

R. C. Tripathi
Bhoomika R. Kar
Namita Pande *Editors*

Towards an Integrative Psychological Science

Issues, Approaches and Applications

 Springer

Towards an Integrative Psychological Science

R. C. Tripathi · Bhoomika R. Kar · Namita Pande
Editors

Towards an Integrative Psychological Science

Issues, Approaches and Applications

 Springer

Editors

R. C. Tripathi
Department of Psychology
University of Allahabad
Prayagraj, Uttar Pradesh, India

Bhoomika R. Kar
Centre of Behavioural and Cognitive
Sciences
University of Allahabad
Prayagraj, Uttar Pradesh, India

Namita Pande
Department of Psychology
University of Allahabad
Prayagraj, Uttar Pradesh, India

ISBN 978-981-16-9564-3

ISBN 978-981-16-9565-0 (eBook)

<https://doi.org/10.1007/978-981-16-9565-0>

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2022

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.

The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Contents

Towards an Integrative Psychological Science	1
R. C. Tripathi, Bhoomika R. Kar, and Namita Pande	
Integration of Methods and Psychological Processes	
Six Blind Men and the Proverbial Elephant: Integrating Multiple Methods in Psychology	19
Ark Verma and Devpriya Kumar	
Seeking Convergence Between Experimental and Survey Methods for Investigating Organizational Behaviour in a Virtually Connected World	45
Ritu Tripathi and Naureen Bhullar	
Integration Across Levels of Information Processing: A Case Study with Visual Category Learning	63
Sujith Thomas and Narayanan Srinivasan	
Interaction Between Affect and Cognition as a Function of Aging: Testing the Positivity Bias in Indian Population	81
Richa Nigam and Bhoomika R. Kar	
Collective Resilience: Macro Influencing Micro	101
Swati Mukherjee and Manas K. Mandal	
Integrative Psychological Science in Cultural Context	
Culture as a Process in Individual and Societal Development	121
R. C. Mishra	
Indian Psychology in the Inter-Cultural Context: From Assimilation to Integration and Beyond	141
Anand C. Paranjpe	

Multilingualism as a Resource: Implications for Education	163
Ajit K. Mohanty	
Integrative Understanding of Social Issues	
Integrative Approaches to Psychotherapy: Insights from Cultural and Spiritual Psychology	193
Komilla Thapa and Prachi Ghildyal	
Social Exclusion of the Physically Disabled	213
Namita Pande	
Integrative Interventions for Managing Cancer: Issues and Concerns	229
Neena Kohli, Vipul Kumar, and Sonoo	
Towards a Human Rights Based-and-Oriented Psychology	247
Polli Hagedaars	
For a Society Beyond Justice	263
Jayant Lele	
Challenges of Integrative Psychology	301
Lilavati Krishnan	
Author Index	327
Subject Index	345

About the Editors

R. C. Tripathi is former Chair and Professor of Psychology, Department of Psychology and Center of Advanced Study in Psychology, University of Allahabad. He has also served as the Director of G. B. Pant Social Science Institute, Allahabad. He is a Fellow of the National Academy of Psychology (India) and also of the International Association of Psychology. He is the chief editor of the journal *Psychology and Developing Societies*. Among his recent publications are *Perspectives on Violence and Othering in India; Psychology, Development and Social Policy in India* (both published by Springer). His primary research interests are in the areas of intergroup relations, social change and development, and organizational behaviour.

Bhoomika R. Kar is Professor and Head of the Centre of Behavioural and Cognitive Sciences, University of Allahabad. She joined the Centre in 2003 after completing her Ph.D. at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore. She is also an adjunct faculty for the Cognitive Science Program at IIT Delhi. Her research interests include development of cognitive and affective control, bilingualism and cognitive control, aging and emotion regulation and cognitive disorders such as dyslexia and ADHD, using behavioural, electrophysiological (EEG/ERP) and neuroimaging methods. She is the review editor for *Frontiers in Aging Neuroscience*, *Frontiers in Educational Psychology*, associate editor of the journal *Psychological Studies* and *Psychology and Developing Societies*. She has edited a book titled *Cognition and Brain Development* published by the American Psychological Association.

Namita Pande is Professor of Psychology, Department of Psychology at University of Allahabad. She is the Editor of the journal *Psychology and Developing Societies*. She has worked with village communities, particularly for rehabilitation of persons with physical disabilities. Her research interests include indigenous psychology, social cognition and stress, health and rehabilitation.

Towards an Integrative Psychological Science



R. C. Tripathi, Bhoomika R. Kar, and Namita Pande

Introduction

Psychology as a scientific discipline aims to promote wellness, personal as well as social. This requires an integrated understanding of psychological dynamics that is rooted within social, political, economic, cultural and physical contexts, all of which are interconnected. However, the discipline of psychology itself is in crisis, if one is to go by how this discipline is viewed by many today (Bakan, 1996; Zittoun et al., 2009). In Bakan's view, it is in crisis, not so much in terms of lack of literature, but the loss that it has suffered relating to its subject matter, method and mission. Of these three, he is more concerned with the loss of its mission. Psychology, according to him, had started out with the mission to design a social order that is in harmony with human nature but has completely lost that focus today. This may have been due to the fact that somewhere during its journey, psychology started aspiring to get recognized as a science on par with other sciences. Psychologists, since then, have been seeking to understand human behaviour within a positivist or mechanistic paradigm, which has contributed only in a very limited amount to our understanding of human mind and how it expresses itself in various contexts. It has not added much to our understanding of macro-level social issues and even less to designing of societies that envision enhancing human welfare in its entirety. Its practitioners also use different frameworks and have not bothered enough to consider epistemic diversity within a single unifying framework. No wonder Koch (1993) asks whether psychology is 'conceptually or theoretically a coherent discipline'? Such a situation,

R. C. Tripathi (✉) · N. Pande
Department of Psychology, University of Allahabad, Prayagraj, Uttar Pradesh, India

B. R. Kar
Centre of Behavioural and Cognitive Sciences, University of Allahabad, Prayagraj, Uttar Pradesh, India
e-mail: bhoomika@cbcs.ac.in

however, may be due to a variety of reasons. Unlike natural phenomena, psychological phenomena cannot be defined using fixed attributes or coordinates nor do they have the same origins. Individuals may be biologically alike in terms of their anatomy, but there is little or no similarity among them in terms of their experiences and their psychosocial development. Psychologists also have not understood fully that human behaviour cannot be understood in isolation of their social and political contexts, real or imagined. They also need to understand that all human problems are interconnected and so are their solutions.

Moving Away from a Reductionist Perspective

Psychology, if it has to play a role in solving human problems, can only do so by rising above its narrow focus. This requires developing a perspective, which is integrative and holistic at the same time. Sadly, not many such perspectives are available. Capra and Luisi (2014) using 'systemic thinking' have tried to show a direction by integrating ideas and theories to develop a systems view of life, but it still remains far away from helping us to understand human behaviour across domains and levels. More specifically, it informs us little about the conditions that are associated with various human and social outcomes and influence the course they are going to take. A major problem that has been witnessed is fragmentation of psychology. As a discipline, psychology has been undergoing fragmentation because human and social problems are not only diverse, and they are also 'constructed' differently both by those whose problems they are and by scholars who study them. For example, while for some psychologists, 'absolute poverty' may be the focus of their study, and for others, 'relative poverty' is more important.

Studying personal and social well-being from a system's perspective requires not only synthesizing traditional approaches with new empirical paradigms but also taking a less linear and a more holistic approach. This requires that the discipline of psychology will have to move away from the mechanistic approach that it has been using for long to understand and explain psychological and social realities in terms of 'factors' following the Newtonian paradigm, which is heavily deterministic and linear. Psychology needs to focus more on processes and their wave like functions, which interpenetrate each other. The dominant positivist paradigm does not take into account the histories of systems. It, therefore, does not help us in understanding the dynamics of these systems. Whether one looks for answers for human behaviour at the genetic level or at the social and cultural level, one will only end up with explaining behaviour partially. Reduction whether it is to micro-level or to the macro-level is only going to give us half-truths. A non-reductive paradigm of psychology, which connects levels in terms of functions, has not yet emerged. However, there is an attempt to apply quantum theory to understand psychological and social processes (Bohm, 1990; Wilson, 1990; Zohar & Marshall, 1993). Contemporary psychologists focus only on issues, which are thrown up by the current state of psychological research, which is guided by a reductive positivist paradigm. They are not able to account for

the whole, because they focus only on some factors, often those, which can be easily manipulated, while leaving out other factors, which explain the dynamics of human behaviour. It is here that western psychology differs from the eastern psychologies, notably from Buddhism, which holds that all phenomena including mental states arise co-dependently from a plurality of causes and conditions (Mikulas, 2007).

In the positivist paradigm, mind and matter are distinguished as two separate entities. It sees psychological phenomena mostly as epiphenomenon, which has their roots in the physical. However, this relationship between the two is not reciprocal. It assumes that mind and its states are offshoots of the functioning of brain and its attendant structures. As is often commented, such a mechanistic thinking does not explain and account for human experiences, which differ from the manner in which thoughts are seen as information structures. Conscious awareness is not the same as conscious experience. Can one expect conscious experience to take place in the absence of awareness? In psychology in the Indian tradition, in contrast to the western psychologies, even mind and consciousness are seen as separate. One of the qualities of consciousness is that it does not have intent (Rao & Paranjpe, 2016). In fact, the phenomena produced by brain, mind and consciousness are different. Brain senses, mind listens and reflects, whereas consciousness is inner transformation leading to the emergence of a moral conscience. The alternate argument that finds support is that the dichotomy between body and mind or matter and mind is a false dichotomy. It does not help us in understanding human behaviour and experience in diverse contexts. An integrative psychological science is possible when such a dichotomy is either dissolved or dispensed with. The argument relating to viewing of psychological processes as flows and the manner, in which they interpenetrate to understand human behaviour, is made out in this context. Such a meta-theory has been suggested, but its full fruition is still awaited. The issues, which we see as demanding integration, relate to interconnection between processes and behaviour, integration of levels and also of methods that are used to study psychological processes and behaviour. But more than that what may be needed is foregrounding of mind over matter by psychologists. This is because psychological and social realities are constructions of mind, more than of matter. In saying so, we do not deny its roots in matter, but physical roots are not the only roots, which sustain it. Mind throws up its independent roots, which sustain it more than it is sustained by its physical roots.

What Needs to Be Integrated and Why?

The literal meaning of integration is 'combining or adding parts to make a unified whole', or it may also refer to 'combining two or more things in an effective way'. While it has been conceptualized variously and many context specific nuances have been added to the term, the central meaning that runs across all such formulations continues to remain unchanged: Integration is an act of creating a unity out of diverse but interrelated elements or parts. The question that is important to ask is when any

disciplines show maturity and a resultant readiness to get engaged with seeking integration. This question needs to be raised in order to explicate the assumptions which are likely to inform the drive towards integration. The capacious knowledge base that psychology has been able to create is through raising important though disconnected questions which were indissociable, but for the sake of ease of interrogation, psychologists posed as distinct questions.

Sternberg and Grigorenko (2001) argue for the need for integration in psychology by promoting a multidisciplinary and multi-paradigmatic approach to remove the fragmentation in psychology seen in terms of methodologies or branches (social/clinical/personality, etc.). Their preference is for a single paradigmatic approach (behaviourism, psychoanalysis, etc.). Various scholars have emphasized upon converging methods for integrative research. Integration of approaches and convergence of multiple and mixed methods would allow not only to increase internal and external validities of research studies but also to explore the dynamics of psychological processes in order to understand and theorize the emergence of a psychological process or phenomenon better. However, Henriques (2004) has a problem with where psychology stands today and not so much with how it studies what it studies. Employing the 'Tree of Knowledge System' he seeks to define psychology with respect to its interface with physical, biological and social sciences. His approach views the business of psychology as extending from studying animal behaviour to human mind and all on one continuum. It emphasizes that the subject matter of psychology should include the investigation about the biological bases of behaviour, how brain and behaviour are related through specialized disciplines like neuropsychology, cognitive neuroscience, behavioural neuroscience and social neuroscience. Investigations about the neural substrates of mind and behaviour have benefited from the technological advancements allowing integration in terms of different levels of inquiry. One can study psychological processes in terms of structure (fundamental components), neural underpinnings at cellular, molecular and systems level, and at the same time, keep in view its implications for behavioural and social outcomes. For instance, investigation of a process like memory can be carried out at different levels of inquiry in terms of its structure, sub-processes, objective and subjective measures of memory performance, neural circuitry and contribution from the environment (situated cognition), and the possible clinical implications including interventions may be there for research on dementia.

The study of psychological processes needs to be situated within the sociocultural context in which a given process has evolved. This is an important dimension that Henriques alludes to but does not develop when he seeks to unify the Skinnerian approach with Freud's approach in which culture figures at the top. What is left out by him and others from consideration is the fact that humans are the only ones whose behaviour is guided by moral considerations in which their attachment to a superior being in the form of God is important. Most western scholars leave out from consideration that humans also are 'moral beings' and pursue 'spiritual goals'. Eastern psychologies have followed that route. They also take an epistemological approach which is different from the approach which western psychologies take. Kim (2000) discusses how three different kinds of epistemologies have resulted in three

kinds of approaches used in studying psychological phenomena, which he refers to as universalist, contextual and integrationist approaches. The universalist approach, according to him, seeks to discover principles of behaviour, which are general and cut across all humans and societies. An approach that is taken by cultural psychologists, such as, by Shweder (1991) is contextual and holds that cultural traditions and practices are responsible for the divergences that are seen in human psyche. They do not allow for the psychic unity of the humankind. Cultures and their associated practices are used by this approach to understand human psyche. Kim also points out to two other kinds of cross-cultural psychologies, which, he calls integrationist. One of these approaches is what Berry (1980) terms a 'derived etic' approach. The approach requires adapting existing theories and the method to local knowledge. It stands against the Euro-American bias that favours individualism and shows up in the formulation of various theories (Sinha, 1997). Enriquez (1993) calls this indigenization from without and argues in support of a bottom-up approach which he calls 'indigenization from within'. It holds that human psyche and human behaviour can be understood only by using the frame of reference of the culture in which participants are embedded and also the total context of a culture. It suggests to a bottom-up approach in which the indigenous information is used to develop theories based on indigenous concepts and methods. It appears to us that an integrative psychological science will seek convergence among these approaches in seeking to better understand all human endeavours. As Tripathi (2016) put it, the most significant challenge that psychology faces today is to move away from 'being' human to 'becoming' human.

Integration of Psychological Processes

Psychology recognizes attention, perception, learning, memory, language and thinking, motivation and emotion as the primary processes, which we know are broadly categorized as cognitive and affective processes. Are these processes connected in some manner? Are their neural substrates, the same or different? Does not well-being have a molecular basis? It is well known that dopamine, a brain chemical, influences neural circuits associated with desire and happiness. Are not happiness and well-being integral to human welfare as a whole? These are some of the questions, which get asked and demand an answer. These are also not new questions. Hebb (1949) had raised them a long time back as Posner and Rothbart (2004) point out. The question asked by these psychologists, following Hebb, is whether genes and experience influence neural networks, which underlie psychological processes that actualize human behaviour (Posner & Rothbart, 2007).

The emergence of new sub-disciplines of neuroscience, such as cognitive neuroscience, affective neuroscience, clinical neuroscience, social neuroscience, organizational neuroscience, and cultural neuroscience, points to the possibilities of having a unified understanding of psychological processes that underlie human behaviour. Unfortunately, the research studies in these fields have not gone beyond brain

mapping and have generally sought to discover neural networks by using various imaging technologies. They have added to our understanding of the anatomical structures and physiological processes that underlie psychological processes but very little to our holistic understanding of psychological processes. Lieff (2013) points to the limits of the neuro-scientific research when he says that the findings of these studies are often over-interpreted and a lot of theories about the brain and mind are speculative. While this may be true, it is to be noted that such studies have led to new ways of looking at psychological processes, especially about the manner in which human mind thinks. They have led to support dual process approaches related to reasoning and thinking and have also shown that brain regions work in tandem, to process information and produce responses. They have shown that these regions are functionally connected.

The dual process approaches are the preferred way of looking at psychological processes in the field of cognition, personality, social psychology and motivations and more recently in understanding how business and economic decisions get made. Kahnemann's (2011) distinction between System 1 thinking which is intuitive and System 2 thinking which is deliberative has come to be recognized widely. However, this distinction does not suggest that the two systems act independently of each other or our brain is divided. Another distinction that is made is between analytical (formal rule-based thinking) and dialectical thinking, which considers different contingencies and possibilities (Nisbett, 2003). That such thought systems are complementary still remains to be shown.

There are, however, two problems with studies, which use this approach. First, as, Yun-Dai and Sternberg (2004) point out, they see most psychological processes as epiphenomenon of cognitive structures and processes leading to what is recognized as a cognitive reductionist perspective. Secondly, what studies grounded in cognitive perspectives do is to invoke some of our essentialist beliefs. This has led scientists to categorize, not only individuals but also societies, based on how frequently and efficaciously they use such processes. The problem with such perspective is that it sees emotions and motivations playing a very minor role in cognitive functioning. Yun-Dai and Sternberg (2004) appear to be an exception in providing an approach, which seeks to integrate the processes of motivation, emotion and cognition in order to understand intellectual functioning. Pessoa (2013) also asserts that integration at the level of independent yet interactive psychological processes such as cognition and affect is required of psychological processes to realize the goal of psychological unity (Pessoa, 2013). Emotion and cognition are seen as separate processes, but it is also true that they are interdependent and feed each other (Moore & Oaksford, 2002). Affect can be seen as a form of cognition (Duncan & Barrett, 2007) and emotions as having a cognitive basis (Oatley & Johnson-Laird, 1987). Cognitive processes like attention and emotion have also been found to interact and influence each other. Emotional information captures and holds attention better compared to non-emotional information. Similarly, attentional control mechanisms have also been found to enhance or impair the processing of affective information (Padmala et al., 2011).

It is in this context that one needs to raise the question of individual differences, which have remained a major focus of psychologists right from the days of Wilhelm Wundt. Human mind as evolutionary theorists tell us has a natural tendency to engage in categorization (Branan, 2010). What is often forgotten is that such differences are actually the outcomes of psychological processes of the persons. Psychological structures are nothing more than when one views them as stopped processes. It is then that they get recognized as attributes or traits of personality. Such an approach serves the purpose of making comparisons, but one loses out on understanding human behaviour, which is better understood in terms of intra-individual processes. Giordana's (2017) argument merits attention in this context when he asserts that personality is better understood in terms of processes than in terms of structures.

Issue of Integrating Psychological Phenomena at Different Levels

Although psychological processes obtain primarily at the individual level, they get manifested at the dyadic, group, organizational and societal levels. Each level serves as the context for the level below it. The structure at the micro-level is constituted by the processes, which surround it. Processes at the macro-level, in turn, also get influenced by the micro-level processes. Although, the relationship between micro-level, where our focus is on individual, meso, i.e. family, ethnicities, nations, level and macro-level, that is, at the level of societies and their structures is assumed and conceded. What is unclear is what are these relationships and how they influence various outcomes at the individual, group, and organizational/societal levels. It is unclear, for example, how individual-level motivations or intentions turn into collective motivations or intentionalities associated with social protests? De Weg (2016) differs from Searle (1990) in conceptualizing collective intention. He contests the idea of collective intention and simply sees collective actions as coordinated individual actions, which result due to 'structuration' and not due to collective intention. This is because individuals have intentions, not the collectives.

A similar question is posed relating to social values. It is asked, how do social values guide an individual's motivation or provide him/her and others in the group with similar cognitive frames to make sense of social and other events? These are hard questions and remain to be answered by an integrative psychological science. It may, also, be asked how answering such questions will help us to use such knowledge for human welfare. Valsiner (2007) suggests that this will involve not only understanding "the "downward" ties of various behavioural phenomena with the physiological, neuronal and genetic levels but also with the "upward" ties with various social units of organization of life" (p. 1). Such an approach will involve having an understanding of: (a) psychological processes within (and across) the individual, group and societal

levels (b) different interfaces that psychology has with other sciences, (c) psychological knowledge for human development and d) methodological approaches, and lastly, also of (e) epistemic diversities rooted in various cultural traditions.

Psychologists have made attempts to address some of these issues but have had limited success. Let us take the example of group polarization effect which is a good example of how psychological processes operating at the group and individual levels have been found to affect decision-making. Group polarization effect is observed when it is found that a decision taken by individuals privately changes substantially and shifts towards extreme ends when the same set of individuals takes it as a group. The decision becomes either overly risky or cautious. The phenomenon has come to be known as group polarization effect (Myers & Lamm, 1976). This phenomenon is understood by integrating information about group-level dynamics with how it impacts individual-level decisions. It has also been explained by many theories like social comparison theory or social identity theory; however, none of these is able to explain it fully. What is worse is that discrepancies in results in group polarization are observed when data are collected using laboratory experiments. There is evidence now from studies carried out using a faceless social media like Twitter that the physical presence is not required for group polarization to take place (Yardi & Boyd, 2010). The issue of levels at which psychological phenomena obtain and whether they can be explained based on processes at that level remains an open one. Another tricky question involves integration of methods that are used to understand phenomena at different levels. It remains quite a challenge for researchers to integrate data generated by phenomenological analysis with hard data obtained from brain imaging.

Steps Towards Integrative Psychological Science

From the discussion that has proceeded above, it may have become clear that there is a need for a new paradigm which will take us towards an integrative psychological science. As has been pointed out above, the need is to consider the possibility of achieving integration within the dominant reductionist paradigm of psychology by making it less reductionist and more holistic. One way to proceed will be, by looking at the interaction between psychological processes at several levels and contexts, by using trans-disciplinary data, and the use of multi-methods. This will be needed all the more, if the discipline of psychology is to contribute as a science towards human welfare.

In psychology, discoveries cannot be viewed in black and white as there are many layers of underlying mechanisms which may operate in parallel or hierarchically. A scientist's focus could easily be genes, thoughts, behaviour, or socialization, etc., and with equal scientific validity, one may provide higher level of understanding and prediction. It is also important for us to recognize the need for integrating different kinds of information (social, affective, cognitive, developmental, behavioural and physiological) to answer questions about psychological processes. Use of one approach or methodology is likely to leave many questions unanswered

about a certain process. For instance, if a study demonstrates that reading difficulty is associated with difficulties on phonological skills, it is also possible that language learning, learning practices in school and home, linguistic environment at home with peers and in school may predict reading acquisition in children (Netten et al., 2016). What one will need is to meaningfully combine information from clinical, linguistic and contextual variables using quantitative, qualitative, objective and self-report-based data. A single approach even with in-depth inquiry will only provide half-truth about the process or phenomenon in question. As stated above, psychological phenomena are not only dynamic but more complex and highly variable. They also occur in qualitatively different environments.

A natural question that follows from above is how psychology should attempt to unify social, cultural, experimental, and physiological data to study psychological processes. This is particularly important when the level of inquiry for a psychological process or phenomenon is in terms of such individual variables as personality, contextual variables like society, demographic and environmental variables, or biological factors. An example may be taken to underscore this point. Studies on rapidly increasing cases of dementia and mild cognitive impairment gain from converging evidence from quantitative data based on experiments on memory and executive functions, neurobiological, neurochemical mechanisms as well as subjective complaints of concerns related to cognitive decline. At times objective evaluation through neuropsychological tests may show adequate performance despite the report of subjective complaints related to memory and cognitive efficiency (Snitz et al., 2015). These authors followed up to find out if objective memory complaints led to or followed subjective memory complaints. They found that the subjective and objective memory complaints influence each other over time which may be related to the insight and awareness about memory impairment and may subsequently influence the higher order cognitive processes such as executive functions and language. The temporal dynamics of information obtained from objective and subjective measures may vary qualitatively. It is known that psychological research is marked by differences in findings based on different methodologies and approaches. For instance, a study using behavioural experimentation may explain a psychological process such as attention in terms of selection, inhibition and shifting as independent components, whereas neuro-scientific investigation using EEG or fMRI may explain the attentional mechanisms supported by independent yet interactive networks. Therefore, the convergence of qualitative and qualitative methods or behavioural and neuro-scientific methods is informative with a broad spectrum of mechanism-based findings.

Exciting new research spans both disciplinary and geographic boundaries and combines different levels of analysis of the same phenomena. The growing emphasis on integrative approaches requires a paradigm shift in basic philosophical foundations, methods of investigating phenomena, and the models and theories. Integrative approach would be able to answer the how and why questions related to psychological processes as well as how psychology can contribute towards building ideal social systems (Kauffman, 2009). In addition to generating knowledge about the underlying mechanisms of processes, psychology as a discipline needs to extend this knowledge to build efficient and effective individual and collective minds.

Possible Methods for Integration

Since psychology is a science of experience and behaviour (Zimbardo & Johnson, 2011), it faces the unavoidable challenge of methodological dualism. It has to choose between behaviourist and neurobiological and also between experiential and phenomenological explanations of psychological processes (Boris et al., 2016). As discussed by Krishnan in this volume (Chap. “Challenges of Integrative Psychology”), integration in psychology is needed due to the lack of connectedness within the discipline as well as between psychology and other allied disciplines.

Psychological sciences have been moving in increasingly interdisciplinary directions with the advent of new approaches and methodologies used in various social sciences, neurosciences, and cognitive science. Organizations like American Psychological Association (APA) and National Academy of Sciences emphasize upon interdisciplinary research as the future of psychological science to improve health and to bring recognition to psychology as a science. The report titled *Facilitating Interdisciplinary Research* report by National Academy of Sciences (2005) described the efforts made towards interdisciplinary research and highlighted the role of psychological sciences. Moreover, the interdisciplinarity in academic research is about integrating ideas, information, data, techniques, tool, concepts, theories and approaches across disciplines and within a discipline like psychological sciences. This is particularly important in face of complex challenges facing the society which cannot be addressed by a single discipline.

Integration in psychology has also been strengthened by the recent development in analytical methods including the psychological network analysis (Jones et al., 2018) which allows for a graphical representation of relationship among variables examined using different kinds of measures including questionnaires and experimental data. It is a useful tool for visualizing and analysing relational data and to look at integration in terms of processes and/or methods in psychology and in the explication of psychological constructs. In psychological network analysis, a particular construct (e.g. major depression) is seen as the network of various dynamically changing variables/dimensions (clinical symptoms) like sleep problems, depressed moods, loss of interest, weight problems, psychomotor disturbances, fatigue, self-reproach, suicidal ideation and concentration problem. These are connected to each other, as well as, to the construct of depression through the means of partial correlations (Borsboom & Cramer, 2013; Schmittmann et al., 2013). The three major steps which are involved in this networking model are (a) to estimate a statistical model on the available data through which parameters are represented as a weighted network between observed variables and (b) then the networks are analysed using graph theory to draw inference and finally the (c) the assessment of the accuracy of the network parameters and associated measures (Epskamp et al., 2018). Network model analysis has advantages over the previous formative and reflective models like considering the presence of only active observable variables, drawing cause and effect relations

between variables, explaining the role of time in changing relations between variables and articulation of the process which determines the occurrence/emergence of the construct (Schmittmann et al., 2013).

A research question involving the study of behaviour related to health, education, economics, cognition, emotion and social interaction requires multiple scientific perspectives. For instance, research on gene-environment interaction used for explaining antisocial behaviour or numerical cognition may benefit from an approach which is integrative both, in terms of disciplines and methodologies. An example of this is the work on numerical cognition of a psychological scientist, Dehaene who was a former mathematician (Dehaene, 1997). Such integrative approaches when developed would lead to ever-evolving but separate lines of research relevant to understanding human mind and behaviour. This is particularly true since our brain, biology and environment are not independent, they rather influence each other. One example in this regard is related to developmental research. The study by Bernier and colleagues (2013) shows a relationship between quality of sleep and development of executive functions and social emotional aspects. Authors also mention that longitudinal designs with genotyping, brain imaging and intervention studies would provide better insights into the mechanisms of developmental change and would suggest ways to create ideal environments for health and development. Similarly, psychological, biological social-community processes may influence resilience at individual and community level for sustainable development (Zautra et al., 2008). Another example of an integrative approach that has emerged is with the coming together of clinical psychology and experimental psychopathology. It has helped to develop mechanism and evidence-based intervention programs for mental health issues (Waters et al., 2017).

Integrative Psychological Science and Social Issues

Scientists generally are least concerned with how their research connects with the society of which they are a part and this is no different in the case of psychologists. This is because basic research has always been valued more by their institutions and also by their community compared to applied research. An integrative applied science is needed both by scientists and professionals who apply it. It should be obvious that a fractured discipline cannot enable scientists to do good science and it certainly cannot be put to any use for social concerns. That psychologists have shunned their professional responsibility is clear from their lack of involvement and in providing inputs for framing of the public policies in most countries. In the preceding sections, we have argued in support of three kinds of integration. These relate to integration of levels, integration of processes and integration of epistemologies, methods and approaches. It is expected that such a science will lead to research, which will not only be able to contribute to developing policies, which will contribute to fulfilment of various needs of the people but also to their happiness and well-being at the individual level. This is unlikely to happen if an individual is not able to find fits

between one's psychological attributes and psychological states and the systems of which one is part of. Such person-environment fits have to be found not only in the present but also in the past and the future (Caplan, 1987). Attention may be drawn to the problem that various social groups in India face with respect to coming to terms with their pasts and also groups which face uncertain futures.

About the Volume

The science of psychology, as it stands today, may fall short on facing the present-day problems and challenges successfully. There is an urgent need for psychological science to seek solutions for individual, group, societal and national problems, which would be possible if it were to operate in an integrative manner. This volume argues in support of working towards an integrative psychological science as a scientific discipline by focusing on the state-of-the-art research and scientific discourse including quantitative and qualitative methodologies, basic and applied research in the fields of cognitive/clinical/ organization/social psychology looking at different levels or inquiry across psychological processes. The major themes of the volume are: (a) Integration of methods and psychological processes; (b) Integrative psychological science in cultural context; (c) Integrative understanding of social issues. The concluding chapter threads together various issues and suggests how one can train and teach the budding scholars of psychological science to develop an integrative approach towards psychological science.

The modality of integration in this volume is conceptualized in terms of integration of psychological processes, methods, contexts and applications for human welfare. The first section delves into the integration of methodologies to examine the levels of certain psychological processes such as category learning, interaction between affect and cognition and organizational behaviour, highlighting the possibility of broadening the understanding of these processes with an integrative approach.

Section I. This section begins with an illustration of the importance of individual and converging quantitative and qualitative methods as one of the approaches towards integrative psychological science. The chapter by **Ark Verma and Devpriya Kumar** focuses on methodological evolution in the discipline of psychology. Authors present the underlying assumptions of the two major research methodologies in psychology, i.e. quantitative and qualitative methods, and their methodological differences. Some paradigms of integration of the two methodologies and their possible contribution for achieving a more wholistic picture of the human mind and behaviour are also discussed. Taking a more realistic and far reaching approach for the impact of research in the field of organizational psychology and its implementation in the real world, the chapter by **Ritu Tripathi and Naureen Bhullar** highlights the relevance of Web-based experimental techniques. They discuss the use of Web-based experimentation for the study of organizational behaviour with examples of Web-based tools like 'small world problem' and the 'implicit association test'. Such methods can have implications for policy-making, may provide useful insights to corporate leaders

and facilitate translational research so that the findings can be validated in real life settings. The chapter by **Sujith Thomas and Narayanan Srinivasan** discusses how cognitive processes can be conceived and studied at the computational, algorithmic and implementation level. The chapter emphasizes that the integration of results across the levels of information processing through different methodologies may provide a broader understanding about a psychological process. **Bhoomika Kar and Richa Nigam** in their chapter further show why integration of objective and subjective measures may be required by taking a case example of the positive affect bias in ageing. They examine the interaction between affect and cognition and highlight the need to integrate methods such as lab-based experimentation with measures which provide self-reported information based on day-to-day experiences, using both explicit and implicit measures. Authors emphasize that certain psychological processes such as affect prioritization as a function of ageing can be best understood or reported not only in a controlled lab-based setting but in a more spaced out manner with a combination of objective and subject self-report measures. Finally, the last paper in this section by **Swati Mukherjee and Manas Mandal's** paper addresses the issue of how communities can be prepared to deal with physical disasters. They argue in support of a development paradigm, which is 'people-centric' rather than 'growth-centric'. This they think can be achieved by focusing on developing social and cultural capitals of the communities.

Section II includes papers that specifically focus on issues of culture in the context of human behaviour. Psychology in its endeavour to become a science has ignored such issues and sought to look for psychological universals. **RC Mishra's** paper seeks to understand how cultural features of a society are associated at the individual and societal levels with their development. It also makes to understand in psychological terms the concept of development keeping in view tribal societies. **Anand Paranjpe** in his chapter takes a position that it may be difficult to arrive at a one kind of 'integrative psychology' which is universal because that will need imposing one particular kind of a vision but does see that there is less of a rupture that once existed between the Eastern and Western approaches in studying psychological phenomena. **AK Mohanty's** chapter discusses how multilingualism is not a burden but a resource. However, the hierarchy among the languages has implications not only for social relations, which deepen the divide but also for education of people whose language is marginalized. He argues in support of maintaining multilingual structure of societies.

Section III. The chapters that have been included in Section III focus on a wide range of social issues. Personal wellness and social wellness are integral to each other. It is in this context that **Komilla Thapa and Prachi Ghildyal-Dwivedi** discuss how integrative approach to psychotherapy needs to take cultural beliefs and context into consideration. They attempt to provide what they call a culturally consonant model of psychotherapy by integrating meditative and yogic practices with the existing psychotherapeutic approaches. **Namita Pande's** chapter draws attention of psychologists to the disconnect that is seen between psychological research and social policy relating to social inclusion of the physically disabled. She discusses how 'emancipatory' research may better help their cause. The chapter by **Neena Kohli and Vipul Kumar** suggests an integrative intervention approach to deal with the problems of

health care of cancer patients. They argue in support an approach which provides a bridge between bio-medicine and psychology and within psychology between cultural factors and psychotherapy. **Polli Hageaars** paper underscores the point that psychologists as well as all psychology associations have an ethical responsibility to support the Universal Declaration of Human Rights. It argues for human rights-based and oriented psychology to ensure that the societies around the world adhere to the principles, which underlie UDHR to allow individuals to develop their capabilities. **Jayant Lele** argues for a minimalist framework for integrating psychology and holds that the only way psychology can become relevant for human welfare is by dialoguing with natural and other human sciences and by resolving such dichotomies as between mind–body, nature–culture and reason–emotion. It is in this context that issues related to social justice in economic, social and political domains need to be addressed.

The last chapter in this volume addresses significant issues related to the theme of the book and highlights the need to preparing students for learning about integrative psychological science. **Lila Krishnan's** paper is presented as the concluding chapter on the theme of the book. It clarifies some basic issues related to integrative psychological science, such as meaning of 'integrativeness', why and where it is needed and how it can come about. It critiques approaches and also shows a way in which an integrative psychological science can truly develop.

We believe that the effort in bringing out a volume with chapters advocating for integrative psychological science looking at different processes, paradigms, methods and analytic approaches will succeed in establishing the need for further development of integrative psychological science. Integration in psychology also lends itself to applications in terms of various domains of human welfare, such as social justice, health and well-being by developing a better understanding of how human mind and behaviour evolve overtime as a function of individual factors and sociocultural context.

Acknowledgements The financial support from the Indian Council of Social Science Research, Government of India, for organizing the Silver Jubilee Convention of the National Academy of Psychology, India is gratefully acknowledged. The current volume is based on the proceedings of this convention.

References

- Bakan, D. (1996). Origination, self-determination, and psychology. *Journal of Humanistic Psychology*, 36, 9–20.
- Bernier, A., Beauchamp, M. H., Bouvette-Turcot, A.-A., Carlson, S. M., & Carrier, J. (2013). Sleep and cognition in preschool years: Specific links to executive functioning. *Child Development*, 84, 1542–1553.
- Bohm, D. (1990). A new theory of the relationship of mind and matter. *Philosophical Psychology*, 3, 271–286.

- Boris, K., Felix, T., Hans, B. A., Thomas, B., Andreas, D., et al. (2016). Methodological problems on the way to integrative human neuroscience. *Frontiers in Integrative Neuroscience*. <https://doi.org/10.3389/fnint.2016.00041>
- Borsboom, D., & Cramer, A. O. (2013). Network analysis: An integrative approach to the structure of psychopathology. *Annual Review of Clinical Psychology*, *9*, 91–121.
- Branan, N. (2010). Are our brains wired for categorization? *Scientific American Mind*, *20*(7), 11. <https://doi.org/10.1038/scientificamericanmind0110-11>
- Berry, J. W. (1980). Introduction to methodology. In H. C. Triandis, & J. W. Berry (Eds.), *Handbook of cross cultural psychology* (Vol. 2, pp.1–28). Allyn and Bacon.
- Caplan, R. D. (1987). Person-environment fit theory and organizations: Commensurate dimensions, time perspectives, and mechanisms. *Journal of Vocational Behavior*, *31*, 248–267.
- Capra, F. & Luisi, P. L. (2014). *The systems view of life: A unifying vision*. Cambridge University Press.
- Dehaene, S. (1997). *The number sense: How the mind creates mathematics*. OUP.
- De Weg, H. B. (June, 2016). *Collective intentionality and individual action*. Retrieved from <https://core.ac.uk/reader/131206396>
- Duncan, S., & Barrett, L. F. (2007). Affect is a form of cognition: A neurobiological analysis. *Cognition and Emotion*, *21*(6), 1184–1211.
- Enriquez, V. G. (1993). Developing a Filipino psychology. In U. Kim & J. W. Berry (Eds.), *Indigenous psychologies: Research and experience in cultural context* (pp. 152–169). Sage.
- Epskamp, S., Borsboom, D., & Fried, E. I. (2018). Estimating psychological networks and their accuracy: A tutorial paper. *Behavior Research Methods*, *50*, 195–212.
- Giordano, P. J. (2017). Individual personality is best understood as process, not structure: A Confucian-inspired perspective. *Culture & Psychology*, *23*, 502–518.
- Hebb, D. O. (1949). *The organization of behavior: a neuropsychological theory*. J. Wiley; Chapman & Hall.
- Henriques, G. (2004). Psychology defined. *Journal of Clinical Psychology*, *60*, 1207–1221.
- Jones, P. J., Mair, P., & McNally, R. J. (2018). Visualizing psychological networks: A tutorial in R. *Frontiers in Psychology*, *9*, 1742. <https://doi.org/10.3389/fpsyg.2018.01742>
- Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.
- Kauffman, S. A. (2009). *Towards a post-reductionist science: The open universe*. ArXiv: 0907.2492.
- Kim, U. (2000). Indigenous, cultural, and cross-cultural psychology: A theoretical, conceptual, and epistemological analysis. *Asian Journal of Social Psychology*, *3*, 265–287.
- Koch, S. (1993). ‘Psychology’ or ‘the psychological studies’? *American Psychologist*, *48*, 902–904.
- Lieff, J. (2013, August 29). *The limits of current neuroscience*. Retrieved from <http://jonlieffmd.com/blog/the-limits-of-current-neuroscience>.
- Mikulas, W. L. (2007). Buddhism & western psychology: Fundamentals of integration. *Journal of Consciousness Studies*, *14*(4), 4–49.
- Moore, S. C., & Oaksford, M. (2002). Some long-term effects of emotion on cognition. *British Journal of Psychology*, *93*, 383–395.
- Myers, D. G., & Lamm, H. (1976). The group polarization phenomenon. *Psychological Bulletin*, *83*, 602–627. <https://doi.org/10.1037/0033-2909.83.4.602>
- National Academy of Engineering, and Institute of Medicine. (2005). *Facilitating interdisciplinary research*. The National Academies Press. <https://doi.org/10.17226/11153>.
- Netten, A., Luyten, H., Droop, M., & Verhoeven, L. (2016). Role of linguistic and sociocultural diversity in reading literacy achievement: A multilevel approach. *Journal of Research on Reading*, *39*, 189–208.
- Nisbett, R. E. (2003). *The geography of thought: How Asians and Westerners think differently and why?* Free Press.
- Oatley, K., & Johnson-Laird, P. N. (1987). Towards a cognitive theory of emotions. *Cognition and Emotion*, *1*, 29–50.

- Padmala, S., Bauer, A., & Pessoa, L. (2011). Negative emotion impairs conflict-driven executive control. *Frontiers in Psychology*, 2, 1–5.
- Pessoa, L. (2013). *The Cognitive-emotional brain: From interactions to integration*. MIT Press.
- Posner, M. I., & Rothbart, M. K. (2004). Hebb's neural networks support the integration of psychological science. *Canadian Psychology*, 45, 265–278.
- Posner, M. I., & Rothbart, M. K. (2007). Research on attention networks as a model for the integration of psychological science. *Annual Review of Psychology*, 58, 1–23.
- Rao, K. R., & Paranjpe, A. C. (2016). *Psychology in the Indian tradition*. Springer India
- Schmittmann, V. D., Cramer, A. O., Waldorp, L. J., Epskamp, S., Kievit, R. A., & Borsboom, D. (2013). Deconstructing the construct: A network perspective on psychological phenomena. *New Ideas in Psychology*, 31, 43–53.
- Searle, J. R. (1990). Collective intentions and actions. In P. R. Cohen, J. Morgan, & M. E. Pollack (Eds.), *Intentions in Communication* (pp. 401–416). MIT Press.
- Sinha, D. (1997). Indigenizing psychology. In J. W. Berry, Y. H. Poortinga, & J. Pandey (Eds.), *Handbook of cross-cultural psychology* (Vol. 1, pp. 129–169). Allyn and Bacon.
- Snitz, B. E., Small, B. J., Wang, T., Chang, C. C., Hughes, T. F., & Ganguli, M. (2015). Do subjective memory complaints lead or follow objective cognitive change? A five-year population study of temporal influence. *Journal of the International Neuropsychological Society: JINS*, 21, 732–742.
- Sternberg, R. J., & Grigorenko, E. L. (2001). Unified psychology. *American Psychologist*, 56, 1069–1079.
- Tripathi, R.C. (2016, October 10). *From being human to becoming human*. A paper presented at Experts' meeting on human rights education, EIUC, Venice.
- Valsiner, J. (2007). Becoming integrative in science: Re-building contemporary psychology through interdisciplinary and international collaboration. *Integrative Psychological and Behavioural Science*, 41, 1–5.
- Valsiner, J. & Rosa, A. (Eds.) (2007). *The Cambridge Handbook of Socio-cultural Psychology*. Cambridge University Press.
- Waters, A. M., LeBeau, R. T., & Craske, M. G. (2017). Experimental psychopathology and clinical psychology: An integrative model to guide clinical science and practice. *Psychopathology Review*, 112–128.
- Wilson, R. A. (1990). *Quantum psychology: How brain software programs you and your world*. Hilaritas Press.
- Yardi, S., & Boyd, D. (2010). Dynamic debates: An analysis of group polarization over time on twitter. *Bulletin of Science, Technology & Society*, 30, 316–327.
- Yun-Dai, D., & Sternberg, R. J. (Eds.). (2004). *Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development*. Routledge.
- Zautra, A. J., Hall, J. S., Murray, K. E., & the Resilience Solutions Group1. (2008). Resilience: a new integrative approach to health and mental health research. *Health Psychology Review*, 2, 41–64.
- Zimbardo, P. G., & Johnson, R. L. (2011). *Psychology: Core concepts* (7th ed.). Pearson.
- Zittoun, T., Gillespie, A., & Cornish, F. (2009). Fragmentation or differentiation: Questioning the crisis in psychology. *Integrative Psychological and Behavioral Science*, 43, 104–115.
- Zohar, D., & Marshall, I. (1993). *The quantum society*. The Bloomsbury.

Integration of Methods and Psychological Processes

Six Blind Men and the Proverbial Elephant: Integrating Multiple Methods in Psychology



Ark Verma and Devpriya Kumar

Abstract Psychology as a discipline has a long history of the development of its subject matter and methodology. In the current chapter, we explore the development of subject matter and methodology in psychology from a historical perspective to the contemporary era. Going further, we examine the two major schools of methodology, i.e., the quantitative and the qualitative methodologies and later we highlight the merits and benefits of using a combination of these approaches as manifested in the mixed-methods research methodology. Finally, we also share a glimpse of the more contemporary research philosophies of embodied cognition and the phenomenological approaches.

Introduction

John Godfrey Saxe (1872) retold an ancient Indian story in his poem titled, ‘*The Blind Men and the Elephant*’, and this is how it began:

It was six men of Indostan
To learning much inclined,
Who went to see the Elephant
(Though all of them were blind),
That each by observation
Might Satisfy his mind.

The story of the blind men and the elephant has been part of our common folklore. The story demonstrates that very often individuals can become so obsessed with their personal vision of the world that they most likely miss the whole truth or let us say the bigger picture. Indeed, scientists sometimes are almost ‘blinded’ by their over-reliance on a fixed set of rules or procedures for understanding the world, and therefore, they become rather reluctant for adopting, as they say, ‘a fresh pair of

A. Verma (✉) · D. Kumar
Department of Cognitive Science, IIT Kanpur, Kanpur, India
e-mail: arkverma@iitk.ac.in

glasses' or a new perspective to view the world. This tendency has been referred to as *functional fixedness* in psychology (Adamson, 1952) and may pose difficulties in the generation of new and creative ideas (Camarda et al., 2018). Often, researchers persist within their methodological silos, while trying to further their endeavours and often they report experiencing an inertia or a mental block that makes it difficult for them to, as Kuhn said, create a paradigm shift (Kuhn, 1970).

Hence, it falls upon us to periodically review our own methodological approaches to understand specific phenomena and evaluate their utility with respect to contemporary issues and current requirements, and innovate, if necessary.

The current chapter draws attention to the methodological evolution in the discipline of psychology. It begins with a brief historical review of the growth of psychology as a discipline and then moves on to understand the underlying assumptions of the two major research methodological approaches in psychology, i.e. quantitative and qualitative methods, and understand their differences. We finally offer some examples of integration of the two approaches and dwell upon their possible contribution for achieving a more wholistic picture of the human behaviour, which includes mental processes and overt behaviour.

A Brief Historical Overview of Psychological Approaches

To contextualize the debate between the quantitative and the qualitative approaches in psychology, one would need to have a perspective of the evolution of research methodologies and the nature of explanation in psychology. Ever since its inception, psychology has been pulled towards two seemingly incompatible approaches that either focus on the internal workings of the mind or towards publicly observable and verifiable behaviour. Some psychologists sought to derive their methodology from the natural and life sciences, an approach referred to as the scientific stance by Griffith (1921). Indeed, there was a lot of emphasis in the early days on psychologists for adopting and practicing the so-called *scientific method* and the first laboratories of psychology were designed to measure aspects of human sensation, collecting objective data, and drawing conclusions from mathematical data analyses. There were also efforts directed towards teaching the participants about aspects of experimental design, familiarizing them with the installed apparatus, and imparting more practical training for conducting and analysing experiments. Around the same time, psychophysics was gaining popularity in Leipzig, and psychometry, i.e. the measurement of the reaction times of participants to get insight into the time course of mental processes involved in performing cognitive tasks were receiving acceptance from practicing psychologists.

The emphasis on quantification and measurement of mental attributes seemed to be the flavour of the day, and psychologists were basking in their attempts to gain a degree of scientific validity and approval. However, while some early psychologists were inclined towards adopting the experimental approach to investigating the human mind, some very prominent psychologists occasionally expressed their preference

for the allegedly ‘unscientific’ method of *introspection*. For instance, Wundt (1897) made a distinction between *internal perception* and *experimental self-observation*, wherein the latter refers to self-observation in controlled circumstances and was acceptable to him as a scientific method to probe into one’s own consciousness (as cited in Brysbaert & Rastle, 2009). In addition, James also championed the use of introspection as a valid scientific tool (James, 1890). This was taken further by Edward Titchener (as cited in Brysbaert & Rastle, 2009) who founded one of the first schools of psychology in *structuralism*, predominantly based on the tenets of introspection, and was focused on trying to discover the basic sensations that would form the elements of human consciousness. Using these methods, Titchener and his fellow psychologists seemed to have identified almost 30,500 elementary sensations that supposedly formed the *structure* of human consciousness.

Functionalism soon followed, inspired by the ideas of Charles Darwin (1809–1882) and also James’s belief in the usefulness or the functional role of mental processes in human and animal behaviour. Psychologists aligned to *functionalism* focused at identifying the specific purposes fulfilled by various mental processes in the evolution of human behaviour. Around the same time in Germany, *Gestalt Psychology* came to the fore. Gestalt psychologists mainly believed that the workings of the human mind can be best understood not in its several discreet elements, but as a ‘whole’ which arose out of a combination of these smaller components working together.

The late nineteenth and the early twentieth centuries also gave way to two very popular schools of thought in psychology that were almost radically different from each other, not only in their specific ideologies but also in their emphasis of the subject matter and methodology to be followed in psychology. The first of these was psychoanalysis. Psychoanalysis mainly involved the use of case studies, wherein patients would describe their own life experiences, and aspects such as childhood memories and dreams. Psychoanalysis became a very popular movement in the 1900s and had a massive impact on the field of psychology.

The other major and almost contrarian school of thought that probably rose as a reaction against introspection and the notion of psychology as a study of mind was *Behaviourism*. Watson (1878–1958), one of the founders of behaviourism, prescribed that the subject matter of psychology should, ‘*never use the terms consciousness, mental states, mind, content, introspectively verifiable, imagery and the like*’ (Watson, 1913; as cited in Brysbaert & Rastle, 2009). As an alternative, psychology should study its subject matter in terms of ‘*stimulus and response, in terms of habit formation, habit integration and the like*’. Skinner (1904–1990) (as cited in Brysbaert & Rastle, 2009) emphasized that all of human behaviour should be explained as a consequence of S-R connections and his forceful denial of anything like the mind or covert mental processes by the mind came to be known as *radical behaviourism*.

The schools of *psychoanalysis* and *behaviourism* presented two opposite ends of the spectrum for the methodological assumptions in psychology. While the former relied on case studies, narratives and introspection, which would later be identified as important tools for qualitative research; the latter drew closely from the ideals of positivism and tested hypotheses about human behaviour in a quantitative fashion,

which included coming up with precise operational definitions of variables, statements of causal relationships among them, and then verification through experimental procedures. Finally, behaviourism gave way to the much-famed *cognitive revolution*, which continued with quantification and methodological behaviourism.

The advent of the cognitive revolution also coincided with the emergence and a call for the need of qualitative methods in psychology, possibly also as a reaction against the predominantly quantitative flavour of psychological research of that era, under the influence of positivism. Few significant developments of the era include the publication of Allport (1942)'s monograph that included a description of several qualitative tools of research like autobiographies, interviews, diaries/journals, letters, verbatim records and the history of their use, etc. Also, the publication of Abraham Maslow's work on the self-actualized personality (Maslow, 1968) added much needed impetus to the rise of the qualitative methods. Finally, Glaser and Strauss (1967)'s *The Discovery of Grounded Theory* served as a guiding text for a host of psychologists taking up qualitative enquiry, partly to address the long-term goals of psychology as a discipline, and partly as a result of dissatisfaction from the 'cold and impersonal' nature of quantitative methods in psychology.

To summarize, this brief historical overview of the evolution of psychology as a discipline, shows that since its inception, psychologists have been preoccupied not only with what needs to be explained but also with the appropriate methodology that is needed to explain psychological phenomena. A fairly dominant trend was to build a scientific psychology similar to natural sciences like physics, chemistry and biology perhaps to earn approval and accreditation as a bonafide science. However, critics have pointed out that while the scientific method has reaped great dividends for psychologists and the discipline itself, psychologists may have been too obsessed with the importance of following a specific brand of research methods, even at the cost of building coherent all-round theories of human behaviour (Brysbart & Rastle, 2009).

In the subsequent sections, we describe the two contrasting methodological approaches in some detail, try understanding their foundational assumptions, and the methodological details and then make a case for the integration of both, the quantitative and qualitative methods to put ourselves in a better position to answer the central concerns of psychology as a discipline, i.e. to develop a greater understanding of human mind and behaviour.

Underlying Assumptions of Quantitative and Qualitative Approaches

The quantitative and qualitative methodologies differ in their worldview and the paradigms they adopt in line with their specific worldviews. For instance, the quantitative psychologists mainly believe that there exists a reality independent of our conscious experience, which can be measured and quantified; and that the best way to

understand and investigate the nature of such reality is by means of systematic observation and collection of data. Hence, the quantitative psychologists believe in forming testable hypotheses about the nature of relationships between various phenomena, and then conducting tightly controlled experiments to test these hypotheses. The idea is that the knowledge arrived at the end of the process would confirm or reject the formed hypotheses and add to the existing knowledge about the reality of the world. In other words, quantitative psychologists typically have faith in the hypothetico-deductive model that forms the basis of their scientific enquiry.

On the other hand, the qualitative researchers are more likely to believe that there may exist multiple, constructed realities, each of whom are equally valid and are derived from an individuals' subjective experiences, perceptions and interactions with the various aspects of the environment. Moreover, different paradigms within the qualitative methods differ in their construal of the nature of reality. For instance, according to the *constructivist–interpretivist* theoreticians, the true nature of reality may need to be uncovered by the interaction between the researcher and the research participant, i.e. *hermeneutics*. More specifically, it is believed that it is not possible to construct an objective reality that is independent of the person who is experiencing, processing and labelling the reality (Ponterotto, 2005). In addition to the above, qualitative researchers are also informed by the *critical-ideological* theories, according to which reality construction is also influenced by the proactive values of the researcher. More specifically, the nature of reality is assumed to be influenced by the power relations between the researcher and the research participant within a given social and historical context (Kemmis & McTaggart, 2000 as cited in Ponterotto, 2005).

Aim of the Research Enterprise

Quantitative researchers typically follow the *nomothetic perspective* wherein the aim of the research enterprise is to collect and accumulate knowledge that can be formalized in terms of generalizable laws about the nature of relationships between different phenomena. The nomothetic perspective focuses mainly on description of phenomena in a manner that is true across various circumstances and can be used to arrive at universally applicable predictions (Gelo et al., 2008; Ponterotto, 2005). In contrast, qualitative researchers mainly subscribe to the *idiographic perspective*, wherein the aim of the research enterprise is to understand the individual/group (s) as unique and complex entities. The focus is not to arrive at generalizable knowledge that may be useful for making predictions across situations, rather it is to arrive at a rich and sophisticated description of the individual/group (s) under study.

Relationship Between the Researcher and the Researched

According to quantitative psychologists, the researcher and the participant are independent of each other, and the researcher puts in all the effort to follow research protocols in a manner that ensures that the research findings are not influenced by the researcher in any way. On the other hand, qualitative psychologists propose that the relationship between the researcher and the research participant is transactional in nature, wherein both the researcher and the research participants contribute to the evolved understanding that is derived out of a research enterprise. The process of dialogue between the researcher and research participant is expected to provide insights to both the researcher and the research participant and is believed to capture the lived experience of both.

Also, quantitative psychologists believe that the researcher needs to remain emotionally detached from the research enterprise (Ponterotto, 2005). The expectation is that the quantitative psychologist would follow the standardized and systematic methods of data collection and investigation and therefore will not be in a position to influence the research enterprise. However, on the other hand, the qualitative psychologists believe that the research enterprise cannot be divorced of the lived experiences of the researchers. Moreover, under the qualitative research paradigm, the values, beliefs and emotions of the researchers are acknowledged to influence the qualitative research enterprise.

Controlled Experimentation

Quantitative psychologists take special care to sanitize the research design by controlling for the *confounding variables*, i.e., variables other than the independent variable that may influence the changes in the dependent variables. For instance, if one wants to test the effects of a particular *independent variable* say the effect of ink colour on the *dependent variable* say legibility of text written on paper, then the researchers would try to explicitly control for 'font size', which may act as a *confound variable* because it may have an effect on the legibility of text. The qualitative researchers maintain that excessive sanitization of experimental settings makes them impoverished or artificial, and by doing that researchers may undermine the ecological validity of the research enterprise. According to qualitative psychologists, data collection for research enterprises should be carried out in naturalistic settings wherein the aim of the researcher is not so much to avoid the effect of any confounding variables but achieve a rich and constructive understanding of the situation.

Emphasis on Causal Relationships

Quantitative approaches are mostly preoccupied with finding out causal relationships between variables. They are interested in knowing how different variables are related, and how these relationships influence mental processes or human behaviour. Also, as mentioned earlier, the emphasis is on discovering general principles that govern the relationships between variables and can be later integrated into a broader theory of how things work, which may eventually help in prediction and control of phenomena. Qualitative approaches, on the other hand, recognize and emphasize the uniqueness and the complexity of each variable or interaction that happens to be the subject of their study. The idea is to not focus exclusively on finding causal relationships but rather develop a rich and immersive understanding of the phenomena at hand. The qualitative researcher is more interested in discovering the layers of meaning in any interaction and allows the research to flow freely from one variable to another in order to reveal the sophisticated interplay of several variables at once.

Quantitative and Qualitative Methods

Quantitative Methods

Three main methods *descriptive research*, *correlational research* and *experimental research* form the backbone of quantitative methods.

Descriptive Research

Descriptive research involves psychologists observing particular phenomena and assigning numerical values to the measurable aspects of the phenomena in terms of units or frequencies of occurrence for these units. Quantitative psychologists arrive at the idea of measurable units by providing *operational definitions* to these phenomena. For example, one way of measuring how angry somebody might be could be to measure how frequently they use cuss words and use it as a measure of the degree of anger experienced by the participants. Researchers can then describe the event or phenomena observed in terms of *descriptive statistics* to arrive at a tangible picture or description of the event. Importantly, descriptive research mainly looks forward towards building a careful and exhaustive charting of the variables under focus, the method does not look towards finding out any relationships among the variables under study. The advantage of descriptive research technique is that it allows the researcher to get a complete picture of the variable under focus. For example, a detergent company owner can conduct a survey about the number of customers who use white, vs. green vs. blue colour detergents and descriptive research methods would be able to provide an exhaustive picture of the same. A probable disadvantage of descriptive

research, however, is that basically it does not provide any more information than just the distribution of the variables in the population.

Correlational Research

While descriptive research can provide us with exhaustive measurements of the variables under study, we often need to know the nature of the relationships among these variables. For example, a researcher may want to understand the relationship between the level of noise in the room and the quality of sleep that an individual gets. As mentioned earlier, the researchers would first need operational definitions for both *noise* and *quality of sleep* and then take measurements of the same. The strength of correlation between noise and quality of sleep can then be computed using the formula for Pearson's correlation coefficient r . However, while correlation allows us to predict one variable based on knowledge about the other variable, it does not allow us to infer causal relationships between variables. Problems with correlations include spurious correlations among variables. For instance, the correlation between A and B could be due to a common variable C influencing both variables. To give an example, a possible correlation between aggression levels in children and the amount of violent video games they see each week could be due to a third variable like parenting style. On the upside though, correlational research is easy to set up because it does not require the researchers to explicitly manipulate or control the variables involved.

Relationships between multiple variables can be measured and a number of factors that may be needed to account for the correlations between the measured variables and also how the variables relate to the factors can be obtained using factor analysis (Brysbaert & Rastle, 2009). For instance, a researcher may want to measure the correlations between the following four variables, i.e. *job satisfaction, monthly salary, overall happiness and health* of a participant. It is possible that the researcher finds that all four measures are highly correlated with each other; for example, the correlation between salary and job satisfaction is 0.75, and between overall happiness and salary is 0.80 and between overall happiness and health is 0.85. In such a case, factor analysis may reveal that there is only a single factor required to account for the correlations among the four variables, for example, amount of wealth generated by a particular job. It might also happen that while monthly salary and job satisfaction are highly correlated and overall happiness and health are highly correlated; but there is no or weak correlations between say overall happiness and monthly salary. This would indicate that at least two different factors might be needed to account for such a pattern of correlations, say, amount of money may guarantee job satisfaction, but overall happiness may only be guaranteed by the absence of illnesses and bodily well-being (Schmitt, 2011).

Experimental Research

Finally, causal relationships between variables can be established using controlled experiments that involve random assignment and manipulation of independent variables and measure the effect of the same on the dependent variables. In addition to manipulating the independent variable, quantitative researchers also take great efforts to control the effects of variables that are not part of the experimental manipulation, i.e. *the extraneous variables* or *the confounding variables*. Let us take an example of an experimental design: suppose a researcher is interested in determining whether the participants' ability of driving (dependent variable) a vehicle is affected by the presence of alcohol (independent variable) in the body or not. The researcher will divide the participants into two groups, i.e. an *experimental group* (who will be given limited amount of alcohol) and a *control group* (who will not be given alcohol), and assign both the groups to a test of driving. A very important point to consider in such between-subjects experiment design is the creation of *initial equivalence*, i.e. the participants in both groups should be matched on various criteria such as age, gender and driving experience. Better control and statistical power are achieved using repeated measures design by treating the same participant with different levels of the independent variables.

Experiments can involve multiple variables and involve *factorial designs*, wherein the term *factor* refers to each of the different independent variables that have been manipulated. Let us take an example to understand this scenario: suppose a researcher is interested in determining the effect of level of alcohol (IV1, presence vs. absence) and the effect of environmental light (IV2, presence(day) vs. absence (night)) on the driving ability (DV) of a group of individuals. Then the researcher would test the same participants on a driving test, once in a drunken state during daytime and once during the night, and once in a sober state during daytime and during the night. In this way, the performance of the same participants can be compared across four different conditions and would be able to give a comparative estimate of both the IVs on the performance at the DV. Factorial designs are one of the most widely used experimental designs, as they allow the researchers to measure the effects of more than one or two independent variables at the same time, as well as study the interaction patterns of these variables to determine their combined effect on participant's behaviour.

Qualitative Methods

We will now briefly review five main approaches to qualitative inquiry as documented by Cresswell (2007).

Narrative Research

Narrative research is a popular method used by qualitative researchers. A *narrative* has been defined as ‘spoken or written text giving an account of an event/action or series of events/actions, chronologically connected’ (Czarniawska, 2004, p.17; as cited by Creswell, 2007). Narrative research involves studying one or two individuals and gathering information about them through a collection of their life stories, noting down their individual experiences and then chronologically ordering these stories and putting these experiences into perspective in terms of their meanings and significance. Narrative research has been utilized in many social sciences. The analysis of narratives can move through a variety of strategies, mainly involving the identification and description of themes that are consistent across the number of stories shared as part of the narrative, and arranging them into a sort of a framework that reveals different insights about the individual under study and also focusing on their life path as protagonists, along with other main actors and events. Narrative researchers attempt to identify the individual stories within the ambit of a participant’s personal experiences and contextualize these stories with reference to their cultural, social and spatio-temporal contexts.

This reorganization of an individual’s several stories into a general framework and looking for key elements in the story (in terms of time, place, plot and scene) and then rewriting these stories into a chronological sequence, to reveal how different events are linked to one another, is referred to as *restorying* (Creswell, 2007). Further, narrative researchers actively engage the participants in their research enterprise, to gauge the continuing themes in the narratives, to understand the relationships between elements, and also for understanding the relative significance of the events. Moreover, during the process, the researchers also forge their own relationship with the research participants in a manner in which both of their lived experiences can provide valuable insights and enrich each other’s lives in the process.

Phenomenological Research

Phenomenology as a method of qualitative research has several philosophical underpinnings and assumptions (Creswell, 2007) and is used in several social sciences including psychology. Phenomenology involves identifying a common event or experience in the lives of several individuals, i.e. a *phenomenon* and then focusing on the description of their experiences with this phenomenon (e.g. the experience of Indian partition in 1947). The idea is to ‘reduce individual experiences with a phenomenon to a description of its universal essence’ (Creswell, 2007). Phenomenology may therefore be a useful tool, to understand and appreciate the common lived experiences of several individuals who share a phenomenon between their lives.

There are also different approaches to phenomenology, i.e., the *hermeneutic approach* (van Manen, 1990) and the *transcendental or psychological phenomenology* (Moustakas, 1994). In the hermeneutic approach, a researcher is

predominantly oriented towards the lived experiences of his participants and interpreting the ‘texts’ of life, that is uncovering the hidden meanings and significance of the lived experience. In transcendental phenomenology, the focus is more towards the descriptions of the experiences of the participants. In the transcendental tradition, the researchers also make a conscious attempt at setting their own personal experiences aside, while describing those of the participants, by the following a process called *epoche* or bracketing advocated by Husserl (1982). Indeed, it is a difficult exercise to partition the researchers’ own experiences, especially if the researcher also shares the phenomenon and even otherwise, and therefore, it is not uncommon to see researchers bracketing out their own views before proceeding with the description of others’ experiences. As a method of qualitative research, phenomenology can provide useful insights to professionals across several fields such as therapist, teachers, health workers and even policymakers.

Grounded Theory Research

Grounded theory research seems to have been developed by sociologists Barney Glaser and Anselm Strauss around the year 1967 (Glaser & Strauss, 1967) and aims mainly to generate or develop a general theory or an abstract analytical schema of a particular process that is based on or grounded in data collected from these participants who have experienced the particular process. The idea is that the researcher should be able to generate a general explanation of such a process in consideration, that is shaped by the views and information provided by a large number of such individuals/participants.

Let us try and understand how grounded theory works using an example: suppose a researcher is interested in knowing ‘Why people generally arrive late at work?’. The researcher would then set his/her eyes at collecting more and more data from individuals who generally arrive late at work through a series of structured and unstructured interviews. During these interviews, the researcher would try to identify themes that the latecomers would have pointed out as possible factors in their behaviour. The themes that come out of the data analysis could be ‘lack of motivation for the job’, ‘laziness’, ‘task aversiveness’ and so on. The researchers could then use the above analysis and arrive at a theory that describes the behaviours of these latecomers using the above themes, and occasionally adding his/her own insights and explanations to the process.

A popular approach towards analysis in grounded theory is the *systematic procedures approach* by Strauss and Corbin (1990, 1998). Under the *systematic procedures approach*, the researcher attempts to develop a theory that explains the process in some detail. Typically, the researcher would conduct 20–30 interviews based on several visits to the field to aggregate data about the process. The data is then populated according to categories, i.e. units of events, happenings and instances. The participants for these interviews are selected in such a manner that allows the researcher to gain the most amount of information as quickly as possible. The

researcher then begins with what is referred to as *open coding*, which involves identifying, naming, categorizing and describing phenomena found in the information obtained from the participants. Further, the researchers then move on to *axial coding* which involves identifying one of the open coding categories as the *core* category and then relating other categories around the same *phenomenon*. The different types of categories around the core category could include *causal conditions* (factors supposed to have caused the phenomenon), *strategies* (actions taken in response to the core phenomenon), *contextual and intervening conditions* (broad and specific situational factors that modulate the strategies) and also *consequences* (outcomes of the strategies). The final step in the analysis is the step of *selective coding* wherein the researcher takes a model and develops propositions that interrelate the categories in the model or assembles a story that describes the interrelationship of categories in the model. The idea here is to develop a coherent storyline around which the theory is organized, and all pieces are put together (Creswell, 2007).

An important aspect of the grounded theory research is the need for the researcher to set aside his own theoretical ideas or notions such that the theory can basically emerge from the gathered data or insights from the participant's interviews. Grounded theory has been an important tool of qualitative enquiry over the decades and has served several researchers in developing a deeper understanding of the processes or phenomena that were covered.

Ethnographic Research

Ethnographic research mainly derives from comparative cultural anthropology with a marked emphasis on first-hand data collection, by a researcher, who is immersed in the day-to-day lives of those he is tasked to observe and interview. It typically focuses on large group of individuals which share a common culture, values and behaviours. The researcher engages in participant observation of the lives of the group/people under study by beginning to live among them and making these observations and collecting information through various means. Ethnographic researchers focus on studying the behaviour patterns, the language and the interactions between the members of the said culture-sharing group and document the same in great detail.

Case Study Approach

Case studies have been a mode of a research investigation in psychology for a long time, along with other fields such as medicine, law and political science. Creswell (2007) defines case study approach as a 'methodology, a type of design in qualitative research, wherein an investigator explores a case (object of study, participant) overtime, through detailed and in-depth data collection involving different sources of information including observations, interviews, audio-visual materials, documents and reports'. Case studies indeed serve to provide detailed information about the object of study (e.g. a particular schizophrenic patient) and allow the researchers to

understand the unique situation and experiences of the individual. These experiences reveal several insights about various aspects of the individual's experience (e.g. the nature and type of verbal-visual hallucinations), which may then be able to inform the researchers about similar instances. Case studies have been used in psychoanalysis or for studying neurological patients (Beaumont, 2008).

Methodological Differences Between the Quantitative and Qualitative Methods

There are significant methodological differences between quantitative and qualitative approaches (See Gelo et al. (2008) for a detailed review). Quantitative researchers mainly employ research designs to figure out and quantify the relationship among variables. On the other hand, qualitative researchers are often in search of research designs that only minimally interfere with or modify the research setting, referred to as *naturalistic research designs*. Using these, researchers would typically get a chance to observe the interplay of various variables and participants as it unfolds naturally, and hence, there is little structure and manipulation involved. This is expected to provide a high degree of ecological validity.

The approaches also differ in terms of selecting research participants. Quantitative psychologists employ both *probabilistic* and *purposive sampling* techniques to select participants for their experiments and correlational studies. On the other hand, in qualitative research, *purposive sampling* techniques are more popular as they allow researchers to select specific participants or groups for their research, which would allow them to specifically select cases that help them acquire more precise and in-depth information through their methods.

Quantitative psychologists typically prefer to collect data using controlled experiments in the laboratory as well as standardized questionnaires or structured interviews. On the other hand, qualitative psychologists typically use *open-ended interviews* (allowing for free-flowing set of questions to seek more information from the research participants) with *focused groups* (allowing for a detailed discussion of specific issues within a fixed set of research participants) and *naturalistic observation* (which allows for the observation of the research participants in their natural settings or real-world situations).

Data obtained from quantitative research paradigms is analysed using statistical methods to make inferences about the population. The choice of statistical tests like ANOVA and regression depends on various factors such as the sample of participants, tasks administered, or tests conducted, and the specific inferential techniques used. On the other hand, different kinds of analysis are employed by the qualitative researchers. For instance, the data collected in terms of transcriptions, memos or field notes is first analysed through content analysis or thematic analysis. The content or thematic analysis is focused on identifying recurrent patterns or themes which are captured by the researcher while transcribing the interviews or in his/her

description of an event or setting that has been keenly observed. These themes are then organized by means of a particular coding system, which is supposed to reveal more information about the various issues of importance under study.

Interpretation of data is the final step in the research enterprise that allows the researchers to evaluate the outcome of the study. Quantitative researchers generally follow the hypothetico-deductive model to test hypotheses about the relationships among variables. More specifically, quantitative psychologists are looking for confirmation of their assumed theoretical stance or specific statement on the basis of the specific observations from the study. On the other hand, qualitative psychologists look at their findings in a more open-minded manner because of the minimal use of a priori hypothesis testing. Data interpretation is therefore more inclined towards following *inductive reasoning* wherein the goal is to create more meaningful and consistent explanations based on their findings. The qualitative psychologists are more inclined to deeply analyse the observed findings without any prior expectations and gradually move towards the formation of new theories based on these findings.

Validity of a particular research enterprise refers to the level of accountability and legitimacy of the procedures used during data collection and its analysis and interpretation (Gelo et al., 2008). Quantitative psychologists pay special attention to aspects of *internal validity*, which refers to the fact that the procedures followed in the research enterprise are free from any kinds of confounds, and the conclusions drawn are therefore dependable. Cook and Campbell (1979) identified *construct validity*; that is, whether the operational definitions of the variables used in the study are correct or not, *statistical conclusion validity*; that is, whether the statistical tests applied to analyse the data are suitable enough to draw inferences from the sample for the entire population and *causal validity*; that is, the validity of the cause–effect relationship inferences drawn from the research enterprise. In addition, *external validity* is referred to as the extent to which the results of any experiment or study can be generalized across various populations, settings or time (Johnson & Christensen, 2000).

Qualitative psychologists on the other hand are mainly concerned with other kinds of validity than just the internal and external validity pointed out above. Maxwell (1992) has pointed out four main types of validity that qualitative psychologists are concerned with. These are *descriptive validity* which refers to the extent to which the descriptions of settings or events captured in a research enterprise are correctly covered, *interpretative validity* refers to the validity of the statements or perspectives stated by the participants during the research enterprise, *explanatory validity* which refers to the validity of the explanations offered about the phenomena covered in the research enterprise, the causes and the relationships among variables and *generalizability* which refers to the extent to which the obtained results can be extended to other individuals, settings or contexts (Gelo et al., 2008).

A major point of contention is the fact, that some quantitative psychologists do not consider the methods followed by qualitative psychologists as ‘scientific’. There are several reasons for the same. For, instance, qualitative psychologists outright seem to reject the conception of an ‘objective reality’, which can be quantified and measured. According to some quantitative psychologists, the assumption of an outside reality

is a basic tenet of the scientific method, and any research that rejects the proposition cannot claim to be scientific.

Another possible issue of contention between the two methodologies is the degree of involvement of the researcher in the research enterprise. Quantitative psychologists maintain that following the standard protocols of research while using qualitative methods puts the researcher in a position to not only influence the outcome of the research study, but also how other methodological issues are handled, such as the interpretation and description of research findings. On the other hand, qualitative psychologists assert that it is not possible to divorce the researcher and his values, biases, etc., from the research enterprise because it makes the study artificial.

Further, one more objection of the quantitative psychologists towards qualitative psychology is that the data encoded in the research enterprise is mainly derived from the participant's self-descriptions or introspections and is later interpreted by the researchers. It is assumed that the participants may not be in the best position to talk about their own experiences as their views might be clouded by several of their own biases, emotions, etc. It has also been pointed out that in high-stakes research, for example, in research that is directly going to inform policymaking at the administration's level, a researcher's involvement closely with their research may leave it open for criticism (Brysbaert & Rastle, 2009).

Qualitative psychologists also have their own reservations against the use of quantitative methods, which they assume are over-sanitized, artificial and misinformed. An interesting jibe towards quantitative psychologists often offered by the qualitative psychologists is that the obsession with the '*positivist*' paradigm is basically to maintain the status quo of psychology as a bonafide science, which translates into higher social and professional standing and even access to large pools of funding, power, etc.

Integrating Qualitative and Quantitative Methods

The debate between the quantitative and qualitative methods is neither new nor limited to the discipline of psychology; rather it has been articulated by several social scientists across the disciplines of psychology, sociology, anthropology, and so on. The perceived incompatibility of quantitative and qualitative methods has been stated as the *incompatibility thesis* (Howe, 1988), according to which quantitative and qualitative methodologies are inherently incompatible, and therefore, they cannot and must not be mixed. Such a degree of polarization between quantitative and qualitative researchers across the various disciplines of the social sciences was particularly prevalent in the 1980s, which is referred to as the period of the so-called *paradigm wars*.

Three major schools of thought were prevalent around this particular time period and can be imagined as arranged on a continuum of opinions about whether the two methods can coexist and be combined (Onwuegbuzie & Leech, 2005). On one end lie the *purists* who believed that quantitative and qualitative research methods stem

from completely different ontological, epistemological and axiological assumptions about the nature of research and hence are fundamentally incompatible and therefore cannot and should not be mixed. In somewhat the middle, one could find the *situationalists* who would recognize the merits of both the quantitative and qualitative methods but proposed that some questions lend themselves more towards a quantitative enquiry while some others to a qualitative enquiry, and hence, there was no real need to combine the two methods together to address the issues within the same study. On the other end of the continuum from the purists, lie the *pragmatists*, who believe that the dichotomy between the quantitative and qualitative methods is false and unwarranted. They advocate the integration of both kinds of methods within a single study (Onwuegbuzie & Leech, 2005). Further, they propose that as both approaches have their own inherent strengths and weaknesses, researchers would benefit if they utilize the strengths of both in order to get a better understanding of the social phenomena under study. Another way to circumvent the problems caused by contrasting assumptions of the two methods is to go back and address the basic point of contention between the two approaches. A major reason for disenchantment with the quantitative methods was that it ignores the importance of richness of the environment and of experiences that people have. In addition to qualitative methods, another approach known as the phenomenological approach emerged to address the issues associated with quantitative approach. Two approaches inspired from the phenomenological tradition, the embodied approach to understand cognition and the neurophenomenological approach, both focus on the importance of environment and richness of experiences in explaining various mental processes and how they are linked with our experiences. Both these approaches have been discussed later in the chapter in the form of case studies.

Mixed Methods Research

Several researchers drawing mainly from the pragmatist school of thought have forged new ways in which quantitative and qualitative methods could be combined to understand human behaviour. These efforts are referred to as *mixed methods research movement* or the *third wave research movement* in the social sciences. Several definitions of mixed methods research have emerged overtime; however, Johnson et al. (2007) came up with the following definition as a synthesis of about 19 definitions:

Mixed methods research is the type of research in which a researcher or a team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and collaboration. (p. 123)

Moreover, researchers have also emphasized that the combination of methods from both the traditions should be well-etched out in terms of philosophical assumptions, designing of the study, the approaches of the researchers in terms of data collection, analysis and interpretation. Sparkes (2015) provides an interesting discussion

of some of the critical considerations that researchers must take into account before embarking upon a mixed-methods research enterprise. For instance, it is pointed out that the researchers must have a clear idea of the paradigmatic assumptions and the methodological commitments to make a correct choice in terms of which methods could be correctly combined together to optimize the potential of a research study. On the other hand, some researchers (e.g. Andrew & Halcomb, 2007, as cited by Salehi & Golafshani, 2010 p.128) point out to the documented purposes of using a mixed methods research design which underlies their strength. These are:

- *Triangulation* refers to convergence of information from multiple sources gathered through different methods, preferably confirming the results of the conducted study.
- *Complementarity* refers to the idea that information collected from different methods shall complement each other. Moreover, the expectation is that information collected from let us say quantitative method may help in further development of the information collected from the qualitative method.
- *Development* refers to the idea that the outcomes or the results from one kind of method may help in designing the procedures to be used for the other methods. For instance, researchers may first collect information through semi-structured interviews from a bunch of participants and use the insights from these interviews to design experiments to be administered on these participants.
- *Initiation* refers to the idea that findings obtained using one set of methods (qualitative or quantitative) may be used to initiate new set of hypotheses or research questions that may be addressed during the further course of the study using either the same or different methods.
- *Expansion* refers to the idea that researchers may employ different methods mainly to expand upon the findings obtained from one method and explore various new possibilities. For instance, a combination of methods may be utilized to gather additional information from participants either through qualitative or quantitative methods to expand upon the already gathered information.
- *Enhancement* refers to the idea that researchers may utilize different methods to enhance the findings obtained from one set of methods, by gaining more converging information. For instance, it might be possible that the researchers may be able to add more significance to the findings from qualitative methods by adding more validation from the independently administered quantitative tools for data collection.

Going by the benefits of using a combination of qualitative and quantitative methods as highlighted above and the consequent popularity of mixed methods research, several types of research designs or typologies have become available for interested researchers, especially upcoming graduate students who can make use of these methods to further their research. Some of the contributors to the developments of research designs using mixed methods research include Creswell (2003) who advances three design models to combine qualitative and quantitative research methods, Greene and Caracelli (1997) who propose a typology of mixed methods design consisting for three component designs and four integrated designs,

Mertens (2005) who add the parallel and sequential data collection schemes and finally Tashakkori and Teddlie (2003) who have proposed six main types of mixed methods designs (Cameron & Miller, 2007). Here, we briefly discuss four basic mixed methods research designs covered in (Doyle et al., 2016).

The Convergent Design

The convergent design also referred to as the concurrent triangulation design (Creswell, 2003) is utilized when the researchers are looking for information from multiple sources to provide them with a more complete understanding of a given phenomenon under study. In this kind of research design, both quantitative and qualitative data are collected at the same time from the participants, albeit in an independent manner, i.e. the findings of one phase of the data collection do not depend upon data obtained from another phase. Also, equal importance is given to both the qualitative and quantitative data and results are merged only in the interpretation and discussion phase of the study where the researchers are developing inferences from the combined results.

The convergent design is a useful and efficient research design, given the fact that both kinds of data are gathered around the same time and often from the same set of participants. Such a research design is found to be especially useful in scenarios where the participant population is dynamic, for example, in the hospital setting where the patients may get discharged or school/college settings where the students may pass out or move away. An example of the use of the convergent design method can be found in Stoddart et al. (2014) who utilized a convergent design to explore the new clinical leadership role of the senior nurses. In their study, first, quantitative data was collected, using an online survey from 50 participants, and then up to 9 participants participated in qualitative interviews to reveal the opinions and experiences of senior nurses regarding the implementation of a national clinical leadership policy. The convergent design allowed the researchers to gain a depth of understanding that would not have been possible if either of the two methods were used alone.

The Explanatory Sequential Design

The explanatory sequential design refers to a design wherein there is usually a larger quantitative phase of data collection, followed by a relatively smaller phase of qualitative enquiry. The main aim of the qualitative enquiry in such research designs is to follow up and elaborate on the results obtained within the quantitative phase. As indicated by the name, here, data collection and analysis occur in a sequential manner; and the results obtained from the quantitative leg of the study shapes and guides the nature of enquiry to be adopted for the qualitative phase. Further, as the data collection has to be sequential the researcher design is suitable to be implemented by just a single researcher as well. However, the only drawback of the method seems to be that the qualitative data collection cannot commence unless the data collection is

complete for the quantitative phase, which causes delays in the research enterprise and the participants may not be available for such a long duration. An example of the explanatory sequential design was implemented by Jellesmark et al. (2012) who wanted to investigate the relationship between fear of falling (FoF) and functioning ability among older people, following a hip fracture. In their study, surveys were used to first identify the presence of FoF and other related factors, and then interviews were taken to develop an in-depth understanding about FoF among the participants.

The Exploratory Sequential Design

The exploratory sequential design mainly involves a larger and more important qualitative data collection phase, which is supplemented by a quantitative phase of data collection. In this kind of research design, the qualitative phase is majorly utilized for the development of testing instruments for the identification of the key variables and in for the development of initial theory or hypotheses (Creswell & Clark, 2011). The quantitative leg of the study, basically, is utilized to test the instruments developed from the earlier qualitative phase and to facilitate the generalization of the qualitative results to a larger population. However, the relative importance of the qualitative and the quantitative phase depends upon the purpose of the research enterprise; i.e. if the goal was just to develop the test instruments to be later validated in some sense by the quantitative phase, the quantitative part of the study gets more priority; however, if the main aim was to develop a theory, the qualitative phase is usually given more importance.

An example of the exploratory sequential design was implemented by Stoller et al. (2009) who conducted such a study to explore variables that would affect the decision to curtail alcohol consumption in those with hepatitis C. The study began with interviews with 42 participants who had hepatitis C and had been advised to reduce alcohol consumption. The interviews helped to identify 17 important factors which were then used to develop a survey questionnaire measuring for these 17 factors. The survey could then be administered to about 77 people with hepatitis C and helped gain an idea of the prevalence estimates of alcohol consumption in hepatitis C patients.

The Embedded Intervention Design

The embedded intervention design is also referred to as the experimental intervention design and mainly involves a qualitative phase of data collection which is embedded within an experimental study or an intervention trial. This kind of design usually helps the researchers to get around some of the problems associated with intervention studies. In this kind of research design, the qualitative phase can be used at different points during an intervention study, i.e. before, after, during the intervention or even at all the three times. If the qualitative phase is carried out before the intervention trials, it can be useful to develop an instrument or recruitment for the trials. If the qualitative

phase is employed during the intervention study, the qualitative phase can improve the researcher's understanding about the participant's experiences of intervention and can help in modifying the same to address any faced problems (Creswell, 2014). Finally, if the qualitative phase is employed after the intervention trial, it would be useful in understanding the reasons for the effectiveness/ineffectiveness of the intervention trials and can also help in improving various aspects of the intervention procedures.

An example of the embedded intervention design was used by McCabe et al. (2013) who utilized a randomized control trial (RCT) to determine the effect of new media art using a virtual window on health-related quality of life in patients experiencing stem cell transplantation. The findings from the RCT revealed that patients exposed to the stem cell transplantation had overall good experiences of the treatment, along with more positive depression and anxiety scores. These findings revealed with the help of qualitative interviews allowed the participants with the opportunity to understand the beneficial effects of the intervention and hence provided an example of how an embedded intervention design could enhance the understanding and effectiveness of intervention trials.

Embodied Cognition

Although there is no single definition of embodied cognition, this school of thought views thinking and cognition as a product of a complex adaptive behaviour that needs to be studied in context of being immersed in a real world (Nuñez, 1999). A key question that is addressed by embodied cognition is the process of meaning making. How do individuals gain knowledge and understanding of the world around them and how does the environment (both social and physical) shape the process of meaning making? The approach does not assume any pre-given objective reality independent of human understanding and suggests that epistemological knowledge can be gained without assuming an ontological reality. Similar to quantitative approaches, embodied cognition also investigates the nature of reality using experimental techniques but rather than trying to provide an impoverished environment in laboratory setting and asking participants to follow instructions in an artificial manner, the focus herein is on to investigate natural behaviour in a rich environmental context in which participants are free to control how they want to approach the task (Droll & Hayhoe, 2008). The embodied cognition approach therefore provides a clear example of how the quantitative research methodology can be used without pre-assuming a positivist paradigm. Embodied cognition also suggests approaching the psychological/cognitive constructs/processes in a manner wherein we can try to understand these processes as emerging via interaction between individuals, thriving on the richness of the environment.

Language acquisition has been an area which has gained a lot from the classical cognitivist approaches. However, a large part of advancements in understanding of second language acquisition (SLA) is based on quantification of performance by

looking at developmental failures/ successes in language acquisition and theorizing accordingly. Recent work (Atkinson, 2010) points towards the fact that such a classical approach has several shortcomings. For instance, such a view of language acquisition (or any type of learning) largely ignores the richness of the environment, and the fact that learning is a cooperative process in which multiple agents are involved. This would often result in an impoverished understanding of the environment. However, by observing the process of learning in a natural environment, researchers would realize that learning within the mind is inseparable from the body and the world and cannot be understood without looking at the context in which it is taking place. Learning is a process of discovering how to align with the world and maintaining a personal identity in relationship with others plays an important role in the process of learning (Norton, 2000; Norton & Costa, 2018). The learner tries to actively engage in process of meaning making during second language acquisition, while actively trying to align and coordinate with the instructor (Atkinson, 2010). Similar work in the field of perception seems to suggest that asking participants to behave in a free manner provides greater insights regarding participants cognition. Hayhoe and Ballard (2005) asked participants to perform a task in a rich environment without providing any constraints about how the participants should proceed with the task. They found that participants use strategies to optimally balance the working memory load and number of eye movements. The finding suggests that eye movements and working memory are intricately linked with each other and are not modular as proposed by classical models of cognition. The study provides an example of how studying cognition in rich environmental context, where participants are free to behave the way they want, can provide greater insights towards understanding of human mind.

Phenomenology

Phenomenological methods can be both descriptive and experimental, allowing for unified investigation of conscious experience. A very good example of this is provided in Gestalt psychology, which uses descriptions of perceptual experiences along with psychophysical methods to have a unified theory of perception. The difference between experiments in quantitative approaches and experiments in phenomenology is that in these experiments, the variables, tasks, and explanations are constrained by the structure of subjective experience (Albertazzi, 2018). Moreover, phenomenology involves identifying structure of first-person experience by strictly suspending the beliefs regarding what is being examined (reflexivity), focusing on immediacy of experience (intuitive reasoning), and identifying descriptive that helps translate intuitive variants into communicable invariants. Phenomenology, unlike positivist realism does not assume an a priori distinction between objective and subjective. Rather, such distinctions dynamically emerge as part of lived experiences.

A variant of phenomenology that attempts to integrate the recent brain-based techniques to understand human cognition with approaches of phenomenology

has been forwarded by Varela (Varela, 1996). The method involves using explicit phenomenological method in experimental setting, while measuring the neural activity (Gallagher & Francesconi, 2012). Such experiments have been successfully conducted in the field of perception (Lutz et al., 2002), with patients suffering from epileptic seizures (Petitmengin, 2010). A working hypothesis of neurophenomenology is that the lived experience and cognitive system are related in a mutually constraining fashion. It does not try to reduce the lived experience to any cognitive/brain activity (Varela, 1996).

A very good example of how we can combine the first-person perspective with third-person approaches, benefitting from the strength of both is provided by Gallagher et al. (2015). The authors draw their inspiration from phenomenological analysis of narratives given by astronauts as part of daily logs and books authored by these astronauts about their journey in space. They found that a lived experience commonly described by astronauts is that of 'Awe' and 'Wonder'. They describe awe as 'an experience or feeling when faced with something incomprehensible or sublime'. Wonder is described as a 'reflective experience motivated when one is unable to put things in familiar conceptual framework leading to pen questions rather than conclusions'. The main aim was to look at how cognitive system is constrained by the experience and what factors could influence the occurrence of these experiences. To do so, they tried to recreate the scenario of launching into space, in a laboratory setting, while the brain activity of participants was recorded. During the entire time, the researchers strictly followed the constraints of the phenomenological analysis, namely focusing only on the lived experience, not biasing the participants to talk about 'awe' and 'wonder'. In later follow-up experiments, they recreated the experiences in different settings with different participants and looked at how individual experiences vary in different contexts (Brockelman et al., 2013; Gallagher et al., 2014). The experiment presents a welcome example of integration between two approaches to psychology in that it tries to utilize the richness of description provided by the astronaut's narratives to constrain the experimental settings in the laboratory as well as the theoretical problems, and at the same time trying to establish the neural correlates of phenomenological experience.

Conclusion

The current chapter suggests a way to get around the problem, that John Godfrey Saxe, so eloquently articulates in his poem, that 'of six blind men, blinded by their methods and missing the elusive elephant'. Indeed, it seems quite possible for researchers to get 'lost' while following only one of the two methods and being oblivious of the other. Notably, while there are certain differences between quantitative and qualitative approaches, which may give an impression of a natural incompatibility, there is enough literature that points out the similarities between the two methods (Doyle et al., 2016). The task, however, for a 'pragmatic' researcher moving further is to train oneself in both the methodologies and get access to the 'best of both worlds'.

Indeed, it seems profitable to us that researchers in psychology, both, young and old and especially new graduate students acquire the skills to conduct research in both the traditions. Methodological pluralism is not just desirable, but imperative for researchers who are serious in their attempts to get answers for their varied research questions about psychological phenomena and/or processes. An important reason for following and extensively using both kinds of methods is the acknowledgement that both the discipline of psychology and its questions are becoming more and more interdisciplinary in nature. It may not be possible for a researcher to ignore the demands for mixed methods research. The examples cited in the chapter illustrate clearly the potential for mixed methods research for providing new insights into the complex uni-/bidirectional interactions across individual, experimental and contextual variables. This is important to develop a holistic and complete picture of the human mind and behaviour.

References

- Adamson, R. E. (1952). Functional fixedness as related to problem solving: A repetition of three experiments. *Journal of Experimental Psychology*, *44*(4), 288.
- Albertazzi, L. (2018). Naturalizing phenomenology: A must have? *Frontiers in Psychology*, *9*, 1933.
- Allport, G. W. (1942). The use of personal documents in psychological science. *Social Science Research Council Bulletin*.
- Andrew, S., & Halcomb, E. J. (2007). Mixed methods research is an effective method of enquiry for community health research. *Contemporary Nurse*, *23*(2), 145–153.
- Atkinson, D. (2010). Extended, embodied cognition and second language acquisition. *Applied Linguistics*, *31*(5), 599–622.
- Beaumont, J. G. (2008). *Introduction to neuropsychology*. Guilford Press.
- Brockelman, P., Reinerman-Jones, L., & Gallagher, S. (2013). Methodological lessons in neurophenomenology: Review of a baseline study and recommendations for research approaches. *Frontiers in Human Neuroscience*, *7*, 608.
- Brysbaert, M., & Rastle, K. (2009). *Historical and conceptual issues in psychology*. Pearson Education.
- Camarda, A., Salvia, E., Vidal, J., Weil, B., Poirel, N., Houde, O., Borst, G., & Cassotti, M. (2018). Neural basis of functional fixedness during creative idea generation: an EEG study. *Neuropsychologia*, *118*, 4–12.
- Cameron, R., & Miller, P. (2007, December). Mixed methods research: Phoenix of the paradigm wars. In *21st Annual Australian & New Zealand Academy of Management (ANZAM) Conference*.
- Cook, T. D., & Campbell, D. T. (1979). The design and conduct of true experiments and quasi-experiments in field settings. In *Reproduced in part in research in organizations: Issues and controversies*. Goodyear Publishing Company.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods*.
- Creswell, J. W., Plano Clark, V. J., Gutmann, M. L., & Hanson, W. E. (2003). Handbook of mixed methods in social and behavioural research. In *Advanced mixed methods research designs* (p. 209).
- Creswell, J. W. (2007). Five qualitative approaches to inquiry. In *Qualitative inquiry and research design: Choosing among five approaches* (Vol. 2, pp. 53–80).
- Creswell, J. W., & Clark, V. P. (2011). *Designing and conducting mixed research methods*.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE publications.
- Czarniawska, B. (2004). *Narratives in social science research*. Sage.

- Doyle, L., Brady, A. M., & Byrne, G. (2016). An overview of mixed methods research—revisited. *Journal of Research in Nursing, 21*(8), 623–635.
- Droll, J. A., & Hayhoe, M. M. (2008). Seeing what we can do: Insights into vision and action through observations of natural behavior. In *Handbook of cognitive science* (pp. 189–206). Elsevier.
- Gallagher, S., Janz, B., Reinerman, L., Trempler, J., & Bockelman, P. (2015). *A neurophenomenology of awe and wonder: Towards a non-reductionist cognitive science*. Springer.
- Gallagher, S., & Francesconi, D. (2012). Teaching phenomenology to qualitative researchers, cognitive scientists, and phenomenologists. *Indo-Pacific Journal of Phenomenology, 12*(sup3), 1–10.
- Gallagher, S., Reinerman-Jones, L., Sollins, B., & Janz, B. (2014). Using a simulated environment to investigate experiences reported during space travel. *Theoretical Issues in Ergonomics Science, 15*(4), 376–394.
- Gelo, O., Braakmann, D., & Benetka, G. (2008). Quantitative and qualitative research: Beyond the debate. *Integrative Psychological and Behavioral Science, 42*(3), 266–290.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory*. Aldine.
- Greene, J. C., & Caracelli, V. J. (1997). *Advances in mixed-method evaluation: The challenges and benefits of integrating diverse paradigms*.
- Griffith, C. R. (1921). Some neglected aspects of a history of psychology. *Psychological Monographs, 30*(3), 17.
- Hayhoe, M., & Ballard, D. (2005). Eye movements in natural behavior. *Trends in Cognitive Sciences, 9*(4), 188–194.
- Howe, K. R. (1988). Against the quantitative-qualitative incompatibility thesis or dogmas die hard. *Educational Researcher, 17*(8), 10–16.
- Husserl, E. (1982). Ideas pertaining to a pure phenomenology and to a phenomenological philosophy. In *First Book. General introduction to a pure phenomenology* (F. Kersten, Trans.). Martinus Nijhof.
- James, W. (1890). *The principles of psychology* (Vol. 1). Henry Holt & Co. Inc. <https://doi.org/10.1037/11059-000>
- Jellesmark, A., Herling, S. F., Egerod, I., & Beyer, N. (2012). Fear of falling and changed functional ability following hip fracture among community-dwelling elderly people: An explanatory sequential mixed method study. *Disability and Rehabilitation, 34*(25), 2124–2131.
- Johnson, B., & Christensen, L. (2000). *Educational research: Quantitative and qualitative approaches*. Allyn & Bacon.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1*(2), 112–133.
- Kemmis, S., & McTaggart, R. (2000). In Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 567–605).
- Kuhn, T. S. (1970). Book and film reviews: Revolutionary view of the history of science: The structure of scientific revolutions. *The Physics Teacher, 8*(2), 96–98.
- Lutz, A., Lachaux, J. P., Martinerie, J., & Varela, F. J. (2002). Guiding the study of brain dynamics by using first-person data: Synchrony patterns correlate with ongoing conscious states during a simple visual task. *Proceedings of the National Academy of Sciences, 99*(3), 1586–1591.
- Maslow, A. H. (1968). *Toward a psychology of being*. Van Nostrand Reinhold Company.
- Maxwell, J. (1992). Understanding and validity in qualitative research. *Harvard Educational Review, 62*(3), 279–301.
- McCabe, C., Roche, D., Hegarty, F., & McCann, S. (2013). ‘Open Window’: A randomized trial of the effect of new media art using a virtual window on quality of life in patients’ experiencing stem cell transplantation. *Psycho-Oncology, 22*(2), 330–337.
- Mertens, D. M. (2005). *Qualitative methods, in research and evaluation in education and psychology*.
- Moustakas, C. (1994). *Phenomenological research methods*. Sage publications.
- Norton, B. (2000). *Identity and language learning: Gender, ethnicity and educational change*. Editorial Dunken.

- Norton, B., & De Costa, P. I. (2018). Research tasks on identity in language learning and teaching. *Language Teaching*, 51(1), 90–112.
- Núñez, R. (1999). Could the future taste purple? Reclaiming mind, body and cognition. *Journal of Consciousness Studies*, 6(11–12), 41–60.
- Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology*, 8(5), 375–387.
- Petitmengin, C. (2010). A neurophenomenological study of epileptic seizure anticipation. In *Handbook of phenomenology and cognitive science* (pp. 471–499). Springer, Dordrecht.
- Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, 52(2), 126.
- Salehi, K., & Golafshani, N. (2010). Commentary: Using mixed methods in research studies: An opportunity with its challenges. *International Journal of Multiple Research Approaches*, 4(3), 186–191.
- Saxe, J. F. (1872). The poems of John Godfrey Saxe. Boston, Houghton, Mifflin and Co.
- Schmitt, T. A. (2011). Current methodological considerations in exploratory and confirmatory factor analysis. *Journal of Psychoeducational Assessment*, 29(4), 304–321.
- Sparkes, A. C. (2015). Developing mixed methods research in sport and exercise psychology: Critical reflections on five points of controversy. *Psychology of Sport and Exercise*, 16, 49–59.
- Stoddart, K., Bugge, C., Shepherd, A., & Farquharson, B. (2014). The new clinical leadership role of senior charge nurses: A mixed methods study of their views and experience. *Journal of Nursing Management*, 22(1), 49–59.
- Stoller, E. P., Webster, N. J., Blixen, C. E., McCormick, R. A., Hund, A. J., Perzynski, A. T., Kanuch, S. W., Thomas, C. L., Kercher, K., & Dawson, N. V. (2009). Alcohol consumption decisions among nonabusing drinkers diagnosed with hepatitis C: An exploratory sequential mixed methods study. *Journal of Mixed Methods Research*, 3(1), 65–86.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research*. Sage publications.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques*. Sage publications.
- Tashakkori, A., & Teddlie, C. (2003). *Handbook on mixed methods in the behavioral and social sciences*.
- van Manen, M. (1990). *Researching lived experience: human sciences for an action sensitive pedagogy*. Althouse.
- Varela, F. J. (1996). Neurophenomenology: A methodological remedy for the hard problem. *Journal of Consciousness Studies*, 3(4), 330–349.
- Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological Review*, 20(2), 158.
- Wundt, W. (1897). Outlines of psychology (C.H. Judd, Trans.). *Leipzig: Wilhelm Engelmann*, 1, 14.

Seeking Convergence Between Experimental and Survey Methods for Investigating Organizational Behaviour in a Virtually Connected World



Ritu Tripathi and Naureen Bhullar

Abstract Select scholarly reviews suggest that experimental research has been losing favour in organizational behaviour (OB) research in the past three decades. We suggest that this is primarily due to sampling, setting, and selection bias issues. To counteract these challenges, we revisit the merits of experimental research especially with an emphasis on the advantages conferred by causality and efficacy. The drawback of the artificiality of the lab setting is addressed with the recommendation for a greater use of Web-based experimentation in organizational behaviour. This is especially relevant in the contemporary virtually connected world where much work is carried out via technology-enabled communication channels. Sampling, experimental manipulations, dependent variables measurement, manipulation checks, and ethical considerations of Web-based experimentation are examined in detail with examples from the OB literature.

Keywords Organizational behaviour (OB) · Experimental method · Web-based experiments · Virtual work · Remote workforce

The sensational research findings that Facebook can alter the emotions of thousands (Kramer et al., 2014) and affect the voting behaviour of millions (Bond et al., 2012) are striking. Not only do they speak to the hidden influence of social media, but they highlight the vulnerabilities of human populations to Web-based *experimental manipulations*. As if Asch's (1951) confederates have been replaced by behind-the-screens devious algorithms. The behavioural outcomes of the unsuspecting netizens, though, are not as inconsequential as judging the length of the lines. It cascades to macro-level social and political outcomes. And the sample size is not a handful of study participants, but thousands and millions. This intersection of virtuality and

R. Tripathi (✉)

Organizational Behaviour and Human Resources Management, Indian Institute of Management Bangalore, Bannerghatta Road, Bangalore 560076, India
e-mail: ritu.tripathi@iimb.ac.in

N. Bhullar

Behavioural Sciences Lab, Indian Institute of Management Bangalore, Bannerghatta Road, Bangalore 560076, India

human behaviour is all the more relevant in circa 2020, when owing to the worldwide COVID-19 pandemic, the interpersonal, social, and organizational dynamics have got redefined, and the computer screen has taken the place of the brick-and-mortar offices, schools, colleges, and universities. Most human interactions are happening online, and the social fabric is being knit by technology-enabled communication channels and networks. This does not seem to be a temporary event, but is being called the ‘new normal.’

In such socio-technological zeitgeist, then, one wonders at one’s role as a social psychologist. While the unfolding of the human behaviour in a variety of social situations, in and of itself is interesting to anyone, let alone to a social psychologist, the human vulnerability to virtual influence, as identified in the research studies cited above, opens up a plethora of unsettling questions to the psychologist. For instance, was Bond et al.’s (2012) breakthrough large-scale experiment on Facebook’s influence on voting behaviour a fore-warning for the 2016 U.S. Presidential elections? Could the policy drawing upon such research have instituted better checks and balances? Could the masses have been alerted and sensitized about the alarming influence of social media? Could the capitalistic businesses, knowing the research findings, have done better with more stringent privacy and safety controls?

These are big questions. But answers do not necessarily require big data. Experimental social psychological research conducted at a smaller scale, is an effective tool to provide generalizable insights, not only to *causally* explain, but also to predict and control a phenomenon of basic and applied interest. The policy impact of insights derived from the current surge of behavioural experimental economics is a good example. On the one hand, it illustrates the cross-fertilization of academic research and public policy (Benartzi et al., 2017; Soman, 2015; Thaler & Sunstein, 2008), and on the other, it illustrates the rising use of experimental research in development and policy-relevant sub-fields of economics (e.g. Levitt & List, 2007; see also Banerjee & Duflo, 2009).

In yet another sub-discipline critical to management education and research, organizational behaviour (OB), the methodological undertones of epistemology reveal a different story. OB—commonly defined as the scientific study of human behaviour in organizations—is fundamental to management curriculum (Brown et al., 2013; Singh & Schick, 2007) as well as to the application of behavioural science research for organizational effectiveness (Luthans et al., 2015). Whereas the foundational contributions of social psychology to OB are well-acknowledged (Katz & Kahn, 1978; Thibaut, 1959), the signature methodology of social psychology—controlled experimentation—has fallen out of favour in recent years in OB circles (for a review see Eden, 2017; Greenberg & Tomlinson, 2004; Scandura & Williams, 2000). The trend is a bit intriguing because landmark historical events that set the tone for people-centred approach in organizations—right from Elton Mayo’s Human Relations Movement in the Hawthorne Plant (1924–1933; for a review see Sonnenfeld, 1985) to Kurt Lewin’s Social Action Research (e.g. Lewin et al., 1939)—carried a strong emphasis on experimental paradigms (for a review see Danziger, 2000).

In this chapter, we briefly discuss the reasons for the declining interest in experimental approach among OB researchers. This is followed by a review of the merits of experimental method with a few illustrative examples. The chapter closes with a discussion on the central theme of the chapter—the relevance of *Web-based experiments* (for reviews see Birnaum, 2004; Reips, 2002, 2008) in OB research and managerial implications.

Experimental Research Falling Out of Favour in OB

Scandura and Williams (2000) noted a significant decline in published research employing experimental methods in top management journals as a whole, in the mid-nineties compared to the mid-eighties, specifically in the *Academy of Management Journal*, *Administrative Science Quarterly*, and the *Journal of Management*. Greenberg and Tomlinson (2004) note that experimentation is conspicuous from its absence in current handbooks dedicated to organizational behaviour (Golembiewski, 2000), organizational psychology (Anderson et al., 2002), industrial and organizational psychology (Dunnette & Hough, 1990). Even research methods in industrial and organizational psychology textbooks (Rogelberg, 2002) have failed to devote a single chapter to experimentation. These observations have led researchers to conclude ‘experimentation’s low profile among organizational scholars.’ (Eden, 2017, p.114).

The reasons for the rift mainly can be summarized as the three S’s: sampling, setting, and selection bias.

Sampling

A readily available and streamlined procedure of undergraduate ‘subject pool’ in most Western universities facilitates lab-based experimental research. To participating students, this provides an exposure to the use of experiments as a research tool, in addition to some amount of college credit and/or monetary compensation. However, findings from the student sample are not well-received in management in general and in OB in particular. Based on significant differences found between the student and non-student sample, management researchers dismiss this as the ‘science of the sophomores’ (originally referenced in McNemar, 1946; for a review see Gordon et al., 1986; Peterson, 2001) and caution organizational researchers against relying on the conclusions derived from research conducted among student samples.

Setting

The same set of critics draw attention upon another drawback of experimental research. The research is conducted in the ‘labs’ which are contrived artificial settings markedly different from the ‘real world’; therefore, the findings are low on generalizability and ecological validity. The findings derived from experimental artefacts are of little use to applied management science. OB research must be conducted in organizations, among working professionals, for it to be relevant to the field. The conception of the organization being the traditional brick-and-mortar workplace—which, according to the critics, must be the sites of research and data collection, as these afford the natural ambience in which work is carried out.

Selection Bias in Publications

Another reason why experimental research finds few takers in OB is the editorial gatekeeping. Barring notable exceptions such as *Organizational Behavior and Human Decision Processes* (OBHDP), publication of experimental research is on a decline, even in applied I-O psychology journals. Cascio and Aguinis (2008) found a significant decrease in the use of experimental methods in the *Journal of Applied Psychology* (JAP) in the period 1963–2007. Another I-O psychology focused journal, *Personnel Psychology*, did not have any published articles on human factors applied experimental psychology during this period. In the case of JAP, Cascio and Aguinis note: [instructions from the American Psychological Association to exclude] “clinical and applied experimental or human factors, for which there are more appropriate American Psychological Association journals” (American Psychological Association, 2007; cited in Cascio & Aguinis, 2008, p. 1075). Editorial gatekeeping and disciplinary boundaries, therefore, keep most lab-based experimental research that is potentially relevant to answering research questions and theory building in organizational behaviour restricted to basic psychology journals, deepening the methodological and epistemological divide.

Do Not Throw the Baby Out with the Bathwater: Merits of Experimentation Revisited

Although controlled experimentation has declined in OB because of certain limitations and challenges, key merits of experimental research need to be revisited for OB researchers to take a fresh look at the basic and applied value of this tool. This is important because methodological orientations are fundamental to scientific

discovery and epistemological progress in any discipline. Disfavouring a methodological tool that is known for certain inherent merits stalls this progress. Kuhn (1970) took note of such lack of openness in the progress of science:

To a great extent these are the only problems [paradigm-specific] that the community will admit as scientific or encourage its members to undertake. Other problems, including many that had previously been standard, are rejected as metaphysical, as the concern of another discipline, or sometimes as just too problematic to be worth the time. A paradigm can, for that matter, even insulate the community from those socially important problems that are not reducible to the puzzle form, because they cannot be stated in terms of the conceptual and instrumental tools the paradigm supplies. Such problems can be a distraction ... (Kuhn, 1970, p. 37).

Methodological foci might reflect the current epistemological paradigms within OB. However, with respect to controlled experimentation, three merits that OB researchers would 'insulate' themselves from at their own peril are causality, efficacy, and artificiality.

Causality

Experimentation, as all social scientists know, is the gold standard for establishing the cause and effect relationship: the process allows for the temporal separation of the cause from the effect—a necessary and sufficient condition for establishing causal relationships (Cook & Campbell, 1979; Davidson, 1967). In the absence of this, much of correlational research masquerades as causal. A bulk of knowledge in OB is built using cross-sectional self-report survey measures—which, although allowing for more 'real-life' data collection opportunities among employees and working professionals in organizations, have inherent limitations such as cognitive and reporting biases (Nisbett & Wilson, 1977; Schwarz, 1999). Whereas scholars suggest structural and statistical procedures to overcome the limitations (Podsakoff et al., 2003) the methods are inadequate for making causal inferences even with longitudinal designs (Williams, 2007). Controlled experiments allow for causal inferences while ruling out alternative explanations, thereby providing the researchers and practitioners a greater degree of confidence in the cause–effect inferences about a phenomenon.

Efficacy

Another strength of experimental research is that with effect size computations, it allows for the detection of the efficacy or the effectiveness of the causal treatment on the outcome. Effect size—that is how strong or powerful the causal impact of the independent variable on the dependent variable is—is especially relevant to experimental designs, because over and above the significance tests, it allows researchers to estimate the strength or the magnitude of the phenomenon of interest (Cohen, 1977;

Lakens, 2013; McGraw & Wong, 1992). Experimental designs often reveal that subtle manipulations have large effects, that is, the interventions or treatment conditions are particularly efficacious in obtaining large psychological and behavioural outcomes. For example, Johnson and Goldstein (2003) found that organ donation rates across several European countries differ drastically by a minor variation in the construction of the donor registry form: whether the form asked the potential donors to ‘opt-in’ or ‘opt-out’ of the organ donation program. Forms that had the opt-out as the default option had a much higher rate of organ donation. The effect size was dramatically high, with 60 percentage points separating the two groups. Hence, the seemingly minor variation in the extant conditions was shown to have profound behavioural implications.

Artificiality

Although controlled experimentation has been critiqued for creating a contrived artificial environment in the lab, with little or no relevance to the real world, researchers often see this artificiality as a virtue (Henshel, 1980). The scientific goal is to “maximize artificiality deliberately so as to discover regularities that do not presently obtain under the “real” conditions...but which are *capable* of existing...” (Henshel, 1980). Experiments allow researchers to design potentially conceivable situations in a lab setting. The artificiality, drawing upon theoretical premise, hence is a precursor for possibilities in real life—which are meaningful to scientists and practitioners alike.

Although yet to be wholeheartedly recognized by OB scholars, these merits have not been entirely ignored by the management scholars in general. There have been recent calls by management journal editors to contribute to the field with experimental research (e.g. Colquitt, 2008, *Academy of Management Journal* on publishing laboratory research; Schilke et al. *Organization Science Special Issue on Experiments in Organizational Theory*, 2019). In experimental paradigms, whereas laboratory and field experiments are well-documented as methodological tools (Hauser et al., 2017), in the current digitally connected world, Web-based experiments, as described below, hold much promise for scientists and practitioners in OB.

Web-Based Experiments: Relevance to OB

The terms ‘Web experiment’ ‘Web-based experiments’ have been used interchangeably and were coined in mid-1990s to distinguish them from laboratory and field experiments (Reips & Krantz, 2010). Web-based experiments refer to true experiments—the manipulation in the experimental conditions and the random assignment is dynamically done over the Internet without any human intervention. The ‘virtual’ participant could be sitting in the office, home, classroom, laboratory, anywhere around the globe.

Web-based experiments inherently adopt the social psychological experimental paradigm of controlled experimentation, with Internet, instead of a brick-and-mortar lab—being the platform for experimental manipulation as well as measurement. This offers a methodological advantage for OB researchers because the Internet, in many ways, is the *organization* within which the work is carried out, be it digitally mediated communication, cross-border virtual team collaboration, or in the upcoming domains such as e-leadership (Avolio et al., 2014). In many ways, it mimics the ‘field experiments’ with a higher degree of control and versatility in the design of experimental manipulations and behavioural measures, as well as access to populations around the world.

Two examples illustrate this point:

(1) **Small World Problem**

Ever since Stanley Milgram’s experimental answer to the small world problem—‘Given any two people in the world, person *X* and person *Z*, how many intermediate acquaintance links are needed before *X* and *Z* are connected’ (Milgram, 1967, p.259; Travers & Milgram, 1969), the ‘six degrees of separation,’ has been a mainstay of empirical literature and popular discourse. Scientists, however, have wondered about the nuances of the social network ties in modern-day digitally connected world. On the one hand, any person is just a ‘google-search’ away and can be easily reached by e-mail given the digital footprint of modern-day working professionals; on the other, there is little clarity on the actual nature of the network ties. For instance, would the network ties vary globally? What would be the features of network ties if target from various different countries belonged to different professions? Have the number of degrees changed since the 1960s? In order to investigate these questions, a team of sociologists at Columbia University (Dodds et al., 2003) took an online version of Milgram’s experiment to a ‘global’ scale, by creating an Internet-based experiment, replacing letters with e-mail communication. Participants registered online (<http://smallworld.sociology.columbia.edu>) and were randomly allocated one of 18 target persons from 13 countries. Targets, among others, included a professor at an Ivy League university in USA, a police officer in Perth, Australia, a technology consultant in Gurgaon, India, and a veterinarian in the Norwegian army. Participants, like Milgram’s study, were asked to initiate an e-mail chain to a social acquaintance whom they considered ‘closer’ than themselves to the target. Internet search for the target was prohibited as sender in each step had to report the type of relationship and level of closeness with the recipient. All e-mails were sent through the Website developed for the experiment, so the senders and receivers could be tracked.

The results indicated that despite the large number of participants who signed up, only 34%, compared to 75% in Milgram, was likely to forward the e-mail to the next acquaintance for the chain to complete; the overall chain completion rate was also small (0.4%). Incentives, it was concluded, are critical to such tasks; voluntarism, expected of participants, did not yield successful outcomes. However, where the experiment corresponded closely with Milgram that the mean path length of completed chains was between 5 and 7; ‘six degrees of separation’ holds even in the digitally connected world. However, social connections varied by profession

and nature of relationship. For example, although family and friendship were the most frequent tie used in e-mail chains, it is the professional ties that yielded more successful results, even when the level of closeness was ‘casual’. The results from the Internet-based experiment provided key insights in social connections in the digitally connected world, besides triggering a spate of research on associated topics (see Watts, 2004) thereby providing an effective methodological tool to study a classic phenomenon relevant to social networks, group behaviour, and online voluntarism.

(2) Project Implicit

In April 2018, in a Starbucks café, located in Philadelphia, USA, two black men, like other customers, were seated in the cafeteria when their request for the bathroom keys without a food order, aroused the suspicion of the store manager who called the police. The police upon arriving immediately arrested the men without a preliminary investigation warranted in such circumstances. Eyewitness’ accounts and viraled videos revealed that the store manager and the police had acted on impulsive gut reactions borne out of racism and biased attitudes towards blacks. The incident resulted in nationwide outrage and Starbucks store closures. Starbucks CEO, Kevin Johnson, in the aftermath of the incident, among other remedial measures, immediately announced an ‘implicit bias’ training for all Starbucks employees. Starbucks closed 8,000 stores for half a day to train 175,000 workers, at an estimated cost of \$12 million.

Whereas the effectiveness of such training is not yet established (Dobbin & Kalev, 2018) what is striking is that ‘implicit bias’ which now has entered the managerial and practitioners’ discourse has history in lab-based controlled experimentation (see Banaji & Hardin, 1996; Greenwald et al., 1998; for a review see Greenwald & Banaji, 1995). These researchers theorized that implicit attitudes—that is ‘attitudes that influence judgement, decision-making, and behaviour in ways that are outside of conscious awareness and/or control’—are critical to understanding social phenomena such as stereotyping, discrimination, prejudice, and racial bias. A computer-based task, *Implicit Association Test* (IAT), was designed to tap such attitudes. In the IAT, participants are asked to pair the target stimuli (e.g. Black and White faces for a ‘race-IAT’) with evaluative attributes (e.g. pleasant and unpleasant words) using two designated keys. Subjects typically perform this task more quickly and easily when pleasant attributes share the same response key as the implicitly liked stimuli.

IAT and the associated literature on implicit attitudes got considerable momentum and public attention when it got posted as an online laboratory at Harvard (project implicit.net). With resources available for researchers as well as organizations, IAT now runs as a Web-based experimental tool, facilitating increased awareness and interest about a phenomenon that otherwise would have been limited to academic and research community. Much of Starbucks’ training modules, for example, drew from this literature.

The two examples above illustrate how Web-based experiments have helped advance research in two interrelated ways: by demonstrating how a well-established phenomenon operates in a virtually connected world—as the ‘Small World Problem’

research team did, and by showing the transformative impact of lab-based psychological research to a wider audience—as the project implicit did. In both cases, Internet helped circumvent the problems, conventionally associated with lab-based experimental methods.

How, then, can one effectively design Web-based experiments? What are some of the recent advances in the online use of experimental techniques in psychology that OB researchers can draw from, especially to conduct studies with estimated sample size and power?

Web-Based Experiments: Nuts and Bolts

In the early 2000s, psychologists interested in conducting controlled experimentation on the Internet required programming skills (for a review see Birnbaum, 2000, 2004; Fraley, 2004). The last decade, however, saw the emergence of user-friendly tools such as Qualtrics (www.qualtrics.com) which provided fast and easy ways to design sophisticated experiments and run them over the Internet. For example, Qualtrics allows random assignment to experimental conditions, branching, embedding the JavaScript, and the use of multimedia stimulus. Table 1 summarizes a few such studies to provide illustrative examples of how topics, relevant to OB, have been investigated via Web-based experiments. Additional details on these studies as well as on key meta-principles of Web-based experiments, such as the sampling, online engagement, manipulation of independent variables and the behavioural dependent measures, and ethical considerations are provided below.

Sampling

The advent of Web-based research has also seen the corresponding innovation in recruitment and sampling procedures. Amazon's Mechanical Turks—the online crowdsourcing platform—has become a common time- and cost-effective means to collect data among workers who are also more representative than college students (Buhrmester et al., 2011; Paolacci et al., 2010). Besides the ubiquitous use of Amazon's Mechanical Turks, other online sources have also been utilized, including crowdsourcing platforms like clickworker.com and YouTube and Google videos (see Table 1).

Web-based experiments also allow populations of applied interest. For example, Tripathi et al. (2018) targeted corporate professionals in India and the United States in experimentally testing the effect of autonomy-supportive conditions on the motivation of Indians and Americans. They did so by contacting the managers in multinational companies who then forwarded the request to their employees. A Web-based experiment facilitated data cross-cultural data collection across countries in a cost- and time-effective manner.

Table 1 Few examples of Web-based experimental studies

S. No.	Research study	Independent variable manipulations	Behavioural dependent measure	Sampling source
1	ten Brinke and Adams (2015). Saving face? When emotion displays during public apologies mitigate damage to organizational performance Studies 1, 2a, 2b	<i>Study 1:</i> Apologies retrieved online, verbal content, facial affect (deviant-happy/normative-sad) analysed <i>Study 2a</i> (Silent video): Actor enacting an apology in a scenario with three types of affect (deviant/normative/ none) <i>Study 2b</i> (Subtitled video): Same as 2a but with subtitles added and two types of affect only (deviant/normative)	<i>Study 1:</i> Organizational performance <i>Study 2a:</i> Sincere remorse, reconciliation, repair, company confidence, performance predictions <i>Study 2b:</i> Sincere remorse, company confidence, performance prediction	<i>Study 1:</i> Google news, Google Videos, and YouTube <i>Study 2a:</i> Amazon Mechanical Turks <i>Study 2b:</i> Amazon Mechanical Turks
2	Guzman and Espejo (2018). Introducing changes at work: How voice behaviour relates to management innovation Study 2	<i>Study 2:</i> Four conditions—2 (voice: high vs. low) × 2 (resource availability: high vs. low) between-subjects design	<i>Study 2:</i> Promotive voice behaviour, willingness to discuss ideas, and management innovation	<i>Study 2:</i> www.clickworker.com , a crowdsourcing web platform
3	Hafenbrack and Vohs (2018). Mindfulness Meditation Impairs Task Motivation but Not Performance Experiments 1, 3, 4 & 5	<i>Experiment 1:</i> Two conditions—Mindfulness meditation manipulation and mind-wandering comparison <i>Experiment 3:</i> Three conditions—Mindfulness meditation manipulation, writing comparison, and reading comparison <i>Experiment 4:</i> Two conditions—Mindfulness meditation manipulation and mind-wandering comparison <i>Experiment 5:</i> Two conditions—Mindfulness meditation manipulation and mind-wandering comparison	<i>Experiment 1:</i> Task motivation <i>Experiment 3:</i> Task motivation, task performance, future focus, state arousal <i>Experiment 4:</i> Task motivation, task performance, future focus, state arousal <i>Experiment 5:</i> Task performance, detachment from stressors, task focus	Amazon mechanical turks

(continued)

Table 1 (continued)

S. No.	Research study	Independent variable manipulations	Behavioural dependent measure	Sampling source
4	Lupoli et al. (2018). Paternalistic lies Study 2, 3, 5	<p><i>Study 2:</i> Four conditions- 2 (Deception: honesty vs. paternalistic lying) × 2 (Choice set: choice set 1 vs. choice set 2) between-subjects design</p> <p><i>Study 3:</i> Eight conditions- 2 (Deception: honesty vs. lying) × 2 (Lie type: paternalistic lie vs. unequivocal prosocial lie) × 2 (Choice Set: choice set 1 vs. choice set 2) between-subjects design</p> <p><i>Study 5:</i> Eight conditions—2 (Deception: honesty vs. lying) × 2 (Communication: communication vs. no communication) × 2 (Choice set: choice set 1 vs choice set 2) between-subjects design</p> <p><i>Study 6:</i> Four conditions—2 (Lie Type: paternalistic lie vs. unequivocal prosocial lie) × 2 (Communication: communication vs. no communication) between-subjects design)</p>	<p><i>Study 2:</i> Moral character of sender and positive affect</p> <p><i>Study 3:</i> Moral character of sender and positive affect</p> <p><i>Study 5:</i> Punishment, moral character of sender and positive affect</p> <p><i>Study 6:</i> Moral character of sender and positive affect</p>	Amazon Mechanical Turks (Study 2, 3, 5,6)
5	Tripathi et al. (2018)	<p><i>Study 1:</i> Autonomy-supportive versus obligations-oriented motivational cues</p> <p><i>Study 2:</i> Autonomy versus obligations-oriented Instructional sets</p>	<p><i>Study 1:</i> Time spent on a voluntary task</p> <p><i>Study 2:</i> Preference for the instructional set</p>	Indian & American corporate professionals (Study 1) Amazon Mechanical Turks (Study 2)

Online Experimental Manipulations and Behavioural Dependent Measures

Web-based experiments lend themselves to sophisticated experimental manipulations and dependent measures. For example, in a meta-analysis of research studies that used Internet-based affect induction procedures, the effect size was found to be comparable to lab-based affect induction procedures; affect induction procedures on Internet induced almost all affective states like general positive affect, general negative affect, fear, disgust, anger, sadness, and guilt (Ferrer et al., 2015).

Online studies have made effective use of audio and video stimulus. For example, ten Brinke and Adams (2015) analysed the impact of emotional displays during public apologies on the organization's performance in a series of experiments. Using the archival research methodology, they first obtained videos from YouTube and Google videos of company representatives rendering a public apology after a corporate transgression and coded for normative (expression of sadness) and deviant (expression of happiness like smiling) affect. When these representatives smiled during an apology, their company stock performed poorly in the days after the apology, and this effect lasted for three months. This effect was further exaggerated if the representative was at a higher position like a CEO compared to a lower ranking individual. In a series of follow-up studies using online experimental manipulations, a causal relationship was observed between the facial emotional expression of the apologizer and public perception of his organization. Such online experiments, conducted post-facto because of the availability of rich multimedia archival records, provide important insights on how seemingly subtle variation in visual content might influence organizational leadership perceptions and performance.

Online Attention Checks and Engagement Mechanisms

Given that most Web-based experiments are self-administered without the physical presence of an experimenter, there is a strong possibility that virtual participants may not be fully attentive to instructional tasks and may drop out. While this may be true of other data collection modes also, the fact that the virtual subjects could be at home, office, with natural distractors around, compounds the problem in Web-based experiments, not to mention that web-surfing—that is hopping from one Website to another in a casual, distracted manner, is common in online world. The Web platform, again offers a distinct advantage; in that, it allows for certain screening and training mechanisms that helps deal with this problem—more effectively than is possible in paper–pencil tasks or in physical laboratories.

Instructional manipulation checks (Oppenheimer et al., 2009) are increasingly being used as a screening mechanism. These refer to questions that, if the participant read only partially or carelessly, would fail giving the right answer (e.g., a lengthy cover story may end with a sentence, “irrespective of the questions asked below,

answer them with the word ‘note’”; participants may then be asked “How many times do you eat in a day?”). Whereas most researchers have been discarding or excluding the participants who fail the test (see Berinsky et al., 2014 for a review), in hard to reach populations, this could cause a problem. Also, those who fail the attention check could be correlated with other characteristics (e.g. age, education level); therefore, excluding the sample might compromise with the representativeness of the sample. A more favoured strategy is to ‘train’ the subjects: respondents who fail the initial screening are repeatedly asked the same question till they pass. Oppenheimer et al. (2009) report that the trained sample is not different on outcomes variables from the sample that passed the test. Such a training is not possible in offline modes.

Ethical Considerations

Experimental research on the Internet can pose ethical challenges similar, as well as different from the those associated with conventional experimental research. Both American Psychological Association (see Kraut et al., 2004) and British Psychological Association as well as IRB training modules have established extensive guidelines on conducting research on the Internet. However, these need to keep up with the fast pace at which technology and Web-based communication channels—potential tools for research—are emerging. For example, Kramer et al.’s (2014) research on emotional contagion in Facebook raised serious concerns about the practice of informed consent procedures in Web-based research (Flick, 2016).

The physical absence of the experimenter may also have both benefits and drawbacks from the ethical viewpoint. One of the major benefits is a reduced sense of the perceived pressure to complete the experiment even when voluntary withdrawal is allowed; in a Web-based study, the participants experience a greater degree of freedom to withdraw from the ongoing study (Nosek et al., 2002). On the other hand, the absence of the experimenter could have negative ethical implications, inadequate debriefing especially where participation could end involuntarily due to technical issues, including broken Internet connection, power cut, or program error. This is particularly problematic in research where deception is used. For example, in experiments conducted on cyber-ostracism across countries, several participants quit the online study without subsequent debriefing. Their comments indicated potential distress with their experience (Williams et al., 2000). Strategies to counteract such problems include obtaining an email address in the beginning (if anonymity is not a concern) and providing a list of engaging FAQs to address the anticipated concerns and having the researcher available in a chat room following the participants to address their questions directly (Nosek et al., 2002).

Is the privacy of the participant protected adequately in a Web-based experiment? There may be a better chance of protecting the identity of a participant in a Web-based study as the experimenter or anyone in the research team is not having direct access to the person who is responding to these questions. Although it assumed that Internet safeguards privacy, there are potential risks during all stages

of the research process, including data collection, storage, and communication. For example, Internet Protocol (IP) address, which is a unique identification number assigned to every computer connected to the Internet, can be traced quite easily and subsequently the identity of the participant as well. To counteract this, there are online research service providers like survey tool builder, Qualtrics, which offer researchers the option to get data without the IP address to protect the privacy and confidentiality of the participants. Also, implementation of Secure Server Line (SSL), an encryption technology, can prevent this theft of data as the information encoded is meaningless in transit. Hence, as technology is evolving, so are ways for ethical conduct of Web-based research. Web-based experiments—conducted at small and medium scale—can actually aid in the process by artificially simulating the theoretical possibilities of tomorrow, thereby preparing the researchers and policy makers for ethical concerns inherent in a virtual world.

Challenges and the Way Ahead

We recommended the use of Web-based experiments for OB research. The strength of the method is also its limitation: the digital divide might exclude populations that are not users of Web-based technologies from being potential participants. The method, yes, is seriously limited in such circumstances, but within the scope of the OB research, conventionally done, mostly with corporate and non-corporate employees, the tool has immense potential use. Moreover, with increased use of smart phones, there is a likelihood that the digital divide would be bridged, providing researchers opportunities to reach out to populations of theoretical interest.

The future of this methodology lies in harnessing the technological advancements such as AI, chatbots, real-time translations, and multimedia user-interface to design experiments that simulate the current realities as well as conceivable realities of tomorrow. For example, e-leadership (Avolio et al., 2014) exercised in a digital borderless workplace might require a different set of talents and skills than have traditionally been studied in the leadership literature. Similarly, online hiring procedures, such as the recruitment Website, can affect prospective job seekers' impression of the organization (Braddy et al., 2008). Further inquiry on such topics can be facilitated with the use of Web-based experiments.

In using Web-based experimental techniques, a potential concern is how generalizable are the findings from the virtual to the 'real world'. The findings, derived from Web experiments, provide more direct insights on computer-mediated behaviour, but the theoretical rationale would make them generalizable to the offline world as well, as do the conclusions of the representative articles we summarized in the paper. Future research utilizing converging findings from lab and online experiments can further test the assumption.

Conclusion

The chapter discussed the use of Web-based experimental techniques that have become increasingly common in basic social psychological research, but are not being extensively used in OB research and pedagogy. The contexts for this discussion were two interrelated observations: experimental research has ‘fallen out of favour’ in OB research and pedagogy, and that the modern-day organizational landscape because of its scale and scope of operations is consequential to matters of social, political, and public policy relevance. Taking example of the online version of the ‘small world problem’ and the ‘implicit association test’—the relevance of Web-based experimental tools was highlighted. A primer on the procedural aspects of this tool for enthusiastic OB researchers willing to try out this tool was presented.

Present-day organizational settings are not limited to physical space. Discussions and research on organizational issues such as telecommuting or flexible workplace, the influence of social media, workers in a gig economy, leadership in the digital era, the inter-generational workforce in modern organizations were already on the rise, and the 2020 pandemic has amplified and intensified the conversations in both industry and academia. Such topics can potentially be addressed with much greater granularity and causal precision with academic experimental research that operates with a pre-defined sample size and predictive power than what other methodologies allow for. Not to talk of issues of social relevance such as susceptibility to fake news, virtual bullying, and online persuasion which could easily become interwoven with topics in organizational behaviour as the world becomes more virtual and screen-driven. Policymakers and corporate leaders, drawing upon such experimental research, can be better informed about the conditions that result in favourable or unfavourable outcomes warranting prediction, control, and intervention in a timely manner, so unabashed real-life behavioural experimentation in digitally connected world does not take us by surprise.

References

- Anderson, N., Ones, D. S., Sinangil, H. K., & Viswesvaran, C. (2002). International collaboration on the handbook of Industrial, Work and Organizational (IWO) psychology: Editorial perspectives. *The Industrial-Organizational Psychologist*, 40, 106–115.
- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, leadership and men; research in human relations* (pp. 177–190). Carnegie Press.
- Avolio, B. J., Sosik, J. J., Kahai, S. S., & Baker, B. (2014). E-leadership: Re-examining transformations in leadership source and transmission. *The Leadership Quarterly*, 25(1), 105–131.
- Banaji, M. R., & Hardin, C. D. (1996). Automatic stereotyping. *Psychological Science*, 7(3), 136–141.
- Banerjee, A. V., & Duflo, E. (2009). The experimental approach to development economics. *Annual Review of Economics, Annual Reviews*, 1(1), 151–178.

- Benartzi, S., Beshears, J., Milkman, K. L., Sunstein, C. R., Thaler, R. H., Shankar, M., Tucker-Ray, W., Congdon, W. J., & Galing, S. (2017). Should governments invest more in nudging? *Psychological Science*, 28(8), 1041–1055.
- Berinsky, A. J., Margolis, M. F., & Sances, M. W. (2014). Separating the shirkers from the workers? Making sure respondents pay attention on self-administered surveys. *American Journal of Political Science*, 58(3), 739–753.
- Birnbaum, M. H. (2000). Decision making in the lab and on the Web. In *Psychological experiments on the internet*. Academic.
- Birnbaum, M. H. (2004). Human research and data collection via the internet. *Annual Review of Psychology*, 55, 803–832.
- Bond, R. M., Fariss, C. J., Jones, J. J., Kramer, A. D., Marlow, C., Settle, J. E., & Fowler, J. H. (2012). A 61-million-person experiment in social influence and political mobilization. *Nature*, 489(7415), 295.
- Braddy, P. W., Meade, A. W., & Kroustalis, C. M. (2008). Online recruiting: The effects of organizational familiarity, website usability, and website attractiveness on viewers' impressions of organizations. *Computers in Human Behavior*, 24(6), 2992–3001.
- Brown, K. G., Charlier, S. D., Rynes, S. L., & Hosmanek, A. (2013). What do we teach in organizational behavior? An analysis of MBA syllabi. *Journal of Management Education*, 37(4), 447–471.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data. *Perspectives on Psychological Science*, 6(1), 3–5.
- Cascio, W.F., & Aguinis, H. (2008). Research in industrial and organizational psychology from 1963 to 2007: Changes, choices, and trends. *Journal of Applied Psychology*, 93(5), 1062–1081.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences* (Rev). Lawrence Erlbaum Associates Inc.
- Colquitt, J. A. (2008). From the editors publishing laboratory research in AMJ: A question of when not if. *Academy of Management Journal*, 51(4), 616–620.
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Houghton Mifflin.
- Danziger, K. (2000). Making social psychology experimental: A conceptual history, 1920–1970. *Journal of the History of Behavioral Sciences*, 36(4), 329–247.
- Davidson, D. (1967). Causal relations. *Journal of Philosophy*, 64(21), 691–703.
- Dobbin, F., & Kalev, A. (2018). Why doesn't diversity training work? The challenge for industry and academia. *Anthropology Now*, 10(2), 48–55. <https://doi.org/10.1080/19428200.2018.1493182>
- Dodds, P.S., Muhamad, R., & Watts, D. J. (2003). An experimental study of search in global social networks. *Science*, 301(5634), 827–829.
- Dunnette, M. D., & Hough, L. (1990). *Handbook of industrial and organizational psychology* (2nd ed.) Consulting Psychologists Press.
- Eden, D. (2017). Field experiments in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 91–122.
- Ferrer, R. A., Grenen, E. G., & Taber, J. M. (2015). Effectiveness of internet-based affect induction procedures: A systematic review and meta-analysis. *Emotion*, 15(6), 752.
- Flick, C. (2016). Informed consent and the Facebook emotional manipulation study. *Research Ethics*, 12(1), 14–28.
- Fraley, R. C. (2004). *How to conduct behavioral research over the Internet: A beginner's guide to HTML and CGI/Perl*. Guilford Press.
- Golembiewski, R. T. (Ed.). (2000). *Handbook of organizational consultation*. Marcel Dekker.
- Gordon, M. E., Slade, L. A., & Schmitt, N. (1986). Student guinea pigs: Porcine predictors and particularistic phenomena. *The Academy of Management Review*, 12(1), 160–163.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102(1), 4–27.
- Greenberg, J., & Tomlinson, E. C. (2004). Situated experiments in organizations: Transplanting the lab to the field. *Journal of Management*, 30(5), 703–724.

- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association task. *Journal of Personality and Social Psychology*, *74*, 1464–1480.
- Guzman, F. A., & Espejo, A. (2018). Introducing changes at work: How voice behavior relates to management innovation. *Journal of Organizational Behavior*, *40*, 73–90.
- Hafenbrack, A., & Vohs, K. (2018). Mindfulness meditation impairs task motivation but not performance. *Organizational Behavior and Human Decision Processes*, *147*, 1–15.
- Hauser, O. P., Linos, E., & Rogers, T. (2017). Innovation with field experiments: Studying organizational behaviors in actual organizations. *Research in Organizational Behavior*, *37*, 185–198.
- Henshel, R. L. (1980). The purposes of laboratory experimentation and the virtues of deliberate artificiality. *Journal of Experimental Social Psychology*, *16*(5), 466–478.
- Johnson, E. J., & Goldstein, D. G. (2003). Do defaults save lives? *Science*, *302*, 1338–1339.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations*. Wiley.
- Kramer, A. D. I., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences*, *111*(24), 8788–8790.
- Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online: Report of board of scientific affairs' advisory group on the conduct of research on the internet. *American Psychologist*, *59*(2), 105.
- Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed.). The University of Chicago Press.
- Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. *Frontiers in Psychology*, *4*, 863.
- Levitt, S. D., & List, J. A. (2007). What do laboratory experiments measuring social preferences reveal about the real world? *Journal of Economic Perspectives*, *21*(2), 153–174.
- Lewin, K., Lippitt, R., & White, R. K. (1939). Patterns of aggressive behavior in experimentally created "social climates." *The Journal of Social Psychology*, *10*, 271–299. <https://doi.org/10.1080/00224545.1939.9713366>
- Lupoli, M., Levine, E., & Greenberg, A. (2018). Paternalistic lies. *Organizational Behavior and Human Decision Processes*, *146*, 31–50.
- Luthans, F., Luthans, B. C., & Luthans, K. W. (2015). *Organizational behavior: An evidence-based approach*. Information Age Publishing (IAP).
- McGraw, K. O., & Wong, S. P. (1992). A common language effect size statistic. *Psychological Bulletin*, *111*(2), 361–365.
- McNemar, Q. (1946). Opinion-attitude methodology. *Psychological Bulletin*, *43*(4), 289–374.
- Milgram, S. (1967). The small-world problem. *Psychology Today*, *1*(1), 61–67.
- Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, *84*(3), 231–259.
- Nosek, B. A., Banaji, M. R., & Greenwald, A. G. (2002). E-research: Ethics, security, design, and control in psychological research on the internet. *Journal of Social Issues*, *58*(1), 161–176.
- Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, *45*(4), 867–872.
- Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on amazon mechanical Turk. *Judgment and Decision Making*, *5*(5), 411–419.
- Peterson, R. A. (2001). On the use of college students in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research*, *28*(3), 450–461.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903.
- Reips, U.-D. (2008). How Internet-mediated research changes science. In *Psychological aspects of cyberspace: Theory, research, applications* (pp. 268–294). Cambridge University Press.

- Reips, U.-D., & Krantz, J. H. (2010). Conducting true experiments on the web. In *Advanced methods for conducting online behavioral research* (pp. 193–216). American Psychological Association.
- Reips, U.-D. (2002). Standards for Internet-based experimenting. *Experimental Psychology*, 49(4), 243–256.
- Rogelberg, S.G. (2002). *Handbook of research methods in industrial and organizational psychology*. Blackwell Publishing.
- Scandura, T., & Williams, E. A. (2000). Research methodology in management: Current practices, trends, and implications for future research. *Academy of Management Journal*, 43(5), 1248–1264.
- Schilke, O., Levine, S. S., Kacperczyk, O., & Zucker, L. G. (2019). Special issue on experiments in organizational theory. *Organization Science*, 30(1), 232–234.
- Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54(2), 93–105.
- Singh, R. P., & Schick, A. G. (2007). Organizational behavior: Where does it fit in today's management curriculum? *Journal of Education for Business*, 82(6), 349–356.
- Soman, D. (2015). *The last mile: Creating social and economic value from behavioral insights*. University of Toronto Press.
- Sonnenfeld, J. A. (1985). Shedding light on the Hawthorne studies. *Journal of Organizational Behavior*, 6(2), 111–130.
- ten Brinke, L., & Adams, G. S. (2015). Saving face? When emotion displays during public apologies mitigate damage to organizational performance. *Organizational Behavior and Human Decision Processes*, 130, 1–12.
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.
- Thibaut, J. W. (1959/2017). *The social psychology of groups*. Routledge.
- Travers, J., & Milgram, S. (1969). An experimental study of the small world problem. *Sociometry*, 32(4), 425–443.
- Tripathi, R., Cervone, D., & Savani, K. (2018). Are the motivational effects of autonomy-supportive conditions universal? Contrasting results among Indians and Americans. *Personality and Social Psychology Bulletin*, 44(9), 1287–1301.
- Watts, D. J. (2004). *Six degrees: The science of a connected age*. WW Norton & Company.
- Williams, C. (2007). Research methods. *Journal of Business & Economic Research*, 5(3), 65–72.
- Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the internet. *Journal of Personality and Social Psychology*, 79, 748–762.

Integration Across Levels of Information Processing: A Case Study with Visual Category Learning



Sujith Thomas and Narayanan Srinivasan

Abstract Marr proposed that the human mind can be thought of as an information processing system, which can be studied at the computational, algorithmic and implementational levels. Individual studies on the specific subsystems of mind like the perceptual system have often focused on individual levels. In this chapter, we show how the results from different levels can be useful and integrated using a case study on human visual category learning. We highlight that (1) the details of behavioural studies and its results define the nature of the problem that is solved at the computational level and sometimes at the algorithmic level, (2) representations and models used at the algorithmic level can generate new hypotheses for both behavioural and neuroimaging studies, (3) results of neuropsychological and neuroimaging studies can inform and constrain the theories developed at the other two levels. This way of integrating the results across the Marr's levels of information processing can broaden our understanding of the human perceptual system and eventually our mind as a whole.

Keywords Marr's levels of information processing · Computational level · Algorithmic level · Implementational level · Visual category learning

Introduction

One way of systematically studying human cognition and mental processes would be to think of the human mind as an information processing system (Marr & Poggio, 1977). This information processing system can then be thought of as consisting

S. Thomas · N. Srinivasan (✉)

Centre of Behavioural and Cognitive Sciences, University of Allahabad, Allahabad 211002, India
e-mail: nsrini@cbcs.ac.in

S. Thomas

Department of Computer Science and Information Systems, BITS Pilani K. K. Birla Goa Campus, Goa 403726, India

N. Srinivasan

Department of Cognitive Science, Indian Institute of Technology Kanpur, Kanpur 208016, India

of three levels—computational level, algorithmic level and implementational level (Marr, 1982). These different levels can be studied independently. At the computational level, we define the computational problems that are solved by the human mind. At the algorithmic level, we are concerned with the representations and procedures that are used to solve those computational problems, and at the implementational level, we investigate the neural circuitry that is involved in realizing specific computations and algorithms.

Marr's approach is not a reductionist view. Instead, Marr envisaged integration of the high-level constraints of the computational level and the low-level constraints of the implementational level (Eliasmith & Kolbeck, 2015). Marr's levels play a distinctive and a non-redundant role (Bechtel & Shagrir, 2015), and hence, understanding all the levels is important for understanding mind.

Anderson (1991) suggests that the problem at the computational level should be specified by taking into account the constraints that are imposed by the environment. These constraints include the amount of time and computational resources that are available to a person. These constraints may also be guiding the kind of algorithms that are used, and to account for these constraints, an additional level between the computational and the algorithmic levels has been proposed (Grifths et al., 2015). There are other ways in which the environment influences the problem definition at the computational level (Bechtel & Shagrir, 2015). For example, the problem at the computational level would depend on the type of abstract, structured knowledge about the environment that is used to solve the problem (Tenenbaum et al., 2011). Bechtel and Shagrir (2015) argue that knowing how the neural circuitry is organized can help us determine what algorithms are used at the algorithmic level. Some algorithms may not be feasible given the neural circuitry that humans have. Thus, findings at each of Marr's levels can guide the research at the other levels, and this can lead towards a better understanding of the human perceptual system.

Some criticisms have also been raised against the Marr's three levels approach. Bowers and Davis (2012) argue that some of the mathematical models proposed at the computational or algorithmic level have too many free parameters, which make the models unfalsifiable. Also, these models focus on constraints at the computational level and do not give sufficient attention to the constraints imposed by biology and evolution. For example, the computations in the brain are guided by evolution, which may not lead to optimality (Hardcastle & Hardcastle, 2015). Most mathematical models do not explain how the representations and procedures at the algorithmic level are implemented by the neural circuitry. Also, most models cannot make predictions about the dysfunctional behaviour of the brain (Love, 2015). Zednik and Jäkel (2016) has provided a response to some of the above criticisms.

Marr's levels of information processing may not be distinct (Hardcastle & Hardcastle, 2015). For example, it may not be possible to disassociate computation at the computational level from the representation at the algorithmic level. Also, it may not be possible to disassociate implementation from the algorithm. Love (2015) also provides a similar view where the algorithmic level can help explain the brain imaging data, which in turn can be used to choose between competing algorithms. Algorithmic level can also provide the necessary constraints and define the problem

being solved at the computational level. Price (2018) uses data from neuroimaging and neuropsychological studies and shows how integration can happen across the implementational and computational levels.

In this chapter, we use a case study in visual category learning to show how integration can happen across all three Marr's levels. The behavioural studies demonstrate the problems that are solved by the human perceptual system. The mathematical models that can predict the behavioural data help us understand the representations and algorithms that are used. These models can also predict neuropsychological and neuroimaging data. We show how results from each level inform the other levels, and how integrating the findings can lead to a richer understanding of the human perceptual system.

Visual Category Learning: A Case Study

Concepts and categories help us to express ideas in a concise manner. Complex concepts and ideas are learned in terms of simpler concepts and categories. For this reason, categories are often considered to be the building blocks of knowledge. In this chapter, we highlight some of the insights obtained about human category learning from behavioural studies, computational modelling and neuroscientific studies.

For a long time, it was assumed that categories could be defined using a set of necessary and sufficient conditions. This has come to be known as the classical notion of categories. Let us consider the concept *bachelor*. The classical theory posits that the concept *bachelor* could be defined using two conditions: being male and being unmarried. Each of these two conditions are necessary; that is, a person cannot be a bachelor by satisfying just one of the two conditions. Also, the two conditions are sufficient, which means that if the two conditions are satisfied then we do not need any additional conditions to decide whether someone is a bachelor.

Many concepts in science have a strict definition, which can be expressed in terms of a set of necessary and sufficient conditions. However, there are concepts that cannot be defined in this manner. This problem was first noticed by the philosopher Ludwig Wittgenstein, who argued that a concept like *game* cannot be defined in terms of a set of necessary and sufficient conditions. Wittgenstein argued that members of the concept *game* (card games, ball games, lego construction games, etc.) share overall similarities, which he called family-resemblances (Wittgenstein, 1953).

In addition to the philosophical arguments, empirical studies have also posed a challenge to the classical theory of concepts. Rosch and Mervis (1975) showed that categories that had a higher family-resemblance were learned faster, and its members were correctly categorized in a lesser amount of time. By higher family-resemblance, we mean those categories whose members are highly similar to one another. If humans learn categories in terms of definitions, then the degree of family-resemblance within a category should have no influence on how easily the category is learned. The category members that shared more features with other category members were judged to be more prototypical of the category (Rosch & Mervis,

1975). This means that the participants considered category membership to be graded and not absolute as entailed by the classical theory.

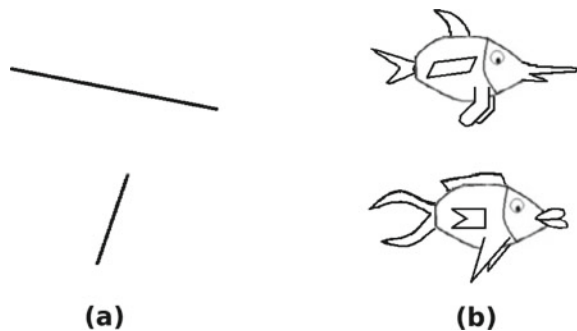
The challenges posed to the classical theory of concepts led to the development of alternate theories that relied more on the similarity between objects. Prototype theory and exemplar theory are two such theories. According to the prototype theory, a category is learned in terms of a summary representation of the features that occur more frequently in the category. An object that is formed by these frequent features is called the prototype of a category. For example, the prototype of a category like *bird* will include features like beak, wings, lays eggs, etc. An object is considered to be a member of a category if it is sufficiently similar to the prototype of the category. The exemplar theory posits that a category is learned by remembering the different members of a category that were encountered. Membership is decided based on how similar an object is to the previously seen members of a category.

Human category learning studies often use artificial stimuli that vary along a fixed set of dimensions. This allows for clearly defining the different features, which in turn makes computational modelling easier. Also, the artificial stimuli allows the researchers to control for any background knowledge that participants may have about the categories. For example, if real-world categories are used instead, then some additional knowledge about a certain species of birds or some piece of furniture may influence participants' categorization behaviour. However, use of artificial stimuli do have their drawbacks. One drawback is that the small number of feature dimensions; real-world categories typically have a large number of feature dimensions.

Figure 1 shows two sets of stimuli (a and b). The stimuli in (a) are lines that vary along two dimensions: line length and line orientation. Each stimulus can be constructed by giving different values to the two stimuli dimensions. Hence, a stimulus can be represented as a point in a two-dimensional stimulus space, where each dimension corresponds to a stimuli dimension.

Figure 1b shows fish-like stimuli that vary along five dimensions. The different dimensions of the stimuli are shape of mouth, upper fin, lower fin, tail and body pattern. Each of the five dimensions of the stimuli takes binary values. The two types of stimuli shown in Fig. 1 have been used in various category learning studies (Ashby et al., 2002; Rabi et al., 2015).

Fig. 1 Line stimuli in **a** have two dimensions: line length and line orientation. Fish-like stimuli in **b** have five dimensions: shape of mouth, tail, upper fin, lower fin and body pattern



Common Categorization Strategies

Category learning studies often compare two categorization strategies—categorization based on a few stimulus dimensions and categorization based on all the dimensions. Categorization that is based on one or two dimensions is often referred to as a rule-based categorization (Ashby et al., 1999; Minda & Miles, 2009), where the category rule has the property that it can be verbalized as a short sentence (Rabi & Minda, 2017). The number of dimensions forming the rule in a rule-based categorization is always less than the total number of stimuli dimensions.

There are categorization strategies that use all the stimuli dimensions for determining the category of an object. These categorization strategies are referred to by different names, such as family-resemblance strategy, similarity-based strategy and information-integration. In family-resemblance categorization, category membership is determined by the overall similarity of an object with the members of a category. The terms family-resemblance and similarity-based strategies are often used interchangeably. The term information-integration strategy is used when the stimuli dimensions take values from an interval scale, and the correct categorization depends on values of all the stimuli dimensions. Figure 2 shows examples of rule-based and information-integration category structures for a two-dimensional stimuli.

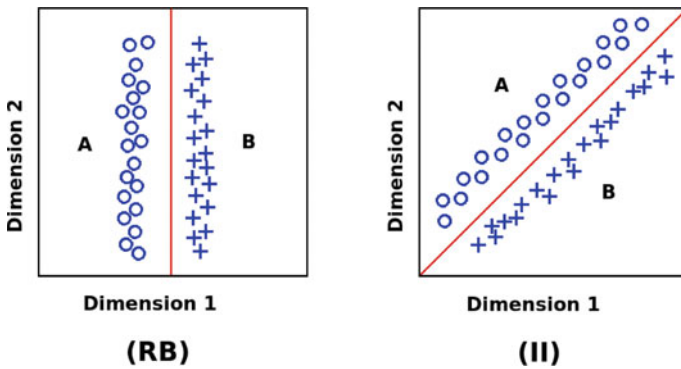


Fig. 2 The figure shows two-dimensional stimulus spaces that have two categories A and B. The values that a stimulus takes along its two dimensions can be used to represent the stimulus as a point in the stimulus space. The stimuli, that belong to category A, are represented using the '+' symbol, and category B objects are represented using 'O' symbol. The figure shows two category structures that are commonly used in the literature. Category structure (RB) is the rule-based (RB) category structure, where only one of the stimuli dimension is relevant for categorization. Category structure (II) is the information-integration (II) category structure, where both dimensions are relevant for categorization

Category Learning Paradigms

Category learning studies use different paradigms that can be broadly divided into two types: supervised learning and unsupervised learning. In supervised learning, participants first go through a training phase, which is then followed by a final test phase. In the training phase, participants are shown the training stimuli one by one and are informed about the correct category of each stimulus. In the test phase, participants are shown previously unseen stimuli and are asked to categorize them.

The supervised learning is further divided into classification learning and observational learning based on the nature of the training phase. In classification learning, the training stimuli is presented one by one, and the participants are asked to categorize each stimulus. After the participant responds, the correct category of the training stimulus is displayed. The classification learning paradigm is also known as feedback learning.

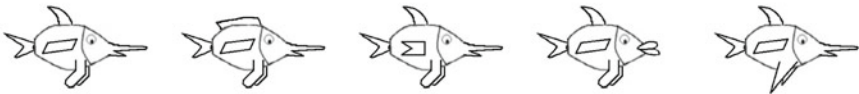
Observational learning is the second type of supervised learning. In observational learning, the training stimuli is presented one by one along with its category label. Participants are not required to categorize the training stimuli. The classification learning and observational learning differ only in the training phase. Most category learning studies follow the supervised classification (feedback) learning paradigm.

Figure 3 shows an example of the stimuli that is used in supervised category learning. The training set consists of five objects belonging to category A and five belonging to category B. The objects that belong to a category are very similar to each other; that is, the categories have a high degree of family-resemblance. The

Training Stimuli (Category A)



Training Stimuli (Category B)



Transfer Stimuli

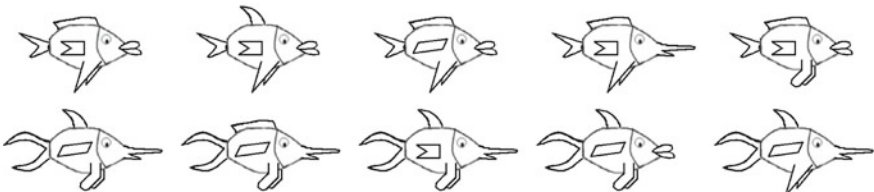


Fig. 3 In supervised learning paradigm, the stimuli labelled category A and B are used in the training phase. The stimuli labelled 'Transfer Stimuli' is used in the testing phase. The transfer stimuli reveal the category representations that participants learned during the training phase

objects that belong to category A have the same tail shape. This is the only feature that is common across all the members of category A. The objects belonging to the two categories can be identified using a rule-based strategy, where the shape of the tail forms the unidimensional rule. The objects belonging to the two categories can also be identified using a family-resemblance strategy. In the test phase, participants are presented the transfer stimuli, which is different from the training stimuli. These type of stimuli allow researchers to study the strategy that the participants prefer or employ. Stimuli similar to the one shown in Fig. 3 were used in Rabi et al. (2015).

Unsupervised learning is another category learning paradigm that has been used (Pothos et al., 2011). In unsupervised learning, participants are allowed to sort the stimuli into as many categories (usually restricted to two) as they find natural and intuitive (Ashby et al., 1999; Ell & Ashby, 2012).

Researchers have used different approaches to study category learning, which include behavioural studies, modelling and neuroscientific studies. These address issues corresponding to Marr's three levels of information processing.

Computational Level: Perspectives from Behavioural Studies

Behavioural studies are performed with humans to identify the problems that are solved at the computational level. The variables that influence categorization strategy and the experimental environment help us define the problem.

As mentioned before, family-resemblance influences category learning. Family-resemblance refers to the degree of similarity among the members of a category. When family-resemblance is high, the points in the stimulus space that correspond to the category will form a tight cluster. Distinctiveness of a category refers to the degree of similarity of the members of a category with the members of another category. When a category is distinct, then the points corresponding to the category (in the stimulus space) will be far away from the points corresponding to other categories.

Rosch and Mervis (1975) studied the effect of family-resemblance and category distinctiveness on supervised classification learning. The results show that members of categories having a high family-resemblance are learned faster, are identified more quickly (RTs were low) and are judged to be more prototypical. Even when observational learning paradigm is used, accuracies are much higher for category having a greater family-resemblance (Kloos & Sloutsky, 2008). Rosch and Mervis (1975) also showed that participant accuracies are high for supervised classification learning when the categories are more distinct. Similar results have been reported for supervised observational learning and even for unsupervised learning (Vong, Perfors, & Navarro, 2014).

Ashby et al. (2002) compared the effect of supervised classification learning with supervised observational learning using the RB and the II category structures. The RB category structure is learned faster and with a greater accuracy for both classification and observational learning. The II category structure could be learned

using classification learning only and not using observational learning. Reducing the family-resemblance in the RB category structure—by spreading out the category members in the stimulus space—also leads to significant drop in accuracies for the observational learning (Edmunds et al., 2015). The above results show that classification learning is better when the task is to learn to discriminate between two categories. However, observational learning leads to better learning of the non-diagnostic stimulus dimensions—that is, those dimensions that do not form the categorization rule (Levering & Kurtz, 2015).

Figure 3 shows categories of fish-like stimuli that have a high degree of family-resemblance and also a common feature (shape of tail). Instead of these categories, we can also define categories that are based purely on a Boolean formula. For example, we can have a category of fish-like stimuli that either have a long tail or a short mouth. The Boolean formula corresponding to such a category will be a disjunction of features. Shepard et al. (1961), in their classic study, used categories that could be represented using different types of Boolean formulas. They found that categories that were based on conjunction of features (e.g. long tail and short mouth) were much easier to learn compared to other categories whose formulas had disjunction of features. The easier learning of conjunction of features was reported for both classification and observational learning. This study has been replicated with a much larger set of participants (Nosofsky et al., 1994).

The difficulty of learning a Boolean formula-based category can be measured using the notion of Boolean complexity (Feldman, 2000). Boolean complexity was defined as the number of unique literals (features) in the minimal formula corresponding to a category. A minimal formula is the Boolean formula that represents a category and uses minimum number of literals. Vigo (2006) found the Boolean complexity of a category to be a good measure of learning difficulty for most cases. However, there are cases where the Boolean complexity increases, but the category becomes easier to learn. For example, Yim et al. (2014) use categories that are based on a conjunctive formula that contains either one feature or three features. The category based on three features conjunctive formula was found to be easier to learn. Other models like the concept invariance model (CIM) (Vigo (2009)) and generalized invariance structure theory (GIST) (Vigo, 2013) have been proposed to provide a better measure of Boolean concept complexity. The complexity values predicted by the above models agree with the empirical results obtained in Shepard et al. (1961) and Feldman (2000).

As mentioned earlier, Fig. 3 shows two categories that can be correctly categorized either by using a rule-based or a similarity-based algorithm. Participants that learn these categories, using either classification learning or observational learning, exhibit higher accuracy for the rule (fully diagnostic) dimension compared to the non-rule (partially diagnostic) dimensions. In Fig. 3, the rule dimension is the tail, because it can correctly categorize all the training stimuli. In other words, the tail dimension is fully diagnostic. Also, participants prefer rule-based categorization strategy over a family-resemblance strategy when trained using classification learning or observational learning (Minda & Miles, 2009; Rabi et al., 2015). Participants also exhibit some knowledge about the non-diagnostic dimensions (Conaway & Kurtz,

2014; Levering & Kurtz, 2015), even though they prefer a rule-based categorization strategy.

Algorithmic Level: Perspectives from Mathematical Modelling

A mathematical model describes the representation and the algorithm that takes an input and produces an output. Mathematical models provide a bridge between the computational and the neuroscientific levels of information processing. A model that is based on finer details at the neuroscientific level can provide better explanations at the algorithmic and computational levels (Staford, 2012). Mathematical modelling is always based on some theory. A model tells us how the various terms in the theory can be mapped onto the input and output variables of the model. In this manner, the model provides a formal operational definition for the various terms used in the theory.

The model parameters are often fine-tuned so that the output of the model fits the data obtained from a behavioural experiment. The model does not prove its theory, but it provides additional support for the theory (Staford, 2012). Another way models can be used is by showing that the model fails to fit a behavioural data. In this case, the failed modelling leads to further refinement of its underlying theory. Staford (2012) points out that unless the purpose of modelling is not explicitly stated, it cannot be evaluated whether the modelling was successful. Also, when a model has a lot of free parameters, then it can fit almost any data. Hence, modellers try to minimize the number of free parameters.

A lot of models have been proposed that capture various aspects of human category learning. Generalized context model (Nosofsky, 1986) (GCM) is a model that is based on the exemplar theory. GCM assumes that participants can recall all the previously seen positive and negative instances of a category. The probability that an item belongs to a category J is given by the following formula:

$$P(J|i) = \frac{b_J S_{iJ}}{\sum_{K=1}^n b_K S_{iK}} \quad (1)$$

where S_{iJ} is the similarity between stimulus i and category J , and b_J is the prior probability for category J . The similarity between stimulus i and category J can be found by summing up the similarity between stimulus i and each member of category J as shown below:

$$S_{iJ} = \sum_{j=1}^{nJ} s_{iJ} \quad (2)$$

The similarity between two items i and j (denoted as s_{ij}) is given by the Shepard's universal law of generalization (Shepard, 1987):

$$s_{ij} = e^{-cd_{ij}^p} \quad (3)$$

where c and p are freely estimated parameters, and d_{ij} is the distance between stimulus i and stimulus j in the psychological space. Psychological space is the stimulus space with weights assigned to each stimulus dimension. Multidimensional scaling (MDS) approach is used to adjust these weights so that the GCM better fits the behavioural data. After fitting the GCM, if a stimuli dimension received a higher weight, it means that participants gave more importance to this dimension during the categorization task.

Viken et al. (2002) used the MDS technique to show that participants, who exhibited bulimic symptoms, paid more attention to body size dimension of the stimuli instead of the facial affect dimension. More recently, Nosofsky et al. (2018) again used the MDS technique to find the dimensions that were more important for identifying different categories of rocks. The authors suggest that these techniques can be used for teaching the rock categories in classroom. For a detailed tutorial on GCM, see Nosofsky (2011).

Posner and Keele (1968) used dot-pattern stimuli and showed that participants categorized the prototype more accurately. The results in Donald et al. (1973) show that the prototype was classified with more accuracy even few days after the study. Rosch and Mervis (1975) showed that the category instances that have more features in common with other category members were learned faster and were judged to be more prototypical members of the category. These classical studies support the prototype theory according to which a category is represented based on the central tendency of the category members.

The prototype model is a formal description of the prototype theory. Minda and Smith (2001) argue that the success of the exemplar-based models—like the generalized context model—could be because the stimuli categories that were used in the experiments were small, low-dimensional and poorly differentiated. The results in Minda and Smith (2001) show that, for well-differentiated category structures, the prototype model outperforms the exemplar-based model. The study conducted by Minda and Smith (2001) is an example where models are compared to determine which theory better explains the empirical data.

The prototype model computes the similarity of a new stimulus with each of the category prototypes. Shepard's universal law of generalization is again used for computing the similarity (see Eq. 1). The probability that a participant chooses category J for stimulus i is given by

$$P(J|i) = \frac{S_{iJ}}{\sum_{K=1}^n S_{iK}} \quad (4)$$

where S_{ij} denotes the similarity between stimulus i and prototype J , and n denotes the number of categories that are present. The prototype model uses a more abstract category representation compared to the exemplar-based model. Also, it uses fewer free parameters and hence is less prone to overfitting. Minda and Smith (2011) provide a tutorial and implementation recommendations for the prototype model.

Both the GCM and PM models use a similarity metric for generalization. Due to this, these models cannot perform well for the XOR category structure. Kurtz (2015) proposes divergent autoencoder (DIVA), which is a generative model capable of producing exemplars that are likely to be members of a given category. Conway and Kurtz (2017) show that DIVA gives a better account of behavioural data compared to both GCM and PM.

Waldron and Ashby (2001) have reported a behavioural study where participants had to perform a concurrent numerical stroop task while learning the RB and II category structures. The results show that the stroop task affected the learning of RB category structure more than the II category structure. The authors hypothesized that the results were due to multiple systems of category learning in the brain, where the stroop task interferes with one system more than the other. The results were better modelled by COVIS (Ashby et al., 1998), which is a neuropsychological model. COVIS consists of separate systems for RB category learning (verbal system) and II category learning (implicit system). Initially, COVIS prefers the verbal system, but the preference switches to the implicit system if the implicit system starts performing better. For a tutorial on COVIS, see Ashby et al. (2011).

Some factors that influence categorization strategy, like cultural differences, can be difficult to incorporate into a mathematical model. Norenzayan et al. (2002) have reported cultural differences between East Asian and European American populations regarding the preference for a rule-based or a family-resemblance-based categorization strategy. Norenzayan et al. (2002) report that European Americans tend to show a greater preference for a rule-based strategy compared to their East Asian counterparts. However, this result could not be replicated by Murphy et al. (2017), where the results show that two-thirds of the participants preferred a family-resemblance strategy over a rule-based categorization strategy. Murphy et al. (2017) attribute the reason for the non-replication of Norenzayan et al. (2002) study to factors like differences in stimuli and experimental procedure. Thibaut et al. (2018) identify several factors that could influence the preference for either a rule-based or a family-resemblance-based categorization strategy. These include size of the categories in the training set, number of times the training stimuli is presented and the similarity of the transfer stimuli to the training stimuli. It is worth noting that both Murphy et al. (2017) and Thibaut et al. (2018) use a training procedure that is different from the classification learning and observational learning paradigms that are commonly used in other studies. Potential differences in strategies across cultures would reflect in the algorithms employed, and future models would need to incorporate such differences.

How factors like working memory capacity and response time limit influence categorization algorithms have also not been sufficiently explained. Craig and Lewandowsky (2012) show that working memory capacity does not influence the choice of categorization strategy. However, the results show that people with greater

working memory capacity were more accurate with their preferred categorization strategy. Current mathematical models do not provide an explanation for this effect. Smith et al. (2015) show that when participants must respond within 500 ms, they tend to prefer a rule-based strategy. Category structures used in Smith et al. (2015) were similar to RB and II categories shown in Fig. 2. Current mathematical models ignore such effects of response time limit.

Pothos and Wills (2011) provide tutorials for the various models of category learning. For a discussion of advantages and drawbacks of mathematical modelling, see Murphy (2011).

Implementational Level: Insights from Neuropsychological and Neuroimaging Studies

Neuropsychological and neuroimaging studies try to identify the brain regions that are involved in category learning. As mentioned earlier, behavioural studies conducted by Waldron and Ashby (2001) and the COVIS model (Ashby et al., 2011) both support the hypothesis that human category learning is mediated by multiple systems in the brain.

Robinson et al. (1980) used the Wisconsin Card Sorting Task, which can test a person's abstract reasoning ability, to compare subjects having lesion in the frontal lobe with those having lesion in other regions. The results show that performance of the frontal lesion group was impaired when compared to the non-frontal lesion group. This indicated that the frontal lobe could be mediating abstract reasoning like the ones required for rule-based categorization.

Maddox and Filoteo (2001) studied patients in different stages of having the Parkinson's disease. The disease affects the striatum during the early stages and the frontal regions of the brain only at the advanced stages. The results in Maddox and Filoteo (2001) show that II category learning is impaired for patients in the early stages of the disease, but the RB category learning is not impaired. This shows that the striatum is more important for II category learning compared to RB category learning. Maddox and Filoteo (2001) also found that the performance of the patients in the Wisconsin Card Sorting Task was correlated with RB category learning, but not with II category learning. This may indicate the involvement of the frontal lobe in RB category learning. Overall, the correlations indicate that different brain regions are involved in RB and II category learning.

Ashby and Ell (2001) has reviewed several neuropsychological studies and argued that the learning of RB categories, II categories and prototype distortion categories are mediated by different brain regions. Roeder et al. (2017) provide a more recent review of studies that use neurological patients as participants. Roeder et al. (2017) have argued that a frontal-based explicit system mediates RB category learning and a basal ganglia-based implicit system mediates II category learning.

Nomura et al. (2006) used functional neuroimaging (fMRI) technique to test the multiple systems theory of category learning. Nomura et al. (2006) used RB and II category structures, which were matched for overall task difficulty. The results show that anterior medial temporal lobe was more active during the RB category learning, and the caudate nucleus was more active during the II category learning. The results support the theory that RB category learning depends on the hippocampal-based declarative memory, and II category learning depends on basal ganglia-based procedural memory.

Other studies using the fMRI technique have shown that during the early stages of RB category learning increased activity is observed in the medial temporal lobe, head of the caudate nucleus, anterior cingulate and prefrontal cortex (Filoteo et al., 2005; Helie et al., 2010). During II category learning, increased activity is observed in the putamen, and the head and the tail of caudate nucleus (Waldschmidt & Ashby, 2011). Cincotta and Seger (2007) show that the head of the caudate nucleus could be mediating the processing of feedback during supervised learning. This provides an explanation for why the head of the caudate nucleus is active during both RB and II category learning.

Automaticity is developed when RB and II category learning task is performed over thousands of times spanning multiple training sessions. As discussed above, unique regions of the brain are active during the early stages of RB and II category learning. But once automaticity is achieved, only the cortical motor regions are active for both RB and II category learning (Soto et al., 2013). The results observed when automaticity is attained cannot be explained by the current theories of category learning. As these results are confirmed by more studies, it should lead to the theory being modified, and an updated COVIS model would be proposed (Ashby & Valentin, 2017).

Generalized context model (GCM) is a computational model based on the exemplar theory. GCM was inspired by the results of behavioural studies and has provided good fits to a large number of behavioural data. The theory assumes that all the exemplars of a category can be recalled from memory. However, neuroimaging studies of category learning (Soto et al., 2013) do not show major activity in the hippocampus, which is associated with memory formation. This has led Ashby and Rosedahl (2017) to propose a computational model for the exemplar theory, which is based on the neural plasticity in cortical-striatal synapses. The study claims that the model is computationally equivalent to the GCM and can account for the neuroimaging studies as well.

Discussion and Conclusion

In this chapter, we have described how human cognition can be thought of as an information processing system that has three different levels that include computational, algorithmic and implementational levels. We have described how integration can happen across these levels using a case study on visual category learning.

The details of the behavioural studies and its results can help us define the problems that are solved at the computational level. For example, the behavioural studies in visual category learning show that a category is easier to learn when it has a high family-resemblance and distinctiveness. So, the mathematical models proposed at the algorithmic level must be able to account for this. We have shown that the results of behavioural studies in visual category learning support the prototype and the exemplar models of category learning at the algorithmic level.

Sometimes a model fails to explain the behavioural data. For example, in visual category learning, participants sometimes use a different (rule-based) categorization strategy. This failure of a model to explain the data leads to further hypotheses for behavioural studies. The above preference for a different categorization strategy could be due to factors like category structure, limitations on response time or some hitherto unknown factors. Thus, the failure at the algorithmic level can lead to a deeper understanding of the problems that are solved at the computational level.

One of the major conclusions that result from the behavioural studies in visual category learning is that there should be multiple systems of category learning at the implementational level of the brain. This conclusion is supported by results from the neuropsychological and neuroimaging studies. This shows that we can use the results at one of Marr's levels to predict the results at other levels.

Mathematical models like the GCM often provide a good fit for the behavioural data. The free parameters of the best fitting model give us insights into the stimuli dimensions that participants paid more attention to. This can lead to more testable hypotheses at the computational and implementational levels. Some models, like the COVIS and SUSTAIN, are based on neuroscientific studies, and these can also generate new hypotheses for more neuroimaging studies.

Thus, we see that the results at each of Marr's levels can inform—and sometimes constrain—the theories at other levels. This way of integrating the results from different levels can lead to a richer and more holistic understanding of the human mind.

Acknowledgements Authors acknowledge Department of Science and Technology, Government of India, for financial support vide Reference No. SR/CSRI/PDF-49/2016 under Cognitive Science Research Initiative (CSRI) to Dr. Sujith Thomas.

References

- Anderson, J. R. (1991). The adaptive nature of human categorization. *Psychological Review*, 98(3), 409.
- Ashby, F. G., Alfonso-Reese, L. A., Waldron, E. M., et al. (1998). A neuropsychological theory of multiple systems in category learning. *Psychological Review*, 105(3), 442.
- Ashby, F. G., & Ell, S. W. (2001). The neurobiology of human category learning. *Trends in Cognitive Sciences*, 5(5), 204–210.
- Ashby, F. G., Maddox, W. T., & Bohil, C. J. (2002). Observational versus feedback training in rule-based and information-integration category learning. *Memory & Cognition*, 30(5), 666–677.

- Ashby, F. G., Paul, E. J., & Maddox, W. T. (2011). Covis. In *Formal approaches in categorization* (pp. 65–87).
- Ashby, F. G., Queller, S., & Berretty, P. M. (1999). On the dominance of unidimensional rules in unsupervised categorization. *Perception & Psychophysics*, *61*(6), 1178–1199.
- Ashby, F. G., & Rosedahl, L. (2017). A neural interpretation of exemplar theory. *Psychological Review*, *124*(4), 472.
- Ashby, F. G., & Valentin, V. V. (2017). Multiple systems of perceptual category learning: Theory and cognitive tests. In *Handbook of categorization in cognitive science (second edition)* (pp. 157–188). Elsevier.
- Bechtel, W., & Shagrir, O. (2015). The non-redundant contributions of Marr's three levels of analysis for explaining information-processing mechanisms. *Topics in Cognitive Science*, *7*(2), 312–322.
- Bowers, J. S., & Davis, C. J. (2012). Bayesian just-so stories in psychology and neuroscience. *Psychological Bulletin*, *138*(3), 389.
- Cincotta, C. M., & Seger, C. A. (2007). Dissociation between striatal regions while learning to categorize via feedback and via observation. *Journal of Cognitive Neuroscience*, *19*(2), 249–265.
- Conaway, N., & Kurtz, K. J. (2014). Now you know it, now you don't: Asking the right question about category knowledge. In *Proceedings of the 36th annual meeting of the Cognitive Science Society* (pp. 2062–2067).
- Conaway, N., & Kurtz, K. J. (2017). Similar to the category, but not the exemplars: A study of generalization. *Psychonomic Bulletin & Review*, *24*(4), 1312–1323.
- Craig, S., & Lewandowsky, S. (2012). Whichever way you choose to categorize, working memory helps you learn. *The Quarterly Journal of Experimental Psychology*, *65*(3), 439–464.
- Donald, H., Joseph, C., Don, C., David, G., & Steven, S. (1973). Prototype abstraction and classification of new instances as a function of number of instances defining the prototype. *Journal of Experimental Psychology*, *101*(1), 116.
- Edmunds, C., Milton, F., & Wills, A. J. (2015). Feedback can be superior to observational training for both rule-based and information-integration category structures. *The Quarterly Journal of Experimental Psychology*, *68*(6), 1203–1222.
- Eliasmith, C., & Kolbeck, C. (2015). Marr's attacks: On reductionism and vagueness. *Topics in Cognitive Science*, *7*(2), 323–335.
- Ell, S. W., & Ashby, F. G. (2012). The impact of category separation on unsupervised categorization. *Attention, Perception, & Psychophysics*, *74*(2), 466–475.
- Feldman, J. (2000). Minimization of boolean complexity in human concept learning. *Nature*, *407*(6804), 630–633.
- Filoteo, J. V., Maddox, W. T., Simmons, A. N., Ing, A. D., Cagigas, X. E., Matthews, S., et al. (2005). Cortical and subcortical brain regions involved in rule-based category learning. *Neuroreport*, *16*(2), 111–115.
- Griffiths, T. L., Lieder, F., & Goodman, N. D. (2015). Rational use of cognitive resources: Levels of analysis between the computational and the algorithmic. *Topics in Cognitive Science*, *7*(2), 217–229.
- Hardcastle, V. G., & Hardcastle, K. (2015). Marr's levels revisited: Understanding how brains break. *Topics in Cognitive Science*, *7*(2), 259–273.
- Helie, S., Roeder, J. L., & Ashby, F. G. (2010). Evidence for cortical automaticity in rule-based categorization. *Journal of Neuroscience*, *30*(42), 14225–14234.
- Kloos, H., & Sloutsky, V. M. (2008). What's behind different kinds of kinds: Effects of statistical density on learning and representation of categories. *Journal of Experimental Psychology: General*, *137*(1), 52–72.
- Kurtz, K. J. (2015). Chapter three-human category learning: Toward a broader explanatory account. *Psychology of Learning and Motivation*, *63*, 77–114.
- Levering, K. R., & Kurtz, K. J. (2015). Observation versus classification in supervised category learning. *Memory & Cognition*, *43*(2), 266–282.
- Love, B. C. (2015). The algorithmic level is the bridge between computation and brain. *Topics in Cognitive Science*, *7*(2), 230–242.

- Maddox, W. T., & Filoteo, J. V. (2001). Striatal contributions to category learning: Quantitative modeling of simple linear and complex nonlinear rule learning in patients with parkinson's disease. *Journal of the International Neuropsychological Society*, 7(6), 710–727.
- Marr, D. (1982). *Vision: A computational investigation into the human representation and processing of visual information*. MIT Press. Cambridge, Massachusetts; Marr, D., & Poggio, T. (1977). From understanding computation to understanding neural circuitry. *Neurosciences Research Program Bulletin*, 15, 470–488.
- Marr, D., & Poggio, T. (1977). From understanding computation to understanding neural circuitry. *Neurosciences Research Program Bulletin*, 15, 470–488.
- Minda, J. P., & Miles, S. J. (2009). Learning new categories: Adults tend to use rules while children sometimes rely on family resemblance. In *Proceedings of the 31st annual conference of the cognitive science society* (pp. 1518–1523).
- Minda, J. P., & Smith, J. D. (2001). Prototypes in category learning: The effects of category size, category structure, and stimulus complexity. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 27(3), 775.
- Minda, J. P., & Smith, J. D. (2011). Prototype models of categorization: Basic formulation, predictions, and limitations. *Formal approaches in categorization*, 40–64.
- Murphy, G. L. (2011). The contribution (and drawbacks) of models to the study of concepts. *Formal Approaches in Categorization*, 299–312.
- Murphy, G. L., Bosch, D. A., & Kim, S. (2017). Do Americans have a preference for rule-based classification? *Cognitive Science*, 41(8), 2026–2052.
- Nomura, E., Maddox, W., Filoteo, J., Ing, A., Gitelman, D., Parrish, T., Mesulam, M. M., & Reber, P. (2006). Neural correlates of rule-based and information-integration visual category learning. *Cerebral Cortex*, 17 (1), 37–43.
- Norenzayan, A., Smith, E. E., Kim, B. J., & Nisbett, R. E. (2002). Cultural preferences for formal versus intuitive reasoning. *Cognitive Science*, 26(5), 653–684.
- Nosofsky, R. M. (1986). Attention, similarity, and the identification-categorization relationship. *Journal of Experimental Psychology: General*, 115(1), 39.
- Nosofsky, R. M. (2011). The generalized context model: An exemplar model of classification. In *Formal approaches in categorization* (pp. 18–39).
- Nosofsky, R. M., Gluck, M. A., Palmeri, T. J., McKinley, S. C., & Gauthier, P. (1994). Comparing modes of rule-based classification learning: A replication and extension of Shepard, Hovland, and Jenkins (1961). *Memory & Cognition*, 22(3), 352–369.
- Nosofsky, R. M., Sanders, C. A., & McDaniel, M. A. (2018). A formal psychological model of classification applied to natural-science category learning. *Current Directions in Psychological Science*, 1–7.
- Posner, M. I., & Keele, S. W. (1968). On the genesis of abstract ideas. *Journal of Experimental Psychology*, 77 (3p1), 353.
- Pothos, E. M., Perlman, A., Bailey, T. M., Kurtz, K., Edwards, D. J., Hines, P., & McDonnell, J. V. (2011). Measuring category intuitiveness in unconstrained categorization tasks. *Cognition*, 121(1), 83–100.
- Pothos, E. M., & Wills, A. J. (2011). *Formal approaches in categorization*. Cambridge University Press.
- Price, C. J. (2018). The evolution of cognitive models: From neuropsychology to neuroimaging and back. *Cortex*, 37–49.
- Rabi, R., Miles, S. J., & Minda, J. P. (2015). Learning categories via rules and similarity: Comparing adults and children. *Journal of Experimental Child Psychology*, 131, 149–169.
- Rabi, R., & Minda, J. P. (2017). Familiarization may minimize age-related declines in rule-based category learning. *Psychology and Aging*, 32(7), 654.
- Robinson, A. L., Heaton, R. K., Lehman, R. A., & Stilson, D. W. (1980). The utility of the wisconsin card-sorting test in detecting and localizing frontal lobe lesions. *Journal of Consulting and Clinical Psychology*, 48(5), 605.

- Roeder, J. L., Maddox, W. T., & Filoteo, J. V. (2017). The neuropsychology of perceptual category learning. In *Handbook of categorization in cognitive science (second edition)* (pp. 189–225). Elsevier.
- Rosch, E., & Mervis, C. B. (1975). Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology*, 7(4), 573–605.
- Shepard, R. N. (1987). Toward a universal law of generalization for psychological science. *Science*, 237(4820), 1317–1323.
- Shepard, R. N., Hovland, C. I., & Jenkins, H. M. (1961). Learning and memorization of classifications. *Psychological Monographs: General and Applied*, 75(13), 1–42.
- Smith, J. D., Zakrzewski, A. C., Herberger, E. R., Boomer, J., Roeder, J. L., Ashby, F. G., & Church, B. A. (2015). The time course of explicit and implicit categorization. *Attention, Perception, & Psychophysics*, 1–15.
- Soto, F. A., Waldschmidt, J. G., Helie, S., & Ashby, F. G. (2013). Brain activity across the development of automatic categorization: A comparison of categorization tasks using multi-voxel pattern analysis. *NeuroImage*, 71, 284–297.
- Staford, T. (2012). How do we use computational models of cognitive processes? In *Connectionist models of neurocognition and emergent behavior: From theory to applications* (pp. 326–342). World Scientific.
- Tenenbaum, J. B., Kemp, C., Griffiths, T. L., & Goodman, N. D. (2011). How to grow a mind: Statistics, structure, and abstraction. *Science*, 331(6022), 1279–1285.
- Thibaut, J.-P., Gelaes, S., & Murphy, G. L. (2018). Does practice in category learning increase rule use or exemplar use-or both? *Memory & Cognition*, 1–14.
- Vigo, R. (2006). A note on the complexity of boolean concepts. *Journal of Mathematical Psychology*, 50(5), 501–510.
- Vigo, R. (2009). Categorical invariance and structural complexity in human concept learning. *Journal of Mathematical Psychology*, 53(4), 203–221.
- Vigo, R. (2013). The gist of concepts. *Cognition*, 129(1), 138–162.
- Viken, R. J., Treat, T. A., Nosofsky, R. M., McFall, R. M., & Palmeri, T. J. (2002). Modeling individual differences in perceptual and attentional processes related to bulimic symptoms. *Journal of Abnormal Psychology*, 111(4), 598.
- Vong, W. K., Perfors, A., & Navarro, D. J. (2014). The relevance of labels in semi-supervised learning depends on category structure. In *Proceedings of the 36th annual meeting of the Cognitive Science Society* (pp. 1718–1723).
- Waldron, E. M., & Ashby, F. G. (2001). The effects of concurrent task interference on category learning: Evidence for multiple category learning systems. *Psychonomic Bulletin & Review*, 8(1), 168–176.
- Waldschmidt, J. G., & Ashby, F. G. (2011). Cortical and striatal contributions to automaticity in information-integration categorization. *Neuroimage*, 56 (3), 1791–1802.
- Wittgenstein, L. (1953). *Philosophical investigations*. Anscombe (Tr.).
- Yim, H., Castro, L., Wasserman, E. A., & Sloutsky, V. M. (2014). The interactions of category structure and supervision in category learning: a comparative approach. In *Proceedings of the 36th annual meeting of the Cognitive Science Society* (pp. 1814–1819).
- Zednik, C., & Jäkel, F. (2016). Bayesian reverse-engineering considered as a research strategy for cognitive science. *Synthese*, 193(12), 3951–3985.

Interaction Between Affect and Cognition as a Function of Aging: Testing the Positivity Bias in Indian Population



Richa Nigam and Bhoomika R. Kar

Abstract Previous studies have marked the importance of affective prioritization across ageing population in support of the cognitive reserve. The idea of ageing is complex in India since the benefits differ from the west in various aspects like financial and social security, one's idea of being productive in the community, future purpose, role in family and society, etc. Therefore, these differences could influence the existence of affective bias for positive emotions among elderly, which is well established in the Western population. Little work has been done to explore affective bias in the elderly as a function of healthy ageing in the Indian context. The idea in the current review is to mark out the importance of affective bias particularly among ageing adults and to examine how early in time does this process begin when older adults' performance is compared to that of middle-aged or younger adults? In addition, the structural and functional changes in the brain as a function of ageing may contribute to the behavioural and cognitive effects of ageing and may interact with affect processing. Prevalent and alternate methodologies including lab-based behavioural experiments, neuroimaging and experience-sampling measures are expected to improve our understanding of the existence and mechanisms underlying the cognition–emotion interaction in healthy ageing. Positive affect bias is also expected to support cognitive reserve in healthy older adults.

Keywords Cognitive ageing · Affect-cognition interaction · Positivity bias · Dot probe task · Affective prioritization

Introduction

The concept of cognitive ageing comes from the impact ageing has over ones cognition. It is important to understand these changes since they affect the overall functioning of the ageing individuals. It is known that structural and functional changes in the brain are intimately tied with changes in cognitive functions. Where certain

R. Nigam · B. R. Kar (✉)

Centre of Behavioural and Cognitive Sciences, University of Allahabad, Prayagraj, Uttar Pradesh, India

e-mail: bhoomika@cbcs.ac.in

cognitive abilities like vocabulary do not usually decline and rather improve with ageing, there are certain others like attention, memory, processing speed, etc. that go down. Age-related changes in cognition are not uniform across all processes, and attention and memory are the most affected cognitive functions as a consequence of ageing. Both these processes are not unitary in nature and involve a variety of subprocesses. In attention itself, older adults are found to be relatively slower than young adults in tasks involving selective attention, e.g. Stroop task, complex visual search tasks (McDowd & Shaw, 2000). Similarly, divided attention tasks where task requires the processing of two or more source of information simultaneously have been associated with significant age-related decline in performance of older adults as compared to younger adults (McDowd & Craik, 1998). These are usually explained in terms of decline in cognitive resources and difficulty in task switching in older adults to process such information. However, in tasks of sustained attention where one has to maintain concentration over a period of time, older adults' performance was found to be comparable to that of younger adults. In all, older adults show impairment in attention tasks that require more of flexible control of attention. However, these tasks are responsive to training and further improvement.

Similarly, working memory as well as long-term memory is significantly affected as a consequence of ageing, which requires active maintenance and manipulation of information at a given time. Decline in attentional resources (Craik & Byrd, 1982), reduction in speed of information processing (Salthouse, 1994, 1996) and failure of inhibitory control are main reasons ascribed for such a decline in memory (Hasher et al., 1999). Neurophysiological differences in activated region during such tasks among old and young adults are also attributed as a plausible reason for such decline (Reuter-Lorenz & Sylvester, 2005). Older adults also experience similar fate for long-term, semantic, episodic, procedural and implicit as well as prospective memory when their performance on these is compared with those of young adults.

Structural and Functional Changes with Ageing: Implications for Cognition–Emotion Interaction

Ageing is associated with functional changes including different cognitive domains as discussed above as well as structural changes across brain regions. Voxel-based morphometry was used to investigate regional and global structural changes showing widespread reduction in grey matter in frontal, insular and anterior cingulate regions (Farokhian et al., 2017). Changes in grey matter volume in general observed as a consequence of ageing might lead to an obvious decline in executive functions like working memory, attention shifting and inhibition. Ge et al. (2002) in their work discovered grey matter loss as a 'constant and linear' function with ageing but white matter loss being delayed until middle age before declining quadratically. Fjell and Walhovd (2010) also provided evidence of significant shrinkage in brain volume and ventricular expansion as a function of ageing. They further stated that largest

changes are seen in frontal and temporal cortex. With cognitive ageing, a peculiar decline is observed in the prefrontal cortex as evidenced by frontal lobe hypothesis of ageing which reveals decline in the volume and function of prefrontal regions as a consequence of ageing (Raz, 2000). Therefore, reductions in key cognitive abilities like processing speed, executive functions and memory are seen in healthy ageing.

Despite such changes, cognition–emotion has been evidenced to witness some enhanced interactions in older adults (Charles & Carstensen, 2013). As everyday stressors are resolved throughout life, older people develop an improved competence to regulate their emotions in ways that promote emotional well-being (Blanchard-Fields, 2007; Charles, 2010). Emotion regulation has been broadly defined as monitoring, evaluation and modifying of emotional reactions in order to accomplish goals (Thompson, 1994). Executive functions are frequently relied upon during emotion regulation as one needs to remember goals, anticipate outcomes, plan and execute responses (Zelazo & Cunningham, 2007). Hence, emotion regulation in ageing has recently become a topic of interest in ageing research. Emotion regulation can be measured in terms of use of specific strategies, day-to-day affective experiences and recruitment of control processes. Most of the research in this regard pertains to examine behavioural changes with ageing (Issacowitz & Reidiger, 2011). In this regard, still little is known about the complexities of emotional ageing process.

Ageing and Emotion Regulation

Many studies in the recent times have come up with the importance of interaction between cognition and emotion for older adults. Hence, despite a decline in cognitive functions with ageing, emotion regulation processes were found to be intact. This contrasting view of ageing brain and intact emotion processing led many research studies to focus on the affective advantage on cognitive ageing. These studies mainly proposed prioritization of affective information with ageing and major influence of positive information over negative (Sheibi & Carstensen, 2010). Various studies have claimed the existence of affective bias in older adults, which also help them perform as well as younger adults in any affective task (Mather & Carstensen). Such a bias is not found in young age, which propels one to ask what transpires as a function of old age, which results in such a prioritization. Carstensen (1992) was the first one to propose a socio-emotional selectivity theory in this regard to explain how the idea of limited time left in life makes the older adults to undergo a motivational shift where they prioritize emotional information over any other information. Such prioritizations also happen to work in their advantage as they compensate their declining cognitive abilities with that of motivated affective processing.

The approaches applied so far to the study of affective bias and emotional processing in ageing and in general still hold mixed views regarding attention bias for emotion processing. Fox et al. (2002) stated that bias towards positive emotions has been considered ‘noteworthy’, and it is the negative stimuli that is ‘attention

grabbing'. There are others who state attention bias away from threat that is preferentially locating attention away from the location of threatening stimuli (Cisler & Koster, 2010). Hence, it was crucial to explore the nature of attention bias for affective stimuli. There is also a need to explore affective bias in Indian context since the ageing benefits differ from that of the west due to complex socio-cultural setup and changing role demands. With little to no background so far, reviewing this paradigm in Indian context is of utmost importance.

Affective Bias and Ageing

Various studies in the recent past have emphasized over the importance of affective positive bias among elderly as a consequence of ageing (Carstensen & Mikels, 2005; Mather & Carstensen, 2003). Positive bias in older adults has been explained as an age-related change in the cognitive processing favouring positive over negative stimuli as compared to younger adults. Kennedy et al. (2004) first found with their work how constant priming of heightened motivated cognition towards current well-being resulted in induced positivity bias in long-term autobiographical memory among younger participants which were similar to the responses of older participants in the control group who were not subjected to any such instruction-based focus. Similar studies also emerged providing support to this work with studies over short-term memory (Charles et al.,), working memory (Mikels et al., 2005), etc. Carstensen (1992) has been influential in explaining positivity bias in elderly in terms of life span 'socio-emotional selectivity theory' (SST) of motivation. According to this theory, with reduced time left in life, older adults tend to invest more on emotionally meaningful goals, which in turn are also satisfying. This motivational shift also influences their cognitive processing making them prefer positive over negative information. There have also been other studies using visual attention and eye tracking paradigms showing how older adults direct their gaze towards positive and away from negative stimuli as compared to younger adults (Mather & Carstensen, 2003; Issacowitz et al., 2006a, 2006b). This effect has been explained in terms of preferential attention to and memory for positive information among older adults.

Affective Bias as a Function of Ageing: Evidence Based on a Dot Probe Task

Even after various efforts, the views on affective bias among older adults have been mixed (Kensinger, et al., 2002; Gruhn et al., 2005), and more so it is not explored in the Indian context. The current study aimed to explore the existence of positivity bias in Indian context. Following the classical approach, a dot probe task (Mather & Carstensen, 2003) was administered following pairs of emotional-neutral faces across

young, middle-aged and older adult groups for Happy, Sad, and Angry emotions in order to determine whether a bias among older adults really exists for positive as compared to negative emotions when paired with a neutral face, in Indian population, which one fails to exhibit in relatively younger age. The idea was also to determine the validity of the dot probe as a task to be used for such studies. Since dot probes are sensitive towards attention to relevant cues in terms of their spatial locations, similar avoidance to certain other cues and disengagement difficulties from cues (depending on more attention allocation to a certain type), the subjects will detect the probes quickly when it is displayed at the same spatial location as the stimuli (here face) they focused their attention at as compared to locations they did not focus (Posner et al., 1980). The emotional bias effects therefore are to be reflected in terms of faster probe RTs following an emotional face as compared to a neutral face. Also age effects are to be reflected in terms of faster RTs among middle-aged and older adults for probe following a happy face as compared to a sad or angry face. Bias towards emotions are stated in terms of 'attention bias score' (abs) is reflected in a dot probe task as a difference between RTs of an emotional face from that of the RTs of a Neutral face. The higher the magnitude of this difference, the more is the attention biased towards that particular emotion.

Method

Participants

Seventy-four volunteers comprising of 25 young adults (mean age: 22.76 yrs), 24 middle-aged adults (mean age: 48.25 yrs), and 25 older adults (mean age: 64.96 yrs) participated in the experiment. One young, 1 middle-aged and 4 older adults' data was excluded from analysis due to poor accuracy. The inclusion criteria of the participants include all the participants to be having a basic educational qualification that is until graduation level and near to corrected vision. Also around 80 people were screened on various neuropsychological tests such as Addenbroke's Cognitive Examination-Revised (mean ACE: young = 96.5, middle-aged = 91.94, older adults = 92.09), with Mini Mental State Examination (MMSE) adapted version (Mathuranath et al., 2004; Ganguly et al., 1995; Mioshi et al., 2006), Clinical Dementia Rating (CDR) adapted version (Morris, 1993), Neuropsychological Inventory (NPI) adapted version (Cummings et al., 1994; Pershad & Verma, 1990), Rey Osterrieth Complex Figure (Canham et al., 2000; Rao et al., 2004), Rey Auditory Verbal Learning Test (RAVLT) (Rey, 1964; Rao et al., 2004; Schmidt, 1996; Spreen & Strauss, 1998) and State Trait Anxiety Inventory (STAI) by Spielberg et al. (1970) indicating no observable signs of dementia or cognitive impairment. The participants were found to be adequate in their performance across all these tests.

The Dot Probe Task

The stimuli consisted of four grey-scale face-front images of two females and two males with Happy, Sad, Angry and Neutral expressions each subtending $9.17^\circ \times 7.22^\circ$ and matched in their mean luminance. The faces were selected from an Indian emotional faces database (Grewal et al., 2012) containing face images rated for intensity and arousal on a five-point rating scale (i.e. 1—least happy and 5—very happy). The faces were first rated in terms of the valence of the face as either Happy, Sad, Angry or Neutral followed by being rated in terms of intensity of the expressed emotion and that of intensity of the felt emotion (arousal) on a five-point rating scale. The mean intensity ratings for the Happy, Sad, Angry and Neutral faces were 3.39, 3.53, 3.12 and 2.53, respectively ($p > 0.05$). The mean arousal ratings of the Happy Sad, Angry and Neutral stimulus faces were 3.28, 2.53, 2.65 and 3.10, respectively ($p > 0.05$). Ratings were obtained from young adults, middle-aged and older adults. Ratings for intensity and arousal of the faces taken for the study were matched across the three age groups.

The participants were required to sit in front of a computer at a distance of 60 cm from the screen of a 19" monitor. The experiment began with a fixation cross at the centre of the screen for 500 ms followed by a pair of faces out of which one was emotional (Happy, Sad or Angry), and other was neutral belonging to the same identity present for a jittered duration between 300 and 800 ms on either side (left and right) of the screen from its centre against a black background. Face pair presentation was jittered to make the stimulus less predictable with the given task simplicity. The presentation of emotional-neutral face on either side was counterbalanced. This was followed by a dot probe in the form of a small white circle present on one of the either left or right side of the screen which could fall on the place of any of the two faces that were present in pair earlier. A blank screen was presented following the probe for 1000 ms on which participants' responses were recorded for the probe. Participants were asked to respond to the probe as soon as possible by pressing 'left arrow key' in case the probe appeared on left side of the screen or 'right arrow key' in case the probe appeared on right side of the screen using the keyboard (See Fig. 1). The response keys were counterbalanced across participants. Participants were asked to respond as fast and accurately as possible.

There were a total of 396 trials presented in blocks of Happy-Neutral, Sad-Neutral and Angry-Neutral with a predetermined rest pause after each block of 132 trials. The target dot probe was either congruent half of the times to the emotional face and other half of the time with the neutral face presented prior to the probe. Congruency was determined in terms of dot probe at the location of emotional face as a congruent trial and dot probe at the location of Neutral face as an incongruent trial. Few trials had probe being followed by a question regarding the location of either Neutral or emotional face. This was done in order to keep the participant vigilant in an otherwise simple task. These questions were not part of any analysis. The participants were provided with 40 practice trials in the beginning of the experiment before they

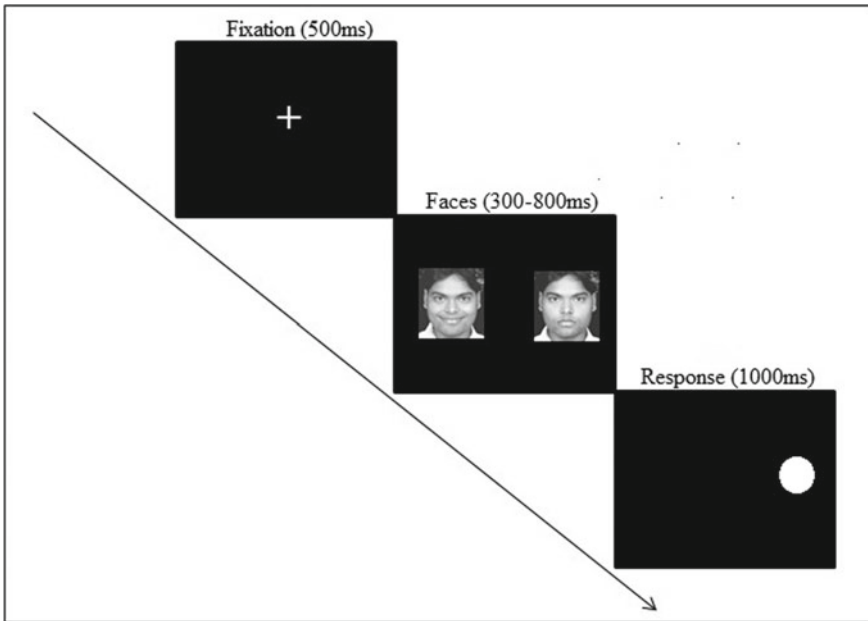


Fig. 1 Trial structure of the experiment and sample stimuli

were exposed to the actual task. The design of the experiment comprised of 6 conditions 3 (Emotions: Happy, Sad, Angry) \times 2 Congruence (Congruent, Incongruent) throughout the experiment.

Analysis

Reaction times (RTs) and accuracy (error rate %) were recorded. Reaction times were filtered by eliminating anticipatory responses and/or late responses. Mean accuracy across participants was 95.62% among young adults, 90.38% among middle-aged adults and 88.35% among older adults. Attention bias score (abs) for each block was computed between the sets of emotion–neutral pair within each age group by deducting the reaction times of neutral face with that of the reaction time of the paired emotional face for each participant. The overall average of abs score across all participants for a particular block was labelled as the bias score for that affect block for each age group.

A two-way ANOVA on attention bias scores was performed with 3 (age) \times 3 (emotion). A two-way ANOVA with positive and negative affect pairs was also performed with 3 (age) \times 2 (emotions: Happy, Sad) and another with 3 (age) \times 2 (emotions: Happy, Angry), design was also performed using the attention bias scores. Three separate mixed ANOVAs were computed with reaction times for each

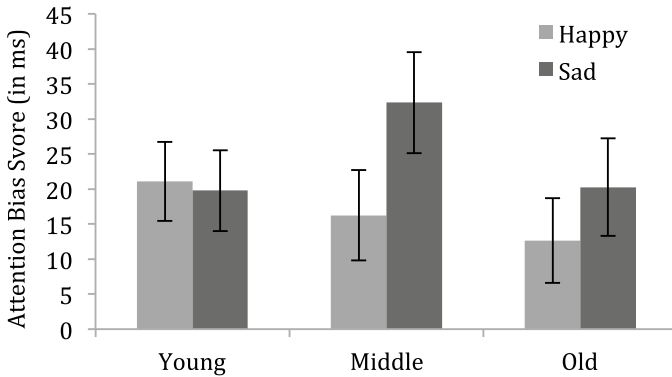


Fig. 2 Mean comparisons of the attention bias score of young, middle-aged and older adults for Happy and Sad emotions

emotion across age for Happy, Sad and Angry emotions [3 (age) \times 2 (emotion: Happy-Neutral)], [3 (age) \times 2 (emotion: Sad-Neutral)] and [3 (age) \times 2 (emotion: Angry-Neutral)] to examine bias for affective stimuli. A two-way mixed ANOVA with 3 (age) \times 3 (emotions: Happy, Sad, Angry), design was performed with reaction times. Within- and between-group planned comparison tests were performed on RT data comparing emotional and neutral stimuli (Happy-Neutral, Sad-Neutral and Angry-Neutral) within each age group (young, middle and old) since the abs scores were inconclusive.

Results

Results based on the two-way ANOVA with attention bias scores with 3 (age) \times 3 (emotion) design did not show a significant effect of age or emotion nor the interaction between age and emotion.¹ Attention bias score for positive and negative affect was also compared across the three age groups.² A two-way ANOVA with 3 age \times 2 emotion (Happy, Sad) and another with 3 age \times 2 emotion (Happy, Angry) was performed (see Figs. 2 and 3). A two-way ANOVA with attention bias scores was performed with 3 (age) \times 2 (emotion) design. For both comparisons with respect to affect valence, the main effects as well as the interaction between age and emotion were not found significant. However, the Happy–Angry comparison showed bias

¹ Main effect of age: $F(2, 71) = 1.06, p = 0.35, \eta_p^2 = 0.029$; main effect of emotion: $F(2, 142) = 1.75, p = 0.17, \eta_p^2 = 0.024$, respectively. Age \times emotion: $F(4, 142) = 0.96, p = 0.42, \eta_p^2 = 0.27$.

² Comparison of attention bias score for Happy and Sad emotion: Main effect age: $F(2, 71) = 0.569, p = 0.56, \eta_p^2 = 0.16$; main effect of emotion: $F(1, 71) = 3.064, p = 0.08, \eta_p^2 = 0.041$. Age \times Emotion: $F(2, 71) = 1.396, p = 0.25, \eta_p^2 = 0.0038$. Attention bias score for happy versus angry emotion: Main effect of age: $F(2, 71) = 1.356, p = 0.26, \eta_p^2 = 0.037$ and emotion: $F(1, 71) = 0.003, p = 0.95, \eta_p^2 = 0.000$. Age \times emotion: $F(2, 71) = 0.305, p = 0.73, \eta_p^2 = 0.009$.

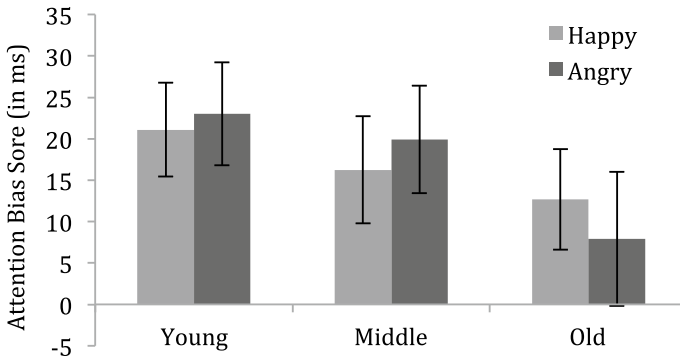


Fig. 3 Mean comparisons of the attention bias score of young, middle-aged and older adults for Happy and Angry emotions

towards positive affect among older adults with relatively higher attention bias score compared to angry affect though was not statistically significant (see Fig. 3).

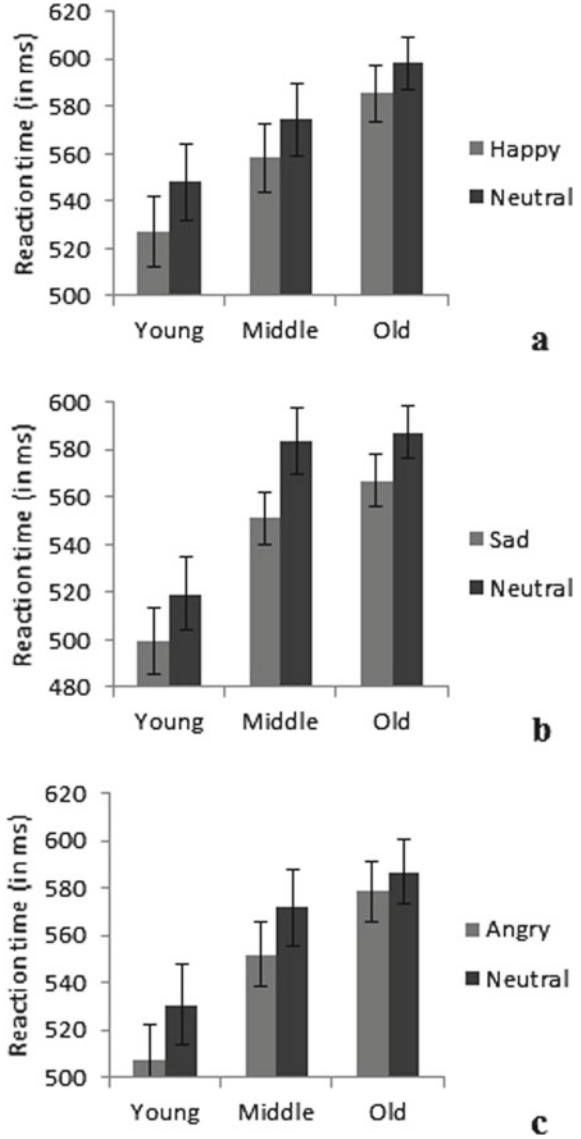
A two-way ANOVA with reaction times was performed with 3 (age) \times 2 (emotion: Happy, Neutral). Overall, reaction times increased with age with young, middle and old having the RT of 537.706 ms, 566.486 ms and 591.887 ms, respectively. The effect of emotion was significant, showing faster detection of probe in terms of overall reaction time when followed by a Happy emotion (557.01 ms) as compared to the one followed by a Neutral emotion (573.681 ms). The interaction between age and emotion was not significant.³ For the comparison between sad versus neutral emotion, overall reaction times increased with age with young, middle and older adults having a mean RT of 509.38 ms, 567.27 ms, and 577.17 ms, respectively. The effect of emotion showed faster detection of probe when followed by a sad emotion (539.05 ms) compared to the one followed by a neutral emotion (563.06 ms). The interaction between age and emotion was not significant⁴ (see Fig. 4b). The comparison of angry versus neutral emotion across age showed slowing of reaction times with increasing age with young, middle and old having a mean RT of 519.43 ms, 561.92 ms and 582.89 ms, respectively. The effect of emotion was also significant, showing faster detection of probe when followed by angry emotion (546.20 ms) compared to the one followed by a neutral face (563.10 ms). However, the interaction between age and emotion was not significant⁵ (See Fig. 4c).

³ Happy versus Neutral comparison: Main effect of age: $F(2, 71) = 3.893, p = 0.02, \eta_p^2 = 0.100$; main effect of emotion: $F(1, 71) = 22.723, p = 0.00, \eta_p^2 = 0.242$; Age \times emotion: $F(2, 71) = 0.488, p = 0.61, \eta_p^2 = 0.014$ (see Fig. 4a).

⁴ Sad versus Neutral comparison: Effect of age: $F(2, 71) = 8.673, p = 0.000, \eta_p^2 = 0.198$; Effect of emotion: $F(1, 71) = 39.230, p = 0.00, \eta_p^2 = 0.356$ Age \times emotion: $F(2, 71) = 1.142, p = 0.32, \eta_p^2 = 0.031$.

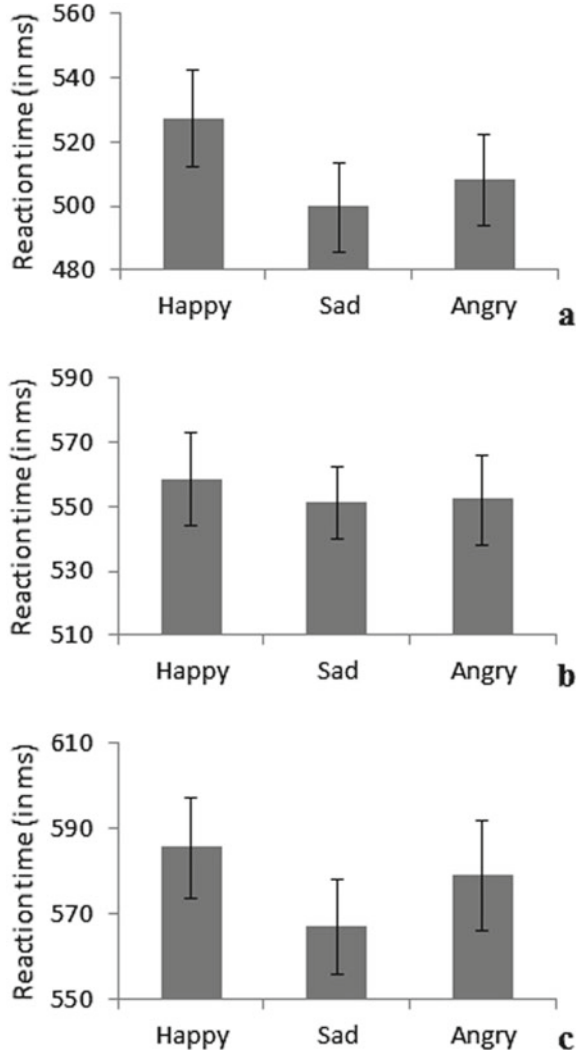
⁵ Angry versus Neutral comparison: Effect of age: $F(2, 71) = 5.215, p = 0.008, \eta_p^2 = 0.130$; effect of emotion: $F(1, 71) = 17.597, p = 0.000, \eta_p^2 = 0.199$; Age \times emotion: $F(2, 71) = 1.306, p = 0.27, \eta_p^2 = 0.036$.

Fig. 4 a–c Mean comparisons of reaction times for **a** Happy-Neutral, **b** Sad-Neutral and **c** Angry-Neutral emotions across the three age groups



Further, a two-way mixed ANOVA with 3 (age) \times 3 (emotions: Happy, Sad, Angry), design was performed with reaction times (see Fig. 5a–c). The young adults were fastest with an overall RT of 511.53 ms followed by middle-aged adults with a mean RT of 553.81 ms followed by older adults with a mean RT of 577.18 ms. The significant effect of emotion showed faster probe detection for emotions with overall reaction time for sad (539.05 ms) being the fastest followed by angry affect

Fig. 5 a–c. Mean comparisons of reaction times across the three emotions in **a** young, **b** middle-aged and **c** older adults



(546.20 ms), which was followed by happy (557 ms) affect. The interaction between age and emotion was not found significant.⁶

The results based on attention bias score (RT for neutral minus emotion) for each emotion block in each age group were inconclusive on ANOVA test; however, the ANOVA with reaction times showed main effects for age and emotion for certain comparisons between emotion valences. Planned comparisons using paired t-tests were performed within each age group comparing mean RTs across emotions. Among

⁶ Effect of age: $F(2, 71) = 7.49, p = 0.001, \eta_p^2 = 0.176$; effect of emotion: $F(2, 142) = 6.16, p = 0.003, \eta_p^2 = 0.080$; Age x emotion: $F(4, 142) = 0.81, p = 0.52, \eta_p^2 = 0.017$.

young adults, processing of sad emotion (499.50 ms) was significantly faster as compared to happy emotion (527.15 ms). Similarly, younger adults were also found to be faster at processing happy emotion (527.15 ms) as compared to angry emotion (507.92 ms). Among older adults, faster responses were observed for Sad emotion (567.05 ms) as compared to Happy emotion (585.55 ms). No difference across emotions was found within the group of middle-aged adults.⁷

Further, between-group planned comparisons were performed using independent sample t-tests for comparing the RTs for each emotion. Among the three age groups, young adults showed faster responses for sad (young = 499.50 ms; middle-aged = 551.10 ms) and angry (young = 507.92 ms; middle-aged = 551.96 ms) emotions as compared to middle-aged adults. Young adults were faster for all three emotions, happy (young = 527.157 ms; old = 585.553 ms), sad (young = 499.501 ms; old = 567.054 ms) and angry (young = 507.929 ms; old 578. 956 ms) when compared to older adults. No difference was found between middle-aged and older adults for all three emotions.⁸ Overall, the bias scores across emotions did not change with age, and only affective bias was determined in all three age groups with faster detection of probe following emotional stimuli compared to neutral stimuli. Slowness in RTs was observed as a function of ageing.

Discussion: Evidence on Affective Bias and Ageing Based on the Dot Probe Task

The contrasting nature of declining age and relatively intact emotion regulation in older adults motivated us to explore affective attention bias across young, middle-aged and older adults. Another impetus was to explore the existence of affective bias in Indian context. The previous studies on attention bias towards positive affect have reported mixed results. We adopted the dot probe task, which has been classically used to study attention bias for positive emotions in ageing population comprising of middle-aged and older adults as compared to young adults. Attention bias in a dot probe task is based on the difference in the reaction times in probes replacing an emotional as compared to neutral stimulus. The valence (towards positive or negative) of such bias is determined by the magnitude of this difference. Thus, higher the magnitude of difference, more is the bias towards a particular emotion.

Earlier studies have reflected a bias among individuals to emotional as compared to non-emotional or neutral information (Carretie et al., 2004; Carretié, 2014). Mather and Carstensen (2003) in their study have explained how paired emotional-neutral faces had older adults responding faster for positive as compared to neutral faces

⁷ Within-group planned comparisons: Young adults Sad < Happy: $t(24) = 3.02, p = 0.006$; Happy < Angry: $t(24) = 2.10, p = 0.04$; older adults: Sad < happy: $t(24) = 1.95, p = 0.06$.

⁸ Young adults < middle aged adults for sad, $t(47) = -2.91, p = 0.005$ and angry emotions $t(47) = -2.29, p = 0.031$; young adults < older adults across Happy, $t(48) = -3.05, p = 0.004$, Sad $t(48) = -3.83, p < 0.001$ and Angry emotions $t(48) = -3.71, p = 0.001$.

and also to neutral as compared to negative faces. Young adults, on the other hand, did not show any such bias. They stated this bias in older adults as positivity effect for the affective attentional bias towards positive faces when paired with a neutral face. They also suggested older adults to have an attentional bias away from negative faces when paired with neutral faces as compared to younger adults. A support for this theory was suggested in the later studies which showed that with ageing the older adults nurture their emotional well-being by adopting a tendency to remember less of negative than positive information (Charles et al., 2003a, 2003b; Gruhn et al., 2007). Gronchi et al. (2018) in their recent study have found positivity effect by examining the role of automated and controlled attention in the positivity effect by varying the duration of stimuli from 100 to 500 ms. They found that as compared to younger adults, elderly population focused more on positive stimuli in the first 100 ms and they avoided fearful faces at 500 ms. The current study also jittered the stimulus presentation in order to make the task less predictable but yet could not find a valence-specific effect across emotions on the dot probe task. There are also other studies like Fung et al. (2008) who failed to find this attention bias towards positive in older adults comprising of Hong Kong Chinese nativity. Therefore, one needs to look at the task used more carefully, which would allow us to investigate affective bias with ageing. Some of the constraints that the current dot probe task might have posed to lead to the results obtained in the current study are discussed below.

One explanation for the results acquired so far could be that due to the simplicity and low task demands, the groups showed comparable responses across emotions. Alternatively, the increasing task complexity might better capture the positive affect bias in a dot probe task as also suggested by Lee and Knight (2009) where they presented both pictures and words as stimuli with each stimulus being presented in both masked and unmasked manner. They found that despite diagnosed with anxiety, older adults showed a relative avoidance response towards angry faces and typical bias towards negative affect was observed only in the unmasked condition. Also, even though the dot probe task has been reported to be more sensitive to visual attention as compared to emotional Stroop paradigm (Weierich et al., 2008), it has been commented to be providing only a 'snapshot' of attention allocation at the time of probe's appearance. Therefore, results can vary as a function of duration interval between emotional stimuli and probe (Mogg et al., 2004). Other factors influencing the results are also interindividual variability in terms of difference of speed of processing between young and elderly which may jeopardize interval duration selection. All this could effectively contribute to absence of valence-based differences among young, middle and older adult group for a dot probe task. On the other hand, slightly cognitively demanding tasks like emotional Stroop do show attention bias for affective stimuli despite such differences in processing speed with individuals reflecting positive bias at later aged individuals by simply assessing interference (Price et al., 2012).

Another factor of crucial consideration is the fact that attention cost distributes due to the interaction of cognition and emotion. Earlier studies have found that even irrelevant emotional distractors (exogenous) are able to capture attention more

as compared to irrelevant neutral distractors (Carretie, 2014). Hence, cognition–emotion interplay can cause a lot of attentional resources to disperse and more so in older adults with decline in their executive functions. The previous studies on attention–emotion interaction and scope of attention suggest that positive stimuli are associated with distributed attention and negative stimuli are associated with the narrowing of attention (Srinivasan & Gupta, 2011). There is a higher chance that in the current dot probe task, the attention capturing positive emotion is using more attentional resources in case of older and middle-aged adults as compared to those of younger adults along with their speed accuracy trade-off which may have rendered the effect as comparable despite having a facilitatory effect on the processing of positive stimuli.

Converging Methodologies Investigating Attention–Emotion Interaction as a Function of Ageing

With the costs associated with ageing, more sensitive measures could be undertaken to tap affective attention in the elderly, which would render a fine convergence of attentional process and more sensitive methodology. So far various approaches have been applied to study this phenomenon. We aim to explain how recent studies have used each of these to study emotion–cognition interaction effectively:

1. Experience-sampling method (ESM): Reidiger et al., 2014 used this to examine the day-to-day affective experiences on a range of adults (young-old) in order to study the prevalence of contra-hedonic and pro-hedonic motivation among them. Similarly, English and Carstensen (2014) explored through a longitudinal task using ESM, how the reduction of social networks composition with age leads elderly to regulate their emotions better by prioritizing people with well-known social partners over others since they elicit less negative emotions and more positive emotions. Such detailed sampling of individual emotions render more sensitive account to the study of cognition–emotion interactions.
2. Subjective evaluations: These involve oral or written accounts of subjective reactions/reports of discrete aspects his mood or emotions (in case of affect) or other dimensions of his experiences. Using these, Volkle et al. (2014) studied young, middle and older adults by closely looking at their mood fluctuations and their effect on perception of emotion stating that mood congruency effect is more pronounced in older adults.
3. Behavioural measures are those in which some aspect of participant’s behaviour is observed or recorded. Behaviour could be recorded in terms of reaction time in case of lab settings or behavioural observations in case of field settings. These also constitute another effective method of studying attention–emotion interaction. Svard et al. (2014) used behavioural measures to effectively examine emotion-related cognition where they showed through their task how emotional content of information had a direct facilitatory link to one’s working

memory irrespective of age. Similarly, Truong and Yang (2014) also showed how emotional targets facilitated working memory and emotional distractors disturbed working memory performance in both young and older adults.

4. Eye tracking is viewed as another sensitive measure to study attention-emotion interplay. Pehlivanoglu et al. (2014) used this methodology to showcase an age-related deficit in the performance of older adults in disengaging from task-irrelevant emotional information.
5. Functional neuroimaging used by Cassidy et al. (2014) effectively showed the source location of neural correlates for socioemotional information by showing a shift from dorsal to ventral medial prefrontal cortex emphasizing on the motivated focus that older adults have on emotionally relevant information; Dolcos et al. (2014) also used fMRI to show how the spontaneous engagement of older adults towards emotion control regions leads to their better regulatory control of emotions when compared with younger adults.
6. Electrophysiology is another sensitive measure to study emotion–cognition interaction. Opitz et al. (2014) used the multi-channel approach of the methodology to show how fluid and not crystallized cognitive processes predict the success of regulatory processes of emotions irrespective of age.

However, a direct comparison between studies is limited because of variability within and between participant groups.

Recent studies have used converging methodologies in providing more robust conclusions towards cognition–emotion interaction. Reidiger et al. (2014) in their study showed the prevalence of contra-hedonic and mixed affect most among adolescents and least among older adults by correlating participants' response in experience-sampling measure with responses in Implicit Association Task. Similarly, Ziaei et al. (2018) converged behavioural colour operation span working memory task to study age-related differences in processing emotional distracters with task-fMRI. Working memory performance was lower in older adults for emotional as compared to neutral distracters. With an fMRI, they found differences in brain responses to emotional distracters with older adults being more distracted with task irrelevant positive distracters. Ready et al. (2007) also combined prospective ESM-records of young and older adults on their everyday affect with that of retrospective recall of the prospective ESM-responses. Older adults were found to overestimate positive affect more, and younger were found to overestimate negative affect more when compared with each other's responses on prospective ESM-records. These recent studies clearly show how the task sensitivity can be increased to explore cognition–emotion interaction across varying paradigms and groups effectively.

Conclusion

Cognitive ageing is marked with structural and functional changes in the brain, cognition, affect and behaviour in healthy older adults. Research has shown positivity effect or positive affect bias in the elderly as a consequence of less time left in life. Affective valence is an important factor for affect regulation in the context of ageing research since affect closely interacts with cognition in terms of modulation of attentional mechanisms as a function of affect valence. Cognition–emotion interaction could serve as one of the mechanisms supporting cognitive reserve with increasing age. Positive affect bias has been observed in lab-based experiments but not very consistently. However, other techniques like neuroimaging and experience sampling have supported the notion of positive affect bias in the elderly more so when measured in terms of day-to-day affective experiences and implicit representation of affect valence and its effect on cognition. Researchers have also referred to positive affect bias as a motivational shift, which needs to be further validated. The cognition–emotion interaction as a function of ageing addressed with multiple methodologies is a good example of integration in psychological science with implications for human welfare in terms of affective reserve.

References

- Blanchard-Fields, F. (2007). Everyday problem solving and emotion—An adult developmental perspective. *Current Directions in Psychological Science*, *16*, 26–31.
- Canham, R. O., Smith, S. L., & Tyrrell, A. M. (2000). Automated scoring of a neuropsychological test: the Rey Osterrieth complex figure. In *Proceedings of the 26th Euromicro Conference. Informatics: Inventing the Future* (Vol. 2, pp. 406–413).
- Carretié, L. (2014). Exogenous (automatic) attention to emotional stimuli: A Review. *Cognitive, Affective and Behavioural Neuroscience*, *14*, 1228–1258.
- Carretié, L., Hinojosa, J. A., Martín-Loeches, M., Mercado F, et al. (2004). Automatic attention to emotional stimuli: Neural correlates. *Human Brain Mapping*, *22*, 290–299.
- Carstensen, L. L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging*, *7*, 331–338.
- Carstensen, L. L., & Mikels, J. A. (2005). At the intersection of emotion and cognition: Aging and the positivity effect. *Current Directions in Psychological Science*, *14*(3), 117–121.
- Carretié, L., Hinojosa, J. A., Martín-Loeches, M., Mercado, F., et al. (2004). Automatic attention to emotional stimuli: Neural correlates. *Human Brain Mapping*, *22*, 290–299.
- Cassidy, B. S., Hedden, T., Yoon, C., & Gutchess, A. H. (2014). Age differences in medial prefrontal activity for subsequent memory of truth value. *Frontiers in Psychology*, *5*(87), 1–10.
- Charles, S. T., Mather, M., & Carstensen, L. L. (2003). Aging and emotional memory: The forgettable nature of negative images for older adults. *Journal of Experimental Psychology. General*, *132*(2), 310–324.
- Charles, S. T. (2010). Strength and vulnerability integration: A model of emotional well-being across adulthood. *Psychological Bulletin*, *136*, 1068–1091.
- Charles, S. T., & Carstensen, L. L. (2013). Social and emotional aging. *Annual Reviews of Psychology*, *61*, 383–409.

- Charles, S. T., Mather, M., & Carstensen, L. L. (2003). Aging and emotional memory: The forgettable nature of negative images for older adults. *Journal of Experimental Psychology: General*, *132*, 310–324.
- Cisler, J. M., & Koster, E. H. (2010). Mechanisms of attentional biases towards threat in anxiety disorders: An integrative review. *Clinical psychology review*, *30*(2), 203–216.
- Craik, F. I. M., & Byrd, M. (1982). Aging and cognitive deficits: The role of attentional resources. In F. I. M. Craik & S. Trehub (Eds.), *Aging and cognitive processes*. Plenum.
- Cummings, J. L., Mega, M., Gray, K., Rosenberg-Thompson, S., Carusi, D. A., & Gornbein, J. (1994). The Neuropsychiatric Inventory: Comprehensive assessment of psychopathology in dementia. *Neurology*, *44*, 2308–2314.
- Dolcos, S., Katsumi, Y., & Dixon, R. A. (2014). The role of arousal in the spontaneous regulation of emotions in healthy aging: An fMRI investigation. *Frontiers in Psychology*, *5*(681), 1–12.
- English, T., & Carstensen, L. L. (2014). Selective narrowing of social networks across adulthood is associated with improved emotional experience in daily life. *International Journal of Behavioral Development*, *38*(2), 195–202.
- Fjell, A. M., & Walhovd, K. B. (2010). Structural brain changes in aging: Courses, causes and cognitive consequences. *Reviews in the Neurosciences*, *21*, 187–221.
- Farokhian, F., Yang, C., Beheshti, I., Matsuda, H., & Wu, S. (2017). Age-related gray and white matter changes in normal adult brains. *Aging and Disease*, *8*, 899–909. <https://doi.org/10.14336/AD.2017.0502>
- Fox, E., Russo, R., & Dutton, K. (2002). Attentional bias for threat: Evidence for delayed disengagement from emotional faces. *Cognition and Emotion*, *16*(3), 355–379.
- Fung et al. (2008). Age-related positivity enhancement is not universal: older Chinese look away from positive stimuli. *Psychological Aging*, *23*(2), 440–6.
- Ganguli, M., Ratcliff, G., Chandra, V., Sharma, S., Gilby, J., Pandav, R., et al. (1995). A Hindi version of the MMSE: The development of a cognitive screening instrument for a largely illiterate rural elderly population in India. *International Journal of Geriatric Psychiatry*, *10*, 367–377.
- Ge et al. (2002). Age related total gray matter and white matter changes in normal adult brain. Part I: volumetric MR imaging analysis. *American Journal of Neuroradiology*, *23*, 1327–1333.
- Grewal, P., Kar, B.R., Kumar, D. (2012). CBCS Emotional faces database. Exogenous (automatic) attention to emotional stimuli: a review. *Cognitive, affective & behavioral neuroscience*, *14*(4), 1228–1258. <https://doi.org/10.3758/s13415-014-0270-2>
- Gronchi et al. (2018). Automatic and controlled attentional orienting in the elderly: A dual-process view of the positivity effect. *Acta Psychologica*, *185*, 229–234.
- Grühn, D., Smith, J., & Baltes, P. B. (2005). No aging bias favoring memory for positive material: Evidence from a heterogeneity-homogeneity list paradigm using emotionally toned words. *Psychology and Aging*, *20*, 579–588.
- Grühn, D., Scheibe, S., & Baltes, P. B. (2007). Reduced negativity effect in older adults' memory for emotional pictures: The heterogeneity-homogeneity list paradigm. *Psychological Aging*, *22*, 644–649.
- Hasher, L., Zacks, R. T., & May, C. P. (1999). Inhibitory control, circadian arousal, and age. In D. Gopher & A. Koriat (Eds.), *Attention and performance XVII* (p. 653). MIT Press.
- Isaacowitz, D. M., Wadlinger, H. A., Goren, D., & Wilson, H. R. (2006). Is there an age-related positivity effect in visual attention? A comparison of two methodologies. *Emotion*, *6*(3), 511–516.
- Isaacowitz, D. M., Wadlinger, H. A., Goren, D., & Wilson, H. R. (2006). Selective preference in visual fixation away from negative images in old age? An eye-tracking study. *Psychology and Aging*, *21*(1), 40–48.
- Issacowitz, D. M., & Reidiger, M. (2011). When age matters: Developmental perspectives on “cognition and emotion.” *Cognition and Emotion*, *25*, 957–967.
- Kennedy, Q., Mather, M., & Carstensen, L. L. (2004). The role of motivation in the age-related positivity effect in autobiographical memory. *Psychological Science*, *15*(3), 208–214.
- Kensinger, E. A., Brierley B., Medford N., Growdon J. H., & Corkin S. (2002). Effects of normal aging and Alzheimer's disease on emotional memory. *Emotion*, *2*, 118–134.

- Lee, L. O., & Knight, B. G. (2009). Attentional bias for threat in older adults: Moderation of the positivity bias by trait anxiety and stimulus modality. *Psychology and Aging*, 24(3), 741–747.
- Mather, M., & Carstensen, L. L. (2003). Aging and attentional biases for emotional faces. *Psychological Sciences*, 14(5), 409–415.
- Mather, M., & Carstensen, L. L. (2005). Aging and motivated cognition: The positivity effect in attention and memory. *Trends in Cognitive Science*, 9(10), 496–502.
- Mathuranath, P. S., Hodges, J., Mathew, R., Cherian, P. J., George, A., & Bak, T. H. (2004). Adaptation of the ACE for a Malayalam speaking population in southern India. *International Journal of Geriatric Psychiatry*, 19, 1188–1194.
- McDowd, J. M., & Craik, F. I. M. (1998). Effects of aging and task difficulty on divided attention performance. *The Journal of Experimental Psychology: Human Perception and Performance*, 14, 267.
- McDowd, J. M., & Shaw, R. J. (2000). Attention and aging: A functional perspective. In F. I. M. Craik, & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (2nd ed., p. 221). Erlbaum, Mahwah, NJ.
- Mikels, J. A., Larkin, G. L., Reuter-Lorenz, P. A., & Carstensen, L. L. (2005). Divergent trajectories in the aging mind: Changes in working memory for affective versus visual information with age. *Psychology and Aging*, 20(4), 542–553.
- Mioshi, E., Dawson, K., Mitchell, J., Arnold, R., & Hodges, J. R. (2006). The Addenbrooke's cognitive examination revised (ACE-R): A brief cognitive test battery for dementia screening. *International Journal of Geriatric Psychiatry*, 21, 1078–1085.
- Mogg, K., Bradely, B., Miles, F., & Dixon, R. (2004). Time course of attentional bias for threat scenes: Testing the vigilance-avoidance hypothesis. *Cognition and Emotion*, 18, 689–700.
- Morris, J. C. (1993). The clinical dementia rating (CDR): Current version and scoring rules. *Neurology*, 43, 2412–2414.
- Opitz, P. C., Lee, I. A., Gross, J. J., & Urry, H. L. (2014). Fluid cognitive ability is a resource for successful emotion regulation in older and younger adults. *Frontiers in Psychology*, 5, 1–25.
- Pehlivanoglu, D., Jain, S., Ariel, R., & Verhaeghen, P. (2014). The ties to unbind: Age-related differences in feature (un)binding in working memory for emotional faces. *Frontiers in Psychology*, 5(253), 1–13.
- Pershad, D., & Verma, S. K. (1990). *Handbook of PGI battery of brain dysfunction (PGI-BBD)*. National Psychological Corporation.
- Posner, M. I., Snyder, C. R., & Davidson, B. J. (1980). Attention and the detection of signals. *Journal of Experimental Psychology*, 109(2), 160–174.
- Price, R. B., Siegle, G., & Mohlman, J. (2012). Emotional Stroop performance in older adults: Effects of habitual worry. *American Journal of Geriatric Psychiatry*, 20(9), 798–805.
- Rao, S. L., Subbakrishna, D. K., & Gopukumar, K. (2004). *NIMHANS neuropsychology battery-2004 manual* (1st ed, pp. 6–201). NIMHANS Publications.
- Raz, N. (2000). Aging of the brain and its impact on cognitive performance: Integration of structural and functional findings. In F. I. M. Craik, T. A. Salthouse (Eds.), *The handbook of aging and cognition* (pp. 1–90).
- Ready, R. E., Weinberger, M. I., & Jones, K. M. (2007). How happy have you felt lately? Two diary studies of emotion recall in older and younger adults. *Cognition and Emotion*, 21(4), 728–757.
- Reidiger, M., Wrzus, C., & Wagner, G. G. (2014). Happiness is pleasant, or is it? Implicit representations of affect valence are associated with contrahedonic motivation and mixed affect in daily life. *Emotion*, 14(5), 950–961.
- Reuter-Lorenz, P. A., & Sylvester, C.-Y. C. (2005). The cognitive neuroscience of working memory and aging. In R. Cabeza, L. Nyberg, D. & Park (Eds.), *Cognitive neuroscience of aging* (Vol. 186). Oxford University Press.
- Rey, A. (1964). L 'examenclinique en psychologie [Clinical tests in psychology]. Presses Universitaires de France.
- Salthouse, T. A. (1994). The aging of working memory. *Neuropsychology*, 8, 535.

- Salthouse, T. A. (1996). The processing-speed theory of adult age differences in cognition. *Psychological Review*, 103(3), 403–428.
- Schmidt, M. (1996). *Key auditory verbal learning test: A handbook*. Western Psychological Services.
- Sheibi, S., & Carstensen, L. L. (2010). Emotional aging: Recent findings and future trends. *The Journals of Gerontology, Series B, Psychological Sciences and Social Sciences*, 65B(2), 135–144.
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. (1970). *STAI Manual*. Consulting Psychologists Press.
- Spren, O., & Strauss, E. (1998). *A compendium of Neuropsychological tests: Administration, norms, and commentary* (2nd ed.). Oxford University Press.
- Srinivasan, N., & Gupta, R. (2011). Rapid Communication: Global-local processing affects recognition of distractor emotional faces. *Quarterly Journal of Experimental Psychology*, 64, 425–433.
- Svärd, J., Fischer, H., & Lundqvist, D. (2014). Adult age-differences in subjective impression of emotional faces are reflected in emotion-related attention and memory tasks. *Frontiers in Psychology*, 5(423), 1–12.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of a definition. *Monographs of the Society for Research in Child Development*, 59(2/3), 25–52.
- Truong, L., Yang, L. (2014). Friend or foe? Decoding the facilitative and disruptive effects of emotion on working memory in younger and older adults. *Frontiers in Psychology*, 5, 94.
- Völkle, M. C., Ebner, N. C., Lindenberger, U., & Riediger, M. (2014). A note on age differences in mood-congruent versus mood-incongruent information processing in faces. *Frontiers in Psychology*, 5, 635.
- Weierich, M. R., Treat, T. A., & Hollingworth, A. (2008). Theories and measurement of visual attentional processing in anxiety. *Cognition and Emotion*, 22(6), 985–1018.
- Ziaei, M., Samarani, G., & Persson, J. (2018). Age differences in the neural response to emotional distraction during working memory encoding. *Cognitive, Affective and Behavioral Neuroscience*, 18(5), 869–883.
- Zelazo, P. D., & Cunningham, W. A. (2007). Executive function: Mechanisms underlying emotion regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (Vol. 2007, pp. 135–158). Guilford Press.

Collective Resilience: Macro Influencing Micro



Swati Mukherjee and Manas K. Mandal

Abstract Resilience is largely conceptualized as an individual-level variable within the disciplinary domain of psychology though environmental and community influences have not entirely been ignored. Collective resilience is an upcoming area of research that emanates from identifying and acknowledging the complexities inherent in assessing social and community influences on an individual's resilience. The idea of collective resilience has been explored the most in the context of propensity of communities to recover from the aftermath of disasters and mass emergencies. Researchers have documented instances of community resilience in the immediate aftermath of a disaster; however, the sustainability of such collective resilience is yet to be established. Taking cue from such studies, the present paper conceptualizes collective resilience as rooted in the social capital and cultural practices of a community and proposes that it can be inculcated as a positive capability that sustains beyond immediate stressful circumstances. It proposes that the discipline of psychology can significantly contribute towards the development efforts in the third world by inculcating positive adaptability towards change and facilitating a move from 'growth-centric' development model to 'people-centric' development model that prioritizes empowerment of the people over mere economic growth. Adopting collective resilience as a process enables psychologists to work as facilitators and capacity builders towards sustainable development that focuses not merely on growth, but questions the power disequilibrium at the root of structural inequalities, thereby paving way for a more equitable and peaceful society. Moreover, it is advocated that an integrative approach to research and practice in the domain of disaster management and sustainable development would not only result in enhanced collective resilience, but also engender a trans-disciplinary perspective. This approach could bridge the gap between scientific knowledge and practical outcomes for the community.

S. Mukherjee

Defence Institute of Psychological Research, Defence R&D Organisation, Min. of Defence,
Lucknow Road, Timarpur, Delhi 110054, India

M. K. Mandal (✉)

Department of HSS, Indian Institute of Technology, Kharagpur 721302, India

Keywords Resilience · Vulnerability · Sustainable development · People-centric development · Integrative approach

Introduction

Psychology's emphasis on human efficiency and well-being is of recent origin. When Seligman and Csikszentmihalyi (2000) commented upon psychology becoming largely a science of healing in their landmark article delineating the domain of positive psychology, they were not merely drawing attention to the core nature of the discipline, but also underlining the need for moving from deficiency model of human functioning to an efficiency-based model that would explore the dynamics of thriving and flourishing, and not merely surviving under adversity. In this context, the concept of psychological resilience has gained enhanced prominence in recent years. Psychological resilience has its origins in developmental research, especially among researchers who were interested in childhood psychopathology, and the remarkably adaptive response of some children despite suffering from or despite being at high risk of psychopathology (Garmazy, 1974; Masten et al., 1999). Researchers expanded the domain of risk to include chronic poverty, parental divorce, perinatal stress and the like and found that almost a third of all children exposed to such adversities still develop into effective adults (Werner & Smith, 1989). Over the years various individual-, family- and community-level factors were related to resilient outcomes, and the initial research focuses on individual resilience gradually tended to extend to resilience of whole communities. Parallel research approaches in other social sciences have also had an influence on the expansion of concept of psychological resilience from an individual-level conceptualization to a comprehensive construct of community resilience that is built through dynamic psychosocial processes. The 'Strengths Perspective' (Saleebey, 1996) in social work, for example, has its focus on recognizing and utilizing the inherent strengths, aspirations and capacities of individuals, families and communities in a collaborative manner for their development. Studies on ecological resilience have also recognized the adaptive sustenance properties of ecosystems that survive through or recover from damage and disturbance quickly. Further, ecological resilience research has also pointed towards sustainable ecological practices of communities that help an eco-system sustain and thrive (Gadgil et al., 1998). A related approach can be discerned in the resilient perspective of managing disasters and hazards, which focuses on developing the underlying capacities and strengths of individuals, organizations and communities by learning from the exposure to disasters and reducing their vulnerability for future. Current research on resilience in psychological sciences learns from and builds upon the insights gained from such allied fields. However, it still remains to develop an integrative framework for bringing together these diverse disciplinary fields by transcending the disciplinary boundaries. Such transcendence is envisioned to be achieving twofold goals—(i) Merger of intra-disciplinary and inter-disciplinary boundaries, facilitating a holistic understanding through multiple perspectives; and

(ii) Forging of a common ground of mutual benefit by working towards shared goals identified by the researchers and the community, where the scientific understanding is enhanced through incorporating the ground-level understanding that the community has developed through its experience of dealing with the phenomena being studied, and the community is benefited by the practicable applied outcomes of the research.

The discipline of psychology recognizes human resilience as a ‘powerful and ubiquitous force’ (Zautra et al., 2008), that is reflected through dual but interrelated processes involved in recovery from adversity, and sustainability despite stressful circumstances. Resilience is most commonly conceptualized as an individual level construct that is inferred by the coping behaviour demonstrated by an individual in the face of substantial risk or adversity (resilient coping); or as normal development under adverse circumstances (Fonagy et al., 1994; Masten, 2001); or as relative resistance to psychosocial risk experiences (Rutter, 1999, 2000). Three general usage of the term resilience are prevalent within psychology (Werner, 1995)—good developmental outcomes despite high-risk status, sustained competence under stress and recovery from trauma.

Though largely defined as an individual-level phenomenon, researchers have recognized the influence of social- and community-level factors on resilient outcomes. Yet, the complex processes and pathways involved remain to be understood fully. As discussed by Masten (2013) beginning with the pioneering researchers like Norman Garmezy, Lois Murphy, Michael Rutter, Alan Sroufe, Arnold Sameroff, and Emmy Werner, the focus of resilience research remained on identifying the factors that contributed towards positive behavioural outcomes among resilient youth, and the focus on individual-level processes continued through the subsequent research that explored the processes through which the adaptive and resilient outcomes were achieved (e.g. Masten, 2006; Luthar, 2006; Cicchetti & Curtis, 2007). Later researchers have also emphasized that resilience is better defined as a process rather than a phenomenon. Rutter (1990), for example, posits that the risk and protective factor in the environment are not significant per se, rather it is their interaction with the individual-level factors that determines resilient outcomes. Recent research has also extrapolated the initial conceptualizations regarding individual resilience to larger domains and collectivities. The two defining features of individual resilience, viz. recovery from trauma and sustainability in the face of adversity, have been utilized for gaining an understanding of resilience among communities and social systems (Zautra et al., 2008). The construct of resilience has evolved over the years from being an individual level concept into a systemic multidimensional construct. The notion of community resilience can be interpreted in two ways—first, to denote how people overcome stress and life challenges by drawing upon social and cultural resources embedded within the community; and second, to understand how communities as a whole respond resiliently in the face of challenge and adversity (Kirmayer et al., 2009).

Drury et al. (2009) describe two genres of definitions of collective resilience. First genre of definitions are those that use the term for describing a process. For example, Hernandez (2002, p. 334) defines collective resilience as ‘the coping processes that occur in reference to and are dependent on a given social context’. The second

genre of definitions uses the term 'collective resilience' for denoting pre-existing social resources. One such definition is given by Fielding and Anderson (2008, p. 7), who defined it as 'the bonds and networks that hold communities together, provides support and protection, and facilitates recovery in times of extreme stress, as well as resettlement. These social bonds are variously referred to as social networks, community facilities and activities, active citizenship, or social capital.' Connecting the process and the social structures Drury et al. (2009, p. 502) define collective resilience as 'the way in which groups of people and crowds of people express and expect solidarity and cohesion, and thereby coordinate and draw upon collective sources of support and other practical resources adaptively to deal with adversity'.

The individual-level process involved in resilience has received ample attention within the disciplinary domain of psychology; however, the collective response of communities in the face of disaster demands a nuanced understanding. The response and adaptation of the worst affected populations after the infamous Mumbai floods that devastated large parts of the city in 2005 has been analysed by scholars. Chatterjee (2010), for example, demonstrates that the capacity to respond in disaster situations is not distributed equally across the population and varies with socio-cultural factors and political and economic constraints, making the slum dwellers particularly vulnerable. Also, as revealed through her research while the structural interventions by the government agencies benefit the upper sections of the city, it is the multilevel support networks, both formal and informal, at the local and global levels that are crucial resources for adaptation and recovery for the slum dwellers. The socio-economic affiliations developed within the community and local levels were found to contribute majorly to their resilience. The complexity involved in explaining the variation in vulnerability and resilient response makes it imperative to adopt an integrative perspective bringing together research insights from multiple allied disciplines such as disaster management, public policy and applied social psychology. In order to enable the researchers to contribute towards complex real-world problems, it is also essential to evolve methodologies for integrative trans-disciplinary research that are more inclusive of the community and break the researcher-user dichotomy. Trans-disciplinary research is an evolving field, and variety of methodologies has been proposed for developing an epistemological framework for trans-disciplinary research and practice. The same are discussed in a subsequent section.

The common thread that treads through all the above definitions is that they conceptualize resilience beyond an individual-level construct, emphasizing the systemic and ecological aspects. A major domain where such conceptualization of collective resilience has been tested is formed by disaster mitigation and response. The present paper provides a brief review of the extant research in this domain and posits that the insights gained from these are not only useful for resilient response to disasters and mass emergencies, but can provide the theoretical grounding for developing healthy and resilient communities in general. The paper proposes a conceptual model for shaping resilient communities that acknowledges individual-level resilience factors and the ecological, systemic and structural surroundings

that together form a resilient collective. It emphasizes that such conceptualization provides a useful framework for sustainable people-centric development, especially in the context of the developing countries that are faced with the challenge of sustaining in the face of fast paced economic growth and social change. Utilizing the context of disaster research which is multidisciplinary in general, emphasis is placed on the need for developing greater integration among the scientific disciplines and also transcend the disciplinary boundaries to include the community as a partner and stakeholder in the research process.

Resilient Communities in the Face of Emergencies

Resilience of a community has often been defined in terms of sustainability. Fiksel (2006, p. 16), for example, defines resilience as ‘the capacity of a system to tolerate disturbances while retaining its structure and function’. Resilience of a community is not merely reflective of a number of resilient individuals put together; neither is it merely taking stock of the material resources of the community. Community resilience is a process rooted in cultural values and practices (Clauss-Ehlers & Lopez-Levy, 2002) that emphasize upon family and community relationship obligations and prioritizing of social relationships over and above instrumental connections. Resilience of a community is reflective of its individual capabilities as well as the collective psychological, social and cultural resources. Three broad forms of community resilience have been identified in the face of adversity and change (Kirmayer et al., 2009)—Resistance in the face of change by counteracting the impact of challenge; recovery from severe or prolonged challenge to return to its original state; and creativity exhibited through adapting to new circumstances and developing novel institutions and practices. A resilient community might adopt any or all of the response forms for recovery and sustainability.

Frerks et al. (2011) describe four successive paradigms and disciplinary assumptions underlying their use in the domain of disaster research. The paradigm that prevailed across the world till the last century and is still influential in the third world conceptualises disasters a ‘hazards’. The hazard paradigm is denoted by its focus on techno-centric disaster response for reducing probability of occurrence by developing infrastructure. The affected human community plays a minimal peripheral role in disaster response or preparedness. The second related narrative is hallmarked by its focus on the ‘at-risk’ populations, yet the security focus remains on reducing the probability of occurrence and impact through infrastructural solutions and mechanisms for keeping the populations away from the risk. Marking a break from the earlier two paradigms, the currently prevalent paradigms of ‘vulnerability’ and ‘resilience’ both have their focus on the affected communities. The vulnerability paradigm works on the community or group level and along with reducing the probability and impact also focuses upon reducing the specific vulnerabilities of the community. The resilience paradigm, an emergent counterpart of the vulnerability conceptualization, provides a systemic response to disaster mitigation. The focus of the resilience paradigm

is inclusive involvement of the affected communities in disaster preparedness and response, by recognizing and utilizing individual capabilities as well as enhancing social and cultural strengths inherent within the community. While the vulnerability framework perceives communities or people as a frail and weak, prone to overreact in the face of stress, the resilience framework acknowledges people and communities as inherently strong and makes use of their specific strengths in structuring a sustainable response.

The vulnerability framework is based on the notion that the crowd or collective is more irrational, less intelligent and very emotional as compared to a lone individual (Le Bon, 1895) and hence prone to 'mass panic' (Dynes, 2003) and contagion, resulting in a quick spread of frivolous ideas and misperceptions. The psychological mechanisms involved in mass panic can be understood as a series of mental and somatic events that travel from the individual to the group. Since uncertainty and ambiguity prevail in most disaster situations, at the level of the individual, the subconscious threats and perceived dangers gain prominence inhibiting logical reasoning. The inhibition of reasoning in turn facilitates somatization of anxieties and results in aggravated panic reaction among the individuals. Given the anxiety inherent in an emergency situation, such individual-level panic quickly spreads across the crowd. The vulnerability framework, thus, posits that the collective, thus, cannot be relied upon for any authentic information or action, as instincts for individual survival are expected to override any socialized responses of orderly and helping behaviour (Strauss, 1944). In this framework, the responsibility of rescue, mitigation, and post-emergency adaptation rests with the management agency or the authorities. The vulnerability approach, thus, generates a paternalistic approach, that under the garb of protection, constructs a community that remains passive and dependent upon a group of 'experts' or authorities for ensuring that they are kept away from the 'risk'. Though such expectations of vulnerability have been largely discredited by a growing body of literature that has shown evidence of cooperative, orderly and socially helpful behaviour in the face of grave danger, they continue to influence public policy and perceptions through popular representations of disaster and clichés (Tierney et al., 2006).

The resilience approach to disaster mitigation and preparedness, on the other hand, ensures active involvement of the communities through collective self-help, use of community resources, quick recovery of survivors, and continued functioning of social organizations even under adversity. Such a conceptualization constructs a community that is self-reliant and responsive for its own security and well-being, recognizing its own strengths and vulnerabilities and structuring a reasoned response in the face of threat. Active involvement of the community also ensures sustainability of response and continued adaptive functioning even after the immediate danger has receded. The research literature in disaster studies has emphasized a number of factors underlying resilience that are observed in the collective response, e.g. adaptive sociality and adaptive organizational functioning. Numerous theoretical conceptualizations have attempted to provide socio-psychological explanations for such adaptive behaviours, for example, normative theories (Turner & Killian, 1972); affiliation approaches (Mawson, 2005); self-categorization approach (Drury et al.,

2009). While the normative theories and affiliation approaches make the resilient response contingent upon pre-existing social norms and interpersonal affiliations, the researches in more recent self-categorization approach have shown that sense of common fate and a common identity emergent during the crisis situation itself leads to collective resilience and adaptive response. In a sense, the processes involved in emergence of collective identity operate on the group to structure their responses in an optimum fashion to ensure continued survival.

Collective Identity and Collective Resilience

Collective identity is a term used to denote the identity of a person as member of a group. Collective identity denotes a socially relevant dimension shared with other people in an inclusive manner (Turner et al., 1987). Though emanating from the subjective sense of belonging to a group or groups, identity is generally anchored in objective features, such as territory, language, history and culture (Bostock & Smith, 2001). As opposed to social identity which is construed as static and given, the notion of collective identity denotes a dynamic and evolving sense of identity. At a given point in time, there is a choice of collective identities available to an individual. Among the available collective identities available to a person, which identity gains salience is structured by the interplay of personal variables and societal context. The term collective identity is used more frequently in the context of social contestations and conflicts, but can also be utilized for denoting emergent sense of cohesion in the context of mass emergencies and disasters.

A shared perception of threat (in emergency situations and mass disasters) and an awareness of shared disadvantaged position of the group (in situations of structural inequalities) foster a sense of collective identity among the people. Further, the processes of 'meaning making' and 'sense of agency' augment the collective identity (Simon & Klandermans, 2001). Meaning making is a process of attribution that seeks the reasons for the perceived vulnerability of one's group. Clarity in conceptualizations of who/what is responsible for the group's predicament reflects a cognitive elaboration of one's worldview, providing the members with a perspective on the situation. The processes of attribution might take the form of afterthought in the case of disasters and emergencies, though in the case of structural inequalities and perceived systemic disadvantages, attribution plays a potent role in motivating members of the collective towards purposeful action. Self-perceptions as members of a collective with clearer consciousness of purpose provide the members with a sense of agency that motivates them for participation in an active struggle for seeking solutions and provide a sense of control over one's social environment. The process involved in enhancing group consciousness often requires intensified efforts by a few leaders or core members whose behaviour becomes normative. The processes involved in emergence of a collective identity thus have the potential to be utilized for achieving various goals—be it for raising a social movement, fuelling a conflict or for building a resilient collective response.

Bringing together the two disparate domains—the disaster studies and the collective identity framework—in the context of the underlying factors of collective resilience, we seek to propose a conceptual framework that accounts for a resilient response not only in mass emergency or disaster situation, but expects a sustained continuity of adaptive and resilient behaviours at the collective level, even in the face of systemic and structural disadvantages. Figure 1 presents a diagrammatic comparison of the processes involved in vulnerability and resilient frameworks. It proposes when faced with adversity, either in the form of a mass emergency or disaster, or in the form of a system level disadvantage, people have a choice of following the

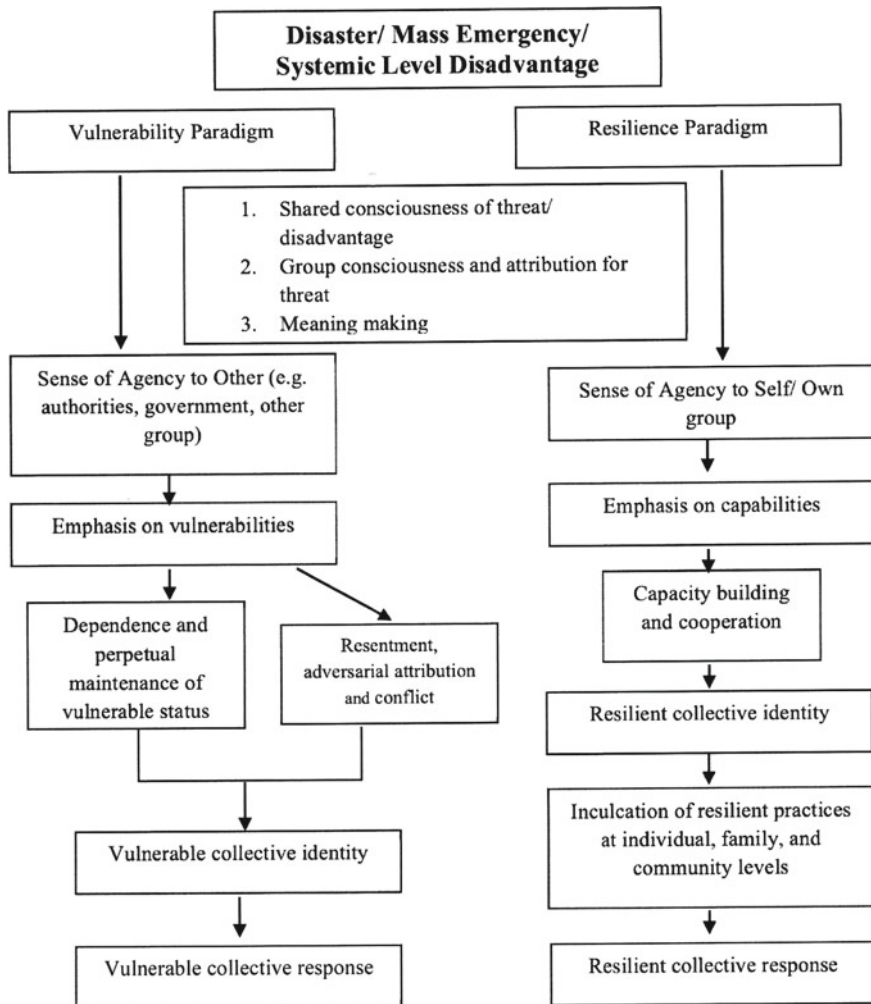


Fig. 1 Conceptual model comparing vulnerable and resilient response in the face of adversity

vulnerability paradigm or the resilient paradigm though they might not have a free choice always, especially in the face of structural and systemic disadvantages. There are three basic processes that constitute the roots of group consciousness—(1) Shared consciousness among the people involved the common threat or common disadvantage that all of them have to face; (2) Emergence of group consciousness due to shared fate and a search for attribution, i.e. a search for who or what caused the disadvantage; (3) Emergence of shared explanation or ideology through the process of meaning making and sharpening of group consciousness.

The initial processes remain undistinguished immaterial of the vulnerability or resilience framework being adhered to. However, it has been seen in disaster research that the collectives that had a sense of belonging together and a perceived notion of shared fate responded in a more structured manner to the emergency. Based on the analyses of primary accounts of survivors and eye witnesses of London bombings of 2005 along with relevant secondary data Drury et al. (2009) empirically demonstrated that in a mass emergency situation behaviours exhibiting psychosocial resilience (helping behaviours, sense of unity) remained predominant as compared to vulnerable behaviours (selfishness, mass panic). Interestingly, in contrast to the common assumptions given by the vulnerability paradigm, their findings show that a sense of continued danger gives rise to perceptions of common fate and a concerted effort to help others who are seen sharing the same fate. They also found the sense of unity and helping being converted into a certain risk taking for helping other victims, who were otherwise strangers.

Both vulnerability and resilience paradigm assume certain merger of the self with the collective; however, the processes conceptualized differ. While the vulnerability model presupposes a process of deindividuation hallmarked by a loss of identity in the crowd (Haney et al., 1973), that makes the individual downplay socially approved values and behaviours; the resilience model conceptualizes merger of individual identity with the larger collective that gains salience for the specific purpose. Also, what distinguishes the two paradigmatic responses is the sense of agency that evolves following emergence of group consciousness. The vulnerability framework that constructs people as dependent and incapable of managing themselves facilitates attribution of agency to authorities, power holders or other groups, absolving the disadvantaged group of taking any initiative for changing their vulnerable position. The perpetual dependence facilitates the emergence of vulnerable collective identity and response and a vicious circle of perpetual disadvantage. The emphasis on vulnerabilities either gets translated into dependence behaviour, or alternatively through the path of adversarial attribution results in resentment and conflict with the groups that are seen as enjoying a more advantageous position than one's own group. On the other hand, the resilience framework focuses on the capabilities at the individual, family and community levels and construes people as capable of taking responsible action for changing their disadvantaged position. Authorities, government agencies or power holders are construed as facilitators whose role is to empower the disadvantaged groups through capability building. Disaster preparedness thus becomes a collaborative exercise, with the community taking lead in recognizing its strengths and vulnerabilities and actively utilizing these with the support of the authorities.

Such capability building becomes useful not only for immediate resilient response in the face of threat, but facilitates reduction of structural inequalities and systemic disadvantages. Emerging from disaster studies, such a model can potentially be used for re-conceptualizing the metaphor of development in terms of capability building as opposed to the currently prevalent conceptualization of development as growth.

From Vulnerability to Resilience: People-Centric Development

The U. N. World Commission on Environment and Development in the year 1987 defined sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987). The underlined emphasis on sustainability in the definition implicitly connects it to the concept of resilience. Folke et al, (2002, p. 439) bring together the two constructs to make certain specific policy recommendations—firstly, policies focused on prioritizing the interrelationship between environment and prosperous development of the society; secondly policies for creating space for innovative and flexible collaborations that ensure sustainability of development; and thirdly, policies that operationalize sustainability in the context of social-ecological resilience. A development perspective that equates development with growth might result in infrastructural and material enrichment of the community, but might not lead to sustainable and healthy communities.

Most of the third world countries, including India, have been facing the challenge of achieving inclusive and sustainable development that values and incorporates the contributions of all stakeholders. On ground, however, due to a general influence of neo-liberal sociopolitical ethos, many governments often end up prioritizing donor prerogatives and private interests over citizens' welfare. A sustainable development initiative needs to incorporate an active involvement of the community in planning, monitoring and execution of development programs. The choice of development programs to be implemented needs to be made in collaboration with the local communities and leaders. A program for bringing in infrastructural or social change, which is devoid of community involvement, leads the community into an ineffective development path and may also result in destructive choices and perpetual resistance. A development paradigm that is techno-centric relies on expert knowledge seeks to bring in change through top-down processes, putting the community in a passive role at the receiving end. People have a minimal role to play, a nominal say in the matters that directly affect their lives and livelihoods. Such a development paradigm constructs a vulnerable identity for the community, promotes dependence not merely in the face of crisis, but as a way of sustenance in day-to-day life. Such vulnerable identities of passivity and powerlessness are often internalized through an insidious and potent process of 'subjectivation' (Hamann, 2009; Milchman &

Rosenberg, 2008) whereby the identities thus created are accepted and adhered to as the norm by the community itself.

The choice of people-centric development, that incorporates values of justice, sustainability and inclusiveness, calls for a transformation of institutions, technology, values and behaviour, consistent with ecological and social realities (Korten, 1990). However, merely bringing in structural-level macro-changes in the policy would prove absolutely inadequate if micro-level factors influencing peoples' choice to participate in decisions affecting their lives and livelihoods are addressed adequately. With its knowledge of individual- and group-level processes and informed with the insights gained from resilience research in allied disciplines, psychology can play a major role in this regard through facilitating public policies based on empirical research that demonstrates the advantages of collaborative sustainable development models.

All development entails change, and change can often be threatening. Especially in the third world countries like India, where a large proportion of the population depends on local resources for livelihood, a developmental change that affects these structural arrangements would often threaten people to the extent of resisting the development and fighting for maintaining the status quo. Recent researches demonstrate the ubiquitous need of participation for making change more acceptable as well as effective. Despite democratic institutions existing at the grass roots level in India, most development remains minimally participatory. It is easy to attribute this to a continued prevalence of feudal structures and traditionally non-egalitarian power arrangements within the society. However, this also results in many development projects remaining incomplete, ineffective and more seriously facing strong resistance from the people whom these are supposed to benefit. Taking cue from the micro- and macro-level factors emergent in resilience research in diverse fields and coalescing these for the purpose, certain insights emerge based on which we make a few assertions, with a potential to inform policy. In making these assertions, we accept that psychology has largely remained outside the orbit of development challenges in the developing countries (Moghaddam, 1990), yet emphasize that there are many possible pathways through which psychologists can aid in the development efforts using their knowledge and services.

First, it is important to *ensure participation* of stakeholders of development. As discussed, an unquestionable adherence to vulnerability model with the authorities adopting a techno-centric paternalistic approach undermines the local knowledge structures, weakens the community ties and pushes the community towards a self-perception that is devoid of a sense of agency and strength. The sense of common fate that arises due to the uncertainty and ambiguity introduced by non-participatory change brought in by the authorities gives rise to deindividuation, rather than sense of collective identity. Further, the deindividuation might give rise to primitive behaviours based primarily on emotion rather than reason, leading to mass contagions of irrational acts that are devoid of social values. As an outcome, self-centricity prevails making any reasoned negotiation very difficult. With its vast domain of knowledge in change management, the psychologists have the potential to provide solutions that would minimize resistance towards change and motivate

people for making change a participatory activity. Also, along with the emphasis on economic and political factors, identification of micro-level factors that can facilitate participation is only possible through involvement of a psychological approach.

Deriving from this, as our second assertion, we emphasize that it is pertinent that a *sense of collective self* be facilitated among the community. A participatory approach to development planning or to disaster preparedness is the key element that determines the effectiveness of crisis response, sustained resilience and adaptability. Arising from a shared perception of common fate, the affected people can choose to view themselves either as victims or as change makers. A structural- and systemic-level arrangement that has fostered passivity would beget passivity and vulnerability in crisis situations. On the other hand, governing practices that created structures and systems fostering resilience would give rise to voluntary participation and a community that proactively engages with the authority for accomplishing tasks and achieving goals. A strong recommendation thus can be made for bringing in policies that recognize the strengths of the local populace, acknowledge the indigenous forms of knowledge and make it mandatory to involve local populations in planning and executing development projects. This is not only expected to facilitate sustainable development, but also to bring a positively oriented collective identity to the fore.

Deriving from an analysis of various development models and the potential role of psychology within these, a third assertion can be made for *recognizing the multi-layered nature of conflicts that arise in the wake of development efforts*. Research reveals that power asymmetries exist not only between authorities and the people, or the local and the national levels, but also within the community (Van Vlaenderen, 2001). A policy for sustainable development must be geared to address and minimize these asymmetries through involvement of the most disempowered sections of the society. Acknowledging and working towards minimizing the power differentials prevalent at various levels calls for a critical approach towards research by surpassing the limitations imposed by a 'value neutral scientific approach' of mainstream psychology. In order to make any significant contribution towards development challenge, it is of crucial importance for psychological research to strike a balance between an activist approach and a scientific approach.

As Van Vlaenderen (2001) suggests, a participatory action research paradigm emerges as the optimum framework through which psychology can make active contributions to the development project, at the same time maintain the scientific rigour of research that is the hallmark of the discipline. Hence, the fourth and final assertion made by us focuses on active involvement of psychologists in *empowering people through capacity building*. This capacity building can be facilitated through finding ways and means of articulating local knowledge, skills, needs and resources; strengthening local community networks and leadership and imparting new skills for managing material and human resources (Van Vlaenderen & Gilbert, 1993). A community that is confident in its skills and knowledge participates in decision-making process, and the decisions taken through participation lead to more sustainable development initiatives.

People-Centric Development: A Perspective on Research and Practice

The ultimate purpose of science is to alleviate human suffering by providing workable solutions to real-life problems. Most of the issues in the contemporary world are increasingly becoming complex and multifaceted, solutions to which need to be informed by disciplinary knowledge of multiple disciplines. Moreover, in order to arrive at workable solutions and ensuring sustainability of these solutions, the involvement of the stakeholders is also necessitated. Stock and Burton (2011) discuss the various ways of bringing together the knowledge and methodologies of diverse disciplines for arriving at the intended integrated outcomes. Preferring the term integrative research over ‘cross-disciplinary’ (Jakobsen et al., 2004; Russell et al., 2007), ‘multi-disciplinary’ (Tress et al., 2004) or ‘supra-disciplinary’ (Balsiger, 2004) research, they emphasize upon breaking down the methodological, epistemological and ontological boundaries that prevent shared understandings of complex issues for developing integrated paradigms of research and practice.

Bridging disciplinary gaps involves both developing a better understanding of the problem and developing more effective solutions. Integration in this sense requires cognitive as well as social integration. While integration of intra- and inter-disciplinary stances is primarily achieved through striving for an enhanced conceptual understanding and methodological rigour; the realm of practice calls for examining the proposed hypotheses or solutions for their practical relevance and feasibility of implementation (Pohl and Hadorn 2007). Talking about integration has been found easier by the researchers than practicing it (Stevens et al., 2007; Reyers et al., 2010). Bergmann and colleagues (Bergmann et al., 2012) provide an exhaustive overview of 43 methods of integration discerned from various trans-disciplinary projects. They group these methods into seven broad categories. These categories also provide a process for designing integrative research in a systematic manner, beginning with—

- (i) *Conceptual clarification and theoretical framing through clear definitions of central concepts and theoretical formulations;*
- (ii) *Formulation of problem-oriented (rather than discipline-oriented) research questions and collaborative hypothesis generation;*
- (iii) *Developing, testing and refining new problem-oriented methods;*
- (iv) *Developing integrative multi-criteria assessment procedures for measuring the effectiveness of outcomes;*
- (v) *Development and application of models as integrative tools that bridge the gap between scientific knowledge and societal experience;*
- (vi) *Creating and defining artefacts, services and products as ‘boundary objects’ or spaces where various stakeholders meet on a common platform;*
- (vii) *Connecting various knowledge bases by creating inter-disciplinary teams and collaborating with social practitioners.*

The envisaged goal of replacing the growth-centric development model with a sustainable people-centric development model can become easier to achieve through a two-step strategy in which inclusive research precedes inclusive decision-making. Drawing from Pohl’s and Hadorn (2007) elaborative definition of trans-disciplinary

research, we propose an integrative-trans-disciplinary process of research and praxis for sustainable and resilient development, which is delineated in the following steps:

- a. Achieving sustainable development and resilient communities
- b. Grasping the complexity through explicit sharing of issues and concerns of various stakeholders.
- c. Working out the meanings of important terms collaboratively
- d. Describing and collating various disciplinary conceptualizations and societal perceptions for joint construction of research problem and hypotheses.
- e. Linking of abstract and case-specific knowledge for developing research insights and working out a probable range of solutions.
- f. Development of methods by integrating methodological knowledge from diverse disciplines.
- g. Working out and agreeing upon assessment criteria for determining the effectiveness of solutions provided by the research that would be acceptable to various stakeholders and that also ensures ‘common good’, with an explicit statement of the value stance of the researcher and various stakeholders.

This process is an iterative and recurrent process of research and practice and ensures inclusive participation by the community members at all levels. It also creates space for various perspectives to be included and diverse concerns to be addressed within the research paradigm. Also, it has the potential to bridge the gap between scientific knowledge, which is often seen as having limited utility in providing practicable solutions, and the larger goal of achieving sustainability through inclusive participation. Beginning with adoption of perspectives that allow for insights from allied disciplines to be incorporated, broadening the methodological armour by learning from inter-disciplinary methods and developing and working as a part of integrative research teams in pursuance of solutions for real world problems—the discipline of psychology definitely has the potential to transcend the limitations it sets for itself and emerge as a stronger integrative science.

Conclusion

This chapter has focused upon the contemporary changes in the research and practice domains of psychology and has argued for adopting an efficiency-based approach. The shift from deficiency to efficiency model of individual functioning is well acknowledged; however, the same needs to be translated to group functioning and community development. Psychology has a lot to learn in this regard from the allied disciplines. Remarkable insights have been obtained by observing peoples’ positively oriented reactions even under extremely threatening situations. These findings have led to earlier notions of ‘mass panic’ and ‘illogical crowd behaviour’ being discredited. Research findings of socially rooted positive behaviours in disaster situations have the potential to inform policies that would value participation by the people. Further, the chapter has highlighted the underlying similarities of processes

involved in limited and short duration crises (mass emergencies, disasters and terror attacks) as well as the prolonged and chronic systemic level crises (poverty and marginalization). It has been argued that a resilience-based approach that identifies and uses peoples' skills, strengths and knowledge valuing their participation in decision-making results in better outcomes and sustainable development. Psychology has so far played a minimal role, especially in the domain of development. However, its potential cannot be undermined with a foreseeable move towards more integrative approaches and adoption of critical research paradigms.

References

- Balsiger, P. W. (2004). Supradisciplinary research practices: History, objectives and rationale. *Futures*, 36, 407–421.
- Bergmann, M., Jahn, T., Knobloch, T., Krohn, W., Pohl, C., & Schramm, E. (2012). *Methods for transdisciplinary research: A primer for practice*. Campus Verlag.
- Bostock, W. W., & Smith, G. W. (2001). On measuring national identity. *Social Science Paper Publisher*, 4(1), 1–6.
- Brundtland, G. H. (1987). *Report of the world commission on environment and development: Our common future*. United Nations.
- Chatterjee, M. (2010). Slum dwellers response to flooding events in the megacities of India. *Mitigation and Adaptation Strategies for Global Change*, 15, 337–353.
- Cicchetti, D., & Curtis, W. J. (Eds.). (2007). Special issue: A multilevel approach to resilience. *Development and Psychopathology*, 19(3).
- Clauss-Ehlers, C. S., & Levi, L. L. (2002). Violence and community, terms in conflict: An ecological approach to resilience. *Journal of Social Distress & the Homeless*, 11(4), 265–278.
- Drury, J., Cocking, C., & Reicher, S. (2009). The nature of collective resilience: Survivor reactions to the 2005 London Bombings. *International Journal of Mass Emergencies and Disasters*, 27(1), 66–95.
- Drury, J., Cocking, C., & Reicher, S. (2009). Everyone for themselves? a comparative study of crowd solidarity among emergency survivors. *British Journal of Social Psychology*, 48, 487–506
- Dynes, R. R. (2003). Finding order in disorder: Continuities in the 9–11 response. *International Journal of Mass Emergencies and Disasters*, 21, 9–23.
- Frerks, G., Warner, J. & Weijs, B. (2011). The politics of vulnerability and resilience. A paper written for the Netherlands US Crisis Research Network (NUWCReN). Retrieved from <http://www.scielo.br/pdf/asoc/v14n2/08.pdf>
- Fielding, A., & Anderson, J. (2008). *Working with refugee communities to build collective resilience. association for services to torture and trauma survivors*. Occasional paper 2. Perth, Australia.
- Fiksel, J. (2006). Sustainability and resilience: Toward a systems approach. *Sustainability: Science Practice, & Policy*, 2, 14–21.
- Folke, C., Carpenter, S., Elmqvist, T., Gunderson, L., Holling, C. S., & Walker, B. (2002). Resilience and sustainable development: Building adaptive capacity in a world of transformations. *Ambio*, 31(5), 437–440.
- Fonagy, P., Steele, M., Steele, H., Higgitt, A., & Target, M. (1994). The Emanuel Miller memorial lecture 1992. The theory and practice of resilience. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 35, 231–257.
- Gadgil, M., Hemam, N. S., & Reddy, B. M. (1998). People, refugia and resilience. In F. Berkes & C. Folke (Eds.) *Linking social and ecological systems*. Cambridge University Press.
- Garmezy, N. (1974). Children at risk: The search for the antecedents of schizophrenia. Part II: Ongoing research programs, issues, and intervention. *Schizophrenia Bulletin*, 9, 55–118.

- Hamann, T. H. (2009). Neoliberalism, governmentality, and ethics. *Foucault Studies*, 6, 37–59.
- Haney, C., Banks, C., & Zimbardo, P. G. (1973). Interpersonal dynamics in a simulated prison. *International Journal of Criminology and Penology*, 1, 69–97.
- Hernández, P. (2002). Resilience in families and communities: Latin American contributions from the psychology of liberation. *The Family Journal*, 10, 334–343.
- Jakobsen, C. H., Hel, T., & McLaughlin, W. J. (2004). Barriers and facilitators to integration among scientists in transdisciplinary landscape analyses: A cross-country comparison. *Forest Policy and Economics*, 6, 15–31.
- Kirmayer, J. L., Sehdev, M., Whitley, R., Dandeneau, F. S., & Isaac, C. (2009). Community resilience Models, metaphors and measures. *Journal of Aboriginal Health*, 5, 62–117.
- Korten, D. C. (1990). *Getting to the 21st century*. Kumarian Press.
- Le Bon, G. (1895). *The crowd: A study of the popular mind*. Norman S. Berg.
- Luthar, S.S. (2006). Resilience in development: a synthesis of research across five decades. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Risk, disorder, and adaptation* (2nd ed., Vol 3). Wiley.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3), 227–238.
- Masten, A. S. (2006). Developmental psychopathology: Pathways to the future. *International Journal of Behavioural Development*, 31, 46–53.
- Masten, A. S. (2013). Risk and resilience in development. Self and other In P. D. Zelazo (Ed.), *Oxford handbook of developmental psychology* (Vol. 2, pp. 579–607). Oxford University Press.
- Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology*, 11, 143–169.
- Mawson, A. R. (2005). Understanding mass panic and other collective responses to threat and disaster. *Psychiatry*, 68, 95–113.
- Milchman, A., & Rosenberg, A. (2008). *The final Foucault: Government of others and government of oneself*. Cambridge Scholars Publishing.
- Moghaddam, F. M. (1990). Modulative and generative orientations in psychology: Implications for psychology in the three worlds. *Journal of Social Issues*, 46(3), 21–41.
- Pohl, C., & Hadorn, G. H. (2007). Principles for designing transdisciplinary research. Oekom
- Reyers, B., Roux, D. J., Cowling, R. M., Ginsburg, A. E., Nel, J. L., & Farrell, P. O. (2010). Conservation planning as a transdisciplinary process. *Conservation Biology*, 24, 957–965.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A. S. Masten, D. Cicchetti, K. H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp. 181–214). Cambridge University Press.
- Russell, A. W., Wickson, F., & Carew, A. L. (2007). Transdisciplinarity: Context, contradictions and capacity. *Futures*, 40, 460–472.
- Rutter, M. (1999). Psychosocial adversity and child psychopathology. *British Journal of Psychiatry*, 174, 480–449.
- Rutter, M. (2000). Resilience reconsidered: Conceptual considerations, empirical findings, and policy implications. In J. P. Shonkoff & S. J. Meisels (Eds.), *Handbook of early childhood intervention* (2nd ed., pp. 651–682). Cambridge University Press.
- Saleebey, D. (1996). The strengths perspective in social work practice: Extensions and cautions. *Social Work*, 41(3), 296–305.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5–14.
- Simon, B., & Klandermans, B. (2001). Towards a social psychological analysis of politicized collective identity: Conceptualization, antecedents, and consequences. *American Psychologist*, 56(4), 319–331.
- Stevens, C. J., Fraser, I., Mitchley, J., & Thomas, M. B. (2007). Making ecological science policy-relevant: Issues of scale and disciplinary integration. *Landscape Ecology*, 22, 799–809.

- Stock, P., & Burton, R. J. F. (2011). Defining terms for integrated (multi-inter-trans-disciplinary) sustainability research. *Sustainability Review*, 3(8), 1090–1113.
- Strauss, A. L. (1944). The literature on panic. *Journal of Abnormal and Social Psychology*, 39, 317–328.
- Tierney, K., Bevk, C., & Kuligowsky, E. (2006). Metaphors matter: Disaster myths, media frames and their consequences in hurricane Katarina. *Annals of the American Academy of Political and Social Science*, 604, 57–81.
- Tress, G., Tress, B., & Fry, G. (2004). Clarifying integrative research concepts in landscape ecology. *Landscape Ecology*, 20, 479–493.
- Turner, R. H., & Killian, L. M. (1972). *Collective behaviour* (2nd ed.). Prentice-Hall.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Blackwell.
- Van Vlaenderen, H. (2001). Psychology in developing countries: People centred development and local knowledge. *Psychology in Society*, 27, 88–108.
- Van Vlaenderen, H., & Gilbert, A. (1993) Participatory research for capacity building in rural development: A case study, in Stygen, P & Cameron, M (eds) *Development in transition: Opportunities and challenges* Pretoria: Development Society of Southern Africa.
- Werner, E. (1995). Resilience in development. *Current Directions in Psychological Science*, 4(3), 81–85.
- Werner, E. E., & Smith, R. S. (1989). *Vulnerable but invincible: A longitudinal study of resilient children and youth*. Adams Bannister Cox.
- Zautra, A., Hall, J., & Murray, K. (2008). Community development and community resilience: An integrative approach. *Community Development*, 39(3), 130–147.

Integrative Psychological Science in Cultural Context

Culture as a Process in Individual and Societal Development



R. C. Mishra

Abstract Development of individuals, groups, and societies has been one of the cherished goals of research and practice of social and behavioural scientists for the last several decades. While the concept of development has been criticized for its primary focus on generation, availability, and use of physical resources by people in a given society, a major criticism relates to not taking into account the role of culture in understanding and promoting development. Psychologists, who work in diverse cultures, have attacked most of the myths about development accepted by the Western social scientists. In this chapter, we discuss how culture plays a role in shaping individual's psychological processes (e.g. perceptions, attitudes, beliefs, values, etc.), which are directly linked to societal development. It is argued that development should be considered as a process of psychological change in individuals and groups, which allows them to move from their present state to some more valued state. To ensure human welfare through development, it is necessary to understand (1) the present psychological state of individuals, groups and societies, (2) the kind of life they value and choose for themselves, and (3) the process of psychological change through which the chosen kind of life can be reached. Human welfare programmes require understanding of individuals in a culturally sensitive manner. The chapter will draw upon the findings of psychological research carried out with members of the Adivasi and other underdeveloped groups of the mainstream society in order to argue for a culturally sensitive, individually meaningful, and socially non-ethnocentric approach to change and development of individuals and societies.

Keywords Adivasi society · Cultural change · Modernization · Societal development · Psychological processes · Underdeveloped groups

R. C. Mishra (✉)
Banaras Hindu University, Varanasi 221005, India

Introduction

In this chapter, we examine how culture comes to shape the behaviour of individuals, and how the cultural features of groups and behaviour of individuals contribute to their welfare and to societal development. To place the individual and societal development issues in context, we briefly examine the concept of development as it is shared by social scientists in general, but cultural and cross-cultural psychologists in particular. While attempting to do so, we maintain a difference between individual and societal level conceptualization of development. Then we discuss the concept of culture and point out how culture-oriented psychologists can play a key role in understanding and promoting societal development by way of reinforcing individual level processes, which are shaped by culture. By drawing examples from research carried out with some cultural groups, but especially with the Adivasi groups in India, the chapter intends to show how the knowledge gained from cultural and cross-cultural psychological studies can be used to form a basis for culturally meaningful, economically viable, and individually respectful approach to human and societal development.

Concept of Development

During the last decades, several disciplines have addressed the problem of development of individuals and societies not only in India, but also in many other parts of the world. While it is commonly agreed that the notion of development involves some change, modification, or reorganization in the pre-existing features of individuals and societies, there are disciplinary preferences for the analysis of the nature of changes, the locus of changes, and the meanings assigned to those changes. In the cognate discipline of social sciences, the analysis of developmental change has been carried out at the socio-cultural, institutional, and individual levels. At the socio-cultural level, the focus is on changes that involve fairly large systems, such as nations, regions, or cultural groups, whereas at the institutional level, the focus is on changes or reforms that involve economic or governmental/administrative institutions. At the individual level, on the other hand, the analysis is mainly concerned with the changes in people's personality characteristics, attitudes, values, motivations, perceptions, and cognitions. Although the focus of psychological approach is primarily on changes occurring at the individual level, socio-cultural and institutional level changes are considered important influences for changes that occur at the individual/psychological level.

How can psychology move from the analysis and understanding of human behaviour to a position of actually applying its research-based knowledge in a unified manner to improve life conditions of individuals and groups? This question has often been raised for the discipline of psychology in many scientific meetings. It is now widely accepted that psychology has the potential to address the problems related to

human and societal development in modern times. Some efforts made in this direction are summarized in Berry et al. (2003). Psychologists also have come to realize that a consensus on the meaning of the term 'development' is needed in order for taking significant steps in that direction.

The United Nations Millennium Project (2001), which is taken as an important effort for development at the world level, has proposed a set of eight goals of development. These include: eradication of extreme poverty and hunger; achievement of universal primary education; promotion of gender equality and empowerment of women; reduction of child mortality; improvement of maternal health; combating HIV/AIDS, malaria, and other diseases; ensuring environmental sustainability; and development of global partnership for development. Each of these problems threatens individuals and societies in many parts of the world. They involve psychological dimensions and call for change in attitudes, values, motives, and many traditionally established patterns of behaviour. Some of these psychological dimensions are being addressed by researchers at the global level, but more particularly in the "majority world" where the problems are relatively more complex and challenging than in other places.

There is no doubt that development requires change in economic and socio-cultural systems, but it needs to be understood that all systems require humans to begin with. The goals of development cannot be achieved without considering the psychological characteristics (e.g. abilities, attitudes, values, and motives) of individuals or groups for whom the economic and socio-cultural changes are intended. In order to be considered 'development', all structural and institutional changes have to be geared in the direction of states, which are valued and articulated by individuals and groups involved in the process of change (Berry, et al., 2011; Mishra & Berry, 2018; Mishra, et al, 1996). Development in this sense asks for creating alternative arrangements at social institutions, be it family or workplace. This view of development is subscribed to by many others who pursue a culturally sensitive and culturally appropriate psychology (Sinha, 1997; Tripathi, 1988; Berry, et al, 2003).

Cross-cultural psychological research has tried to understand the ways in which economic and socio-cultural conditions of individuals and groups influence their behaviour as well as the processes through which the influences come about. An eco-cultural framework has been developed by Berry, et al (2011), in which similarities and differences in human psychological functioning (both at individual and group levels) are examined by taking into consideration two fundamental sources of influences (ecological and socio-political) and a set of variables that connect these influences to psychological characteristics of groups and individuals. These variables include biological and cultural adaptations at the population level, and certain transmission variables (e.g. enculturation, socialization, genetics, and acculturation) through which the population level variables are inculcated into the behaviour of individuals. Thus, the eco-cultural framework considers human psychological diversity to be a set of collective and individual adaptations to context. Within this general perspective, cultures are viewed as evolving adaptations to ecological and socio-political contexts, and psychological characteristics of a population as adaptive to their cultural context as well as to the broader ecological (natural environment)

and socio-political (intercultural) contexts (Mishra & Berry, 2018). Understanding ‘development’ from this point of view requires a thorough analysis of ecological demands and cultural features of individuals and groups for whom any development programme is organized. We will return to discussion of this issue at a slightly later point.

The Concept of Culture

At the heart of cross-cultural psychological research is the concept of culture. It has been defined in many different ways. Tyler (1871), who first used the term, defined culture as that complex whole, which includes knowledge, belief, art, morals, laws, customs, and any other capabilities and habits acquired by man as a member of society. The spirit of this classical definition gets resonated in almost all later definitions of culture. The shorter definitions of culture, such as “the total social heredity of mankind” (Linton, 1936, p. 78), or “the man-made part of the environment” (Herskovits, (1948, p. 17), or a “relatively stable way of life of a group of people” (Berry, et al, 2011, p. 228), or “any kind of information that is acquired from other members of one’s species through social learning that is capable of affecting an individual’s behaviour” (Heine, 2016, p. 5), represent various elements of Tyler’s definition.

Berry and his colleagues (Berry, et al., 2011) critically examine both the early and relatively more recent definitions of culture. They feel that all definitions pose difficulties in using culture as a variable in psychological research, because they fail to suggest the mechanism(s) through which culture influences human behaviour. Also, since there are as much behavioural variations within any culture as across cultures, a cultural level explanation of human behaviour is fraught with difficulties. To say that “Asians are global thinkers, whereas Westerners are analytical thinkers” (Nisbett, 2003) doesn’t take us anywhere. The question is: What is there in the Asian or Western culture that makes people think globally or analytically?

One important feature of cultures is that they do not remain static; instead they change and evolve over time. While in the earlier days, the changes took place relatively slowly; in recent decades, changes have been occurring at a faster rate due to the increased mutual contact of people of different cultural groups and their products. The phenomenon of cultural contact has been widely studied under the rubric of “acculturation” (Berry, 1990; Sam & Berry, 2016). Transportation facilities, communication technologies (internet, mobile phones), Western-type schooling, urbanization, and industrial economy, etc., have made the phenomenon of culture contact and change of global interest.

Partly because of the diverse meanings conveyed by the term ‘culture’, and partly because of the ongoing changes in it, the use of culture as a variable in psychological research appears problematic. So much so that some (e.g. Jahoda, 2012) have even gone to the extent of arguing that researchers should be left free to provide their own definition of culture in their research programmes. Tripathi and Mishra (2012), on

the other hand, argue that, for making culture as a researchable concept and using it as an antecedent or a consequent variable, the analysis of the concept of culture and some agreement on its meaning is necessary.

While the debate on the meaning and referents of culture still continues (Berry, et al., 2011; Matsumoto & Juang, 2017), a further complexity is added due to the intermixing of cultures in today's global world. It may be really hard to find today a culture that exists in its 'purest' form. In this situation, a practical problem is to identify the elements of a culture, which influence the behaviour of individuals and groups more than other elements. Without addressing this problem, it will be fairly difficult to connect individual and societal development with culture.

Psychological Approaches to the Study of Development in Cultural Contexts

In the discipline of cross-cultural psychology, there are at least six major approaches that have been used for studying and understanding individual and societal development. Berry (1980) has discussed these approaches in some detail. While the units of analysis in these approaches differ, culture appears to be a central theme in each one of them. We will briefly examine these approaches here.

Culture and Personality Approach

This approach focuses on how the features of culture, with which a group of people engage, lead to the development of certain personality characteristics among those people. Although researchers associated with this school of thought (e.g. Mead, 1956a, 1956b; Wallace, 1951) were primarily concerned with the role played by culture in generating common personality characteristics (called 'modal personality') among individuals, they all have also considered the role that individuals' personalities can play in bringing about change in the respective cultures. In this conceptualization, development is thought to be easier if the personalities of cultural groups are oriented towards change, i.e. if they are congruent with the lifestyle with which they are generally aware.

These ideas were taken further in later studies. Hagen (1962) argued that, for social change and development, contact with technologically advanced societies was necessary. Hagen also maintained that the dynamics of development were largely internal rather than external. Thus, he conceptualized an "innovative personality", which was characterized by traits like creativity, positive attitude towards working in novel fields, and openness to new experiences. It was argued that developmental change would not occur without change in personality characteristics of individuals.

Modernization Approach

Developed by Inkeles and Smith (1974), this approach is focused on individual attitudes, which are placed on a continuum that ranges from “traditional” at one end to “modern” at the other end. Change in individuals’ attitudes is taken to occur in a single direction the end point of which is called “modernity”. Since the attitudes of individuals in all societies reflect change over time, Inkeles and Smith (1974) considered the journey of modernization as “universal”, and modernity not only as a “valued goal” of societies, but also essential for their development. In a large-scale study carried out with a variety of samples in six different countries, they found experience of education, exposure to mass media, industrial experience, and years of urban residence as strong predictors of “modernity”. A modern man was characterized by psychological qualities such as informed participant citizenship, marked sense of personal efficacy, independent and autonomous decisions about behaviour, and open-mindedness and cognitive flexibility. Although this approach has faced several criticisms, change in attitudes of people is still considered as an important step in all development programmes.

Achievement Motivation Approach

This is a relatively more substantial approach to the study of development. Achievement motivation is manifested in variety of ways, such as anxiety and fear of failure, desire for competence and mastery of the environment, desire for social power, and more importantly the desire for excellence.

In his work, McClelland (1961) noted that striving for success in competition with some standards of excellence differs as a function of socialization for independence and specific achievement training. Individuals, whose mothers expected an early mastery of self-reliance, placed fewer restrictions on the child, and encouraged early achievement, were found to show a high level of achievement motivation. McClelland used a variety of techniques (e.g. content analysis of children’s readers over a period of time) to draw supportive evidence for his proposition.

Can people be trained for developing achievement motivation? McClelland and Winter (1969) developed a training programme and tried it with entrepreneurs in India, Italy, and Tunisia. The findings indicated that the training programme did change people’s achievement orientation. This finding is important for two reasons: (a) it indicates that achievement motivation can be changed in spite of its strong relationship with child socialization practices, and (2) it shows that traditional values and practices do not necessarily interfere with the process of (economic) development. In other words, the process of development can operate even without changing many traditionally established psychological characteristics of individuals.

Some research has shown that achievement training without appropriate opportunity structure is not sufficient for development. For example, Nandy (1973) and

Hundal (1971) conducted achievement training programmes in West Bengal and Punjab, respectively, and found that training for achievement was related simply to entrepreneurial behaviour, not to individual or societal development. J. B. P. Sinha (1976) pursued this work further and noted that in the absence of appropriate social structure and cultural norms, enhancing achievement motivation leads to several negative behaviours (e.g. hoarding, corruption), which are unethical for individuals and disruptive for society.

Values Approach

This approach focuses on development in terms of change in or reorganization of values traditionally held by individuals of a given society. An inherent assumption is that some of the traditional values (if not all) interfere with the process of development, and they require modification, change, or reorganization with some innovation. This theme appears fairly strongly in the context of individualist and collectivist values, the latter being regarded as inhibitors of development (Kim, et al, 1994). There is also evidence to suggest that, in the course of development, both individualist and collectivist values may continue to remain in a state of peaceful coexistence (Mishra, 1994; Sinha & Tripathi, 1994).

It is now widely recognized that values are important and relatively stable features of individuals and societies, and they are less susceptible to change. As a result, the development model based on value change has been seriously questioned. Attempts have been made to reexamine the utility of traditional values. Suggestions have been made to reorganize social values and align them for human and social development (Tripathi, 1988). In the Asian context, this approach seems to be particularly useful (Sinha & Kao, 1988).

Perceptual-Cognitive Approach

The main proposition of this approach is that developmental change involves certain cognitive aspects. In earlier decades, a widely held view was that some individuals or groups were not “intelligent” enough to progress or develop. This ‘ethnocentric’ view is no longer taken seriously, although there are still some who believe in greater intellectual capacity or “smartness” of some individuals and groups (Rushton, 2000).

In contrast to this position is the view that individuals and groups develop different perceptual and cognitive skills or styles in order to adapt to the demands of their ecology and culture. This view has persisted over decades (see Berry, 1966, 1976; Berry, et al, 1986) and continues to be the dominant view (see Dasen & Mishra, 2010, Mishra & Berry, 2018; Mishra, et al, 1996). It has been noted that successful

negotiation of life in industrialized and technological environments requires well-developed analytic perceptual and cognitive skills. Development from this perspective can be viewed in terms of congruence between the patterns of skills already developed and valued in traditional life of individuals or groups and those called for by the new technological life in order to meet social, economic, and cultural goals of the society. If the skills of concerned individuals or groups are not congruent with those that are required for development, then the programme of development would necessarily involve change to a lifestyle that leads to the development of perceptual and cognitive skills that are essentially needed in the new (changed) cultural context.

Some decades ago, Triandis (1973) had argued that economic development requires “cognitive complexity”, which involves discrimination, differentiation, and integration. For Triandis (1973, p. 172–73) “...if a culture does not have sufficiently developed differentiation in an exchange that is important for effective behavior in economically developed settings, this culture has characteristics which *inhibit* economic development. Conversely, some traditional cultures may have developed much differentiation in these exchanges and these cultures will find it easier to develop”. The implication is that the nuances as well as starting points of development for different cultures will not (and cannot) be the same. In order to understand the nuances and the starting points, characteristic features of cognitive behaviours of individuals in a given culture need to be thoroughly examined before a programme for individual or societal development is worked out and implemented.

Some other cognitive factors have also been proposed with respect to developmental change. Degree of “cognitive flexibility” is one of them (Cohen, 1968). Development often involves new solutions to older problems in which cognitive flexibility of individuals can play a crucial role. Another factor is “coping style” (Diaz-Guerrero, 1973), which refers to the characteristic approach to problem solving employed by an individual. A distinction is maintained between “active” and “passive” coping styles. The former involves changing the physical and social environment, while the latter involves changing oneself for adjusting to the environment. Which coping style is more conducive to change and development is still not clear.

Intergroup Relations Approach

Societal development involves active participation of all groups in a country’s political, economic, social, and cultural life. In societies, where cultural diversity has existed since eons, integration of members of diverse groups with various domains of life of the mainstream society poses a serious challenge. Issues related to integration of Muslims and a large number of Adivasi groups have posed problems in India. At the global level, integration of immigrants and other ethno-cultural groups in respective societies has been a matter of concern.

For a long time, it had been assumed that smaller groups over a period of time will lose their cultural identities and eventually assimilate in larger groups of the mainstream society. Development from this point of view involved change in the

lifestyle of individuals of smaller cultural groups so as to behave like members of the larger groups of the society. This model of development has failed almost in all parts of the world. Consequently, new approaches and parameters of individual and societal development have been evolved. In the new approach, greater “openness” and “embeddedness” of a social system are regarded as the essential features or the criteria of development (Tripathi, 1988).

Recapitulation

The discussion presented in the preceding section suggests that the problem of individual and societal development can be approached from diverse psychological perspectives. The approaches discussed above have all been used not only for analysing and understanding psychological processes underlying development, but also for organizing programmes aimed at individual and societal development. In the case of India, it is largely the individuals and groups living in remote villages or forests and hilly or mountainous regions who have been in the main focus of development programmes. Some “weaker sections” of the society living in urban areas are also in the focus. In the following section, we will take up the Adivasi society as a case for addressing the psychological issues related to its development. It may be noted that the Adivasi represent the “weakest” among the weak groups of the Indian society. A majority of them still lives in forest and hilly regions making their living with subsistence-level economic activities.

The Adivasi as a Development ‘Beneficiary’

The development of the Adivasi peoples (also called ‘Scheduled Tribes’ or ‘Tribals’) has been a major concern of the Government of India since the time of Independence of the country from British rule in 1947. The Adivasi represent an outcaste group and are not part of the main stream society. For their integration with groups of the larger mainstream Indian society, a variety of developmental programmes have been started by the central and state governments. Among others, education through formal schooling has been proposed as the most important programme for their overall development.

While education has been considered as the most powerful means for improving the position of the Adivasi people (Singh, 1996), in most cases this programme has not resulted in desired level of improvements (Jabbi & Rajyalakshmi, 1997; Mishra, 2007). Less attraction of the Adivasi people to educational programmes seems to be an important reason for less effectiveness of these programmes (Joshi, 2009; Mishra & Joshi, 2015).

The reasons for less attraction of the Adivasi people towards child education, particularly among the more traditional groups, are not much known. The pressures

of subsistence economic activities for living have been suggested as being an important factor responsible for the low participation of Adivasi children in educational programmes (Mishra, 2007, 2008; Mishra & Joshi, 2015).

However, the incongruence between the children's abilities that have been nurtured in their particular eco-cultural settings, and those that are valued and transmitted in schools, seems to be a more important reason (Sinha & Mishra, 1997, Mishra & Sinha, 1998; Mishra, 2005). Low score of Adivasi children on standard tests of intelligence has often been taken as evidence of low I.Q. among them (Singh, 1996). Most cross-cultural psychologists believe that standardized tests cannot provide any insight into the 'intelligence' of children raised in cultures that are different from the one in which the test was developed (e.g. Berry, 1972; Irvine & Berry, 1988/2011).

The existence of any cognitive or intellectual deficiency on the part of Adivasi children is now dismissed as a reason for their low or less effective participation in schools. On the contrary, it is strongly advocated that psychological instruments used in their assessment have not paid attention to their needs, aspirations, and cognitive abilities (Mishra, 2005; Sinha & Mishra, 1997). Adivasi children are cognitively competent in several other ways that have been nurtured in their particular eco-cultural settings (sometimes referred to as their 'indigenous cognitions; see Irvine & Berry, 1983), which are not assessed by standard tests.

Psychological Studies of the Adivasi People

The effect of cultural characteristics, mundane activities, and socialization experiences of Adivasi children on the development of their cognitive competencies has been reported in several anthropological writings. In spite of this, doubts and debates about cognitive competence of Adivasi children and their school achievement have continued over the last several decades. Psychological studies provide us with some understanding of the features of cognitive life of Adivasi children; this knowledge may be used as the basis for organization of development programmes for Adivasi children and their society.

There are some interesting studies carried out in school settings. These studies generally report that children of the Adivasi groups perform poorly in schools and demonstrate a lower level of classroom achievement in comparison to children of other (non-Adivasi) cultural groups. Researchers (e.g. Singh, 1996; Singh & Jayaswal, 1981) hold factors like low level of parental education, occupation, income, and deprivation characteristics of home and neighbourhood to be responsible for poor school performance of children. Negative parental attitude to education, less parental support in children's schoolwork, and educationally fewer encouraging patterns of parent-child interaction, low level of motivation, and poor self-concept of children are other factors influencing children's school performance (Singh, 1996).

It may be observed that none of these studies provides evidence of any cognitive or intellectual deficiency for the Adivasi children. They clearly suggest familial, social,

economic, and motivational factors to be responsible for poor educational achievement of these children. Sinha and Mishra (1997) have argued that these children can perform fairly well in schools if their living conditions and experiential inputs can be modified through social–psychological intervention programmes. In the school, children are taught skills (e.g. use of language and mathematics) in a set-up that is far removed from their real-life context. As a result, schooling turns out to be a non-interesting goal, both for the community and the child. Use of cognitive abilities that are nurtured among Adivasi children and used in everyday life can enhance their performance in schools (Sinha & Mishra, 1997).

Evidence in support of this kind of approach to educational development can be drawn from couple of recent studies (Brouwer et al., 2006, 2017). Children of the Kharwar Adivasi society, sampled according to different chronological and educational age (years of schooling), were individually tested by using familiar ‘real-life’ and ‘school’ like tasks. It was found that chronological age was a more important predictor of performance of younger than older children. A reverse pattern was found for educational age; the influence of education increased with more number of years children spent in school. Test material played a crucial role in the strength of these effects in both testing modes. The effect of chronological age was strongest for the (ecologically more valid) ‘real-life’ like tasks. This is plausible because school content is usually not the focus of everyday life. On the other hand, the effect of educational age was strongest for the ‘school’ like tasks, presumably because these tasks required the use of skills children were taught in school.

These studies suggest that cognitive competence in childhood seemingly follows two pathways despite a common structure of intelligence (Mackintosh, 1998). They indicate that formal education can affect development only when children attend school for longer periods. Thus, a community can benefit from schooling only by sending children to school for more number of years than just for a year or two, and by having teachers who can include more and more information in their lessons from children’s everyday context. Children’s development is typically an outcome of the mastery of skills that are required in daily life, and the mastery of skills that are associated with school practice and instruction (Brouwers et al., 2017; Karmiloff-Smith, 1992). For children who do not go to school, development of everyday skills remains important, whereas for children who attend school, skills required in school set-up become increasingly more important.

In addition to studies that look into classroom achievement of Adivasi children as evidence of their cognitive development, systematic studies have also been carried out by using standard tasks and tasking procedures. Perception, cognition, leaning, thinking, and reasoning processes have been examined with a particular focus on the role of schooling in the development of these processes. These studies are discussed in detail elsewhere (e.g. Mishra, 2005, 2007, 2008; 2011); there is no point in reviewing them here. On the other hand, it will be useful to look at the implication of their findings.

Implication of Studies for Adivasi Development

Much has been written about issues related to development of individuals, groups, and societies, and about the role school education can play in overcoming these problems. While it is doubtful that schooling produces any new cognitive structures or abilities among individuals, there is no doubt about its potential to increase the possibility of the existing cognitive skills of individuals to be applied to other situations (Mishra & Dasen, 2004). There is also some evidence to suggest that, when faced with unfamiliar situations, schooled individuals not only feel more comfortable, but they are also able to manage various affairs of their life more effectively than those who have not been to school (Mishra & Dasen, 2004). It is in this sense that the school education is thought to lead to a general 'empowerment' of Adivasi people with respect to their functioning in personal, social, economic, and other domains of life.

Research studies inform us that parents in the Adivasi society perceive several benefits of school-based education. They perceive not only children's personal development as the most important outcome of school education, but also greater economic possibilities (i.e. wage employment) and a better future for them. They think of a better life for children, a greater chance of mobility from the native place, and an enhanced feeling of self-efficacy (Mishra, 1996; Mishra & Joshi, 2015). The idea, that school education prepares Adivasi children for effective participation in the larger society through inculcation of certain psychological qualities, seems to get resonated in responses of the Adivasi parents.

It is important to note at this point the distinction made between 'cognitive' and 'non-cognitive' aspects of development (Mishra, 1996; Mishra & Joshi, 2015). Cognitive aspects of development are evident in the specific knowledge and general reasoning skills that children acquire through participation in schools. The non-cognitive aspects (also called socio-emotional aspects) of development are visible in the form of changes in beliefs, attitudes, values, and overall personality. That school education can prepare children for development by enhancing their knowledge, skills, and capabilities for participation in wider economic activities (e.g. wage employment, business), and that it can prepare them to accept as adults many responsibilities in the society are the facts deeply realized by the Adivasi parents (Mishra & Joshi, 2015). Research also indicates that the Adivasi parents perceive children, village, and their community as closely interconnected entities. They believe that development of children through education can be instrumental in ameliorating not only the conditions of their own personal lives, but also the lives of their family and community.

Such an optimism of parents, however, is often not without preconditions. The results of most studies done with the Adivasi children ask for an ecologically meaningful and culturally sensitive kind of education at schools for their personal development as well as for the development of their society. In the Adivasi context, education or any other programme of development that is built upon culturally nurtured cognitive skills, abilities, and other psychological qualities of children will constitute development as long as it enhances the prospects of individuals and groups for

negotiation of life in most effective ways in their respective socio-cultural settings (Sinha & Mishra, 1997).

In research, several qualities of Adivasi children have been identified. These are required not only for children's participation in and success at school, but also outside the school. For example, the Adivasi students have been found to be more assertive, venturesome, imaginative, experimenting, emotionally stable and practical than the non-Adivasi students (Srivastava, 1983). They also seem to have an accepting, emotionally supportive, and positively involved family (Singh, 1996). These qualities bear great promise for success of the Adivasi people in various spheres of life.

In a previous study with Adivasi children (Mishra, et al, 1996), it has been found that, in comparison to other groups, children of hunter and gatherer groups possess a higher level of visual and tactual differentiation, demonstrate capacity for finer judgement of shape and size of stimuli and spatial relations, and produce finer categorization of an array of objects. High cognitive differentiation in the case of hunter-gatherer groups is noted in many other parts of the world (Berry, 1976; Berry, et al, 1986; Mishra & Berry, 2018; Mishra, et al, 1996). These abilities are greatly required for success in science, art, music, dance, athletic activities, and vocations like carpentry, tailoring, wood, and stone crafts (Witkin & Goodenough, 1981; see also Riding & Rayner, 2012). These abilities need to be effectively utilized not only for the purpose of children's education in schools, but also in the broader economic spheres of the Adivasi life. Attempts made in this direction will be helpful in generating and promoting a sense of competence, self-efficacy, self-respect, and a positive self-image among the Adivasi children.

Such attempts are also highly likely to provide the Adivasi children with a culturally meaningful, ecologically valid, and economically viable alternative to life by reinforcing the dignity of their culture and identity (Mishra & Berry, 2018; Sinha & Mishra, 1997). Contact of the Adivasi people with the outside world in the last decades has introduced several changes in their culture and life. These changes are clearly reflected in their psychological characteristics. Their ways of perceiving and cognitively organizing the world appear to be very similar to those with whom they negotiate life in changed circumstances (e.g. Mishra, et al, 1996). This suggests that the Adivasi children are cognitively capable of acquiring and using all skills that members of the mainstream society possess. However, without sensitivity to the Adivasi culture and life, recognition of cognitive strengths of children, appreciation of their psychological qualities, and the use of those qualities in school and other domains of functioning, the goal of development either of the Adivasi children or of the Adivasi society is likely to remain largely unachieved.

How can the knowledge gained from psychological studies of the Adivasi children and adults be used by policymakers for development of the Adivasi communities? As we have seen earlier, development from a psychological point of view means movement of individuals and groups from their present state to a state considered as more desirable or valued by the members of the concerned groups and societies. This conceptualization of development provides us with two options for promoting Adivasi development: (a) build a programme of development that can

make the best use of already developed psychological qualities among individuals of the concerned groups, or (b) try to develop among individuals new psychological qualities that the programme of development essentially calls for. In both cases, the development programme has to have a clear understanding of people's psychological characteristics as the starting point.

Informed by psychological predispositions and strengths of children of different Adivasi groups, if the policy intends to strengthen those resources further, then a programme of "reinforcing education" will constitute development. On the other hand, if the policy aims at running a common programme of education for children of the Adivasi groups, then psychological resources of children, particularly of those belonging to traditional groups (e.g. the hunters-gatherers), will have to be identified and carefully addressed (in case the groups are found to be lacking in them) before starting any programme of development. This would require area-specific programmes of intervention that seek to strengthen those areas of competence that are less well developed (Berry, 1976; Mishra, et al, 1996).

The question of 'appropriate schooling' with regard to optimal development of children is currently a matter of serious discussion at the international level. It is argued that in urbanized kind of schools, children get disconnected with the experiences of life of natural environments, such as landscapes, streams, and a wide variety of flora and fauna (Smith & Sobel, 2009). Such experiences are part of daily life of the Adivasi children, and these can be used to build up children's knowledge base and promote their psychological development.

Tailoring change and development programmes according to the ecological and cultural characteristics, daily life experiences, and cognitive characteristics of different Adivasi groups will be a positive step in the direction of their development. This approach to development stands in contrast to the general development programmes that have been tried out with the Adivasi groups for the last several decades. It is now clear that the local needs of particular Adivasi groups should get priority over the needs of the Adivasi communities in general (Mishra, 2007; Mishra & Berry, 2018).

The fast growth of urban-industrial economy in all parts of the country has posed new demands to which many Adivasi people have not been able to adapt. Increasing mental health problems in the Adivasi communities is a matter of serious concern (Mishra, 2015) and a challenge to the Adivasi development model. Caution has to be taken against the introduction of major inconsistencies between traditional lifestyle of the Adivasi peoples and the one that is envisaged through education and other developmental programmes currently underway (Mishra, et al, 1996).

Integration as Development

The intergroup relations approach discussed in the previous section provides us with some insight into the issues related to development of the Adivasi individuals and societies. This approach requires an analysis of psychological dispositions of

members of one cultural group towards the members of other cultural groups. The intergroup relations model, developed by Berry (1976) and his colleagues (Berry, et al, 2011), has been used worldwide to capture relational orientations, attitudes, or strategies of diverse cultural groups (Berry, 2017), including India (Mishra et al., 1996, 2017). In case of the Adivasi groups, the number of studies is limited. Also, the analysis has been carried out only from the perspective of the Adivasi people by asking how they would prefer to relate to 'other' groups present in their contact arena. As we have discussed earlier, 'openness' and 'embeddedness' are the two key features characterizing societal development (Tripathi, 1988). The intergroup relations approach has addressed both these aspects of development. In case of the Adivasi groups, five relational orientations have been identified (Mishra, 2007; Mishra, et al, 1996), called integration, assimilation, separation, marginalization, and coexistence.

In the "integration" mode, maintenance of one's cultural identity as well as movement to becomes an integral part of a larger societal framework is the option taken, whereas in "assimilation", relinquishing cultural identity and moving into the larger society is the individual's option. "Separation" refers to a self-imposed withdrawal from the larger society. In "marginalization", the groups lose cultural or psychological contact with either their traditional culture or the larger society. In the case of "co-existence", there is no attempt towards synthesis or assimilation of new elements; instead the elements of both cultures are kept side by side without involving any standards of comparison and evaluation (Mishra, et al, 1996).

In the course of change and development, although individuals and groups in a given society may predominantly adopt any one of these five strategies, there may be area-specific preferences in their adoption. For example, people may prefer to integrate in terms of dressing style or food, but may prefer separation in their social relationship, or assimilation at the workplace. Studies (see Sam & Berry, 2016) generally indicate separation and assimilation strategies to be associated with negative personal and social outcomes (e.g. greater stress, social disintegration). In contrast, coexistence and integration are identified as strategies accompanied by healthy outcomes both for individuals and societies (e.g. mental health, social harmony). It is to be noted that integration or coexistence is possible only if the society is open to accept and recognize individuals and groups with their distinctive identities, and it has the capacity to enfold them within the prevailing social system.

Adivasi groups generally prefer coexistence or integration strategy to negotiate life with other groups of the society (Mishra, 2007; Mishra & Chaubey, 2002; Mishra, et al, 1996). What we do not know is the manner and the extent to which members of the dominant groups will be willing to accommodate them within their social system. On the other hand, almost all studies report education as an important predictor of individuals' preference for integration or coexistence strategies. If the strategies of members of the main stream society for relating to the Adivasi groups are assessed, we may expect to find a similar kind of role for education. From this point of view, we may again think of education as a potential means of individual and societal development.

Concluding Comments

The potential of psychology to contribute to individual, societal, or national development has been widely acknowledged (Berry, et al, 2011). On the other hand, there is still not a clear agreement on the notion of ‘development’. It is regarded as one of the favourite myths of the western world (Rist & Sabelli, 1986), which has been transported to other parts of the world, but may not be acceptable to people who prefer to live with their distinctive cultural features. The concept of development has been challenged not only by psychologists (e.g. McLachlan et al., 2013), but also by economists (e.g. Maathai, 2009; Sen, 2005). Referring to the case of African nations, Maathai (2009) argues that developmental programmes have taken away their cultural identities, motivations and sense of common purpose, and replaced them with inertia and demoralization. The outcome is endemic poverty, corruption, and civil wars.

Sen (2000, 2005) has approached the concept of development from the point of view of “capabilities”, which refers to a person’s capacity and freedom to choose and to act. Capabilities are not simply what people are able to do, but their freedom to do what they want to do (Sen, 2000). A distinction is made between capabilities, on the one hand, and between commodities (e.g. resources) and functioning (activities that lead to the sense of well-being), on the other hand. While the commodities are a characteristic of the social and political conditions in which a person lives, functioning depends on personal characteristics of the individual. Taken from this perspective, a development programme needs to be directed at increasing ‘agency’ and ‘empowerment’.

Watkins and Shulman (2008) consider the present age as the age of ‘disruptive globalization’ and call upon psychologists to rethink about the goals and practices of psychology in the changed context. They argue that the term ‘development’ reminds people of “what they are not”. As a result, people become enslaved of other people’s dreams, rather than pursue their own. A genuine development, in fact, means a transition from less human to more human conditions of living for each and every person. This transition is possible by enhancing skills, abilities, and capabilities of individuals or groups through education, and also by making economic and socio-political systems more open and inclusive than what they are now. In the case of the Adivasi development, both these conditions are to be essentially fulfilled.

We have seen earlier that psychological studies of change and development have largely focused on attitudes, values, skills (cognitive, social, technical), and abilities of individuals and groups. None of these dimensions has been much examined in the Adivasi context of India. A emergent need of the present time is to create “psychological profile” of the Adivasi individuals and groups to understand their psychological resources upon which the structure of development can be founded. We also need to understand the goals of life of the Adivasi people (i.e. where they want to go, or what they want out of their life). This is possible through the analysis of their needs, aspirations, values, and preferences. In addition, we need also to understand how people move from one (present) state to another (i.e. future, desirable, valued) state.

We know that people, in addition to physical and material resources, possess many psychological resources in the form of motives, drives, and coping mechanisms. In psychological research, these dynamic factors have been shown to carry the potential for changing human behaviour, and they can be effectively used for reorganizing people's life in any society, including the Adivasi one.

Although the issue of development is equally pertinent in the case of many other "weaker sections" of the Indian society, it is more complex and challenging in the case of Adivasi societies than others. Development programmes have forced many traditional groups of the Adivasi society to change their life in the ways that are predetermined by others. There is no question of whether they want it or not. Growing unrest and violent movements witnessed in many Adivasi regions of the country call for a deeper understanding of individuals and groups, their needs and aspirations, and the overall vision of life they have cultivated for themselves. The grasp of psychological underpinnings of development in the context of Adivasi culture and life bears great promise for people who are sincerely involved in development programmes.

The lesson of the discussion presented above for development of the Adivasi people and society is clear. Any development programme, which does not pay simultaneous attention to ecological, cultural, and psychological characteristics of the Adivasi people, is unlikely to make a significant impact. The model of development derived from alien cultural contexts is of limited value in the Adivasi cultural milieu because of keeping out of focus the ecologically nurtured and culturally reinforced skills and psychological qualities of the Adivasi people, the lifestyle of their families, and the needs of their society. Our previous experience of working with the Adivasi groups has taught us the lesson that the goal of Adivasi development cannot be achieved by resorting to any one particular model or approach of human and social development. The application of eco-cultural model in studies of human behaviour informs us that psychological qualities of individuals and groups develop in adaptation to ecological conditions in which they negotiate their daily life as well as the demands of their respective cultures. Convergence of ecological, cultural, and psychological approaches is seemingly essential for facilitating societal development and promoting psychological and social well-being of the Adivasi people.

References

- Berry, J. W. (1966). Temne and Eskimo perceptual skills. *International Journal of Psychology*, 1(3), 207–229.
- Berry, J. W. (1972). Radical cultural relativism and the concept of intelligence. In L. J. Cronbach & P. Drenth (Eds.) *Mental tests and cultural adaptation* (pp. 77–88). Mouton.
- Berry, J. W. (1976). *Human ecology and cognitive style: Comparative studies in cultural and psychological adaptation*. Sage/Halsted.
- Berry, J. W. (1980). Social and cultural change. In H. C. Triandis & R. Brislin (Eds.), *Handbook of cross-cultural psychology* (Vol. 5, pp. 211–279). Allyn & Bacon.
- Berry, J. W. (1990). Psychology of acculturation: Understanding individuals moving between cultures. In R. Brislin (Ed.), *Applied cross-cultural psychology* (pp. 232–253). SAGE publications.

- Berry, J.W. (2017), *Mutual intercultural relations*. Cambridge: Cambridge University Press.
- Berry, J. W., Van de Koppel, J. M. H., Senechal, C., Annis, R. C., Bahuchet, S., Cavalli-Sforza, L. L., & Witkin, H. A. (1986). *On the edge of the forest: Cultural adaptation and cognitive development in Central Africa*. Swets & Zeitlinger.
- Berry, J. W., Poortinga, Y. H., Breugelmans, S. M., Chasiotis, A., & Sam, D. L. (2011). *Cross-cultural psychology: Research and applications*. Cambridge University Press.
- Berry, J. W., Mishra, R. C., & Tripathi, R. C. (2003). *Psychology in human and social development: Lessons from diverse cultures*. SAGE Publications.
- Brouwers, S. A., Mishra, R. C., & Van de Vijver, F. J. R. (2006). Schooling and everyday cognitive development among Kharwar children in India: A natural experiment. *International Journal of Behavioral Development*, 30(4), 559–567.
- Brouwer, S. A., van de Vijver, F. J. R., & Mishra, R. C. (2017). Cognitive development through schooling and everyday life: A natural experiment among the Kharwar children in India. *International Journal of Behavioral Development*, 41(3), 309–319.
- Cohen, R. (1968). *Modernization in Africa: A social and psychological model of analysis*. Centre for African Studies, University of Edinburgh.
- Dasen, P. R., & Mishra, R. C. (2010). *Development of geocentric spatial language and cognition: An eco-cultural perspective*. Cambridge: Cambridge University Press.
- Diaz_Guerrero, R. (1973). Interpreting coping styles across nations. *International Journal of Psychology*, 8(3), 193–203.
- Hagen, E. (1962). *On the theory of social change*. Dorsey Press.
- Heine, P. J. (2016). *Cultural Psychology*. W. W. Norton.
- Heine, S.J. (2016). *Cultural Psychology*. New York: W. W. Norton.
- Herskovits, M. J. (1948). *Man and his work: The science of cultural anthropology*. Knopf.
- Hundal, P. S. (1971). A study of entrepreneurial motivation: Comparison of fast- and slow progressing small-scale industrial entrepreneurs in Punjab, India. *Journal of Applied Psychology*, 55(4), 317–323.
- Inkeles, A., & Smith, D. (1974). *Becoming modern*. Harvard University Press. Plenum.
- Irvine, S.H., & Berry, J. W. (1983). *Human assessment and cultural factors*. New York: Plenum press.
- Irvine, S. H., & Berry, J. W. (1988/2011). *Human abilities in cultural context*. Cambridge University Press.
- Jabbi, M. K., & Rajyalakshmi, C. (1997). Education of SC and ST groups in Bihar. *Social Change*, 27(1 & 2), 30–72.
- Jahoda, G. (2012). Critical reflections on some recent definitions of “culture.” *Culture & Psychology*, 18(3), 289–303.
- Joshi, S. (2009). Dynamics of educational development of tribal children. In A. Shukla (Ed.), *Culture, cognition and behavior* (pp. 91–106). New Delhi: Concept.
- Karmiloff-Smith, A. (1992). *Beyond modularity: A developmental perspective on cognitive science*. MIT Press.
- Kim, U., Triandis, H. C., Kagitcibasi, C., Choi, S., & Yoon, G. (1994). *Individualism and collectivism: Theory, method, and practice*. SAGE.
- Linton, R. (1936). *The study of man*. Appleton-Century Crofts.
- Maathai, W. (2009). *The challenge for Africa: A new vision*. Heineman.
- Mackintosh, N. J. (1998). *IQ and human intelligence*. Oxford University Press.
- Matsumoto, D., & Juang, L. (2017). *Culture and psychology*. Cengage Learning.
- McClelland, D. C. (1961). *The achieving society*. VonNostrand.
- Mclachlan, C., Merilyn, F. & Edwards, S. (2013). *Early childhood curriculum: Planning, assessment, implementation*. Cambridge: Cambridge University Press.
- McClelland, D. C., & Winter, D. (1969). *Motivating economic achievement*. Free Press.
- Mead, M. (1956a) *New lives for old*. Morrow.
- Mead, M. (1956b). The implications of culture change for personality development. In D. G. Haring (Ed.), *Personal character and cultural milieu* (pp. 79–105). Syracuse University Press.

- Mishra, R. C. (1994). Individualist-collectivist orientations across generations. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and practice* (pp. 225–238). SAGE.
- Mishra, R. C. (1996). *Cognitive processes, cultural adaptation, and education of children of some tribal groups*. Unpublished report, NCERT.
- Mishra, R.C. (2005). Cognitive strengths of tribal children: Implication for their education. In A. Shukla (Ed.), *Indian tribes: Psychological and social perspectives* (pp. 53–64). New Delhi: Kanishka publication.
- Mishra, R. C. (2007). Psychological perspective on educational development of tribals. In M. B. Sharan & D. Suar (Eds.), *Psychology matters: Development, health and organization* (pp. 1–17). Allied Publishers.
- Mishra, R. C. (1998). Cognitive processes. In NCERT (Ed.), *Fifth survey of educational research* (pp. 128–146). NCERT.
- Mishra, R. C. (2008). Education of tribal children in India. In P. R. Dasen & A. Akkari (Eds.), *Educational theories and practices from the majority world* (pp. 145–167). SAGE Publications.
- Mishra, R. C. (2011). Eco-cultural contexts and cognitive functioning. In P. N. Tandon, R. C. Tripathi, & N. Srinivasan (Eds.), *Expanding horizons of mind science(s)* (pp. 287–305). New York: Nova Science Publishers.
- Mishra, R. C. (2015). Mental health problems in culturally changing Adivasi communities. *Psychology and Developing Societies*, 27(2), 214–230.
- Mishra, R. C., & Berry, J. W. (2018). *Ecology, culture and human development: Lessons for Adivasi education*. SAGE Publications.
- Mishra, R. C., Sinha, D., & Berry, J. W. (1996). *Ecology, acculturation and psychological adaptation: A study of Adivasis in Bihar*. SAGE Publications.
- Mishra, R. C., & Dasen, P. R. (2004). The influence of schooling on cognitive development: A review of research in India. In B. N. Setiadi, A. Supratiknya, W. J. Lonner & Y. H. Poortinga (Eds.), *Ongoing themes in psychology and culture* (pp. 207–222). Kanisius.
- Mishra, R. C., & Joshi, S. (2015). Acculturation and children's education in a rural Adivasi community. *Indian Educational Review*, 53(1), 7–24.
- Mishra, R. C., & Sinha, D. (1998). Role models, socialization patterns and cognitive strength of tribals. In K. Sujatha (eds.), *Modules for tribal education* (pp. 47–71). NIEPA.
- Mishra, R. C., Bano, S., & Tripathi, R. C. (2017). Intercultural relations in India. In J. W. Berry (Ed.), *Mutual intercultural relations* (pp. 291–310). Cambridge University Press.
- Mishra, R. C., & Chaubey, A. C. (2002). Acculturation attitudes of Kharwar and Agaria tribal groups of Sonebhadra. *Psychology and Developing Societies*, 14(2), 201–220.
- Nandy, A. (1973). Motives, modernity, and entrepreneurial competence. *The Journal of Social Psychology*, 91(1), 127–136.
- Nisbett, R. E. (2003). *The geography of thought: How Asians and Westerners think differently, and why*. Free Press.
- Riding, R. J., & Rayner, S. (2012). *Cognitive styles and learning strategies: Understanding style differences in learning and behavior*. Routledge.
- Rist, G., & Sabelli, F. (1986). *Once upon a time there was development*. Lausanne Editions de'n Bas.
- Rushton, J.P. (2000). *Race, evolution and behavior: A life history perspective*. Charles Darwin Research Institute.
- Sam, D., & Berry, J. W. (2016). *The Cambridge handbook of acculturation psychology* (2nd ed.). Cambridge University Press.
- Sen, A. (2000). *Development as freedom*. Oxford University Press.
- Sen, A. (2005). Human rights and capabilities. *Journal of Human Development*, 6(2), 151–166.
- Singh, A. K. (1996). Improving the educational status of the tribals in India. Paper presented at the National Seminar on Research in Tribal Education, NIEPA, New Delhi.
- Singh, A. K., & Jayaswal, M. (1981). Correlates of scholastic achievement in socially disadvantaged students. *Social Change*, 11(1), 23–28.

- Sinha, D. (1997). Indigenizing psychology. In J.W. Berry, Y.H. Poortinga & J. Pandey (Eds.), *Handbook of crosscultural psychology* (pp. 129–169). Boston: Allyn & Bacon.
- Sinha, D., & Kao, H. S. R. (1988). *Social values and development: Asian perspective*. SAGE Publications.
- Sinha, D., & Mishra, R. C. (1997). Some personality, motivational and cognitive characteristics of tribals and their implications for educational development of children. *Indian Journal of Educational Planning and Administration*, 17(2), 283–295.
- Sinha, D., & Tripathi, R. C. (1994). Individualism in a collectivist culture: A case of coexistence of opposites. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. Choi, & G. Yoon (Eds.), *Individualism and collectivism: Theory, method, and practice* (pp. 123–136). SAGE Publications.
- Sinha, J. B. P. (1976). Outgrowing the alien frame: A review article. *Vikalpa*, 1(1), 63–67.
- Smith, G. A., & Sobel, D. (2009). *Place- and community-based education in schools*. Routledge.
- Srivastava, R. K. (1983). Psychological characteristics of Tharus and non-Tharus: A cross-cultural study. In *Proceedings of the 70th Session of the Indian Science Congress*, Tirupati.
- Triandis, H. C. (1973). Subjective culture and economic development. *International Journal of Psychology*, 8(3), 163–180.
- Tripathi, R. C. (1988). Aligning values to development in India. In D. Sinha & H. S. R. Kao (Eds.), *Social values and development: Asian perspective* (pp. 315–333). SAGE Publications.
- Tripathi, R. C., & Mishra, R. C. (2012). The “other” truth of culture and omniculturalism. *Culture & Psychology*, 18(3), 359–374.
- Tyler, E. B. (1871). *Primitive culture* (2 vols.) Murray.
- United Nations. (2001). *United Nations millennium development goals*. United Nations.
- Wallace, A. F. C. (1951). Some psychological determinants of culture change in an Iroquoian community. In W. N. Fenton (Ed.), *Symposium on local diversity Iroquois culture*. Bureau of American Ethnology, Bulletin 149.
- Watkins, M., & Shulman, H. (2008). *Toward psychologies of liberation*. Palgrave Macmillan.
- Witkin, H. A., & Goodenough, D. R. (1981). *Cognitive styles: Essence and origin*. International University Press.

Indian Psychology in the Inter-Cultural Context: From Assimilation to Integration and Beyond



Anand C. Paranjpe

Abstract This chapter addresses Sinha’s clarion call for “the integration of modern psychology with Indian thought” (Sinha in *Journal of Humanistic Psychology* 5:6–17, 1965). It discusses the distinctive features of psychology in Indian thought, often called “Indian psychology” on the one hand, and those of modern psychology on the other. In addition, it clarifies what “integration” means. In this context, it first explores the main features of Indian psychology and place them in the current international context. This chapter is divided into four sections. In the *first* section, a conceptual model for the understanding of the concept of “integration” is proposed by adapting John Berry’s model for interactions between immigrant and host cultures to suit the relationships between Indian and Western approaches to psychology within their respective knowledge systems. In the *second* section, an attempt is made to sketch out historical background which has shaped the relations between Indian and Western psychology. In the *third* section, three different ways in which Indian and Western approaches have been combined in studies of emotion are discussed. The *fourth* and final section is devoted to a discussion of a set of relevant issues.

Keywords Inter-cultural relations · model · Indian versus Western Psychologies · Integration · Cross-cultural psychology · Indigenous psychology · Emotions

Adapting Inter-Cultural Relations Model to Relations Between Indian and Western Psychologies

Indian and Western psychologies in the inter-cultural context

There should be no doubt anymore that there is a treasure trove of psychological insights, theories, and techniques handed down to us in the long and rich intellectual and spiritual traditions of India. This legacy has been eclipsed by the Western models imported into India starting a hundred years ago with the founding of the first psychology laboratory in Kolkata. The indigenous legacy has been less obvious

A. C. Paranjpe (✉)
Simon Fraser University, Burnaby, Canada
e-mail: anand_paranjpe@sfu.ca

than it should be since it has been pushed into a corner, so to speak, concealed under the labels of philosophy, spirituality, and even religion. This situation is a historical product of the British rule, which involved a conflict between Indian and Western cultures. Insofar as psychology in India today is a product of inter-cultural relations, it can be understood within the larger context of the ways in which cultures tend to interact. The Canadian psychologist Berry (2001) has presented a conceptual model that delineates four major patterns in which immigrant individuals and communities tend to deal with each other when caught into an encounter between ancestral and adopted cultures (Fig. 1).

The schematic diagram in this figure is a version of Berry’s (2001, p. 618) schematic representation in two circles containing two 2×2 tables. Each circle represents four logical alternatives for maintaining or rejecting indigenous or adopted cultures. While the circle on the left deals with choices open mainly for individuals and groups of *immigrants* in connecting with either or both of the ancestral and adopted cultures. The second circle is a similar analysis of the *policies* a society and its government may adopt in dealing with immigrant and native cultures. In this essay, however, I am concerned with Indian and Western models of psychology as *knowledge systems*, and *not* with immigrant communities or policies concerning inter-cultural relations, which are the subject matter of Berry’s analysis. Nevertheless, the concept of “integration” applies, in some (rather modified) form to relationships among systems of psychology also. Other conceptual categories used by Berry are also relevant to some extent, but they need to be modified as appropriate to systems of psychology that have developed in differing cultural contexts.

In Fig. 2, I have tried to represent in four quadrangles the four possible alternatives for choosing *either* Western or Indian approaches to psychology, or *both*, or *neither*.

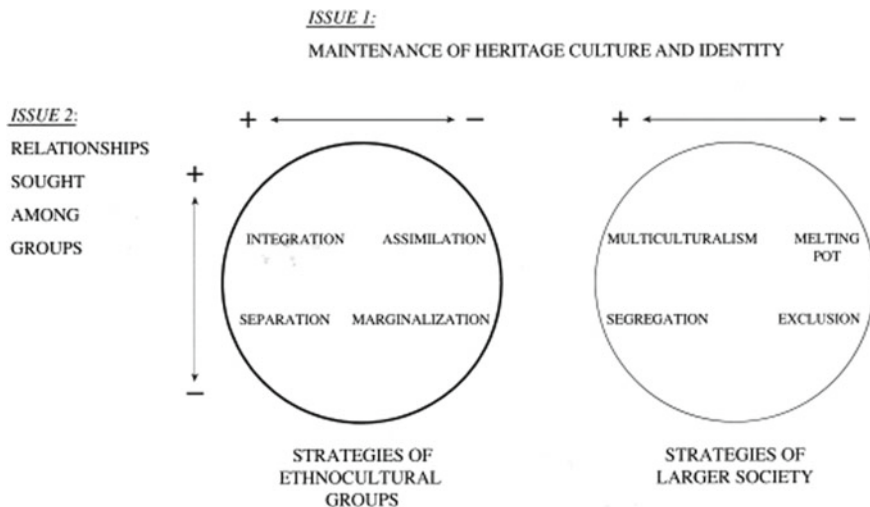


Fig. 1 John Berry’s model for maintenance of heritage culture

Berry's model of acculturation (appropriately adapted to psychology)

	INDIAN Psy YES	INDIAN Psy No
WESTERN Psy Yes	BOTH = INTEGRATION (Best of both worlds) 4	WESTERN Psy Only "DOMINATION" 2
WESTERN Psy No	INDIAN Psy Only Separation Isolation 3	NEITHER DECLULTURATION 1

Fig. 2 Berry's model of acculturation adapted to psychology

Quadrant #1 on the lower right corner represents a situation where one chooses *neither* Western *nor* Indian perspectives in psychology. Admittedly, it is very difficult to make sense of such a situation, since no system of thinking can exist without a cultural context, whether Eastern, Western, or whatever. In an attempt to make sense of this alternative let me make a suggestion. It seems to me that, in cultural terms, it implies cutting off one's psychological thinking from its cultural roots. It is like getting "de-culturated" as it were. Now what would de-culturation mean in psychology? In my view, it means rejecting any connection between psychology and culture. Since no one can stand in a cultural vacuum, it implies that one may ignore, or deny off hand, the cultural roots from which one's thinking has evolved. Insofar as values constitute the principal aspect of culture that provide direction to the development of knowledge within its orbit, a "value-free" approach to psychology indicates its de-culturation. Carnap's (1932–33/1959) idea of "psychology in physical language" would fit perfectly in the melting pot of his grand scheme called the Unity of Science (Carnap, 1938/1949). Let me note in this context that, from a Carnapian logical positivist viewpoint, "ought" statements that are suggestive of values (such as one ought not kill or fornicate) are not empirically verifiable and are therefore meaningless. Psychology that follows a Carnapian model aims to formulate *universal* laws that control behaviour that apply equally across cultures. Like physics it admits no cultural or regional variations. One way in which de-culturation was brought about was bring psychology into a laboratory, a specially created zone where contamination by culture and its values can be kept away like a quarantine to keep away from an undesirable disease. Without denying the benefits of keeping values away to avoid unwanted bias and other advantages of experimental methodology, the excessive reactions against negative effects of culture cannot be denied off hand. Indeed, back in the seventies when I started to publicly propose the study of psychology informed by the intellectual and cultural traditions of India, I was told that psychology is a "science", and therefore speaking of Indian or European psychology is nonsense.

Let me not enter here into a discussion of logical positivism, which aspired to a form of psychology modelled after physics. It has been fully dismantled piece by piece by Popper, Quine, and other philosophers. Indeed, the demise of logical positivism was declared back in the mid-sixties by Passmore (1967). Against this background, it is to the great credit of John Berry that right from his seminal paper back in 1969 he admits to the inevitable cultural impact on all approaches to psychology. So, we can now safely go back to Berry's model here modified with a focus on knowledge systems shaped by Indian and Western cultural traditions.

Quadrant #2 represents the situation where psychologists stick with only Western models and have nothing to do with traditional Indian insights in psychological matters. Needless to say, Indian universities have been following Western models to a near total exclusion of indigenous Indian perspectives. This situation is *not* analogous either to the "Assimilation" of immigrant individuals and groups within the host culture, or to a cultural "Melting pot" as in the case of the USA where immigrants are supposed to adopt a Pan-American culture, by suppressing their ethnic cultural roots. In regard to the major part of psychology as commonly practised and taught in India today, I would prefer to call it a case of a near total "Domination" of Western models. This situation is clearly a product of the continuing effects of the British colonial rule. In this context, it would be useful to take a quick look at history of the relationship between Indian and Western knowledge systems during and after the British rule. I shall return to this issue later on in this essay.

Quadrant #3 represents an alternative where one remains within the orbit of traditional systems of knowledge with little if anything to do with Western insights. Indeed, notwithstanding the domination of Western systems, Indian systems of knowledge have continued to survive, if only in isolation and in penury. It should be clear that traditionally the *gurukul* system was the core of the propagation of the traditional knowledge systems, and of Sanskrit the language in which much of that knowledge was expressed along with Pali and Prakrit. This system continues to exist in the form of a few Sanskrit *pāṭhśālās* and universities (*vidyāpīṭhs*). Traditional perspective on psychology has been part of this system. Although there was no separate discipline called psychology, mind (*citta/manas*) was the focus of Patañjali's Yoga, and quietening the disturbances in the mind by controlling the mental processes was the goal of this system. It is interesting to note in this context that a set of CDs describing the ways for quietening the disturbed mind (*manahpraśamanopāyah*) was presented by Kotemane (2013).

Beyond such *gurukulas*, independent scholars groomed within the cultural tradition have continued to publish works expounding Patañjali's Yoga as the main indigenous system of psychology. For instance, Kolhatkar published sometime back in the 1940s a book called the *Bharatīya Mānasaśāstra* (exactly meaning Indian psychology), which is a detailed exposition in Marathi of Patañjali's Yoga system.

Although Patañjali's Yoga Sūtras are at the core of the traditional Indian system of psychology, it is not the only system of its kind. Concepts and theories of psychology have been integral part of Indian systems of knowledge within the Hindu, Buddhist, and Jain traditions. A survey of the traditional views of cognition, emotion, and will spread across an exhaustive array of texts was published by Sinha (1934/1958,

1961). Ramachandra Rao (1962) presented a historical overview of the development of psychological thought in India, and a few textbooks of Indian psychology have also been published (Kuppuswamy, 1985; Safaya, 1976; Srivastava, 2001). Indeed, aside from such academic exercises, Indian psychology continues to produce new original and high-level contributions to psychology. The case in point is the work of the sage Sri Aurobindo; an overview of his contributions to psychology may be found in Sen (1986).

It should be clear that notwithstanding the continued existence (and even continued—if only slow—growth), it has not made a significant dent on teaching and research in psychology in Indian universities. All the work just cited remains sequestered in isolation from the academic “mainstream” of psychology in India. It presents the separation and isolation of traditional psychology as represented in Quadrant #3.

Quadrant#4 in the schematic table represents a situation in which both Indian and Western models are included, and to some extent at least, an attempt is made to get the “best of both worlds”, so to speak, leading to a broader and richer perspective on given issues. This approach, it seems to me, was suggested by the late Professor Durganand Sinha back in 1965 using the very word “integration.” This situation is *analogous* to that of immigrants who, faced with two cultures, one of their land of origin and another of the adopted country, pick and choose element, of both cultures and fabricate a composite personal lifestyle. It is understandable how and why Berry considers this pattern of “acculturation” to be the *most desirable* among the four alternatives.

Integration: Examples, Problems, Alternatives

It would be relevant to cite some examples of integration, or bringing together, of Indian and Western perspectives in psychology. One example comes from the Department of Psychology from Allahabad University: Pande and Naidu (1992) did interesting studies integrating the indigenous spiritual concept of *Anasakti*, or nonattachment, with modern methods of scientific psychological investigation. They derived hypotheses from the doctrine of *karma* and from the perspective of *karma yoga* in the *Bhagavad-Gītā*, and tested them empirically by means of psychometric methods. Their approach shows the advantages of combining complementary features of differing cultural traditions. Then there are instances where attempt has been made to straddle across Indian and Western traditions and present their perspectives side-by-side. Rao (2002) brings together in one book perspectives on consciousness from the Western and Indian traditions and shows where the two meet. In my earlier work (Paranjpe, 1984), I have similarly brought together Indian and Western perspectives on consciousness. In my later work (Paranjpe, 1998) I pointed out some complementary features of Indian and Western views on cognition, emotion, and volition. The purpose of citing such efforts is not to provide a survey of a multitude

of such works, but to indicate the efforts in the direction of integrating perspectives across cultures.

Here it will be useful to point out certain revisions and criticisms of Berry's four-fold model that have been suggested in light of some research done in India.

Co-existence as a Fifth Category Added by R. C. Mishra to Berry Model

It is interesting that in his studies of acculturation of tribal communities in Bihar, Mishra et al. (1996) have pointed out that there is a need to add "co-existence" as a distinct category to Berry's four distinct patterns of dealing with differences in culture. In his study of two tribal communities in Bihar, which came in close contact with urban cultures different from their ancestral way of life in the jungles, they chose neither assimilation into the urban culture, nor to remain isolated from it. Instead, they chose to live in a relationship of *co-existence* with urban folks. Mishra's finding thus suggests that "co-existence" may be added as a fifth category, thus extending Berry's four-fold model.

Mishra's work, like John Berry's, is concerned with the relationship *between* two different cultures, suggesting that the two may co-exist. Sinha and Tripathi (1994) point out in one of their papers how mutually contradictory tendencies can co-exist *within the same* culture. Co-existence is an important principle which is at the root of the fundamental principles of Indian psychology, as it is of the traditional Indian world view and culture at large. This issue deserves discussion at some depth, and I wish to get back to it towards the end of this essay. Given my focus here on Indian psychology as a system thought in the context of the conflict of Indian and Western systems of knowledge, it would be useful to identify some important landmarks in the history of interaction between Indian and Western systems of knowledge.

Historical Background of the Relations Between Indian and Western Psychologies

Historical landmarks in India–West encounter in psychology: pre-Independence

Clearly, the first major encounter between Indian and Western systems of knowledge occurred when Thomas Macaulay presented his famous (or notorious) *Minute* to a committee of the British East Indian Company in Calcutta in 1835—some 180 years ago. Many of us lament the extraordinary success of this British strategy. Macaulay's denigration of Indian systems of knowledge is too well known to need any comment here. One way in which the British rubbed salt in this injury was to employ learned Sanskrit scholars only to pay them insultingly low wages and thereby

to “put them in their place” while paying huge amounts to ignoramus young British officers disproportionately huge salaries.

The implications and consequences of the educational policy guided by Macaulay’s Minute were not lost on several leaders of the independence movement under the Congress Party. In the early years of the twentieth century, the National Education Movement emerged, especially in Bengal. In 1905, the Bengal National College was founded in Calcutta with Sri Aurobindo Gosh as its first principal. Its very purpose was to promote education founded on traditional Indian systems of knowledge, rather than imparting purely Western education promoted by the colonial rule. As is well known, it is in 1915 that N. N. Sengupta started the first psychology laboratory at Calcutta University; its centenary was celebrated not long ago. It is not so well known and recognized, however, that it is about the same time—in 1916, to be precise—that Sri Aurobindo published his essay titled “Psychology of social development” based on traditional Indian systems of knowledge. This essay was further developed into a book titled *The Human Cycle* (see Purani, 1978). Sri Aurobindo is clearly the greatest and the latest in the long tradition of Indian psychology going back to the Upaniṣhads and Patañjali. Interestingly, it is also in 1915 that Lokamanya Tilak (1915/1956), a friend and colleague of Sri Aurobindo in the freedom movement, published his *Bhagavadgītā-rahasya*. As is well known, this monumental work provides an exposition of *karma-yoga*, a pathway to spiritual development based on principles governing human action. The common perception of this work as only a work in philosophy—or even an ideological tome—hides the fine principles of psychology on which it is based.

The spirit of turning to Indian systems of knowledge continued to flourish in Bengal through the 1930s. It was in 1931 that Krishna Chandra Bhattacharyya (1931/1954) delivered his famous lecture titled *Swaraj in ideas*. The main point of the talk was that it will be no use to earn a political independence from the British Raj if it involves adopting a completely Western world view at the expense of traditional Indian knowledge systems. In his voluminous work called *Studies in Vedāntism*, Bhattacharyya (1907/1983) explained in detail the philosophy of the Advaita Vedānta and showed how it is superior to the philosophy of Immanuel Kant, the German philosopher who was then viewed as the greatest in Western philosophy.

Historical Landmarks in India–West Encounter in Knowledge: Post-Independence

Although *Swaraj* was earned in India 1947, Bhattacharyya’s call for “*Swaraj in ideas*” seems to have been forgotten. Psychology as taught in Indian universities has continued to follow the Western model implanted a hundred years ago by N. N. Sen Gupta. During the decades that followed this early start, more and more of Western models were imported by numerous Indian scholars who were trained in the UK and the USA. That a bulk of psychology in India has followed Western models,

and that it has been imitative and largely irrelevant to the ethos and life in India has been noted so many times. This criticism does not need any adumbration here.

The late Professor Durganand Sinha was perhaps the most articulate critic of the excessive Westernization of psychology in India. Half a century has now passed since he gave a clarion call for the integration of psychology in Indian thought (Sinha, 1965). Sinha was deeply involved in the international scene of psychology, primarily in the affairs of the International Association of Cross-Cultural Psychology, of which he became the President with Prof. Janak Pandey following him in that position. He has made interesting and important observations about psychology in India particularly within the forum of cross-cultural psychology. I will return to some of these observations later on in this essay while comparing the cross-cultural context with two other forums, namely cross-cultural psychology and conversations of Western psychologists with His Holiness the Dalai Lama. Before turning to that international context, let me note two landmarks for the development of Indian psychology within India.

It is by this time about 15 years since an assembly of about 150 psychologists from across India got together and unanimously proclaimed the “Pondicherry Manifesto”¹ of Indian psychology. This manifesto is a significant landmark suggesting that there is an increasing recognition of the contemporary relevance of traditional Indian insights, concepts, and techniques. Indeed, during the recent few years the significance of yoga and various forms of meditation are recognized in many parts of the world. A small but dedicated group of colleagues has pursued the goals set for research and promotion within the field of Indian psychology. Several conferences and seminars have been held, and number of papers, book chapters, and books have been published on various topics in Indian psychology. These developments virtually constitute a “movement” for Indian psychology. There is no place for a survey or overview of these efforts within the scope of this presentation. Just a few publications may be mentioned as notable landmarks: *The handbook of Indian psychology* published about eight years ago (Rao et al., 2008); *Foundations of Indian psychology* (Cornelissen et al., 2011), and *Psychology in the Indian tradition* (Rao & Paranjpe, 2016).

Three Different Approaches to the Study of Emotion

In this section, I wish to discuss three different perspectives on research on a single issue, namely emotion. As we shall see, they will allow a discussion of the methodological and theoretical issues underlying the different perspectives and indicate the different ways in which Indian and Western approaches have been coming together. Here are the three perspectives:

- (1) Cross-cultural psychology,
- (2) Cultural psychology, and
- (3) Dialogue between His Holiness the Dalai Lama and Paul Ekman.

(1a) *Cross-Cultural psychology: Assumptive foundations*

In the latest edition of their textbook of cross-cultural psychology, Berry et al. (2011) have clearly stated that “No emotion component has received more attention than facial expressions” (p. 174). In his contribution on emotion in the first edition of the *Handbook of Cross-Cultural Psychology*, Izard (1980) echoes the same view of the predominant focus on facial expressions, and further clarifies that such focus is “particularly well suited to cross-cultural research” (p. 185). That focus on facial expression of emotions continues in the field is affirmed by Mesquita et al. (1997, p. 282) in their chapter on emotion in the second edition of the *Handbook*. It is equally well recognized that Ekman’s work is the most definitive contribution to the study of facial expressions of emotion. Against this background, I have chosen to focus mainly on Ekman’s work as representative of a cross-cultural perspective on the study of emotions.

The inspiration for the focus on facial expressions of emotion comes from Darwin’s classic work on the expression of emotions in humans and other animals, which was first published in 1872. Paul Ekman has a towering presence in this field with extensive studies and numerous publications over decades. Excellent overviews of his work are available in edited volumes published to commemorate a century after the publication Darwin’s book (Ekman, 1973), and then again thirty years later (Ekman et al., 2003). Ekman’s approach within the cross-cultural framework is based on the assumption that facial expressions are *universal* across the species, and are *innate*. Against this background, the main thrust of emotion within the cross-cultural field is to test the degree of commonality of the patterns of emotion expression in cultures around the world. Ekman’s search for universal aspects of the expression of emotions clearly coincides with a similar search that is at the core of cross-cultural psychology.

(1b) *Cross-Cultural psychology: Issues in methodology*

Here it will be useful to take a close look at the commonly used methodology in cross-cultural studies generally, and in emotion studies in particular. John Berry (1980) points out that “cross-cultural psychology is defined primarily by its *method*” (p. 1, emphasis original). The method most commonly used in cross-cultural studies of emotional expression involves a variation of technique originally used by Darwin. As Ekman (2003) explains, the method involves showing pictures and asking subject to name the emotion they express. Since naming an emotion is obviously a problem for very young children and for subjects in preliterate societies, Ekman and his associates used the technique of asking the subjects to choose among two or three pictures that most closely match the emotion supposed to be experienced in the story they were told (Ekman, 1973, p. 210). This method was based on the work of Dashiell (1927), an early behaviourist, and has become known as the “Dashiell Method.” The point of this method is to reach out to individuals, young children, and preliterates who may be expected to be least affected by the effects of culture. The idea here is that the “variable” of culture can thus be controlled, and the results can be attributed to universal innate causes. Ekman and a host of other investigators

in the field of cross-cultural psychology have devised a number of intricate methods geared to address several specific issues, which may also be noted here. In their extensive survey of cross-cultural studies of emotion, Mesquita et al. (1997) list the following as the methods commonly used: (a) checking out one of a small set (6–10) of emotion words, which they call the “standard method”, (b) rating each expression on a small set of emotion scales, (c) having subjects produce their own label for each expression, and (d) matching the expressions with a small set of brief stories describing an emotional event which, they clarify, is the “Dashiell method” described above (Mesquita et al., 1997, p. 283).

It should be clear that in the methods just mentioned, attempt is made to minimize the use of language, which is a most crucial aspect of cultures. In spite of the use of such studies devised to study emotions, the use of words could not be avoided in cross-cultural psychology. Indeed, there is widespread use of questionnaires and psychometric tests that use sentences as “items” which naturally involve words in one language or other. Quite often, such research instruments are composed in English, and when translated in other languages, difficulties of nonequivalence of terms noted by Wierzbicka (1999) arise. In response, back translations are used to overcome this difficulty. How effective is the method of back translations in minimizing, let alone eliminating, the issue of nontranslatability of emotion words is another question which need not detain us here. On the whole, language is thought of as an obstacle in advancing scientific research across cultures. This attitude is particularly problematic in emotion research insofar as how one *feels* often depends on what one *thinks* about a given situation, which in turn is deeply shaped by the language one uses. This implies, in turn, that what the words we use *mean* to us is important. As we shall presently see, studies of emotion in cultural psychology address precisely this issue of *meanings* of words in shaping of the experience of emotion by language and other aspects of culture.

(2) *Emotion studies in Cultural Psychology: R. Shweder et al.*

While in cross-cultural psychology language is viewed as an obstacle in discovering the *universal* features of emotion based on innate factors, cultural psychology aims at studying the cultural *variations* in the experience of emotion, and emphasizes use and analysis of language. Indeed, the differences between cultural and cross-cultural approaches to emotion are more deeply grounded in the very notion of culture adopted by cultural psychologists. In cultural psychology, culture is not a mere “variable” to be quantified and inserted into a formula; it implies a lot more. According to Richard Shweder, a leader in the field of cultural psychology, culture involves a set of “community-specific ideas about what is true, good, beautiful and efficient”. To this he adds Isaiah Berlin’s words saying that culture involves “goals, values, and pictures of the world” that are “manifest in the speech, laws, and routine practices of some self-monitoring group” (Shweder, 2000, p. 162). Noting that Shweder includes *ideas* about what is true and good as integral part of culture, I would add continual development of knowledge systems as part of cultures. As we shall soon see, in his studies of emotion in India, Shweder and his associates explore not only the values implicit in the meaning of emotion, but also the classical Indian *theories* of emotion.

In an earlier publication, Shweder (1990) clearly articulates his view of how culturally transmitted meanings shape psychological phenomena. He makes a strong argument against the idea implicit in the mainstream of general psychology that there is a “central processor” lodged into the brains of individuals which functions according to universal laws of nature so as to bring about uniformity in behaviours across the human species. His work with Menon (Menon & Shweder, 1994) on the experience of *lajja* among people in Orissa presents an in-depth investigation of the ways in which the experience of emotion is shaped by a host of factors deeply embedded in the historical transmission of *meanings* through not only language, but also through icons and myths transmitted across generations. To help understand this view, it is necessary to take a closer look at this study.

The focus of the Menon and Shweder’s study of *lajja* is an iconic image of the Goddess Kali, whose biting of the tongue is commonly viewed in certain communities of Orissa as a prototypical expression of the feeling of *lajja*.

The iconic picture of goddess Kali shows her dancing with her tongue sticking out. This icon is particularly popular in Orissa. The many variations of this image are based the story in which all male gods could not slay the demon Mahiṣāsura, who had become invincible due to boons he had attained. So, they approached Kali and asked her to kill him. In response, Kali transforms herself into a ferocious mode, slays the demon, and in a wanton dance accidentally steps on the chest of her consort Śiva. The biting of her tongue is believed to be an expression of *lajja*, a complex emotion involving shades of embarrassment mixed with shame and other feelings appropriate to her female role.

Menon and Shweder (1994) focus on this iconic representation of the emotion called *lajja* which implies a unique way in which emotional experience of people in the province of Orissa is shaped. They undertook an intensive exploration of the historical roots of the *meaning* of *lajja* as shaped by the story (or the “myth”) of Kali’s dance. Their inquiry was focused on finding out how the meanings of the term *lajja* are shared in the community all the way from learned men as well as unlettered village folks. To this end, Menon and Shweder examine the texts of Chandi, Devi Mahatmya, and Devi Bhagavata Puranas which narrate the story behind this image of Kali. Their examination of such texts shows that Kali’s expression of biting her tongue does not simply indicate what is normally meant by embarrassment or shame in the English language. There are important shades of meaning of *lajja*, which include a distinctively Indian conception of the role of a woman who is expected to be respectful of her husband. Thus, her expression indicates her recognition of the inadvertent violation of the code of conduct prescribed in the Hindu tradition.

A woman’s respectfulness towards men is not supposed to imply that women are weaker than men. Indeed, the fact that Kali was requested to kill a demon who could not be slain by male gods indicates the belief that women can be even more powerful than men. It is after demonstrating her superior power through killing the demon that Kali had experienced an uncontrollable rage. And yet, Kali had the power to *control* and override a powerful rage. Women as expected to exercise such self-control and behave in a courteous and graceful manner that befits cultured women. Thus, the image of Kali biting her tongue conveys a few important ideas: *first*, that even

the most powerful emotions can be controlled; *second*, that self-control is not only possible, but desirable; and *third*, iconic representations such as Kali's tongue can demonstrate the ways in which cultures can convey complex and important values and norms such as modesty and courteous behaviour expected of women.

Menon and Shweder's empirical study of *lajja* goes beyond the historical transmission of popular texts such as the Purāṇas. They explore how the stories get embedded in the minds of people in such a way that the culturally transmitted meanings become part of their lived experience, and shape their behaviours in daily life. To that end, Menon conducted extended interviews of a wide array of subjects, ranging from unlettered "ordinary" people, as well as educated members of the community, and even pandits who have expert knowledge of the religious tradition and its texts. To make sure that they reach out a wide range of exposure to cultural themes, Menon and Shweder use a psychometric device of the Guttman Scale to measure the degree of their respondents' knowledge about the meaning of *lajja* to help assess the range of the penetration of cultural meaning in the population at large.

Menon and Shweder's focus on meanings indicates their alliance with interpretive human sciences rather than natural sciences. This stands in contrast with Ekman's reliance on a "hard science" like biology. Menon and Shweder view emotions as an aspect of the *agentic* character of human beings, which militates the common view that emotions *happen* to people as the consequence of a chain of natural causes. In other words, humans are "patients" who must take what they get; one cannot *do* anything about how one feels! Menon and Shweder's agentic view of human beings is close to the traditional Indian notion of karma, which Ādi Śaṅkarācārya defines as the ability to do something, not to do it, or to do it in some other way (See Paranjpe, 1998, p. 327). Unlike the view of science as a "value-free" enterprise which avoids speaking of virtues, Shweder speaks explicitly about virtues such as modesty and self-control which Hindu women are expected to cultivate. Cultures are not simply a type of intervening variables; they are entities with a long history with capacity to shape experience and behaviour through stories and myths that convey core values.

As a cultural psychologist, Shweder goes well beyond culturally transmitted stories and values in his studies of emotion. In his study in collaboration with Haidt, Shweder delves further into the knowledge systems of the Indian tradition (Shweder & Haidt, 2000). To be specific, they focus on how the dramaturgical studies in the tradition of Bharata Muni *conceptualize* the nature of emotions. As is well known, in his dramaturgical treatises called the *Natyasāstra* (literally meaning the science of drama), Bharata Muni speaks of, among many other things, how the expression of emotion is guided by social conventions. Shweder and Haidt (2000) explicitly recognize that this ancient Indian account of emotions "compares favourably any contemporary treatise on the symbolic character of emotional experience." They clarify that "It is through an analysis of this venerable text... that we address contemporary concerns" (p. 399).

It should be clear at this point that, unlike the cross-cultural approach to the studies of emotion that tends to ignore the meanings embedded in the experience of emotions, Shweder and his colleagues place meanings at its centre. They not only take the values to be at the core of cultures, they also take into account the knowledge

systems of the cultures and explore how they shape emotional experience. Clearly, the approach of cultural psychology involves a much deeper engagement between the cultural in which studies are conducted than does the cross-cultural approach. As we shall presently see, the dialogue between Ekman and His Holiness Dalai Lama manifests a still deeper level of mutual relation between cultures.

(3) *Dialogue between His Holiness the Dalai Lama and Paul Ekman: Focus on emotions*

A new phase of close international exchange of ideas in psychology has begun with the founding of the Mind and Life Institute in 1990 with an office in Hadley, Massachusetts, in the USA and a major centre in His Holiness Dalai Lama's headquarters at Dharmasala in Himachal Pradesh. With its current location in India, and given deep roots of Tibetan Buddhism in the Madhyamika Buddhist tradition of India, HH Dalai Lama's Buddhist psychology may be reasonably included as part of traditional Indian approaches to psychology. With the focus on the psychology of emotion, it would be useful to take a look at the way in which Paul Ekman's work was influenced by his contact with HH Dalai Lama, and briefly examine the implications of this development to inter-cultural relations for research in psychology. The following discussion of this development is based mainly on Ekman's connection with Dalai Lama as described in Goleman's (2003) book titled *Destructive emotions*, and in Ekman's (2008) account of his conversation with HH Dalai Lama given in his book *Emotional awareness*.

The conversation between the two was as extensive as it was open. The format of this discussion gave a rare opportunity for exploring the nuances of terms used in Tibetan and their translations, which are often approximate and can be misleading. Such exploration allowed to significantly overcome the difficult problem of translations discussed by Wierzbicka (1999). There was a lot of attention paid to the discussion on the nuances of key terms such as emotion, mood, loving kindness (*karuṇā*) in English and Tibetan. An important feature of the discussion involved the frank admission by each of the strengths of the other. While HH Dalai Lama agreed that Buddhists can learn a lot about the physical world from science, Ekman agreed that science can learn from Buddhism about the nature of mind. The relationship between them was one of equality and respect. This stands in contrast with the "vertical" relationship that the late Prof. Sinha (1990) noted in much of cross-cultural research—a relationship in which the Western psychologist was in a "higher" position, and psychological knowledge passed in only one direction: from West to East.

Such mutual understanding and respect did not come about without difficulty. At one point, Ekman candidly notes that having heard about his interest in meeting with HH Dalai Lama, some of his fellow scientists warned him saying "Don't talk to Dalai Lama, he will ruin you as scientist. You will become spiritual." This "warning" indicates the deep-rooted enmity between science and religion in the West. It is interesting, however, that a woman scientist's misgivings were removed when she was given to understand that Buddhism does not believe in the concepts of "Creator" or "soul". This latter reaction shows that the scientists' opposition to religion stems

mainly from the Biblical view of Genesis—that God created the world in seven days out of nothing—is untenable in light of the geological estimates of the age of the earth and the Darwinian view of evolution. The idea of soul has deeply religious connotations in the West, and it is not observable, and both these things do not fit the paradigm of science. As Rao and Paranjpe (2016) have noted, religions of Indian origin such as Buddhism and Hinduism do not pose doctrinal difficulties in their relationship with science as do Abrahamic religions, particularly Christianity.

In India, psychology developed closely in relation to various denominations of Indian religions which commonly emphasize spirituality and personal transformation. In his book *Emotional awareness*, Ekman (2008) devotes a chapter to describe in some detail the deeply personal transformation that he had undergone since the time he first met Dalai Lama in the year 2000. He describes it as the “most dramatic change in my emotional life” (p. 227). He indicates that the change process began when HH Dalai Lama held Ekman’s hand in his hand which felt warm. After much discussion of how he felt at that time, Ekman describes the experience saying: “I think that what I experienced was—a nonscientific term—‘goodness’” (p. 233). When checked to see if other friends of his had a similar experience of feeling good in the presence of HH Dalai Lama, most of them affirmed. Ekman describes how, over the period of several months, his feelings of anger reduced, and he started experiencing “an intense, very unusual feeling, which felt very good; it felt as if it was radiating” (p. 230).

Such a description of profound personal transformation can be easily seen as alien to what studies of emotion in modern psychology, including Ekman’s own studies extending over decades. Seen from an Indian point of view, however, such experiences are not unusual; they are commonly found in descriptions of being in the presence of highly spiritually advanced persons. Also common are instances of personal transformation brought about by gurus in their disciples. This issue of personal transformation is interesting when looked at from the standpoint of psychology in the Indian tradition, and it deserves discussion, to which I shall return in the next section.

Discussion

We may take a look once again at Fig. 3, which proposes four prototypical ways in which Western and Indian approaches to psychology may relate to each other. Let us start with quadrant in the upper right quadrant, which indicates “Yes” for Western psychology, and “No” for Indian psychology. It should be easy to understand how psychology as taught most commonly in Indian universities is almost completely Western, which indicates an unquestionable *dominance* of Western over Indian approaches to psychology. This situation is suggestive of a continuing domination of a colonial mind-set involving a sense of inferiority despite seven decades since the end of the British rule. This is quite odd for a country of one-and-a-quarter billion people now aspiring to be a super power.

Image of Goddess Kālī stepping on Śiva's chest



Fig. 3 Image of Goddess Kali stepping on Siva's chest

Part of the reason for the continuing prestige of Western models is their claim to be a “science.” Without in any way disputing the intrinsic benefits of science as a valuable approach to knowledge, and while admitting to the stupendous benefits of applications of scientific knowledge through varied technologies, it is useful to note once again that psychology can ill afford to follow the model of physics. While physics can well afford to be neutral to the influence of culture, psychology cannot pretend to be free from the influence of culture by remaining within the sanitized zone of the laboratory. The influence of the surrounding culture cannot be completely avoided; *de-culturation* (see lower right quadrant in Fig. 3) is neither a meaningful nor viable option for psychology.

The side-lining of indigenous psychological insights originates in the denigration of all branches of knowledge in the Indian tradition, whether that be mathematics, astronomy, logic or poetics. Their marginalization has continued unabated as teaching in such areas most commonly occurs in *pathshalas* and Sanskrit universities in *isolation* (lower left quadrant in Fig. 3) from the mainstream educational system with the exception of perhaps philosophy and poetics.

As to *integration* (upper left quadrant in Fig. 3), it implies the amalgamation of mutually compatible elements of two (or more) systems, and in the India/West encounter it requires elements of knowledge systems of both sides. Within the growing field of Indian psychology, we find that initiative has come from both sides, Indian (e.g. Paranjpe, 1998; Rao, 2000), as well as Western (e.g., Miculas, 2008; Taylor, 2008). Among the examples of research discussed in this paper, both Shweder and Ekman are Westerners who have taken the initiative in turning to concepts of

indigenous Indian origin, and they present interesting examples of the ways in which integration is being done. A few observations in this context should be in order.

Shweder's work with Menon and Haidt has some distinctive features. First, they not only show that there are distinctively Indian psychological phenomena, such as the emotion called *lajja*, but also that there are distinctive psychological concepts and theories, such as the concept of *rasa* and a theory of emotion explained in the *Rasādhyāya* section of the *Nāṭyaśāstra*. As to Ekman, he is part of a group of Westerners like Goleman, Matthieu Ricard, B. Alan Wallace and many others, who have taken special efforts to learn from HH Dalai Lama. Ekman's encounter with HH Dalai Lama is particularly interesting in more ways than one. *First*, he is among the most well-known researchers in the field of emotion; he was aligned primarily with the cross-cultural approach. *Second*, initially he had been deeply committed to science and was disdainful about religion. *Third*, despite his strong emphasis on universal aspects of emotions, he got around to recognize the distinctive nature of the Buddhist view of compassion and its emotional underpinnings. *Fourth*, his early work in applied psychology involved teaching policemen and sleuths how to correctly recognize emotional experience from facial expressions of suspected criminals or spies. After his encounter with HH Dalai Lama, however, he realized the importance of a different type of applied psychology, aimed at a distinctively Buddhist goal of enhancing loving compassion. Finally, Ekman's personal transformation implies a most distinctive goal of Indian psychology: to bring about a deeply personal transformation that can be legitimately called a *spiritual* goal. Indeed, for Ricard, B. Alan Wallace, and several others, what apparently turned them to Buddhism was spiritual self-development—which is Indian psychology's quintessential *raison d'être*. Thus, integration of Indian and Western approaches under the influence of HH Dalai Lama happens well beyond the level of recognition of some distinctive concepts of psychological phenomena, or even some psychological theories. It happens at a very deep level: at the level of the overarching goal of Indian psychology. Insofar as Ekman seems to be convinced of the relevance and need for promoting loving compassion is a concept derived from Indian thought, it is a good example of the goal envisioned by the late Professor Durganand Sinha (1965), namely "the integration of modern psychology with Indian thought" (emphasis added). Such integration in psychology has a potential for a most significant service to humanity.

Another look at co-existence as the fifth category of inter-cultural relations

As noted earlier, based on his studies of some tribal communities in Bihar, Mishra suggested the need to add co-existence as a category to the four types of relations suggested by John Berry's model. In the context of the relations between Indian and Western psychologies, this idea makes sense in particular. Note, for instance, the ways in which Ekman and HH Dalai Lama differ in their approaches to application of psychological knowledge. While Ekman developed techniques for identifying emotions from facial expressions to be used by law enforcement officers, Buddhism developed techniques of meditation for spiritual self-development and for enhancing loving compassion. These goals are thus quite different, but they are relevant and useful for different needs of the society and the individual. There is absolutely no

need for conflict between such differing goals; both are legitimate in their respective spheres. By and large, scientists like Ekman tend to follow the lead of Francis Bacon, the “father” of modern science, who thought that the goal of scientific knowledge was to be of practical utility to humanity at large. In contrast, psychology in the Indian tradition developed primarily in pursuit of spiritual goals for individual self-development. There is no reason why the pursuit of psychological knowledge must be dedicated to a single goal, and different types of theories and techniques are appropriate for differing goals. There is therefore good reason why different approaches to emotion or any other psychological phenomenon can, and should, co-exist.

An important implication of the idea of co-existence is that there is no need to think in terms of either/or; indeed, the silent preference of integration in Berry’s model implies a combination of selected elements of *both* cultures, ancestral and adopted as in the case of immigrants. Sinha and Tripathi (1994) have pointed out that Western psychology has traditionally worked through binary and dichotomous categories such as individualism-collectivism, often thinking in either/or terms. But in the Indian cultural tradition, there is often a preference for the co-existence of not only differing elements, but even opposites. Thus, for example, the family life in India tends to be highly collectivistic in the sense that obligations of each member of the family to other is more demanding than in Anglo-American families. At the same time, however, the pursuit of spiritual growth is left entirely to the individual; everybody is free to choose a spiritual path and a guru that suits him or her, no questions asked. In other words, a highly individualist aspect of life co-exists with a collectivistic one. Therefore, the Western way of rating cultures as either collectivist or individualist, or some way between the two poles, does not make much sense in the context of Indian culture. There is need to go beyond binaries.

Co-existence is possible and beneficial when the differing aspects of different systems are complementary. It should be clear that, by and large, Indian psychology’s focus is on inner world, on the Self or the Jamesian self-as-subject, and on self-control. In contrast, in Western psychology the focus is most commonly on observing events in the “outer”—public—domain, and controlling behaviour from the “outside” as in the case of a therapist shaping the client’s behaviour. For B. F. Skinner, inner control is a myth as there cannot be a homunculus pulling strings from inside; even controlling oneself must be done only through the environmental manipulation of rewards and punishments. In Patañjali’s Yoga, by contrast, self-control is the key, and the individual is thought to be agentic with an “inner” centre of control. Both inner and outer control may be possible and have their uses in different contexts and towards different goals. Such alternatives are complementary and not conflicting. There is every reason for them to co-exist. Why not work towards enriching different systems of psychology through benefiting from each other’s strengths?

Taking Another Look at the Concept of Integration

As noted, the barriers between Indian and Western traditions in psychology have begun to crumble; individuals from either side have started to look at contributions from the other side with mutual respect and a spirit of healthy give-and-take. Shweder, for instance, has not only recognized the distinctive nature of psychological phenomena like emotions across cultures but has also recognized the value of the traditional Indian approaches to the study of emotions. Ekman's turning to HH Dalai Lama provides an interesting case where science and spirituality, which have otherwise been segregated, have come together. While HH Dalai Lama has been giving a sympathetic and respectful hearing to advances in "scientific" studies of the expression of emotions and their practical applications, he has similarly treated advanced neuropsychological studies of Buddhist meditation, while reciprocally neurologists have been seriously studying higher states of consciousness attained through meditation. Neither side has indicated a self-appointed sense of superiority of their respective approaches. Such attitudes will pave the way for possible "integration" of select aspects from knowledge traditions on either side so that the blended approaches would provide broader and richer perspectives on studies of specific psychological issues and phenomena. India-West is not the only pairing for exchange of ideas; there are many such pairs which bring into play the insights of their respective cultural traditions.

It seems necessary and useful to recognize integration within specific areas of study at the hands of cooperative research teams composed of members trained in two or more knowledge traditions. The idea of a "grand narrative" producing a "universal" single body of psychological knowledge may be an unworkable ideal since it cannot happen without imposing one particular vision. The universe of psychology is vast and rich; distinct phenomena demand differing conceptual frameworks and matching methods. Besides, there cannot be a single goal for the pursuit of knowledge. Looking back once again at Ekman studies as an illustrative case, his cross-cultural studies of emotion appear to be guided by two related goals: "knowledge for its own sake" inspired by the Greek ideal of the dispassionate pursuit of knowledge, plus "knowledge for power" to be used for public good in the spirit of science initiated by Francis Bacon. In contrast, the Buddhist and most other Indian approaches have been guided mainly—but not exclusively—by the overarching goal of spiritual uplift. There is a plurality of equally legitimate goals for humans, and there is a plurality of ways to attain those goals. If this is correct, then the co-existence of differing approaches naturally follows. The idea of "integration" into a single approach of all the rest would be neither possible nor necessary. Yet, as individuals and small cooperative teams keep pursuing integration focused on shared goals within their specific fields, a broader, richer, and pluralist psychology will become available for all humans across the world.

Notes

1. For a text of the Pondicherry Manifesto of Indian Psychology see www.indianpsychology.net/about_pmip.php.

References

- Berry, J. W. (1969). On cross-cultural comparability. *International Journal of Psychology*, 4, 119–128.
- Berry, J. W. (1980). Introduction to methodology. In H. C. Triandis, J. W. Berry (Eds.), *Handbook of cross-cultural psychology, Vol. 2, methodology*. Allyn and Bacon.
- Berry, J. W. (2001). A psychology of immigration. *Journal of Social Issues*, 57(3), 615–631.
- Berry, J. W., Poortinga, Y. H., Breugelmans, S. M., Chasiotis, A., & Sam, D. L. (Eds.). (2011). *Cross-cultural psychology: Research and applications* (3rd. ed.). Cambridge University Press.
- Bhattacharyya, K. C. (1954). Swaraj in ideas. *Visvabharati Quarterly*, 20, 103–114. (Original lecture delivered in 1931).
- Bhattacharyya, K. C. (1983). Studies in Vedāntism. In G. Bhattacharyya (Ed.), *Krishnachandra Bhattacharyya Studies in Philosophy* (2nd rev. ed.). Motilal Banarsisass. (Original work published 1907).
- Carnap, R. (1949). Logical foundations of the Unity of Science. In H. Feigl & W. Sellars (Eds.), *Readings in philosophical analysis* (pp. 408–539) Appleton-Century-Crofts. (Original work published 1938).
- Carnap, R. (1959). Psychology in physical language (G. Schlick, Trans.). In A. J. Ayer (Ed.), *Logical positivism* (pp. 165–197). Free Press. (Original work published, 1932–33).
- Corneissen, R. M. M., Misra, G., & Varma, S. (Eds.) (2011). *Foundations of Indian psychology* (2 Vols.). Delhi: Pearson.
- Darwin, C. R. (199-?). *The expression of the emotions in men and animals*. [electronic resource]. Champaign, Ill.: Project Gutenberg; Boulder, Colo.: NetLibrary, (First published 1872).
- Dashiell, J. F. (1927). A new method of measuring reactions to facial expression of emotion. *Psychological Bulletin*, 24, 174–175.
- Ekman, P. (Ed.). (1973). Cross-cultural studies of facial expressions. In P. Ekman (Ed.), *Darwin and facial expressions: A century of research and review* (pp. 169–222). Academic Press.
- Ekman, P. (1999). Facial expressions. In T. Dalgleish & M. J. Power (Eds.), *Handbook of cognition and emotion* (pp. 301–320). Wiley.
- Ekman, P. (2003). Introduction. In Ekman et al. (Eds.), *Emotions inside out: 130 years after Darwin's The expression of Emotion in Man and Animals*. New York Academy of Sciences.
- Ekman, P. (Ed.). (2008). *Emotional awareness: Overcoming the obstacles to psychological balance and compassion: A conversation between the Dalai Lama and Paul Ekman*. Times Books: Henry Hold and Company.
- Ekman, P., Campos, J. J., Davidson, R. J., & de Waal, B. M. (Eds.). (2003). *Emotions inside out: 130 years after Darwin's The expression of emotion in man and Animals*. New York Academy of Sciences.
- Goleman, D. (2003). *Destructive emotions: How can we overcome them?: A scientific dialogue with the Dalai Lama*. Bantam Books.
- Izard, C. E. (1980). Cross-cultural perspectives on emotion and emotion communication. In H. C. Triandis, W. Lonner (Eds.). *Handbook of cross-cultural psychology, Vol. 3, Basic processes*. Allyn and Bacon.
- Kotemane, R. B. (2013). *Manahpraśamanopāyah* (A set of 6 CDs). Samskrta bhārati.

- Kolhatkar, K. K. (1947). *Bharatīya mānasa sāstra athavā sārtha āṇi svivarāṇa pātāñjala-yogadarśana*. Dhanajay Balkrishna and Keshav Bhikaji Dhavale. (Exact year of publication unknown)
- Kuppuswamy, B. (1985). *Elements of ancient Indian psychology*. Delhi: Konarak.
- Menon, U., & Shweder, R. (1994). Kali's tongue: Cultural psychology and the power of shame in Orissa, India. In S. Kitayama & H. Markus (Eds.), *Emotion and culture* (pp. 241–284). American Psychological Association.
- Mesquita, B., Frijda, N. H., & Scherer, K. R. (1997). Culture and emotion. In J. W. Berry, P. R. Dasen, T. S. Saraswathi (Eds.), *Handbook of cross-cultural psychology, Vol. 2, Basic processes and human development* (2ns ed., pp. 255–297).
- Miculas, W. L. (2008). Buddhist psychology: A Western interpretation. In K. R. Rao, A. C. Paranjpe, & A. Dalal (Eds.), *Handbook of Indian psychology* (pp. 142–162). Cambridge University Press, India.
- Mishra, R. C., Sihna, D., & Berry, J. W. (1996). *Ecology, acculturation and psychological adaptation*. Sage.
- Pande, N., & Naidu, R. (1992). Anasakti and health: A study of non-attachment. *Journal of Psychology and Developing Societies*, 4, 89–104.
- Paranjpe, A. C. (1984). *Theoretical psychology: The meeting of East and West*. Plenum.
- Paranjpe, A. C. (1998). *Self and identity in modern psychology and Indian thought*. Plenum.
- Passmore, J. (1967). Logical positivism. In *Encyclopaedia of philosophy* (Vol. 5, pp. 52–57). Free Press.
- Pergament, K. I. (1999). Psychology of religion and spirituality? Yes and No. *International Journal for the Psychology of Religion*, 9(1), 3–16.
- Purani, A. B. (1978). *The life of Sri Aurobindo* (4th ed.). Sri Aurobindo Ashram.
- Ramachandra Rao, S. K. (1962). *Development of Indian psychological thought*. Kavyalaya Publishers.
- Rao, K. R. (2002). Consciousness studies: Cross-cultural perspectives. McFarland.
- Rao, K. R., & Paranjpe, A. C. (2016). *Psychology in the Indian tradition*. Springer.
- Rao, K. R., Paranjpe, A. C., & Dalal, A. (Eds.). (2008). *Handbook of Indian psychology* (p. 2008). New Delhi.
- Safaya, R. (1976). *Indian psychology*. Munshiram Manoharlal.
- Sen, I. (1986). *Integral psychology: A psychological system of Sri Aurobindo*. Sri Aurobindo International Centre of Education.
- Shweder, R. A. (1990). Cultural psychology: What is it? In J. Stigler, R. Shweder, & G. Herdt (Eds.), *Cultural psychology: Essays on comparative human development* (pp. 1–43). Cambridge University Press.
- Shweder, R. A. (1993). The cultural psychology of the emotions. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 417–431). Guildford Press.
- Shweder, R. A. (2000). Moral maps, “First World” conceits, and the new evangelists. In L. E. Harrison & S. P. Huntington (Eds.), *Culture matters: How values shape human progress* (pp. 158–176). Basic Books.
- Shweder, R. A., & Haidt, J. (2000). The cultural psychology of the emotions: Ancient and new. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 397–414). Guildford Press.
- Sinha, D. (1965). The integration of modern psychology with Indian thought. *Journal of Humanistic Psychology*, 5, 6–17.
- Sinha, D. (1990). Vertical and horizontal collaboration in cross-cultural research. *Cross-Cultural Psychology Bulletin*, 24(4), 11–12.
- Sinha, D., & Tripathi, R.C. (1994). Individualism in a collectivist culture: A case of co-existence of opposites. In U. Kim, H. C., Triandis, C. Kagitcibasi, S.-C., Choi, G., & Yoon (Eds.), *Individualism and collectivism: Theory, method, and applications*. Sage.
- Sinha, J. (1958). *Indian psychology: Vol. 1, cognition* (2nd ed.). Sinha Publishing House. (First published 1934).

- Sinha, J. (1961). *Indian Psychology: Emotion and Will* (Vol. II). Sinha Publishing House.
- Srivastava, S.P. (2001). *Systematic survey of Indian psychology*. Adhyatma Vidya Pakashan
- Taylor, E. (2008). William James on pure experience and Samādhi in Sāṅkhya-Yoga. In K. R. Rao, A. C. Paranjpe, & A. Dalal (Eds.), *Handbook of Indian psychology* (pp. 555–563). Cambridge University Press.
- Tilak, B.G. (1956). *Śrīmadbhavadgītārahasya athavā karma-yoga-śāstra* (7th ed., in Marathi). Pune: J.S. Tilak. (First published 1915)
- Wierzbicka, A. (1999). *Emotions across languages and cultures: Diversity and universals*. Cambridge University Press.

Multilingualism as a Resource: Implications for Education



Ajit K. Mohanty

Abstract Research on cognitive consequences of bi-/multilingualism, including Indian studies, shows that multilingualism is a human resource. Analysis of psycholinguistic processes underlying multilingualism confirms its positive benefits in respect of cognition, creativity, metalinguistic ability, reading and literacy-related skills despite some variations in the performance of the multilinguals under different tasks conditions. Complexities and challenges of negotiating multiple linguistic systems add to the plasticity of brain functions, strengthen executive control and cognitive flexibility and make multilinguals resilient to cognitive conflicts and pressures. The chapter discusses educational implications of the relationship between multilingualism and aspects of cognition, metalinguistic reflections and processes of acquisition of literacy. It is argued that education in a multilingual society like India must promote multilingual competence through development of early literacy and a strong foundation in mother tongue (MT). Evaluation of MT-based multilingual education (MLE) programmes shows positive impact on educational achievement and empowerment of linguistic minorities and Indigenous Tribal Minority communities. Studies also show that the longer the MT is used as the medium of instruction the better is children's classroom achievement and development of competence in dominant languages like English. Neglect of MT in early education of tribal children in India is related to educational failure, high push-out rate, capability deprivation and poverty. MT-based MLE is quality education for all; it is particularly needed for tribal and linguistic minority children in India for better education and empowerment.

Keywords Multilingualism · Metalinguistic awareness · Executive control · Multilingual education

A. K. Mohanty (✉)

Zakir Husain Centre for Educational Studies, JNU, New Delhi, India

Introduction

Education in any society is expected to offer equality of opportunities to every child to maximize her potentials; education is the minimum enabling condition for development of human resources. However, when education neglects, denies or ignores the language(s) of the child, it fails in its basic role in human resource development since language happens to be the most potent and most well-developed among the human resources with which children join formal schooling. From a linguistic point of view, by about five years of age, children all over the world, born with basic biological capabilities, are competent users of the language(s) they are exposed to in their environment. The language and communicative skills of children joining school have the basic features of the adult users of languages. Children do have a shared understanding of the language(s) used in their milieu, and they are able to use their home language for competent social communication. Unfortunately, languages in most societies are hierarchically positioned; some languages have more power enabling their users for greater access to socio-economic resources, whereas the users of the less powerful minority languages are deprived. And, formal education, in imposing the dominant languages and ignoring the other less powerful ones, is a social instrument for perpetuation of inequality and discrimination. Use of several languages in education does contribute to social justice (Mohanty et al., 2009) since the marginalized people, such as the Indigenous, Tribal and Minority (ITM) language communities, are better integrated in the society and well equipped for democratic participation and maintenance and development of their cultures and human potentials when their education is linguistically and culturally appropriate. Multilingualism in education, which offers equal opportunities to children from different language communities to use and develop the language(s) of their thinking and understanding, benefits the speakers of a country's dominant/majority languages as much as the those of the ITM languages. Languages are human resources and need to be fostered through formal education.

This chapter begins with a brief discussion of the nature of the widespread multilingualism in India and shows how languages are organized in a hierarchical structure in which some languages and their speakers have more power than others. The implications of the power hierarchy of languages for maintenance of linguistic diversity and for education are discussed. This chapter takes an overview of research on cognitive consequences bi-/multilingualism, the psycholinguistic processes underlying use of two or more languages and examines the educational implications of how bi-/multilingual minds function. The central concern is to look at multilingualism as a human resource and to draw some implications of research in the area to reflect on some broad desirable features of education for multilingualism on the basis of what is known on such education. It is argued that mother tongue-based multilingual education is a necessary condition for dealing with linguistic and educational disadvantages of the indigenous language communities and it can be seen as an established method for effective education as well as egalitarian multilingualism.

Multilingualism in India: Implications of the Double Divide

Multiple languages are facts of routine Indian life and that is probably why we do not even notice when we move between many languages in all walks of life. At least 780 different languages have been identified by *The People's Linguistic Survey of India* (PLSI) (Devy, 2014) (see www.peopleslinguisticsurvey.org for a list of all volumes of PLSI). The Census of India 2001 listed over 6600 mother tongue (MT) declarations which were rationalized to 3592 MTs. Out of these, 1635 MTs with more than 10,000 speakers each were listed and the remaining 1957 were clubbed under a single "other" MT category. Further, the 1635 listed MTs were grouped under 122 languages. The VIIIth schedule of the Constitution of India lists 22 languages as official languages for all communication between the states as well as the states and the Union of India. Hindi is recognized as the official language of the Union of India and English as an associate or additional official language. Many languages are used in major domains of the society. There are registered newspapers in 123 languages (Registrar of Newspapers, Government of India, www.rni.nic.in consulted on 17 September 2017), All India Radio News Service in 90 languages and Regional News Units in 75 languages (www.allindiaradio.gov.in consulted on 17 July 2017) and films produced in 35 languages (<http://uis.unesco.org/en/news> dated 31 March 2016). With so many languages, linguistic diversity in India is definitely quite high. It ranks fourth in the world in terms of the number of languages. However, it is not just the presence of a number of languages in different spheres of social life in India that makes its multilingualism unique. "The dynamics of the relationship between these languages and their users, the manner in which the languages are organized in the society and the way they are reflected in the daily lives of common people all over the country make the ethos of language use in India distinct from the dominant monolingual societies" (Mohanty, 2019). Annamalai (2008) also suggests that the functional relationship between many languages in different domains of use and the ease with which common people move across the languages in routine daily life make India distinctly multilingual. Mohanty (2006, 2019) discusses several unique social, psychological and sociolinguistic features of Indian multilingualism and focuses on the core aspects of the concept to broadly define multilingualism as "*the ability of communities or persons to meet the communicative requirements of themselves and their society in their normal daily life in two or more languages in their interactions with the speakers of any of these languages*" (Mohanty, 2019, p. 17).

Many languages are sometimes seen as a social burden. Quite often, the dominant monolingual societies in the west view too many languages as a problem. In such societies, one language is the norm, two languages a burden and many languages a nuisance. When immigrants bring their languages to USA, for example, there is pressure on them to conform to the dominant language norm and use their native language in the limited home domain as long as they use English outside. As a result, in most cases, the first-generation immigrants are native speakers of their language, the second generation is likely to be bilinguals in English and their native language and the next generation is monolingual in English. In India, use of many

languages is a normal grassroots level phenomenon, and it is impractical to think of just one or two languages in all our social activities. The migrants from one language region in India to another continue to be multilingual over generations in their native language, the languages of the host region/society and other languages of functional significance; there is no pressure for language shift from native to the dominant language(s). Use of many languages in different spheres of our daily life activities is accepted as a necessary aspect of Indian life. However, hierarchical positioning of languages is problematic in any society. Association between language and power privileges some and disadvantages the others. Mohanty (2010a, 2019) characterizes the sociolinguistic hierarchy and discrimination in multilingual societies as a double-divide situation.

According to Mohanty (2019), social neglect of some languages, sets in motion a vicious circle of disadvantage and exclusion which weakens these languages, and such weakness is used to justify further exclusion. Exclusion of languages is a process of cumulative disadvantage in which the languages and their users are discriminated against and, at the same time, blamed for their own victimized status. Based on his analysis of multilingual societies in the world, Mohanty (2019) shows a pattern of hierarchy in a pyramidal structure, typically with a double divide—between the most dominant language(s) and the major languages, on one hand, and between the major languages and “other” languages, usually the indigenous, tribal, minority/minoritized (ITM) languages, on the other. In Indian context, the first of the double divide is between English (at the top of the hierarchy) and other national and regional major languages (in the middle rungs) and second between the major national/regional languages and the ITM languages (at the bottom of the hierarchy). Mohanty (2010a, 2019) shows that the double divide in multilingual societies like India has implications for how social institutions and education are organized and for maintenance of languages in the society, the ITM languages in particular.

Is it necessary to maintain the multilingual structure of the societies? The answer to this question is critical not just for our society but also for the world. Maintenance of linguistic and cultural diversity is essentially linked to maintenance of world's biodiversity and safeguard of linguistic human rights (Skutnabb-Kangas, 2000). Dominated and ITM languages need to be protected and developed since maintenance of all MTs is vital for linguistic and cultural diversity and related to economic development of linguistic communities (Mohanty, 2009a, 2019). Discussion of the implications of maintenance of linguistic diversity is beyond the scope of this chapter, but it must be noted that loss of languages is a major concern since in every two to three weeks a last speaker of some language is dying in some corner of the world. At the present rate of loss of the world's languages, it is estimated that, by the end of the current century, we will be left with only 10% of nearly 6900 languages in the world unless all languages are preserved and developed. With 196 languages in the endangered categories in *The Atlas of World's Languages in Danger* (UNESCO, 2009), India has the highest number of dying languages. It is imperative that our linguistic diversity is protected and no language is neglected and discriminated against in the society.

In India, educational exclusion of languages, particularly tribal languages, is quite striking. The Constitution of India mandates the state and the local authorities to “provide adequate facilities for instruction in the mother tongue at primary stage of education to children belonging to minority groups” (Article 350A, *Constitution of India*). But the number of languages used as medium of instruction (MoI) and as school subject has been declining over the years. Less than 1% of tribal children have opportunity for education in their home language. In higher education, there is minimal presence of regional majority languages and tribal languages are completely absent; university and technical education are almost exclusively in English. Despite the fact that nearly 60,000 primary schools in India have over 90% ST children and in over 100,000 schools ST children constitute the majority, there is no regular provision for education of ST children in their mother tongues, except in some special programmes. There seems to be a general lack of appreciation of the magnitude of the educational problem in India due to the mismatch between home language and school language of the ITM children.

Speakers of ITM languages all over the world suffer the consequences of neglect of their home language in education which denies their Linguistic Human Rights and Right to Education, has negative effects on their educational performance and leads to loss of linguistic diversity (Skutnabb-Kangas, 2000; see also Mohanty & Skutnabb-Kangas, In press). Language in education policies and practices in most parts of the world force children from ITM language communities into submersion education in dominant languages leading to large-scale educational failure, push-out, capability deprivation and poverty (Mohanty, 2009a; Mohanty & Skutnabb-Kangas, 2013). The dominant/majority language is learnt in schools with subtractive effect on children’s linguistic repertoire; it gradually displaces the mother tongue, initially leading to a diglossic pattern of language use and then to a loss of mother tongue proficiency and often also inadequate development of the dominant language.

Home language of children has a crucial role in the early foundational development in education and, therefore, neglect of language remains a major factor in poor educational performance of the STs. Submersion education of tribal children in a dominant language which is not their MT leads to large-scale educational failure, capability deprivation, economic underdevelopment and poverty and prevents the benefits of education from percolating into human development (Mohanty, 2009a). Educational failure and inability to move into higher levels of education and technical training needed for joining skilled work force limit the chances of upward socio-economic mobility and perpetuates poverty (Mohanty, 2019). Unfortunately, educational policies and planning in India (as in many other parts of the world) assume inherent deficiencies among the disadvantaged linguistic minorities and inadequacy of their languages for educational use. Persistence of educational failure among the ITM children despite many cosmetic and policy level changes shows that in order to get out of the vicious circle of educational failure, capability deprivation and poverty, it is necessary to recognize the critical role of MTs in education in our multilingual society and for development of multilingual competence through schooling. Education in English or any other dominant language imposed on children at the cost of their MT seriously disadvantages these children, causing mental harm, loss

of identity, stigmatization of their languages and educational failure (Mohanty, 2019; Mohanty & Skutnabb-Kangas, 2013, in press).

The questions of use of MTs in education and educational goal of promoting linguistic diversity and multilingual proficiency are linked to the role of multiple languages for human development. Are many languages a burden or liability for bilingual/multilingual mind or are they human resources? Considering that a large proportion of Indian population is multilingual, it is necessary to look into the role of languages for our cognitive and educational performance.

Psycholinguistic Bases of Multilinguals' Cognitive Superiority

Unfortunately, despite robust evidence to the contrary, the popular assumption that more than one language is a burden splitting human mind has been quite resistant to change. The social belief about the negative consequences of bilingualism was reinforced by the early researchers. Beginning with the second decade of the last century, the immigrant bilingual children in schools of the host countries, the Spanish–English bilinguals in USA or the Welsh–English bilinguals in Wales, for example, constituted marked groups with limited opportunities in the host society suffering negative consequences of discrimination; they were mostly from the lower socio-economic strata. The low educational performance of these children prompted research attempts to locate possible psycho-educational antecedents of poor classroom achievement. The rationale of the early studies on cognitive consequences of bilingualism was based on the presumption that bilingualism was a liability. As Lambert (1977) pointed out, “Researchers in the early period generally expected to find all sorts of troubles and they usually did; bilingual children relative to monolinguals were behind in schools; retarded in measured intelligence and socially adrift” (p. 15). Reviews of these early studies (Baker, 2011; Lambert, 1977; Mohanty, 1994; Skutnabb-Kangas, 1984) show that socio-cultural differences between bilinguals and monolinguals, lack of assessment of the degree of bilingualism or of the level of proficiency in the language of testing, test biases, and the social expectations of poor psycho-educational performance of bilingual children were some major methodological shortcomings of these studies.

A study by Peal and Lambert (1962), viewed as a turning point in the Western literature on cognitive consequences of bilingualism, matched the bilingual and monolingual samples on socio-economic level, age and schooling and the degree of bilingualism. The study also used measures of intelligence standardized in each of the two languages—French and English. The bilinguals outperformed the monolinguals on measures of verbal and non-verbal intelligence and school achievement rating. Peal and Lambert (1962) concluded that bilingual children have advantages with mental flexibility, abstract thinking, concept formation and a positive transfer between languages. This landmark study had two significant effects on the course of

research on bilingualism and cognition: (a) it shifted the focus from unitary measures of intelligence to specific intellectual skills and mental processes, and (b) it prompted greater methodological control in respect of differences in socio-economic and other variables, including some psychological ones, and in the levels of bilingual proficiency. In a replication of the Peal and Lambert (1962) study in western Canada, Cummins and Gulutsan (1974) showed that balanced bilinguals performed better than age-, gender- and socio-economic status-matched monolinguals, on measures of verbal and non-verbal ability and verbal originality measure of divergent thinking. Many other post-1960 studies in diverse cultural and linguistic settings confirmed bilinguals' superiority over matched groups of monolinguals in a variety of cognitive tasks. For example, studies by Ben-Zeev (; 1972) with Hebrew–English bilinguals, Ianco-Worral (1972) with Afrikaans–English bilinguals from South Africa and Bain and Yu (1978) with bilinguals and matched monolinguals from Canada, France and Germany found bilinguals to be better than monolinguals on a variety of measures of cognitive flexibility, problem solving and intellectual performance. In India, a study by Southworth (1980) took a sample of 1300 school children (grades I–X) including monolingual Malayalam speakers and other mother tongue (Tamil or Konkani) bilinguals, categorized into five socio-economic levels. Classroom achievement of the bilingual children was better than the monolinguals.

Thus, studies over these years following Peal and Lambert (1962) have clearly supported positive findings showing bilinguals' superiority in a wide range of cognitive measures (see Mohanty, 1994, 2019; Mohanty & Perregaux, 1997, for reviews). With wide acceptance of bilingualism/multilingualism as a resource, researches in this area have increasingly focused on understanding the links between bilingualism/multilingualism and specific aspects of cognition such as information processing, cognitive flexibility, creativity, mental representation and organization of languages, memory and language processing, and metalinguistic awareness (Baker, 2011). However, despite the attempts to match the comparison samples, bilinguals and monolinguals in the Western studies remain culturally different since the former are invariably cultural minorities in dominant monolingual societies in the west.

The Kond Studies and the Metacognitive Advantages of Bi-/Multilinguals

The methodological issue of cultural differences between the bilingual and monolingual populations was addressed in a series of eight studies with Kond tribal children in Odisha (India) examining the cognitive and metalinguistic consequences of bilingualism (see Mohanty, 1994, 2019, for details). These studies are uniquely placed with a distinct methodological advantage of drawing bilingual and monolingual samples from the same culture and socio-economic context. The Kond studies, conducted over a period of over two decades since the early 1980s, sought to explore the relationship between bilingualism and cognition and analyse the dynamics of

bilingual superiority in terms of metalinguistic and metacognitive processes among the bilinguals/multilinguals. These studies confirm the findings of the post-1960 studies on positive cognitive consequences of bilingualism; they show cognitive superiority of the bilingual Kond children over their monolingual counterparts from the same cultural context and matched for socio-economic variables. Kui-Odia bilingual children performed significantly better than Odia monolingual children in a host of intellectual and cognitive tasks, classroom achievement and a number of measures of metalinguistic awareness and metacommunicative skills. The positive consequences of bilingualism noted in studies with school children were also found in studies with unschooled Kond children. The actual operation of better metalinguistic processes of bilingual children was found in tasks of ambiguity detection and perception of ambiguous sentences. Advanced levels of metalinguistic awareness among the bilingual children can be attributed to the experience of using multiple languages and dealing with the complexities of multiple linguistic systems and the challenges in appropriate social use of multiple languages (Mohanty, 2019).

In her review of *Bilingualism in a Multilingual Society: Psycho-Social and Pedagogical Implications* (Mohanty, 1994), Skutnabb-Kangas (1995) pointed out that the Kond studies succeeded in correcting the biases in the Western studies arising out of the confounding between bilingualism as such and socio-cultural differences (including the effects of literacy) and, thus, offered robust support to the findings in respect of cognitive advantages of bi-/multilingualism. Unfortunately, this methodological concern has not been sufficiently addressed in current Western research on bilingualism. In his review of research on bilingualism, cognition and creativity, Kharkhurin (2012) expressed this concern:

In most of the studies of bilingual cognition, bilingual groups included immigrants who in addition to speaking two languages were also likely to experience and participate in two cultures. This cultural element has been virtually ignored in the investigation of the possible cognitive impact of bilingualism (p. 62).

Kharkhurin (2012) further pointed out another related limitation of the Western studies. According to him, “Despite the fact that bilingual participants were tested in a large variety of languages, in most studies they spoke their native language and English. Virtually, no research was conducted with individuals speaking other language combinations” (p. 64). As Skutnabb-Kangas (1995, 2019) has pointed out, with a distinct methodological advantage, the Kond studies are significant for their unique contributions to understanding the role of bi-/multilingualism as a cognitive resource.

The Metalinguistic Hypothesis of Multilingual Advantage

Early work in the field of bilingualism pointed to the strategies that bilingual children use in negotiating multilingual complexities. Leopold (1939–49) was of the view that parallel exposure to two languages accelerates separation of sound and meaning or

name and object. In his early work which was posthumously published in 1934 in Russian language, Vygotsky (1962) suggested that capacity to express the same thought in different languages develops better insight in the bilingual child into the objective and arbitrary properties of language. According to him, "The child learns to see his language as one particular system among many, to view its phenomena under more general categories and this leads to awareness of his linguistic operations" (p. 110).

Early formulations of the metalinguistic hypothesis of bilinguals' cognitive superiority (Ben-Zeev, 1977a, b; Cummins, 1978) were based on Vygotsky's ideas. Ben-Zeev suggested that bilingual children develop metalinguistic skills as strategies for dealing with the problems of possible interlanguage interference. According to her (1977b), "The emphasis is not on interlingual interference per se, however, but on the cognitive consequences of the strategies or processes which develop in the bilingual child as he struggles to overcome interlingual interference operating on the structural level of language" (p. 30). High level of bilingual proficiency enhances metalinguistic awareness which, in turn, influences different aspects of cognition (Tunmer & Myhill, 1984). Bilingual/multilingual children show better understanding of the relationship between words and their meanings, referential arbitrariness and non-physical nature of words, independence of the properties of the objects from their arbitrary labels or associated lexical symbols as in word substitution tasks, grammatical acceptability of sentences, and other objective properties of language at different levels of their representation (Ben-Zeev, 1977a, b; Bialystok, 1988; Cummins, 1978; Edwards & Christophersen, 1988; Galambos & Hakuta, 1988; Ianco-Worrall, 1972; and many other studies). As pointed out earlier, the findings of the Kond studies have also supported the metalinguistic hypothesis of bi-/multilingual superiority.

The experience of dealing with multiple linguistic codes fosters metalinguistic development, also leading to flexibility in cognitive operations and creativity. Effective use of multiple languages for communication involves much more than simple knowledge of the rules of the languages; it involves communicative competence that requires knowledge of the rules of language usage *in context* and ability to consider the state of knowledge of the participants in a communicative event. Metalinguistic ability involves taking a communicative event as an object of cognitive reflection and analysing the same, and it is a major aspect of competence in dealing with such communication.

Studies (Mohanty et al., 1999; Vihman, 1985) show that, fairly early in development (by about the age of 2 years), bilingual and multilingual children differentiate between the languages in the surrounding and attend to the task of keeping them separate. As Serratrice (2013) suggests, discriminating between the two systems is the initial challenge for children growing up in bilingual environment; acquisition of two languages must begin with the discovery of the two systems in their linguistic input. Beginning with such discovery of multiple input systems and early differentiation between the languages, multilingual experience entails constant challenges of selecting socially appropriate linguistic code, code-switching and code-mixing in a variety of communicative contexts. In addition to the task of negotiating possible interference between languages at a formal structural level, multilingual

children must also deal with possible conflict between pragmatic rules and social norms governing communication in multiple languages by developing awareness of communicative practices in complex multilingual context (Genesee, 2006). For example, by about 4 years of age, children in multilingual social contexts understand that some languages are appropriate in certain contexts and not in others and that it is not right to speak to someone in a language that (s)he does not understand (Mohanty, Panda & Mishra, 1999, also see Mohanty, 2019, Mohanty & Skutnabb-Kangas, in press). At a later age, children engage in functional code-switching in response to the politeness norms in the society switching appropriately to the language of the interlocutor. The nature of code-switching and code-mixing may also change in presence of multiple interlocutors belonging to different languages. In discussing the implications of the early Kond studies, Mohanty (1994) underscored the complexity and challenges that bilingual/multilingual children face:

... In addition to the requirements of learning and applying the rules of his language and the usual communicative rules and monitoring these rules, the bilingual child has to keep the rules of language and communication from interfering with each other and, more importantly, develop another set of rules governing the appropriate choice of rules specific to each of his languages (p. 92).

Thus, proficient multilingual communication involves metalinguistic and metacognitive reflection and control over cognitive operations all of which facilitate performance of multilinguals in intellectual and scholastic tasks. The relationship between metalinguistic and metacognitive processes and cognitive control is bidirectional; as cognitive processes become more effective, they add to the efficiency of the mechanisms of control and metacognition.

The current understanding of the nature of relationship between multilingualism and cognition has moved beyond the post-1960 studies during a period of over four decades. While views of multilingualism as a cognitive resource have broadly continued in the post-1960 track, new insights have accumulated over the last couple of decades enriching our understanding of the nature of relationship between multilingualism and cognition.

Going Beyond the Metalinguistic Hypothesis

Metalinguistic advantage of multilinguals has remained a consistent research finding. However, metalinguistic ability is not a monolithic concept; language awareness involves different aspects and levels of language (Bialystok, 2013) and recent studies on metalinguistic awareness have focused on such awareness at phonological, lexical, syntactic, textual and pragmatic levels of language.

Patterns of advantage of bi-/multilinguals vary across a variety of phonological awareness measures such as segmental tasks of phoneme or syllable deletion, substitution, reversal and rhyme recognition and also across the writing systems in which the bi-/multilinguals learn to read. As Padakannaya (1999) shows, the speakers of

Indian languages, including those without any formal literacy skills, perform better on syllable level manipulation tasks, such as rhyme recognition, deletion and reversal than on phoneme deletion and reversal tasks. Padakannaya (1999) also shows that exposure to alphabetic writing system of English improves performance in phonemic awareness tasks. Bialystok et al. (2005) compared morphemic and phonemic level awareness of children learning to read Chinese and English. The Chinese readers had better awareness of morphemic structure, whereas the English readers showed better awareness of phonemic structure. Bruck and Genesee (1995) found better performance of English–French bilingual children from French school programmes than the English monolinguals on syllable counting tasks, whereas the English monolinguals were better on phoneme awareness tasks. It seems, learning to read in alphabetic, linear and opaque writing systems such as English fosters development of phonemic level awareness, whereas the same in alpha-syllabary, nonlinear and transparent writing systems like Hindi is related to syllable level awareness (Padakannaya & Mohanty, 2004; Sproat & Padakannaya, 2008). Clearly, the processes underlying reading vary across different writing systems although learning to read in any writing system involves some basic awareness of the phonological structure of language. Ho and Bryant (1997) suggest that some minimum level of phonological awareness is required in learning to read in non-alphabetic orthography such as Chinese. These findings in respect of literacy instruction in different languages have significant implications for education in Indian multilingual society, and some studies have addressed the issues related to learning to read in multiple writing systems.

Kar et al. (2014) compared normally progressing and slow progressing readers acquiring biliteracy skills in Hindi and English in primary grade English-medium schools and found that the normally progressing readers used script-dependent strategies and had better development in reading Hindi. The slow progressing readers, on the other hand, had difficulty in developing script-dependent strategies for reading in English and Hindi; they also showed poor cognitive and linguistic processing skills. Kar et al. (2014) suggested that a sequential instructional strategy may be more effective than simultaneous learning of two orthographic systems for development of biliteracy skills in different writing systems, such as Hindi and English. Singh et al. (2016) studied 8- to 10-year-old Hindi MT children learning to read Hindi or an unfamiliar language English and found that the orthographic features of the two writing systems affected the reading processes in the two languages. They also noted additional cognitive load in learning to read the unfamiliar language (English) and suggested that education for biliteracy should focus on developing strong mother tongue skills which can be transferred to development of literacy skills in a second language.

In an fMRI study of phrase reading in Hindi–English bilinguals Kumar et al. (2009) noted different patterns of cortical activations in reading Hindi and English writings. The nature of advantage of bilinguals in phonological awareness may depend on the languages of the bilinguals and also learning to read in specific writing systems (Bialystok, 2013). Further, bilingual children's patterns of phonological awareness changes when they learn to read. The difference between bilingual and monolingual readers in phonological awareness is affected by reading instruction for

specific orthographic systems which fosters awareness at different levels (Eviatar & Ibrahim, 2000; Muter & Diethelm, 2001). It seems bi-/multilingual children have some advantage in learning the sound structure of their spoken languages particularly when the languages are similar and learning to read augments or neutralizes this advantage depending on which aspects of phonological awareness are emphasized for learning specific orthographic systems. Advantages of bi-/multilinguals are related to the nature and relationship between their languages as well as the nature of writing systems involved in learning to read. Bilingual and multilingual children have an advantage in early reading since they have better understanding of the principles of phoneme to grapheme representation in printed or written texts (Bialystok & Barac, 2013).

Studies on development of word awareness and understanding of the relationship between words, their referents and meanings show superior performance of bi-/multilingual children. Word awareness involves understanding that speech can be segmented into meaningful units and that the relationship between meaning of words and their referents is arbitrary (Bialystok, 2013). Tasks of counting and defining words are used to assess the understanding of words as meaningful units. Symbol substitution, meaning-referent relations and non-physical nature of words tasks are also used as measures of awareness of referential arbitrariness of words. We used these tasks in the Kond studies which showed bi-/multilingual advantage in word level awareness. Compared to monolingual children, bi-/multilingual children show better understanding of word boundaries in sentences. Bialystok (1986a) administered word counting tasks of varied difficulty levels in scrambled string and normally uttered meaningful sentence conditions and found that bilingual and monolingual children had equal levels of performance in the scrambled string condition showing equivalent knowledge of the word units. However, in the meaningful sentence condition, the bilingual children performed better showing that they were able to dissociate the identification of word level meaning from the meaning of the sentence as a whole.

Bilinguals have an advantage in meaning-referent relations tasks which show children's understanding that the meaning of words remains stable even in absence of any referent. Studies using tasks of understanding the non-physical nature of words do not show consistent bilingual advantage although a majority of the studies (including the Kond studies) show bilingual superiority. Bi-/multilingual children also show better understanding of the arbitrariness of words involving change of object names (e.g. changing the name *sun* to *moon*) more readily agreeing to the exchange of names; they also understand that the characteristics of the object do not change even if the name is changed. Similarly, studies (including the Kond studies) with symbol substitution tasks in which children are asked to play games of substituting some words by other words leading to anomalous statements (such as "*Frogs can fly*", when the symbol/name "*airplane*" is substituted by "*frog*") show better performance of bi-/multilingual children. Thus, studies with a variety of word awareness tasks support the hypothesized bi-/multilingual advantage in word- and lexical level metalinguistic awareness.

Syntactic level awareness is usually assessed by grammaticality judgement tasks in which children are asked to identify and correct sentences with grammatical errors,

sometimes with or without semantic anomaly. When sentences have incorrect or anomalous semantic information, judgement of grammaticality becomes difficult in face of the semantic error. Bilingual children do not show a consistent advantage in grammaticality judgement tasks; often monolingual children, particularly at a higher age, also perform at the same level. However, bilingual children perform better with grammatically correct but semantically anomalous sentences which they are more likely to identify as “correct” (Bialystok, 1986b, 1988; Bialystok & Majumder, 1998; Cromdal, 1999). Besides grammaticality judgement, tasks of detection of sentence ambiguity are also used as measure of syntactic awareness. Studies with ambiguity detection tasks show better performance of bilingual children in correct identification of ambiguous sentences and paraphrasing the meanings with explanation of ambiguity (Galambos & Hakuta, 1988). The Kond studies also showed multilingual advantage in ambiguity detection and use of intonational cues for disambiguation of spoken sentences with surface structural ambiguity. Older multilingual children in the Kond studies performed better than their monolingual counterparts in detecting structural ambiguity in sentences and paraphrasing or explaining the two meanings (Mohanty, 1989).

Bi-/multilingual children have some advantages in literacy, reading and discourse level performance associated with functioning in multiple language systems. Their advantage with metalinguistic tasks and awareness of discourse structure facilitates oral discourse skills and early reading development (Bialystok, 2013). These children also show positive transfer across languages in their competence with literacy-related discourse such as storytelling. As Cummins (1979, 2009) points out, such cross-linguistic transfer occurs over a wide range of literacy skills particularly for abstract and decontextualized tasks. Bilingual children show comparable levels of performance in their languages in picture description and tasks of providing definitions (Davidson et al., 1986; Snow et al., 1989; Wu et al., 1994). Storytelling ability in the home language of multilinguals is affected by the extent of exposure to and proficiency in the home language. Oral discourse proficiency in bi-/multilingual children’s home language is transferred to reading and classroom academic use of the second or school language. There is also some evidence of transfer across languages in case of polyglot aphasics undergoing language training as an intervention and such transfer is greater for similar languages (see Ijalba et al., 2013, for a review).

Development of early reading skills involves understanding of the relationship between print and meaning. For example, readers need to understand that the meaning of a written or printed word remains invariant regardless of where it is placed. Bialystok and Luk (2007) used a moving word task (in which words were moved from one picture or object to another) to test children’s understanding of meaning invariance. Bilingual children showed consistently better understanding in this task (Bialystok, 2013) regardless of whether they were learning to read in the same or different writing systems (Bialystok & Luk, 2007). Knowledge of the symbolic basis of written forms also involves understanding that written form is related to meaning rather than to the referent and that the length of a word is unrelated to the size or length of its referent. The bilingual children learning to read in two different writing

systems performed better than monolinguals in word size tasks to assess such understanding (Bialystok, 1997; Bialystok et al., 2000). Understanding of the nature of print form as necessary prerequisite to reading is facilitated by multilingualism and this advantage is even better when multilingual children learn to read in different writing systems.

Multilingual children are able to transfer reading-related skills across languages, and this facilitates reading in both of their languages even when the writing systems are different. However, the nature of such transfer and its impact on reading proficiency vary across languages and writing systems. Geva et al. (1997) showed that, when children learnt to read in two different writing systems, Hebrew and English, transfer of reading skills in the dominant language facilitates literacy acquisition in the weaker language. Similarly, with children learning to read in a language different from their home language, there is transfer of phonological skills from home language to school language and such transfer facilitates reading development. Padakannaya et al. (1993) compared Kannada-speaking children, literate in the alphabetic writing system of English, with those who were literate only in Kannada (which has a semi-syllabic writing system), in phonemic awareness task in Kannada. They found that literacy in the alphabetic writing system had a positive effect on performance in phonemic awareness tasks. Liow and Poon (1998) assessed spelling in English, the school language of children whose home language was English or Chinese or Bahasa Indonesia. The children with Bahasa Indonesia as home language had the best English spelling performance attributed to transfer of phonological skills from a phonologically simple Bahasa Indonesia to English. Similarly, English reading comprehension of Spanish–English bilingual children was predicted by vocabulary knowledge and phonological awareness in both languages (Carlisle et al., 1999). When children learn to read in two languages, phonological skills in one language facilitate reading in the other language (Durgonoglu et al., 1993).

Cross-linguistic transfer across languages and reading-related skills of bi-/multilingual children foster better learning to read. However, the degree of such advantage may be affected by factors specific to languages and/or writing systems (Bialystok, 2013). In a review of research on bilingualism and writing systems, Bassetti (2013) shows positive effects of biliteracy on metalinguistic awareness, language production, reading and writing skills, and creative use of writing systems. Bassetti (2013) also points out that biliterates have facility in acquiring an additional writing system, just as the bilinguals have advantage in acquiring a third or later language. It seems metalinguistic advantages, early development of prerequisite skills for reading and knowledge of different writing systems endow the bi-/multilingual children with effective language and reading acquisition skills.

Multiple Language Systems in Human Mind: Further Insights

The recent studies are clear in suggesting that functioning in multiple languages enhances metalinguistic and metacognitive awareness which constitute the basis for

general cognitive advantages associated with of bi-/multilingualism. Such advantages, however, are greater for certain kinds of tasks than others. As Kharkhurin (2012) points out, bi-/multilingualism facilitates flexibility and creativity and promote cognitive control and metacognitive awareness. However, in some aspects of their verbal skills, bi-/multilinguals may show lower proficiency in each language compared to monolinguals (Bialystok et al., 2012). Compared to their monolingual counterparts, the bilinguals may be generally poor in certain verbal skills (such as language specific vocabulary) in each language which is likely to affect their performance in verbal tasks. In some studies, bilinguals are found to be poor in verbal fluency, word production, size of receptive vocabulary and comprehension in each language; they also have slower picture naming time and lower accuracy. However, the bi-/multilinguals have an overall advantage in verbal skills when one considers their total verbal repertoire in both or all the languages, including conceptual vocabulary or available lexical concepts. Notably, bi-/multilinguals put in more cognitive effort in dealing with the languages and develop resourceful cognitive control and this compensates for language-specific drawbacks. Recent studies show that bi-/multilingual advantages can be attributed to their better executive control skills. Bialystok (2001) points out that superior selective attention of the bilinguals enables them to focus on relevant features in cognitive tasks, while their inhibition mechanism enables them to ignore any conflicting or misleading information. Thus, the bi-/multilingual advantage is associated with their executive control and “superior ability to ignore misleading information and attend to relevant cues and structures” (Bialystok, 2013, p. 644). Studies show positive effects of bi-/multilingualism in tasks requiring attentional and inhibitory control (Blumenfeld & Marion, 2011). A review by Adesope et al. (2010) relates bilingualism to several cognitive outcomes such as metalinguistic awareness, attentional control, working memory and representational skills. Dash and Kar (2014) examined language control and cognitive control performance of four bilingual aphasics and found dissociation between the two control processes, namely, the bilingual language control and general cognitive control.

The degree of executive control advantage of bilinguals on attention control tasks is related to the level of bilingual proficiency (Mishra et al., 2012; Salvatierra & Rosselli, 2011). Singh and Mishra (2012) compared Hindi–English bilinguals with two different levels of L2 (English) proficiency in oculomotor Stroop task and found better inhibitory control of the high-proficiency bilinguals. Singh and Mishra (2013) also showed that Hindi–English bilinguals with high fluency had better interference control and modulation of selective attention in different monitoring contexts. Khare et al. (2013) administered attentional blink task to Hindi–English bilinguals with different levels of bilingual proficiency and found that the executive control functions vary with levels of bilingual proficiency.

In contrast to the early studies (including the Kond studies) which suggested a better cognitive control due to metalinguistic and metacognitive processes, the recent studies discussed above suggest efficient executive control processes among bi-/multilinguals which manage attention to language and enhance cognitive efficiency. Research using fMRI techniques in language-switching tasks shows distributed

cortical activation converging in bilateral frontal areas of the multilingual brain. These areas are critical for cognitive control, planning and attention. The association between attention, interlanguage-switching and cognitive control mechanisms in terms of neural processing may explain superior performance of bilinguals in non-verbal conflict tasks (Bialystok et al., 2012). It seems prolonged multilingual experience alters cognitive anatomical structures in addition to cortical functions network.

There is simultaneous activation of all the language systems and continuous interaction between them even when the bi-/multilinguals operate in any single language milieu in which other language systems may not be required (Bialystok et al., 2012). Thus, the language systems and their contexts, the interlocutors and multiple conflicting cues are required to be constantly monitored and language(s) not needed to be used at a given point in time inhibited. The chances of interference and errors are higher with all the language systems remaining active and interactive. Despite the complexity and requirement of greater cognitive effort, multilinguals display fairly accurate strategies of selecting their target language and minimize errors due to cross-lingual interference. Attention to multiple languages and continuous selection and switching between them augment effective cognitive strategies and attentional control mechanisms (Bialystok et al., 2012). According to Kroll et al. (2012), cognitive control advantage and mental flexibility of bi-/multilinguals can be attributed to the task of continuous monitoring of multiple linguistic systems and selecting the appropriate lexicon during language production. These processes lead to better control and efficient performance of multilinguals on a wide range of cognitive tasks and enhance executive control involving suppression of possible interference from other languages which remain activated even in conditions of use of a single or target language (Blumenfeld & Marian, 2007). Further, as studies (Guo et al., 2012; Sunderman & Priya, 2012) show, parallel activation of languages is stronger in case of proficient bilinguals. Bialystok et al. (2012) reviewed a number of neuroimaging studies and conclude that the experience of multiple languages shapes human mind and brain for greater flexibility and neuroplasticity. They describe the mental flexibility of bilinguals as follows:

Bilinguals sometimes have an advantage in inhibition, but they also have an advantage in selection; bilinguals do sometimes have an advantage in switching, but they also have an advantage in sustaining attention; and bilinguals do sometimes have an advantage in working memory, but they also have an advantage in representation and retrieval. Together, this pattern sounds like 'mental flexibility', the ability to adapt to ongoing changes and process information efficiently and adaptively (p. 247).

Many of these advantages of bi-/multilinguals also continue into adulthood and protect against ageing-related decline in cognitive functions and attentional control. Bi-/multilingualism is also associated with better maintenance of white matter structures in the brain, and it can be viewed as "one of the environmental factors that contribute to cognitive reserve or brain reserve" (Bialystok et al., 2012, p. 246). Bialystok et al. (2012) argue that dealing with the complexity of multiple language systems involves stimulating mental activities which strengthen cognitive functions, limit the effects of age-related cognitive decline and delay the onset of old age

dementia. In an analysis of the age of onset of Alzheimer's disease (AD) in 91 monolingual and 93 bilingual patients, Bialystok et al. (2007) found a 4-year delay in the age of onset of dementia among the bilingual patients despite the fact that their level of education was lower than the monolingual counterparts. In another comparison of 100 bilingual and 100 monolingual cases of AD, Craik et al. (2010) noted a 5-year delay in case of bilingual patients. Bialystok et al. (2012) point out that the average age of onset of dementia is 78.6 years for bilingual patients compared to 75.4 years for monolingual patients. In their review, Bialystok and Barac (2013) sum up the cognitive effects of bilingualism and its role in onset of AD as follows:

... evidence for the impact of bilingualism on mental functioning across the lifespan demonstrates the essential flexibility and plasticity of the mind. Experience shapes our mind, just as our mind selects from the array of experiences in which we potentially engage. We have come a long way from the pervasive assumption that bilingualism is damaging to children's cognitive development to demonstrating a protective effect of bilingualism in coping with symptoms of Alzheimer's disease. Experience is powerful, and bilingualism may be one of the most powerful experiences of all (pp. 209–210).

The study of bi-/multilingualism has gone beyond the early debate on the general intellectual and scholastic consequences of bilingualism. Nearly six decades after the Peal and Lambert (1962) study, which marked a turning point, our understanding of the processes underlying the advantages of the multilinguals and their strengths as well as weaknesses has become more refined and differentiated. There is now robust evidence of positive benefits associated with the experience of dealing with multiple languages in respect of cognition, creativity, development of metalinguistic awareness, reading and literacy-related skills. It is also known now that bilingual and multilingual children and adults do not show global advantages in respect of specific skills and developmental patterns; several factors mediate the relationship between multilingual experience and performance on different cognitive tasks. Such factors include: (a) the degree of bilingualism or the level of competence in each of the languages, (b) nature of each language—its phonological, syntactic and semantic features—and the relationship between these languages, their similarities and dissimilarities, (c) reading and literacy experience of the multilinguals with different or similar writing systems and (d) characteristics of the specific tasks for assessment of different aspects of cognitive-linguistic skills.

There is robust research evidence to view multilingualism as a cognitive resource despite some variations in the performance of the multilinguals under different tasks conditions. Plasticity of the brain functions, in face of constant complexities and challenges of negotiating multiple linguistic systems, makes multilinguals cognitively flexible, creative and resilient to cognitive conflicts and pressures. "More important, though," as Bialystok (2013) puts it, "bilingualism never confers a *disadvantage* on children who are otherwise equally matched to monolinguals, and the benefits and potential benefits weigh in to make bilingualism a rare positive experience for children" (p. 645). The same is also true of multilingualism (Mohanty, 2019).

Cognitive and Educational Benefits of Multilingualism: Summing Up the Research Evidence

Research findings during the last sixty years have not only confirmed the positive consequences on bi-/multilingualism but also have shown specific aspects of such consequences adding to our understanding of the underlying dynamics of the multilingual mind and their implications for education. The major trends of research findings as discussed earlier can be briefly stated as follows:

- i. Bi-/multilingualism is clearly associated with better performance in a host of cognitive, intellectual and educational tasks of verbal and non-verbal intelligence, information processing and cognitive control, creativity, cognitive flexibility, concept formation, memory, reasoning, abstract thinking and educational achievement; there is also positive transfer of language skills of the bi-/multilinguals across their languages.
- ii. The experience of continuous monitoring of all languages, which remain activated even in conditions of use of a single or target language, and suppression of possible interference from other languages lead to efficient performance of multilinguals on a wide range of cognitive tasks and enhance executive control.
- iii. The experience of multiple languages shapes human mind and brain for greater flexibility and neuroplasticity. Neuroimaging studies show distributed cortical activation converging in bilateral frontal areas of the multilingual brain, critical for cognitive control, planning and attention. Multilinguals also show a delayed onset of dementia and Alzheimer's disease.
- iv. These multilingual advantages are attributed to the enhanced metalinguistic skills which are reflected in more general metacommunicative and metacognitive skills as cognitive control processes. The degree of metalinguistic advantages, however, varies across the levels of the language awareness of the bi-/multilinguals—phonological, lexical, syntactic, textual and pragmatic.
- v. While bi-/multilingual children have better phonological skills in general, the specific advantages are associated with the languages of these children. Learning to speak some languages such as the Indian languages and Chinese is associated with better development of syllabic and morphemic level awareness, whereas learning other languages like English is associated with better phonemic awareness.
- vi. Bi-/multilingual children show better lexical/word level awareness and have an advantage with tasks of syntactic level awareness, such as grammaticality judgement and in dealing with sentence anomaly and ambiguity. They also show better textual and discourse level competence and oral discourse skills such as storytelling, picture narration, etc.
- vii. The bi-/multilinguals have an overall advantage in verbal skills particularly in terms of their total verbal repertoire in both or all the languages, including conceptual vocabulary or available lexical concepts. They put in more cognitive effort in dealing with constantly active multiple language systems and

- develop resourceful cognitive control, and this compensates for language-specific drawbacks sometimes noted among the bi-/multilinguals compared to their monolinguals counterparts.
- viii. Bi-/multilingual children have an early reading advantage with better awareness and understanding of phoneme to grapheme mapping in written text, discourse structure and cross-linguistic transfer.
 - ix. Although a minimum level of phonemic awareness is needed for learning to read, when bi/multilingual children learn to read non-alphabetic writing such as alpha-syllabic systems of Indian languages or syllabic writing such as Chinese, reading development is associated with syllable level awareness.
 - x. Bilingual children, such as those learning to read in an Indian language and English, follow script-dependent strategies and also have different patterns of cortical activation when reading in different writing systems. Further, level of reading development is predicted by development of the home language or MT because of positive cross-linguistic transfer across languages particularly from a better developed language to other languages of multilinguals.
 - xi. When children acquire literacy skills in multiple writing systems, a sequential acquisition of literacy may be more effective than a simultaneous acquisition particularly when nature of the scripts are different (such as alphabetic and alpha-syllabic scripts). In the context of Indian multilingualism and acquisition of literacy in Indian languages and English, development of literacy in MT facilitates subsequent development of literacy skills in English. This is because when MT skills are well developed, there is a positive transfer from the MT to English and other languages in literacy and education.

Mother Tongues and Multilingualism in Education

Exclusion of ITM languages in formal education perpetuates inequality and discrimination. While English dominates the formal educational systems in India. Particularly in the higher education, the ITM languages are neglected in all levels. Tribal children constitute over 90% of children in nearly 60,000 primary schools and the majority in over 100,000 schools (Mohanty & Skutnabb-Kangas, in press). The tribal mother tongues are not used as language of education, except in a few special programmes. As Mohanty and Skutnabb-Kangas (in press) show, 35.6% of the tribal children joining primary school are pushed out by Class 5, 55% are out by Class 8 and 70.9% by Class 10. Less than 30% of the tribal children joining Class 1 appear in the high school examination and only 9% succeed. Thus, there is a wastage of 91% in the existing system of submersion education in a non-MT language for the tribal children in India (Mohanty, 2019).

Submersion education of ITM children in a dominant language fails to provide high-quality education and enhance their cognitive and intellectual capabilities. It has a subtractive effect on children's MT competence, leads to loss of their linguistic capital and their cultural and linguistic identity and limits their choice and freedom.

Large-scale educational failure and an inability to move into higher levels of education and technical training necessary to join the skilled workforce limit the chances of upward mobility, thus perpetuating poverty (Mohanty, 2019, p. 141; see Mohanty & Skutnabb-Kangas, 2013, for elaboration of capability deprivation). Besides the tribal children (over 8% of the school-age population), at least 40% of other children in India are in English-medium schools (Mohanty, 2019). Thus, nearly half of the 7-to-18-year-old children in India are educated in a language which is not their MT. Clearly, dominant language medium education in multilingual societies does not support MTs and multilingualism of many children including those from ITM language communities.

Mother tongue (MT) is necessary for early education because it is the most complete and powerful resource that children develop by the time of school entry (Mohanty, 2009a, b). It is not surprising, therefore, that children learn better in their language. MT links children to their family, community, nature and culture, and gradually it comes to regulate their thought, problem solving skills, creativity and complex learning. It is quite evident that the most familiar and well-developed language is best suited to be the language for all new learning including classroom learning; moving from known to the unknown or from the familiar to the unfamiliar is a common principle of learning. However, we also must realize that in a multilingual society like ours, education cannot and need not remain confined to MT only. We live in a world which is becoming increasingly multilingual and we need different languages to function effectively. More importantly, as we have seen earlier, multilinguals are intellectually, cognitively, academically better than monolinguals; they are more successful in today's world. India is a multilingual society and we all need multiple languages, regardless of where we are. Our education must develop multilingual skills. It is imperative that education of all children must develop skills in multiple languages beginning with their MT. We will focus here on linguistic minority children from the Indigenous Tribal Minority (ITM) communities since they are the most vulnerable group severely affected by neglect of their MT particularly in education.

Causes of poor educational achievement of the ITM children are many and have been severally discussed. However, language barrier that most ITM children face when they join school in a dominant language, which is not their MT, is undeniably a major factor in their educational failure (2009a; Mohanty, 2000). In India, tribal children have inadequate exposure to the dominant language(s) when they come to school (Mohanty, 2010a; b). "It takes at least 3 years for a tribal child entering Class I to understand the language of the teachers and textbooks and the problem of 'non-comprehension' burdens the child in early years leading to maximum "dropout" in Classes II & III and cumulative learning deficiency" (Mohanty et al., 2014, p. 1). The mismatch between children's home language and school language during the early school years is critical since primary education, including math education, is mostly education in language use—comprehension, expression, reading and writing. Further, early schooling in an imposed dominant language goes against the strong evidence that early literacy and education in mother tongue as the medium of teaching–learning is the most effective form of education for the linguistic minority

children and as we have argued (Mohanty & Skutnabb-Kangas, 2013; Skutnabb-Kangas & Mohanty, 2009) educational neglect of languages leads to illiteracy, poor educational attainment, high rate of “push-out” from schools, capability deprivation and poverty. An imposed dominant language as the language of schooling leads to subtractive language learning; the more the children learn the dominant language the less they retain of their MT skills. Mohanty and Skutnabb-Kangas (in press) also show that subtractive dominant language medium education for ITM children prevents access to education, because of the linguistic, pedagogical and psychological barriers it creates. Thus, it violates the right to education.

Studies all over the world confirm the advantages of learning mother tongues for better education (Heugh & Skutnabb-Kangas, 2010; Mohanty et al., 2009). In multilingual societies, languages including the MT of children are resources. A number of Indian studies (see Mohanty, 2017, 2019 for reviews) also show better performance in MT medium schools when SES differences and quality of schooling are controlled.

Fostering Multilingualism in Education: Multilingual Education (MLE)

Multilingual education (MLE) involves “use of two or more languages as media of instruction in subjects other than the languages themselves and with (high levels of) multilingualism and, preferably, multiliteracy, as a goal at the end of formal schooling” (Mohanty et al., 2009). Successful models of education of ITM children all over the world use mainly MT as the medium of instruction (MI) during the first 6–8 years of education and the dominant language(s) as a second or third language subject(s) taught by multilingual/bilingual teachers who know the children’s mother tongue. There is robust research evidence to show that the length of mother tongue medium education is more important than any other factor in predicting educational success. Both the Ramirez et al. (1991) study involving a sample size of 2353 students and the Thomas and Collier (2002) study (world’s largest longitudinal study of minority students), involving a total of over 2,10,000 students, show that when different models of early- and late-transition from the mother tongue are compared, length of education in mother tongue medium was the strongest predictor of children’s school achievement, bi/multilingual competence and achievement in the dominant language (English). Ethiopia’s national evaluation of different regional variations of mother tongue medium education (Heugh et al., 2010) shows that the students with 8 years of mother tongue medium education (MTM) along with Amharic (the national language of Ethiopia) and English as school subjects had better school achievement as well as proficiency in English compared to those with 6 years of MTM who, in turn, performed better than those with 4 years of MTM. Thus, research and practice of mother tongue-based multilingual education (MLE) all over the world strongly support the conclusion that, compared to the early-transition, late-transition forms

of MLE with at least 6–8 years of teaching in the mother tongue medium lead to better academic achievement, higher levels of multilingual competence, and better achievements in dominant languages (including English). MT-based MLE develops competence in MT and builds other languages on the MT foundation with a clear additive relationship between languages (discussed in Mohanty, 2019, Chap. 8; also see Skutnabb-Kangas, 2007 and Cummins, 2009 for discussion of the psycholinguistic principles of MLE).

Conclusion: Education of the Minorities in a Multilingual Society

Evaluation of MLE programmes in India (NCERT, 2011; Panda et al., 2011; also see Mohanty, 2019) shows that mother tongue-based MLE promotes better school learning of ITM children. Children in MT-based MLE programmes perform better than their non-MLE (dominant language) programme counterparts in academic subjects including English. But the impact of MT-based MLE must be seen beyond the immediate academic benefits. As I have argued, “with the sole objective of enhancing academic achievement, MLE fails to empower and question the unjust hierarchy of languages; rather it becomes an instrument for social exclusion” (Mohanty, 2019, p. 182). When MT-based multilingual education seeks to develop literacy and academic skills in MT as a “bridge” to learning of dominant languages like English and/or the state level languages, it continues to subjugate ITM children’s MTs to these dominant languages and perpetuate the unjust hierarchical divide between languages. Segregating MT-based MLE programmes as education of the ITM children alone, promoting MT use primarily for facilitation of development of dominant language(s) and replacing MT by dominant language(s) as soon as possible are signs of hegemony of the dominant languages. “It is necessary to rethink the current structure and organization of MLE programmes so that ITM communities and languages are moved to the centre. Multilingual societies need MLE *not* because it facilitates learning of other and ‘dominant’ languages, but because it is high-quality education which can be empowering” (Mohanty, 2019, p. 183).

References

- Adesope, O. O., Levin, T., Thompson, T., & Ungerleider, C. (2010). A systematic review and meta analysis of the cognitive correlates of bilingualism. *Review of Educational Research*, 80, 207–245.
- Annamalai, E. (2008). Contexts of multilingualism. In B. B. Kachru, Y. Kachru, & S. N. Sridhar (Eds.), *Language in South Asia* (pp. 223–234). Cambridge University Press.
- Bain, B., & Yu, A. (1978). Towards an integration of Piaget and Vygotsky: A cross-cultural replication (France, Germany, Canada) concerning cognitive consequences of bilinguality. In M. Paradis (Ed.), *Aspects of bilingualism* (pp. 113–126). Hornbeam Press.

- Baker, C. (2011). *Foundations of bilingual education and bilingualism* (5th ed.). Multilingual Matters.
- Basetti, B. (2013). Bilingualism and writing systems. In T. K. Bhatia, & W. C. Ritchie (Eds.), *Handbook of bilingualism and multilingualism* (2nd ed., pp.649–670). Wiley-Blackwell.
- Ben-Zeev, S. (1972). *The influence of bilingualism on cognitive development and cognitive strategy*. Unpublished Doctoral Dissertation, University of Chicago.
- Ben-Zeev, S. (1977a). The influence of bilingualism on cognitive development and cognitive strategy. *Child Development*, 48, 1009–1018.
- Ben-Zeev, S. (1977b). Mechanisms by which childhood bilingualism affects understanding of language and cognitive structures. In P. A. Hornby (Ed.), *Bilingualism: Psychological, social and educational implications* (pp. 29–55). Academic Press.
- Bialystok, E., & Luk, G. (2007) The universality of symbolic representation for reading in Asian and alphabetic languages. *Bilingualism: Language and Cognition*, 10, 121–129.
- Bialystok, E. (2013). Impact of bilingualism on language and literacy development. In T. K. Bhatia, & W. C. Ritchie (Eds.), *Handbook of bilingualism and multilingualism* (2nd ed., pp. 624–648). Wiley-Blackwell.
- Bialystok, E., & Barac, R. (2013). Cognitive effects. In F. Grosjean, & P. Li (Eds.), *The psycholinguistics of bilingualism* (pp. 192–213). Wiley-Blackwell.
- Bialystok, E. (1986). Children's concept of word. *Journal of Psycholinguistic Research*, 15, 13–32.
- Bialystok, E. (1986). Factors in the growth of linguistic awareness. *Child Development*, 57, 498–510.
- Bialystok, E. (1988). Levels of bilingualism and levels of linguistic awareness. *Developmental Psychology*, 24, 560–567.
- Bialystok, E. (1997). Effects of bilingualism and biliteracy on children's emerging concepts of print. *Developmental Psychology*, 33, 429–440.
- Bialystok, E. (2001). *Bilingualism in development: Language, literacy and cognition*. Cambridge University Press.
- Bialystok, E., Craik, F. I. M., & Freedman, M. (2007). Bilingualism as a protection against the onset of symptoms of dementia. *Neuropsychologia*, 45, 459–464.
- Bialystok, E., Craik, F. I. M., & Luk, G. (2012). Bilingualism: Consequences for mind and brain. *Trends in Cognitive Sciences*, 16(4), 240–250.
- Bialystok, E., & Majumder, S. (1998). The relationship between bilingualism and the development of cognitive processes in problem-solving. *Applied Psycholinguistics*, 19, 69–85.
- Bialystok, E., McBride-Chang, C., & Luk, G. (2005). Bilingualism, language proficiency and learning to read in two writing systems. *Journal of Educational Psychology*, 97, 580–590.
- Blumenfeld, H., & Marian, V. (2007). Constraints on parallel language activation in bilingual spoken language processing: Examining proficiency and lexical status using eye-tracking. *Language and Cognitive Processes*, 22, 633–660.
- Blumenfeld, H., & Marian, V. (2011). Bilingualism influences inhibitory control in auditory comprehension. *Cognition*, 118, 245–257.
- Bruck, M., & Genesee, F. (1995). Phonological awareness in young second language learners. *Journal of Child Language*, 22, 307–324.
- Carlisle, J. F., Vihman, M., Davis, L. H., & Spharim, G. (1999). Relationship of metalinguistic capabilities and reading achievement of children who are becoming bilingual. *Applied Psycholinguistics*, 20, 459–478.
- Craik, F. I. M., Bialystok, E., & Fredman, M. (2010). Delaying the onset of Alzheimer's disease: Bilingualism as a form of cognitive reserve. *Neurology*, 75, 1726–1729.
- Cromdal, J. (1999). Childhood bilingualism and metalinguistic skills: Analysis and control in young Swedish-English bilinguals. *Applied Psycholinguistics*, 20, 1–20.
- Cummins, J. (2009). Fundamental psychological and sociological principles underlying educational success for linguistic minority students. In A. K. Mohanty, M. Panda, R. Phillipson, & T. Skutnabb-Kangas (Eds.), *Multilingual education for social justice: Globalising the local* (pp. 21–35). Orient BlackSwan.

- Cummins, J. (1978). Bilingualism and the development of metalinguistic awareness. *Journal of Cross-Cultural Psychology*, 9, 131–149.
- Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, 49, 222–251.
- Cummins, J., & Gulutsan, M. (1974). Some effects of bilingualism on cognitive functioning. In S. Carey (Ed.), *Bilingualism, biculturalism and education* (pp. 126–136). University of Alberta Press.
- Dash, T., & Kar, B. R. (2014). Bilingual language control and general purpose cognitive control among individuals with bilingual aphasia: Evidence based on negative priming and Flanker tasks. *Behavioural Neurology*, 2014, 1–20.
- Davidson, R. G., Kline, S. B., & Snow, C. E. (1986). Definitions and definite noun phrases: Indicators of children's decontextualized language skills. *Journal of Research in Childhood Education*, 1, 37–47.
- Devy, G. (Chief Editor) (2014). *The being of Bhasa: General introduction to the people's linguistic survey of India, Volume I—Part II (in English)*. Orient Blackswan.
- Durgunoglu, A. Y., Nagy, W. E., & Hancin-Bhatt, B. J. (1993) Cross-language transfer of phonological awareness. *Journal of Educational Psychology*, 85, 453–465.
- Edwards, D., & Christopherson, H. (1988). Bilingualism, literacy and metalinguistic awareness in preschool children. *British Journal of Developmental Psychology*, 6, 235–244.
- Eviatar, Z., & Ibrahim, R. (2000). Bilingualism is as bilingual does: Metalinguistic abilities of Arabic-speaking children. *Applied Psycholinguistics*, 21, 451–471.
- Galampos, S. J., & Hakuta, K. (1988). Subject-specific and task-specific characteristics of metalinguistic awareness in bilingual children. *Applied Psycholinguistics*, 9, 141–162.
- Genesee, F. (2006). Bilingual first language acquisition in perspective. In P. McCardle & E. Hoff (Eds.), *Childhood bilingualism: Research on infancy through school age* (pp. 45–67). Multilingual Matters.
- Geva, E., Wade-Woolley, L., & Shany, M. (1997). Development of reading efficiency in first and second language. *Scientific Studies of Reading*, 1, 119–144.
- Guo, T., Mishra, M., Tam, J. W., & Kroll, J. F. (2012). On the time course of accessing meaning in a second language: An electrophysiological investigation of translation recognition. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 38, 1165–1186.
- Heugh, K., & Skutnabb-Kangas, T. (Eds.) (2010). *Multilingual education works: From the periphery to the centre*. Orient Blackswan.
- Heugh, K., Benson, C., Yohannes, M. A. G., & Bogale, B. (2010). Multilingual education in Ethiopia: What assessment shows about what works and what doesn't. In K. Heugh, & T. Skutnabb-Kangas (Eds.), *Multilingual education works: From the periphery to the centre* (pp. 287–315). New Delhi: Orient Blackswan.
- Ho, C. S., & Bryant, P. (1997). Learning to read Chinese beyond the logographic phase. *Reading Research Quarterly*, 32, 276–289.
- Ianco-Worrall, A. (1972). Bilingualism and cognitive development. *Child Development*, 43, 1390–1400.
- Ijalba, E., Obler, L. E., & Chengappa, S. (2013) Bilingual aphasia: Theoretical and clinical considerations. In T. K. Bhatia, & W. C. Ritchie (Eds.), *The handbook of bilingualism and multilingualism* (2nd ed., pp. 61–82). Wiley-Blackwell.
- Kar, B. R., Rimzhim, A., Chatterjee, S., & Maral, P. (2014) Bilingual literacy and reading acquisition in Hindi and English among normally progressing readers and slow progressing readers. In R. Sagar, R. D. Pattanayak, M. Mehta, & H. B. Singh (Eds.), *Specific learning disorder: Indian scenario* (pp. 102–117). AIIMS.
- Khare, V., Verma, A., Kar, B., Srinivasan, N., & Brysbaert, M. (2013). Bilingualism and the increased attentional blink effect: Evidence that the difference between bilinguals and monolinguals generalises to different levels of second language proficiency. *Psychological Research*, 77, 728–737.
- Kharkhurin, A. V. (2012). *Multilingualism and creativity*. Multilingual Matters.

- Kroll, J. F., Dussias, P. E., Bogulski, C. A., & Valdes-Kroff, J. (2012). Juggling two languages in one mind: what bilinguals tell us about language processing and its consequences for cognition. In B. Ross (Ed.), *The psychology of learning and motivation* (Vol. 56, pp. 229–269). Academic Press.
- Kumar, U., Das, T., Bali, R. S., Padakannaya, P., Joshi, M. R., & Singh, N. (2009). Neural representation of an alphasyllabary script—the Devanagari story. *Current Science*, 97, 1033–1038.
- Lambert, W. E. (1977). The effect of bilingualism on the individual: Cognitive and sociocultural consequences. In P. A. Hornby (Ed.), *Bilingualism: Psychological, social and educational implications* (pp. 15–27). Academic Press.
- Leopold, W. (1939–49). *Speech development of a bilingual child* (4 Vols.). North Western University Press.
- Liow, S. J. R., & Poon, K. K. L. (1998). Phonological awareness in multilingual Chinese children. *Applied Linguistics*, 19, 339–362.
- Mishra, R. K., Hilchey, M. D., Singh, N., & Klien, R. M. (2012). On the time course of exogenous cueing effects in bilinguals: Higher proficiency in a second language is associated with more rapid endogenous disengagement. *Quarterly Journal of Experimental Psychology*, 65, 1502–1510.
- Mohanty, A. K. (1994). *Bilingualism in a multilingual society*. Central Institute of Indian Languages.
- Mohanty, A. K., & Perregaux, C. (1997). Language acquisition and bilingualism. In J. W. Berry, P. R. Dasen, & T. S. Saraswathi (Eds.), *Handbook of cross-cultural psychology* (2nd ed.), Vol. 2: *Basic Processes and Human Development* (pp. 217–253). Allyn and Bacon.
- Mohanty, A. K., Panda, S., & Mishra, B. (1999). Language socialization in a multilingual society (pp. 125–144). In T. S. Saraswathi (Ed.) *Culture, socialization and human development*. Sage.
- Mohanty, A. K. (2000). Perpetuating inequality: The disadvantage of language, minority mother tongues and related issues. In A. K. Mohanty, & G. Misra (Eds.), *Psychology of poverty and disadvantage* (pp. 104–117). Concept.
- Mohanty, A. K. (2006). Multilingualism of the unequals and predicaments of education in India: Mother tongue or other tongue? In O. Garcia, T. Skutnabb-Kangas, & M. Torres Guzman (Eds.), *Imagining multilingual schools: Language in education and glocalisation* (pp. 262–283). Multilingual Matters.
- Mohanty, A. K., Panda, M., Phillipson, R., & Skutnabb-Kangas, T. (Eds.) (2009). *Multilingual education for social justice: Globalising the local*. Orient BlackSwan.
- Mohanty, A. K., Acharya, B. M., Dash, U. N., Kundu, M. N., Mishra, M. K., Mohanty, M. M., Panda, M., & Pradhan, A. (2014). *MLE policy and implementation guidelines for Odisha*. Odisha Primary Education Programme Authority.
- Mohanty, A. K. (2017). Multilingualism, education, English and development: Whose development? In H. Coleman (Ed.), *Multilingualism and development* (pp. 261–280). British Council.
- Mohanty, A. K. (1989). Psychological consequences of mother tongue maintenance and the language of literacy for linguistic minorities in India. *Psychology and Developing Societies*, 2(1), 31–51.
- Mohanty, A. K. (2009). Perpetuating inequality: Language disadvantage and capability deprivation of Tribal mother tongue speakers in India. In W. Harbert (Ed.), *Language and poverty* (pp. 102–124). Multilingual Matters.
- Mohanty, A. K. (2009). Multilingual education: A bridge too far? In T. Skutnabb-Kangas, R. Phillipson, A. K. Mohanty, & M. Panda (Eds.), *Social justice through multilingual education* (pp. 3–15). Multilingual Matters.
- Mohanty, A. (2010a). Languages, inequality and marginalization: Implications of the double divide in Indian multilingualism. *International Journal of the Sociology of Language*, 205, 131–154.
- Mohanty, A. K. (2010b). Language disadvantage and capability deprivation of tribal mother tongue speakers. In F. Apffel-Marglin, S. Kumar, & A. Mishra (Eds.), *Interrogating development: Insights from the margins* (pp. 262–286). Oxford University Press.
- Mohanty, A. K. (2019). *The multilingual reality: Living with languages*. Multilingual Matters.
- Mohanty, A. K., & Skutnabb-Kangas, T. (2013). MLE as an economic equaliser in India and Nepal: Mother tongue based multilingual education fights poverty through capability development and

- identity support. In K. Henrard (Ed.), *The interrelation between the right to identity of minorities and their socio-economic participation* (pp. 159–187). Martinus Nijhoff.
- Mohanty, A. K., & Skutnabb-Kangas, T. (In press) Growing up in societies where multilingualism is the norm—or not: Educational promotion of monolingualism through violation of linguistic human rights. In A. Stavans and U. Jessner (eds.), *The Cambridge handbook of childhood multilingualism*. Cambridge University Press.
- Muter, V., & Diethelm, K. (2001). The contribution of phonological skill and letter knowledge to early reading development in a multilingual population. *Language Learning*, 51, 187–219.
- NCERT (2011) *Programme evaluation report: Multilingual education, Orissa*. National Council of Educational Research and Training.
- Padakannaya, P., Rekha, D., Nigam, R., & Karanth, P. (1993) Phonological awareness, orthography and literacy. In R. J. Scholes (Ed.), *Literacy: Linguistic and cognitive perspectives* (pp. 55–70). Erlbaum Associates.
- Padakannaya, P. (1999). Reading disability and knowledge of orthographic principles. *Psychological Studies*, 44, 59–64.
- Padakannaya, P., & Mohanty, A. K. (2004). Indian orthography and teaching how to read. *Psychological Studies*, 49(4), 262–271.
- Panda, M., Mohanty, A. K., Nag, S., & Biswabandan, B. (2011). Does MLE work in Andhra Pradesh and Odisha? *A Longitudinal Study*. *Swara*, 1(6–7), 2–23.
- Peal, E., & Lambert, W. E. (1962). The relationship of bilingualism to intelligence. *Psychological Monographs*, 76, 1–23.
- Ramirez, J. D., Sandra, D. Y., Dena, R. R. (1991). Executive summary: Final Report: Longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language-minority children, Submitted to the U. S. Department of Education. San Mateo, CA: Aguirre International.
- Salvatierra, J. L., & Rosselli, M. (2011). The effect of bilingualism and age on inhibitory control. *International Journal of Bilingualism*, 15, 126–137.
- Serratrice, L. (2013). The bilingual child. In T. K. Bhatia & W. C. Ritchie (Eds.), *The handbook of bilingualism and multilingualism* (2nd ed., pp. 87–108). Wiley-Blackwell.
- Singh, N., & Mishra, R. K. (2012). Does language proficiency modulate oculomotor control? Evidence from Hindi-English bilinguals. *Bilingualism: Language and Cognition*, 15, 771–781.
- Singh, N., & Mishra, R. K. (2013). Second language proficiency modulates conflict monitoring in an oculomotor Troop task: Evidence from Hindi-English bilinguals. *Frontiers in Psychology*, 4, 1–10.
- Singh, N. C., Cherodath, S., Sumathi, T. A., Kosera, R., Currawala, K., Kar, B., & Oberoi, G. (2016). Reading skill in children provided simultaneous instruction in two distinct writing systems—insights from behaviour and neuroimaging. In L. Peer & G. Reid (Eds.), *Multilingualism, literacy and Dyslexia—breaking down barriers for educators* (pp. 200–214). Routledge.
- Skutnabb-Kangas, T. (1995). Book review of *Bilingualism in a multilingual society: Psycho-social and pedagogical implications*, Ajit K. Mohanty. *TESOL Quarterly*, 29(4), 775–780.
- Skutnabb-Kangas, T. (2007). *Bilingualism or not: The education of minorities (with an Introduction by Ajit Mohanty)*. Orient Longman.
- Skutnabb-Kangas, T. (2019). Series Editor's Preface. In A. K. Mohanty (Ed.), *The Multilingual Reality: Living with Languages*. Bristol: Multilingual Matters, xiii–xv.
- Skutnabb-Kangas, T., & Mohanty, A. (2009) *Policy and Strategy for MLE in Nepal*. Multilingual Education Program for All Non-Nepali Speaking Students of Primary Schools of Nepal. Ministry of Education, Department of Education, Inclusive Section.
- Skutnabb-Kangas, T. (1984). *Bilingualism or not: The education of minorities*. Multilingual Matters.
- Skutnabb-Kangas, T. (2000). *Linguistic genocide in education—or worldwide diversity and human rights?* Lawrence Erlbaum.
- Snow, C. E., Cancino, H., Gonzalez, P., & Shriberg, P. (1989). Giving formal definitions: An oral language correlate of school literacy. In D. Bloome (Ed.), *Classrooms and literacy* (pp. 233–149). Ablex.

- Southworth, F. C. (1980). Functional aspects of bilingualism. *International Journal of Dravidian Linguistics*, *IX*, *1*, 74–108.
- Sproat, R., & Padakannaya, P. (2008). Script indices. In N. Srinivasan, A. K. Gupta, & J. Pandey (Eds.), *Advances in cognitive science* (pp. 62–70). Sage.
- Sunderman, G., & Priya, K. (2012). Translation recognition in highly proficient Hindi-English bilinguals: The influence of different scripts but connectable phonologies. *Language and Cognitive Processes*, *27*, 1265–1285.
- Thomas, W. P., & Collier, V. P. (2002). *A national study of school effectiveness for language minority students' long-term academic achievement*. George Mason University.
- Tunmer, W. E., & Myhill, M. E. (1984). Metalinguistic awareness and bilingualism. In W. E. Tunmer, C. Pratt, & M. L. Herriman (Eds.), *Metalinguistic awareness in children* (pp. 169–187). Springer.
- UNESCO. (2009). *Atlas of World's languages in danger*. UNESCO. <http://www.unesco.org/culture/en/endangeredlanguages>. Accessed March 17, 2009.
- Vihman, M. M. (1985). Language differentiation by the bilingual infant. *Journal of Child Language*, *12*, 297–324.
- Vygotsky, L. S. (1962). *Thought and language*. MIT Press.
- Wu, H. S., De Temple, J. M., Herman, J., & Snow, C. E. (1994). L'animal qui fait oink! oink!: Bilingual children's oral and written picture descriptions in English and French under varying conditions. *Discourse Processes*, *18*, 141–164.

Integrative Understanding of Social Issues

Integrative Approaches to Psychotherapy: Insights from Cultural and Spiritual Psychology



Komilla Thapa and Prachi Ghildyal

Abstract This chapter focuses on the integrative movement in psychology and psychotherapy. It examines the various initiatives towards making psychology an integrative science as well as the sustained efforts towards integration in the domain of psychotherapy. In this process, the two main imperatives, the first arising from sociocultural contextual factors and the more pragmatic concerns are discussed. Using the Indian context as the anchor, the significance of spiritual and cultural factors in psychotherapy is discussed and an illustrative case study presented. The final section demonstrates how meditative and yogic practices and techniques from the Atharvaveda can be seamlessly combined in the efforts to attain the goal of both an integrative science and a culturally consonant psychotherapy.

Keywords Integrative science · Integration in psychotherapy · Sociocultural context · Cultural factors in psychotherapy · Spiritual concerns in psychotherapy

In recent years, there has evolved a need for psychology to be an integrated discipline instead of an ensemble of sub-specialties. There is also a growing emphasis on integrative approaches which would require fundamental changes in the nature and practice of psychological science. In the movement towards an integrative psychological science, diverse strategies and methods have been used. These trends are reflected in the domain of clinical psychology and more specifically in the area of psychotherapy. Thus, this chapter endeavours to outline the integrative efforts in psychotherapy and will also focus on how inputs from cultural and spiritual psychology can be blended and merged into psychotherapeutic practice.

K. Thapa (✉) · P. Ghildyal
Department of Psychology, University of Allahabad, Allahabad, India

Psychology as an Integrative Science

The quest for a unifying and integrative framework for psychology has sparked lively debate and speculation. Some representative and diverse viewpoints are briefly presented.

The theoretical precariousness of psychology is evidenced by unsatisfactory and discordant definitions of psychological “core constructs”. This means that psychology is in a messy and unproductive pre-paradigmatic state (Baucal & Kristic, 2020; Martsin, 2020) that is hampering the development of the discipline. While evolutionary psychology has shown promise, the rivalry between different schools of thought has prevented the emergence of a unified paradigm (Zagaria et al., 2020).

Another observation is that psychology as a scientific discipline has become fragmented as researchers focus on studying specific phenomena using common conceptual and methodological tools. This has resulted in a deeper understanding of these phenomena but it has prevented the integration of diverse sets of knowledge (Baucal & Kristic, 2020). Thus, they proposed that the theoretical formulations outlined by Vygotsky (1934/2012) and enriched with Bakhtin’s (1986) insights might be a better starting point for an integrative framework.

Another recommendation is that psychology should adopt a more reflective stance and study meaningful human experience as its central object, thereby reverting to its idiographic status. This would enable the emergence of “relational process ontology” (Martsin, 2020) whereby meanings that persons create are local and temporary states of the whole semiotic dynamic. In this process, culture would provide a framework for meaning-making, a set of semiotic universes (Salvatore, 2018).

In the area of psychotherapy, the evolutionary framework has been proposed for understanding the various aspects of mental disorders and how they emerge in different socio-developmental contexts. An “integrative, evolutionary, contextual, biopsychosocial approach” to psychology and psychotherapy has been advocated by Gilbert (2019). These viewpoints have clear implications for the theoretical models underlying psychological sciences as well as for the methodologies to be used while examining psychological phenomena.

Integration in Psychotherapy

It is evident that these are difficult and challenging times for both psychotherapists and their clients. As Mendelowitz (2009) has eloquently stated, we are now living in “a world shorn of moorings and in alarming disarray, doggedly exposing the extreme states of anxiety and confusion” (p. 339). With rapid changes in values and norms and with events occurring in a seemingly random and chaotic manner, the future seems unpredictable and uncertain. Even though significant scientific and technological advances have been made, many human problems remain insoluble (Wong, 2010).

Viktor Frankl was the pioneer in restoring spirituality and meaning to psychotherapy. The spiritual dimension, he asserted is the very core of our humanness, the essence of humanity. The human spirit is the most important resource in psychotherapy, because it is the basis for recovery and resilience (Frankl, 1986). It is only recently that spirituality and religion have been included in psychotherapy practice (Post & Wade, 2009). Several studies have documented the critical role of religion and spirituality in mental health, including the recovery from serious mental illnesses (Blanch, 2007; Fallot, 2007).

The cultural context has a prominent role in understanding and treating psychopathology. It is widely recognized that it is the cultural context that defines abnormal or psychopathological behaviour. As with overall health and illness, psychological suffering may arise from a complex, multidimensional process of biopsychosocial variables, which is culturally situated (Moleiro, 2018). Most treatments or interventions have their historical roots in specific cultural perspectives, as culture also shapes psychotherapy models (Rathod, et al., 2017). In recent years, definitions of culture in mental health research and practice acknowledge the role of multiple collective influences that combine to constitute a person's identity. Also, recent conceptualizations of culture regard it as processual (Kirmayer, 2012).

Keeping the above concerns and challenges in mind, it is evident that the usefulness of Western psychotherapeutic models needs to be critically examined keeping in mind, local culture, knowledge and understanding and both cultural and spiritual concerns need to be incorporated into the practice of psychotherapy.

In the domain of psychotherapy, several efforts have been made to achieve an integrative psychotherapy. Although psychotherapists have often considered the advantages of psychotherapy integration, it is only within the past 20 years that integration has emerged as significant discourse.

The many ills plaguing the field of psychotherapy and causing major barriers in integrative efforts have been showcased by Gilbert and Kirby (2019). These include the fact that the different schools of psychotherapy have diverse theoretical foundations and their explanations of psychopathology as well as the techniques used for the amelioration of psychological distress are varied. The lack of consensus on a unifying framework which would facilitate the integration of diverse streams of knowledge and research is also acutely felt (Gilbert, 2019).

Among the most significant trends in the area of psychotherapy has been the integrative psychotherapy movement (Norcross, 2005) or psychotherapy integration which has been a formal approach since 1983 (Stricker, 2010). Previously the field was marred by divisive competition and internecine strife. However, therapists gradually realized and accepted that psychotherapy needs to move beyond the confines of a single school approach and learn from other schools and systems. Further, research in the area of psychotherapy had clearly demonstrated that no single theory or therapy was superior or more effective in explaining and treating psychological disorders and distress.

In their efforts to integrate the various theories of counselling and psychotherapy, psychotherapists have used various strategies such as technical eclecticism, theoretical integration, assimilative integration, common factors, multi-theoretical

psychotherapy and helping skills integration (Norcross, 2005). The common factors approach with its focus on core conditions (Rogers, 1957) has been widely used. Thus as succinctly summarized by Norcross (2005, p. 9), “The common factors approach seeks to determine the core ingredients that different therapies share in common, with the eventual goal of creating more parsimonious and efficacious treatments based on their commonalities”.

Gilbert and Kirby (2019) while bemoaning the fragmentation of therapeutic models and interventions have proposed an integrative framework which would include psychology, neuroscience and social contextualism. The unifying framework for integrating theoretical models and interventions would involve “consilience” (Wilson, 1998) which is the synthesis of knowledge from different domains of inquiry.

Imperatives for Working Towards an Integrative Psychotherapy

The impetuses for seeking a unified approach to therapy are likely to be several and multiple. However, the most immediate and proximal concerns, which would appear to be the natural corollaries in this endeavour in the Indian context, will be confined to sociocultural imperatives and those arising from more pragmatic concerns.

Briefly, sociocultural contextual factors would intuitively constitute a major impetus to seek a form of psychotherapy which would be more culturally relevant and consonant. Numerous writers (for instance, Surya & Jayaram, 1964 and Surya, 1979) have articulated their dissatisfaction with traditional forms of psychotherapy as they did not match the expectations and worldviews of the clients for whom they were intended. The major pragmatic concern focuses on the increasing prevalence of mental disorders (Math & Srinivasraju, 2010; Gururaj et al., 2016; Murthy, 2017) and the evidence of a high incidence of mental disorders in both urban and rural areas resulting in an economic burden on families and shortcomings in mental healthcare delivery.

These imperatives are briefly discussed.

Sociocultural Contextual Factors

The role of cultural factors in psychotherapeutic interventions has been discussed by Thapa (2000, 2014). Foucault (cf. Erwin, 1997) had pointed out that psychotherapy involves “technologies of the self”. The nature of the self in the Indian context has been explicated by Roland (1988). This self is fundamentally interpersonal and includes the intrapsychic self which is an integration of a familial self with a spiritual self (Roland, 1988). The familial self is rooted in the hierarchical relationships of

the family and the group. It is characterized by *symbiosis-reciprocity* and includes a “we-self” that is relational in nature. Roland (2003) also assumed that the spiritual self is basic to Indian culture and thought.

While discussing cultural models of psychotherapy, Thapa (1994) has argued that cultural beliefs and practices enter into the psychotherapeutic process, as they form a part of both the client’s and therapist’s definition and understanding of psychological disorders. Thus, there is a “triangular relationship between the client, the therapist and society” (Berry et al., 2002).

The WHO sponsored Global Mental Health (GMH) initiatives which aimed to improve mental health services for people living in developing and non-Western countries was critiqued for its ignorance of the sociocultural context of mental health and low priority given to local needs and concerns and consequent marginalization of indigenous forms of helping (Kirmayer & Pederson, 2014). Also, these initiatives disregarded two interrelated phenomena: preferred sources of help and indigenous healing systems. It is well known that stigma, shame and other factors are barriers in accessing mental health services in Asia (Mathur Gaiha et al., 2014; Tulliao, 2014).

Lee (2015, 2018) espoused the view that psychotherapists and Asian clients may differ in their worldviews and this constituted the rationale for integrating Asian healing concepts into psychotherapy (Bojuwoye & Sodi, 2010). Basically, “Worldviews are beliefs, assumptions, and values that describe reality, human nature, the meanings of life, and one’s relationships with the world” (Koltko-Rivera, 2004, cf. Lee, 2015, p. 4). Commonalities in worldviews provide clients and therapists a common framework to work together (Fischer et al., 1998).

Thus, a shared worldview would constitute a sense-making exercise for the client. All healing systems, including psychotherapy and traditional healing practices, are rooted in “a rationale, conceptual schemes, or myth that provides a plausible explanation for the [client’s] symptoms and prescribes a ritual or procedure for resolving them” (Frank & Frank, 1991, p. 42). This mythic world may take a scientific or a supernatural form. One of the essential requirements for successful therapy is the consonance between the views of the therapist and the client vis-a-vis, this mythic, constructed world. Thus, one of the therapist’s cultural competencies and skills is the ability to use interventions consistent with the client’s worldviews (Hwang, 2006; Sue & Sue, 2013).

In their review of psychotherapy practice in India, Raguram and Bhola (2017) have highlighted the efforts to situate therapies in their local, cultural contexts (e.g. Avasthi, 2011; Jacob & Kuruvilla, 2012; Manickam, 2013). Thus, Jacob and Kuruvilla (2012) suggested that the *form* of therapeutic techniques may be universal, but the *content* must match with local and individual realities. Important considerations include the collectivistic nature of Indian society with its emphasis on interdependence (Markus & Kitayama, 1991) and hierarchical societal structures and childrearing patterns. Thus, the Guru-Chela model of therapy (Neki, 1973, 1979) continues to provide a template for current therapeutic practice. While discussing the barriers to the practice of psychotherapy in India, Raguram and Bhola (2017) listed several factors including stigma, beliefs in reincarnation and fatalism, and cultural strictures against revealing family issues.

Pragmatic Concerns and Imperatives

The prevalence of mental disorders in all states of India from 1990 to 2017 was investigated by Sagar et al. (2020). The study found that in 2017, 197.3 million people in India had mental disorders, including 45.7 million with depressive disorders and 44.9 million with anxiety disorders. This report also indicated that one among every 7 people in India had a mental disorder ranging from mild to severe. The contribution of mental disorders to the total disease burden in India had almost doubled from 1990 to 2017. Among the mental disorders that manifest predominantly during adulthood, the highest disease burden was caused by depressive and anxiety disorders (Sagar et al. 2020).

Previous studies on the epidemiology of psychiatric disorders in India based on the data published from 1960 to 2009 have conservatively estimated that the overall prevalence rate was approximately 190–200/1000 population (Math & Srinivasaraju, 2010). The National Mental Health Survey of India 2015–16 (Gururaj et al., 2016) has revealed a huge burden of mental disorders in the community with nearly 11% of Indians above 18 years having a mental disorder. These alarming figures and the abysmal shortage of mental health personnel would necessitate a movement towards psychological forms of treatment which would be more suited and acceptable to Indian clients.

Cultural Concerns in Psychotherapy

Culture and Psychotherapy: Some Theoretical Speculations

This section discusses culture and its significance in mental health practices and interventions. Culture shapes both the belief systems and inner experiences, so much so that Shweder and Sullivan (1993) stated that “culture and psyche make each other up”. Culture provides meaning systems, forms of discourse, action alternatives and scripts for living (Shweder, 1991).

While discussing culture from a systemic-constructivist perspective, Ahmad and Reid (2009) highlighted the significant role of culture in “core meaning-making processes” (p. 2). These “culturally shaped meaning systems” (Ahmad & Reid, 2009, p. 2) are active during the course of psychotherapy. The role of the psychotherapist is to engage with these cultural constructs and enable the client to explore their unique, culturally specific constructs.

Previous reviews (Thapa, 1994, 2018) have shown that psychotherapists in India have long accepted the significant role of culture in the practice of psychotherapy. A review of the area, however, showed that few attempts have been made to develop models which are congruent with sociocultural practices and beliefs and the changes taking place therein. It is equally true that Western models of psychotherapy may not “fit the lives and experiences of clients, whose metaphysical assumptions concerning

the nature of man, society and the world, whose culture and society are vastly different from the Western world” (Thapa, 2018, p. 5).

The cultural perspective situates psychotherapy as a cultural practice among other cultural forms and types of social discourse. Thus, it has a culturally distinct character that reflects the larger sociocultural and political context in which it took shape. It is possible to develop a historical, dialogical and contextual understanding of psychotherapy as a cultural practice (Hoshmand, 2001). This resonates with the views of Kakar (1982) that psychotherapy is partly “a social institution that provides glimpses into the symbolic universes of Indian culture” (p. 5).

It has also been pointed out that there are vast differences between people in various cultures, traditions and religions which lead to differences in understanding of normality/abnormality and health/illness which emerge from historical, social, cultural, technological and political processes (Das & Rautela, 2018). A proposed model is the eco-social phenomenological approach where mental distress and symptoms are assumed to interact reciprocally with cultural expectations and social responses, generating particular patterns of cultural syndromes, explanatory models, folk categories and experience (Kirmayer et al., 2017).

There is a need to focus on the relational/sociocentric aspect of Indian culture as well as on the modern “fragmented, multifaceted Indian self” having contradictory beliefs, attitude and behaviour, which may be explained in terms of an identity crisis as a consequence of British colonialism (Chakraborty, 2010).

Integrating Culture with Psychotherapy

Healing traditions in Asian cultures emphasize the harmony between body, mind and spirit. Thus, culture influences the therapeutic process by mediating the way the client and the therapist engage with the problem. Psychotherapy would lose its relevance if there is a gap between how the client and the therapist perceive a problem. This gap is often evident when therapists and helps givers deny the cultural embeddedness of the client and brush away the latter’s understanding, attributions and preferences for treatment as “superstition” or at the very least “unscientific”. A shared worldview and shared beliefs concerning the presenting problem are considered universal features of effective therapy in its cultural forms (Torrey, 1986).

The goal of culturally consonant psychotherapy would therefore be healing rather than curing. Thus, an integrative approach to psychotherapy would require two major reorientations of the mainstream “treatment” approach. One would be to guard against cultural encapsulation—i.e. the protective “capsule” or “cocoon” that some counsellors construct around themselves to protect them from meaningful contact with persons from other cultures. The second would be to accommodate the cultural specifics in the way help is given or therapy is practised (Wrenn, 1962).

As an integration strategy, Mikulas (2002, 2005, 2007) proposed an assimilation of Buddhist and Western psychologies with Asian healing systems such as Yoga, Ayurveda and Chinese medicine. This approach was termed as conjunctive

psychology and focused on “universal somato-psycho-spiritual practices” (Mikulas, 2005, p. 101) that has an impact on all four levels of being: biological, behavioural, personal and transpersonal. The inclusion of universal practices such as quieting the mind, increasing awareness, opening the heart and reducing attachments would lead to more powerful and effective therapies.

Ho (1985) found considerable diversity between Western and Eastern cultures pertaining to basic values and ethical principles and identified key dimensions such as independence vs. interdependence, competition vs. cooperation, individual responsibility vs. collective responsibility and nonconformity vs. conformity as the defining characteristics of Western and Eastern cultures, respectively. These characteristics are reflected in therapist attitudes and goals.

Culture and Healing in the Indian Tradition

A deeper exploration of the cultural theme shows that culture may influence the core mental structures and thus impact on the frequency and type of neuroses and the meaning of symptoms (Kakar, 1997). In addition, he pointed out that in India for most patients “emotional problems do not have a life-historical dimension or ... a genesis in the ‘psyche’. If not attributed to possession by malevolent or dissatisfied spirits who definitely lie *outside* the individual, the disorders and conflicts are often seen as the product of the *karma* of a previous life” (p. 37, italics in original). He viewed the guru-disciple relationship as an extension of the parent-child relationship, constituting a developmental second chance for acquiring cohesion and integration of the self (Kakar, 1982, 1991) Citing religious and philosophical texts and *gharanas* of music, Raina (2002) has explored the *guru-shishya* relationship which involves surrender and ultimate transformation of the disciple.

The magic-cosmic world seems to be an integral part of the cognitive map of Indians (Roland, 1988). Illiterate as well as highly educated Indians live in a world peopled with not only kinsmen and other humans but also invisible powers and spirits that can affect them through permeable ego boundaries. The person in turn can also influence these invisible entities through rituals and other means (Roland, 1988).

Another approach proposed by Kleinman et al. (1978) recommended understanding the beliefs, personal and social meanings of illness, and expectations of the client which constituted her “explanatory model”. A comparison of the doctor’s and client’s models would enable the development of effective interventions in different cultures. Further, Higginbotham et al. (1988) pointed out that in order to achieve legitimacy and acceptance, a therapeutic system should include: a culture-specific definition of psychological disorder, accepted norms for role behaviour, expectations of intervention and culturally sanctioned change agents (Higginbotham et al. (1988).

Healing in a Cultural Setting: An Illustrative Case Study

Various healing and folk traditions in India have constructed complex systems to explain the pathogenesis of mental disorders and have evolved techniques for their alleviation. Efforts have been made to explicate the process and methods used by traditional healers in which dramatic cures are brought about in one single session (Hoch, 1979). In the process of instant cure, she identified the following factors: these approaches focus on the totality of human existence, ignoring artificial distinctions between mind, body and spirit; the healer brings about the cure when he acts as a medium for a greater, divine force; as mental disorders are frequently perceived in terms of supernatural causation, this idea is culturally acceptable; most healers communicate in the idiom of the patients and presented subtly disguised insights.

This section will present a case study illustrative of cultural healing practices at the Dargah of Munawwar Shah in North India (Ghildyal, 2004).

The setting:

The Dargah of Munawwar Shah is situated in one of the most crowded parts of the city. Actually a cluster of three Dargahs, that of Munawwar Shah is considered the most potent for healing. Legend has it that Munawwar Shah had come from Madina and was a disciple of Ghause—one of the people nominated by Allah to spread his message in this world. He came from Baghdad and had attained mystical powers through prayers and meditation. It was Ghause who gave Munawwar Shah “Aab-e-hyatt”—the water of life. He spent his years in prayer and attained the power that is still healing those who come to his Dargah. People from all walks of life are welcome here.

The process of cure:

The people coming here seek remedies for various afflictions—physical, mental or family-related. There are no prescribed rituals to be followed for seeking the healing touch but the most favoured way appears to be an offering of roses, rose water and incense. Of utmost significance is the “bayan” or testimony given by the patient in a state of unconsciousness. The cure for all maladies including mental illness is Baba’s benevolence and the strength of his prayers and meditation and his proximity to Allah. Baba’s power to heal drives away the evil spirits possessing the person. If it is an object infused with magic and given to the person with malafide intent it is revealed in the “haziri” (call or attendance). Just being present in the inner sanctum suffused with the aura of Baba’s healing power is enough to cure any disease or affliction. The rose petals, water and oil which are purified by being kept near Baba’s mazar are used in the cure.

The healing regimen begins with a “bayan” which is a part of “haziri lagana” or marking attendance at the Dargah. During this process, the patient loses consciousness and a double dialogue takes place between the Baba and the possessing spirit. The devil’s side of the dialogue is what one hears and the devil seeks forgiveness alternating with expressions of violence and anger. The patient’s verbalizations often seem

as if he is experiencing intense pain. This healing process may occur in a trance-like state.

It appears as if the patients of their own volition are drawn to the sanctum to testify. This process of cure is often dramatic and may be physically and emotionally charged. The testimony and the entire experience are cathartic and also the medium through which the family is asked to take responsibility for the sick person's welfare. The possessing devil is driven away in the "haziri" that the all powerful Baba demands from him. The suffering person, in the state of possession, reveals the spell that has been cast and also the identity of the person who has done so.

Psychological mechanisms and derived insights:

The cultural healing regimen is based on causal beliefs and idioms of distress. Supernatural causation is an abiding theme in Indian culture, and this is used in cases that defy logic and strain the cultural explanatory resources. When these become part of the therapeutic process, it becomes more acceptable to members of the cultural group. Seeking help from culturally accepted sources (the Dargah in this case, which incidentally is frequented by both Hindus and Muslims) is less traumatic and stigmatizing.

The setting provides the freedom to express mental distress in the cultural idiom without any censure which in itself is therapeutic and cathartic. The cultural setting is also one where the universalization of the problem takes place and often helps, and support is obtained from interactions with the larger community.

The predominance of women in the cultural healing setting like that of the Dargah and their verbalizations during a "trance" state are mostly cathartic expressions of the deep-seated distress caused by sociocultural expectations and pressures to conform to the exacting standards they have internalized. This signifies the uniquely cultural way in which distress is experienced and manifested.

Possession is mostly manifested in cultural healing settings. This suggests an intuitive, though probably unconscious understanding of the acceptable norms of the sick role compatible with the healing system chosen. A crucial idea that can be derived from this example is that situating the illness outside the person absolves him of the responsibility of being ill. The attribution of causation to cosmic or supernatural powers in itself can be a powerful relieving factor by lessening the burden of being ill for the individual.

Thus, cultural ways of experiencing, understanding and responding to mental illness need to be incorporated into professional interventions. In order to make psychotherapy relevant, an eclectic approach that incorporates those aspects of the healing systems of different cultures that are most relevant for persons belonging to these cultures is required. Such an approach would enable content and forms of communication that are in harmony with the values upheld by that culture. The cultural symbols as well as ways of being need to be given a space in the negotiated meanings of illness and health in an integrative approach to psychotherapy.

Learnings from Spiritual Psychology

Studies have shown that human distress encompasses all aspects of functioning including the existential and spiritual dimensions (Peet, 2012). Accordingly, the spiritual and practical burdens of illness also need consideration and inclusion in the therapeutic framework, necessitating a unified view of human experience. Richards and Bergin (1997) asserted that a reductionistic understanding of the client as a person would no longer suffice and emphasized the need to work with a more complete and comprehensive conceptualization of the client, which would include the religious and spiritual aspects. The evidence that spiritual values and behaviours actually enhance physical and psychological well-being (Richards & Bergin, 1997) has further substantiated the primacy of spirituality in mental health.

The Possibility of the Spiritual Realm in Psychotherapy

Many practitioners have observed that the current practice of psychotherapy tends to ignore or bypass significant aspects of the client's functioning. In the words of Sollod (1993), "such a de-spiritualized psychotherapeutic endeavour overlooks the spiritual dimensions of life and experience" (p. 237). While exploring the common themes that underlie different approaches to healing, it was found that connection to spiritual and cosmic realities was fundamental including a restoration of wholeness and harmony (Carlson & Shield, 1989).

Recent theoretical and psychotherapeutic approaches posit that human beings are estranged or isolated not only from themselves and others but also from cosmic forces and realities. Fisher (2011) while outlining the four domains of spiritual well-being noted that the relationship with a "transcendent other" was paramount. A recurrent theme in indigenous healing approaches includes "interconnectedness with the universe" (Singh, 1999) and a balance among other domains of functioning including the biological, social, psychological and cosmic environment. The interdependent perspective is vital in that the self is viewed in relation to others (Markus & Kitayama, 1991) and the person is more connected to others. Many healing approaches attempt to reconnect the person with family or significant others (Yeh et al., 2004).

A similar theme was also evident in the Indian context wherein the client's problems may be viewed as "disorders of relationships, including the relationship with the natural and cosmic world" (Kakar, 1984, cf. Thapa, 2018). The interventions used would seek to connect (or reconnect) the client with sources of psychological strength that include an integration with the social and cosmic order (Kakar, 1984, cf. Thapa, 2018). This would "require a polyphonic social drama that attempts a ritual restoration of the dialogue with the person's family, community and its traditions" (Kakar, 1984, cf. Thapa, 2018, p. 7–8).

Rogers was one of the first research-oriented psychotherapists to acknowledge the importance of spiritual phenomena in therapeutic transactions. He referred to an

“altered state of consciousness [in which] it seems that my inner spirit has reached out and touched the inner spirit of the other ...our relationship transcends itself ... Profound growth and healing energy are present” (1980, p. 129). Thus, a spiritual strategy in psychotherapy is the root common to science, religion and other domains and is based on a theistic view of human view of human nature (Barlow & Bergin, 2001; Richards, 2005). It enables a spiritual conception of personality, a moral frame of reference for guiding and evaluating psychotherapy, and a body of spiritual interventions and techniques. The spiritual approach finds its origins in the very beginnings of human history and rejects the reductionism that has little or no room for the higher reaches of human nature (Richards, 2006).

In most Eastern societies, despite the growing influence of modern science and technology, religious traditions continue to have a pervasive influence on the world view of most people (Das, 1987). These traditions define the ideal life and prescribe the requisite conduct for its attainment. Psychological distress and disorders are explained in terms of either spirit possession or violation of a religious or moral principle. Healing may take the form of invoking the help of a supernatural power (refer to the Dargah case study in the preceding section) or restoring well-being by prescribing right conduct and belief.

A substantial body of literature has accumulated regarding the positive correlations of intrinsic spirituality or devoutness with well-being, self-esteem, marital satisfaction, family cohesion and positive mood (Richards & Bergin, 1997). Nevertheless, negative, or at the very least neutral and mixed effects have also been found.

A review of spiritual methods of therapeutic intervention has led many psychotherapists to revise their views regarding the role of religion and spirituality. No longer viewed as simply neurotic manifestations, religious and spiritual beliefs are being taken seriously in their own right. This is reflected in both techniques and theories.

Implications for Psychotherapy

Given the premise of a spiritual reality, it is assumed that every human interaction has the potential for a spiritual component. This has clear implications for psychotherapy goals and would necessitate an awareness of the client's worldviews about religion and spirituality, viewing the client multidimensionally and dealing with difficult issues such as tragedy, pain and suffering and learning from mistakes (forgiveness and repentance).

Therapists view people as being multidimensional and the inclusion of the spiritual component means that people are viewed as bio-psycho-social-spiritual beings. The spiritual dimension thus becomes primary to human existence and is not merely an “add on” (Bauman, 2010).

Evolving Strategies for Integrating Cultural and Spiritual Approaches

In recent years, therapists and researchers worldwide have acknowledged the intersections between spirituality, culture and mental health. As has oft been stated spirituality has been an integral part of everyday life in India. Thus, spiritual and cultural factors are now regarded as part of holistic paradigms in well-being, mental illness and recovery. This section will focus briefly on how therapeutic interventions can incorporate and include meditative practices, yoga and Ayurveda.

Meditation

Meditation has been an important aspect of Indian philosophical thought and practice. Its benefits are wide-ranging and include an integration of brain functions, regulation of physiological mechanisms, enhanced mental and physical well-being and harmonious mind–body interactions (Nagendra et al., 2012). Studies indicate that meditation may lead to positive mental health outcomes including a reduction in symptoms, personality changes and significant improvement in common mental disorders such as anxiety and depression (McGee (2008)). There have been several winning combinations. For instance, in the treatment of Borderline Personality Disorder, Linehan (2007) successfully combined dialectical behaviour therapy with mindfulness, thus according to both acceptance and legitimacy to meditation as a critical component of psychological interventions.

In the general, non-clinical population, Mantra meditation has been viewed as a viable alternative for promoting positive mental health and reducing negativity. Systematic reviews and meta-analyses (e.g. Lynch et al., 2018) have shown that this form of meditation may lead to a decrease in burnout, stress, anxiety, depression and symptoms of trauma. While ongoing efforts to include meditative and mindfulness-based practices into psychotherapeutic paradigms show great promise their integration remains tenuous, there is insufficient evidence pertaining to their efficacy. On the other hand, the inclusion of meditation as part of integrated treatments may lead to greater client acceptability of psychological interventions.

Yoga

Yoga, an ancient and holistic practice, includes the mind, body and spirit and can lead to healing and well-being (Vishvketu & Panwar, 2008). It subsumes physical postures (asana), breathwork (pranayama) and meditation (dhyana). The benefits accruing from the practice of yoga include reduction in stress, anxiety and depression (Butterfield et al., 2017; Forfyflow, 2011; Rioux, 2015). The three aspects of yoga enumerated

above may account for the improvements in anxiety and depression (Sherman, 2012). Speculating on the mechanisms underlying these therapeutic benefits, Da Silva et al. (2009) cited evidence to show that yoga may lead to improved regulation of the autonomic nervous system and the stress responses (Salmon et al., 2009) and also promote self-regulation (Gard et al., 2012) and psychological flexibility (Dick et al., 2014).

Though yoga is one of the more widely used complementary health approaches (Kamradt, 2017), its integration with psychotherapy would require careful analysis and “reflective critical evaluation” (Patwardhan, 2016, p. 261). He further asserted that it would be prudent to be cautious before attempting an integration of two practices which differ in their philosophical and ideological bases.

Taking an opposing stance, Caplan et al. (2013) posited that yoga and psychotherapy are complementary and the inclusion of yogic practices would lead to a mind–body-oriented approach (Singh, 2020) in psychotherapy.

Other Techniques

Ayurvedic texts have dealt with the pathogenesis and alleviation of psychological disorders, and Sattvavajaya has been the recommended psychotherapeutic approach (Murthy & Singh, 1987; Behere et al., 2013; Belaguli & Savitha, 2019). Often referred to as mind control, Sattvavajaya involves the use of specific techniques including regulation of thought processes and progressive clarification and refinement of basic assumptions and beliefs through mentoring and advice (Murthy & Singh, 1987). It involves strengthening of the Sattva component which is a part of the psycho-pranic system (Tripathi, 2002). The Atharvaveda also offers therapeutic techniques for psychological disorders and well-being such as samkalp, sadesh and prayaschitta (Rangaswami, 2009). These techniques have cultural and social sanction and acceptance and can be included in existing psychotherapeutic paradigms (Sharma, 2019). Thus, there is the possibility that these traditional Indian psycho-philosophical-cultural modes of therapy and healing (Thapa, 2018) can be integrated with psychotherapy.

Conclusion

The fusion of cultural and spiritual techniques with psychotherapy offers many opportunities for these techniques to be evaluated and implemented. The arbitrary imposition of “universal” theoretical concepts to specific cultures has led to major gaps in the theorizing of psychology and its practical applications. In order to bridge this gap, integrating the cultural and spiritual perspectives with universal concepts is recommended. This will make psychological science more robust especially for meeting the needs of a culturally diverse population. This is imperative in the evolving field

of psychotherapy which needs to take into cognizance “meaningful human experience” rather than be insensitive to cultural nuances in its pursuit to be an objective or evidence-based practice. Thus, an integrative approach would require a major reorientation in the guiding values and aspirations of the discipline. Rather than looking for universals, a quest for the local and the specific has to be taken up so that that psychotherapies become responsive to the needs of persons embedded in varying cultural and spiritual realities. The common factors approach to identify aspects that cut across different ways of understanding and managing psychological problems could be the starting point of such integration. Again this integration should not be taken up with the assumption of the mainstream approaches as the predominant body of knowledge that are appeasing the local voices. A true integration would require being immersed in the cultural specifics and accord the different perspectives and understanding the space they require. And definitely, the cultural healing practices must also adopt the well-researched and verified body of knowledge to effect a therapeutic change in the person. Thus, integration should not be limited to integrating the cultural into the mainstream but also vice versa. This would enable the focus to shift to healing that is holistic from treatment that is concerned with symptom alleviation. Such psychotherapy would be aligned to the lived experience and the metaphysical assumptions of those seeking help.

References

- Ahmad, S., & Reid, D. (2009, October). *Cultivating cultural competence: Understanding and integrating cultural diversity in psychotherapy*. [Web article]. Retrieved from <http://societyforpsychotherapy.org/cultivating-cultural-competence-understanding-and-integrating-cultural-diversity-in-psychotherapy>.
- Avasthi, A. (2011). Indianizing psychiatry—Is there a case enough? *Indian Journal of Psychiatry*, 53, 111–120.
- Bakhtin, M. M. (1986). *Speech genres and other late essays*. University of Texas Press.
- Barlow, S. H., & Bergin, A. E. (2001). The phenomenon of spirit in a secular psychotherapy. In B. D. Slife, R. N. Williams & S. H. Barlow (Eds.), *Critical issues in psychotherapy: Translating new ideas into practice* (pp.77–98). Sage.
- Baucal, A., & Kristic, K. (2020). Searching for an integrative theoretical framework for psychology: Evolutionary psychology is needed but not sufficient. *Integrative Psychological and Behavioral Science*. <https://doi.org/10.1007/s12124-020-09551-2>
- Bauman, P. J.(2010). The inherent spiritual and theological drama of therapy. In W. S. Schmidt & M. R. Jordan (Eds.) *The spiritual horizon of psychotherapy* (pp.12–24). Routledge.
- Behere, P. B., Das, A., Yadav, R., & Behere, A. P. (2013). Ayurvedic concepts related to psychotherapy. *Indian Journal of Psychiatry*, 55, 310–314.
- Belaguli, G., & Savitha, H. P. (2019). An empirical understanding on the concept of Sattvavajaya Chikitsa (Ayurveda Psychotherapy) and a mini-review of its research update. *Indian Journal of Health Sciences and Biomedical Research*, 12, 15–20.
- Berry, J. W., Poortinga, Y. P., Segall, M. H., & Dasen, P. R. (2002). *Cross cultural psychology: Research and applications*. Cambridge University Press.
- Blanch, A. (2007). Integrating religion and spirituality in mental health: The promise and the challenge. *Psychiatric Rehabilitation Journal*, 30, 251–260.

- Bojuwoye, O., & Sodi, T. (2010). Challenges and opportunities to integrating traditional healing into counseling and psychotherapy. *Counseling Psychology Quarterly*, 23, 283–296.
- Butterfield, N., Schultz, T., Rasmussen, P., & Proeve, M. (2017). Yoga and mindfulness for anxiety and depression and the role of mental health professionals: A literature review. *The Journal of Mental Health Training, Education and Practice*, 12(1), 44–54.
- Caplan, M., Portillo, A., & Seely, L. (2013). Yoga psychotherapy: The integration of Western psychological theory and ancient Yogic wisdom. *Journal of Transpersonal Psychology*, 45(2), 139–158.
- Carlson, R., & Shield, B. (Eds.). (1989). *Healers on healing*. Tarchef.
- Chakraborty, A. (2010). *My life as a psychiatrist: Memoirs and essays*. Kolkata: Stree.
- Da Silva, T. L., Ravindran, L. N., & Ravindran, A. V. (2009). Yoga in the treatment of mood and anxiety disorders: A review. *Asian Journal of Psychiatry*, 2(1), 6–16.
- Das, A., & Rautela, U. (2018). Indianizing psychiatry—A critique. *Indian Journal of Psychiatry*, 60, 245–251.
- Das, A. K. (1987). Indigenous models of therapy in traditional Asian societies. *Journal of Multicultural Counseling and Development*, 15(1), 25–37.
- Dick, A. M., Niles, B. L., Street, A. E., DiMartino, D. M., & Mitchell, K. S. (2014). Examining mechanisms of change in a yoga intervention for women: The influence of mindfulness, psychological flexibility, and emotion regulation on PTSD symptoms. *Journal of Clinical Psychology*, 70(12), 1170–1182.
- Erwin, E. (1997). *Philosophy and psychotherapy: Razing the troubles of the mind*. Sage.
- Fallot, R. D. (2007). Spirituality and religion in recovery: Some current issues. *Psychiatric Rehabilitation Journal*, 30, 261–270.
- Fischer, N. R., Jome, L. M., & Atkinson, D. R. (1998). Reconceptualizing multicultural counseling: Universal healing conditions in a culturally specific context. *The Counseling Psychologist*, 26, 525–588.
- Fisher, J. (2011). The four domains model: Connecting spirituality, health and well-being. *Religions*, 2, 17–28. <https://doi.org/10.3390/rel2010017>
- Frankl, V. E. (1986). *The doctor and the soul* (2nd ed.). Random House.
- Forlylow, A. L. (2011). Integrating yoga with psychotherapy: A complementary treatment for anxiety and depression. *Canadian Journal of Counselling and Psychotherapy*, 45(2), 132–150.
- Frank, J. D., & Frank, J. B. (1991). *Persuasion and healing: A comparative study of psychotherapy*. The Johns Hopkins University Press.
- Frankl, V. E. (2000). *Man's search for ultimate meaning*. Perseus Books.
- Gard, T., Brach, N., Holzel, B. K., Noggle, J. J., Conboy, L. A., & Lazar, S. W. (2012). Effects of a yoga-based intervention for young adults on quality of life and perceived stress: The potential mediating roles of mindfulness and self-compassion. *Journal of Positive Psychology*, 7(3), 165–175.
- Ghildyal, P. (2004). *A study of cultural construction of mental illness and developing an informational package*. Unpublished doctoral dissertation. University of Allahabad: Allahabad.
- Gilbert, P. (2019). Psychotherapy for the 21st century: An integrative, evolutionary, contextual, biopsychosocial approach. *Psychology and Psychotherapy: Theory, Research and Practice*, 92(2). <https://doi.org/10.1111/papt.12226>
- Gilbert, P., & Kirby, J. N. (2019). Preface and Introduction: Challenges of building an integrative science for psychotherapy for the 21st-Century. *Psychology and Psychotherapy Theory, research and practice*, 92(2).
- Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Pathak, K., Singh, L. K., Mehta, R. Y., Ram, D., Shibukumar, T. M., Kokane, A., Lenin Singh, R. K., Chavan, B. S., Sharma, P., Ramasubramanian, C., Dalal, P. K., Saha, P. K., Deuri, S. P., Giri, A. K., Kavishvar, A. B. ... NMHS collaborators Group. (2016). *National Mental Health Survey of India, 2015–16: Summary*. Bengaluru, National Institute of Mental Health and Neuro Sciences, NIMHANS Publication No. 128.
- Higginbotham, H. N., West, S., & Forsyth, D. (1988). *Psychotherapy and behaviour change: Social, cultural and methodological perspectives*. Pergamon.

- Ho, D. Y. F. (1985). Cultural values and professional issues in clinical psychology: Implications from the Hong Kong experience. *American Psychologist*, *40*, 1212–1218.
- Hoch, E. M. (1979). Process in instant cure. In M. Kapur, V. N. Murthy, K. Sathyavati & R. L. Kapur (Eds.), *Psychotherapeutic processes* (pp.45–69). NIMHANS.
- Hoshmand, L. T. (2001). Psychotherapy as an instrument of culture. In B. D. Slife, R. N. Williams, & S. H. Barlow (Eds.), *Critical issues in psychotherapy: Translating new ideas into practice* (pp. 99–113). Sage.
- Hwang, W. C. (2006). The psychotherapy adaptation and modification framework for Asian Americans. *American Psychologist*, *61*, 702–715.
- Jacob, K., & Kuruville, A. (2012). Psychotherapy across cultures: The form-content dichotomy. *Clinical Psychology and Psychotherapy*, *19*, 91–95.
- Kakar, S. (1982). *Shamans, mystics and doctors: A psychological enquiry into India and its healing traditions*. Oxford University Press.
- Kakar, S. (1984). *Psychological counseling: Is there an Asian model?* Proceedings of the 5th Biennial Conference-workshop of the Association of psychological and educational counselors of Asia, Bangalore.
- Kakar, S. (1991). *The analyst and the mystic: Psychoanalytic reflections on religion and mysticism*. Penguin Books.
- Kakar, S. (1997). *Culture and psyche: Selected essays*. Oxford University Press.
- Kamradt, J. M. (2017). Integrating yoga into psychotherapy: The ethics of moving from the mind to the mat. *Complementary Therapies in Clinical Practice*, *May 27*: 27–30. <https://doi.org/10.1016/j.ctcp.2017.01.003>
- Kirmayer, L. J. (2012). Rethinking cultural competence. *Transcultural Psychiatry*, *49*, 149–64 <https://doi.org/10.1177/1363461512444673>
- Kirmayer, L. J., & Pedersen, D. (2014). Toward a new architecture for global mental health. *Transcultural Psychiatry*, *51*, 759–776.
- Kirmayer, L. J., Gomez-Carrillo, A., & Veissière, S. (2017). Culture and depression in global mental health: An ecosocial approach to the phenomenology of psychiatric disorders. *Social Science Medicine*, *183*, 163–168.
- Kleinman, A., Eisenberg, L., & Good, B. (1978). Culture, illness and care: Clinical lessons from anthropological and cross-cultural research. *Annals of Internal Medicine*, *88*, 251–288.
- Koltko-Rivera, M. E. (2004). The psychology of worldviews. *Review of General Psychology*, *8*, 3–58.
- Lee, B. O. (2015, October). *Integration of Asian traditional healing into psychotherapy: Rationales, opportunities and challenges*. Paper presented at the Singapore Association for Counselling Symposium: Evidence Informed Practice—Towards a Better State of Well-being, Singapore (15th–16th October).
- Lee, B. O. (2018). Integrating Asian traditional healing into psychotherapy. In R. Moodley, T. Lo & N. Zhu (Eds.), *Asian healing traditions: Implications for health and mental health*. Sage.
- Linehan, M. (2007). *Dialectical behavior therapy in clinical practice: Applications across disorders and settings*. Guilford Press.
- Lynch, J., Prihodova, L., Dunne, P. J., Carroll, A., Walsh, C., McMahon, G., & White, B. (2018). Mantra meditation for mental health in the general population: A systematic review. *European Journal of Integrative Medicine*, *23*, 101–108.
- Manickam, L. S. S. (2013). Integrative change model in psychotherapy: Perspectives from Indian thought. *Indian Journal of Psychiatry*, *55*(Suppl 2), S322–S328.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224–253.
- Martins, M. (2020). Psychology: A discipline in need of reflective foundations. *Integrative Psychological and Behavioral Science*. <https://doi.org/10.1007/s12124-020-09552-1>
- Math, S. B., & Srinivasaraju R. (2010). Indian psychiatric epidemiological studies: Learning from the past. *Indian J Psychiatry*, *52*(Suppl S3), 95–103.

- Mathur Gaiha, S., Ann Sunil, G., Kumar, R., & Menon, S. (2014). Enhancing mental health literacy in India to reduce stigma: The fountainhead to improve help-seeking behavior. *Journal of Public Mental Health, 13*, 146–158.
- McGee, M. (2008). Meditation and psychiatry. *Psychiatry, 55*(1), 28–40.
- Mendelowitz, E. (2009). Building the great wall of China: Postmodern reverie and the breakdown of meanings. In L. Hoffman, M. Yang, F. J. Kaklauskas, & A. Chan (Eds.), *Existential psychology east-west* (pp. 327–349). University of the Rockies Press.
- Mikulas, W. L. (2002). *The integrative helper*. Wadsworth.
- Mikulas, W. L. (2005). Integrating the World's psychologies. In L. T. Hoshmand (Ed.), *Culture, psychotherapy and counselling* (pp. 91–111). Sage.
- Mikulas, W. L. (2007). Buddhism and western psychology: Fundamentals of integration. *Journal of Consciousness Studies, 14*(4), 4–49.
- Moleiro, C. (2018). Culture and psychopathology: New perspectives on research, practice, and clinical training in a globalized world. *Frontiers in Psychiatry, 9*, 366. <https://doi.org/10.3389/fpsyt.2018.00366>
- Murthy, A. R. V., & Singh, R. H. (1987). The concept of psychotherapy in Ayurveda with special reference to Satvavajaya. *Ancient Science of Life, VI*(4), 255–261.
- Murthy, R. S. (2017). National mental health survey of India 2015–2016. *Indian Journal Psychiatry, 59*, 21–26.
- Nagendra, R. P., Maruthai, N., & Kutty, B. M. (2012). Meditation and its regulatory role on sleep. *Frontiers in Neurology, 18* April 2012. <https://doi.org/10.3389/fneur.2012.00054>
- Neki, J. (1973). Guru-chela relationship: The possibility of a therapeutic paradigm. *American Journal of Orthopsychiatry, 43*, 755–766.
- Neki, J. S. (1979). Psychotherapy in India: Traditions and trends. In M. Kapur, V. N. Murthy, K. Sathyavathi & R. L. Kapur (Eds.), *Psychotherapeutic processes* (pp. 113–134). NIMHANS.
- Norcross, J. C. (2005). A primer on psychotherapy integration. In J. C. Norcross & M. R. Goldfried (Eds.), *Handbook of Psychotherapy Integration* (2nd Ed., pp. 3–23). Oxford.
- Norcross, J. S., & Goldfried, M. R. (Eds.). (2005). *Handbook of psychotherapy integration* (2nd ed.). Oxford University Press.
- Patwardhan, A. (2016). Is the integration of yoga with psychotherapy compatible? What are the risks? *Journal of Psychology & Psychotherapy, 6*, 3. <https://doi.org/10.4172/2161-0487.1000261>
- Peetet, J. R. (2012). Spiritually integrated treatment of depression: A conceptual framework. *Depression Research and Treatment*, article ID 24370 <https://doi.org/10.1155/2012/124370>
- Post, B. C., & Wade, N. G. (2009). Religion and spirituality in psychotherapy: A practice-friendly review of research. *Journal of Clinical Psychology, 65*, 131–146.
- Raguram, A., & Bholia, P. (2017) Psychotherapy practice and research: Roots, realities and the road ahead. In G. Misra (Ed.), *6th ICSSR Research Surveys and Explorations: Psychology, Vol. 5: Themes in contemporary mental health research*. Springer.
- Rangaswami, K. (2009). Psychotherapeutic concepts in the Atharva Veda. In K. R. Rao & S. B. Marwaha (Eds.), *Towards a spiritual psychology: Essays on Indian psychology* (pp. 345–353). Samvad Indian Foundation.
- Raina, M. K. (2002). *Guru-shishya* relationship in Indian culture: The possibility of a resilient creative framework. *Psychology and Developing Societies, 14*(1), 167–198.
- Rathod, S., Pinninti, N., Irfan, M., Gorchynski, P., Rathod, P., Gega, L., & Naeem, F. (2017). Mental health service provision in low- and middle-income countries. *Health Services Insights, 10*, 1–7.
- Richards, P. S., & Bergin, A. E. (Eds.). (1997). *A spiritual strategy for counseling and psychotherapy* (1st ed.). American Psychological Association.
- Richards, P. S. (2005). The need for a theistic spiritual strategy. In P. S. Richards, & A. E. Bergin, (Eds.). *A spiritual strategy for counseling and psychotherapy* (2nd edn). American Psychological Association.
- Richards, P. S. (2006). Theistic psychotherapy. *Issues in Religion and Psychotherapy, 30*(1), 10–26.

- Rioux, J. (2015). Yoga Therapy research: A whole-systems perspective on comparative effectiveness and patient-centered outcomes. *International Journal of Yoga Therapy*, 25(1), 9–19. <https://doi.org/10.17761/1531-2054-25.1.9>
- Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology*, 21, 95–103. <https://doi.org/10.1037/h0045357>
- Rogers, C. R. (1980). *A way of being*. Houghton Mifflin.
- Roland, A. (1988). *In search of self in India and Japan*. Princeton University Press.
- Roland, A. (2003). Psychoanalysis across civilizations: A personal journey. *Journal of American Academy of Psychoanalysis*, 31, 275–295.
- Sagar, R., & Collaborators, I.-L. (2020). The burden of mental disorders across the states of India: The Global Burden of Disease Study 1990–2017. *Lancet Psychiatry*, 7, 148–161.
- Salmon, P., Lush, E., Jablonski, M., & Sephton, S. E. (2009). Yoga and mindfulness: Clinical aspects of an ancient mind/body practice. *Cognitive and Behavioural Practice*, 16(1), 59–72.
- Salvatore, S. (2018). Culture as dynamics of sense-making. A semiotic and embodied framework for sociocultural psychology. In J. Valsiner (Ed.), *Cambridge handbook of culture and psychology* (pp. 35–48). Cambridge University Press.
- Sharma, P. (2019). *When the soul heals: Explorations in spiritual psychology*. Auro Publications.
- Sherman, K. J. (2012). Guidelines for developing yoga interventions for randomised trials. *Evidence-Based Complementary and Alternative Medicine*, 2012, 1–16. <https://doi.org/10.1155/2012/143271>
- Shweder, R. A. (1991). *Thinking through cultures: Expeditions in cultural psychology*. Harvard University Press.
- Shweder, R. A., & Sullivan, M. A. (1993). Cultural psychology: Who needs it? *Annual Review of Psychology*, 44, 497–523.
- Singh, A. N. (1999). Shamans, healing, and mental health. *Journal of Child and Family Studies*, 8, 131–134.
- Singh, R. (2020). *Integrating yoga into counselling and psychotherapy: The path and practice*. Doctoral dissertation, Ontario Institute for Studies in Education, University of Toronto.
- Sollod, N. (1993). Integrating spiritual healing approaches and techniques into psychotherapy. In G. Stricker & J. R. Gold (Eds.), *Comprehensive handbook of psychotherapy and integration* (pp. 237–248). Plenum Press.
- Stricker, G. (2010). A second look at psychotherapy integration. *Journal of Psychotherapy Integration*. <https://doi.org/10.1037/a0022037>
- Sue, D. W., & Sue, D. (2013). *Counseling the culturally diverse: Theory and practice* (6th ed.). Wiley.
- Surya, N. C., & Jayaram, S. S. (1964). Some basic considerations of psychotherapy in the Indian setting. *Indian Journal of Psychiatry*, 6, 153–156.
- Surya, N. C. (1979). Personal autonomy and instrumental accuracy. In M. Kapur, V. N. Murthy, K. Sathyavathi & R. L. Kapur (Eds.), *Psychotherapeutic processes* (pp. 1–20). NIMHANS.
- Thapa, K. (1994). *In search of “cultural” models of psychotherapy: Some thoughts*. Paper presented at the Symposium on Emerging Trends in Psychotherapy. Fifth Congress of the National Academy of Psychology, Allahabad.
- Thapa, K. (2000). Clinical psychology in India: Dilemmas and challenges. *Indian Psychological Abstracts and Reviews*, 7(2), 231–272.
- Thapa, K. (2014). Social policy and mental health: The case of India. In R. C. Tripathi & Y. Sinha (Eds.), *Psychology, development and social policy in India* (pp. 149–170). Springer.
- Thapa, K. (2018). Towards an integrative approach to psychotherapy. *Indian Journal of Clinical Psychology*, 45(2), 4–10.
- Torrey, F. (1986). *Witchdoctors and psychiatrists: The common roots of psychotherapy and its future*. Harper and Row.
- Tripathi, K. M. (2002). *An Indian approach to psychotherapy: Sattvavajaya-Concept and application*. Paper presented at the National Conference on Yoga and Indian approaches to Psychology, Pondicherry, September 29–October 1, 2002

- Tuliao, A. P. (2014). Mental health help seeking among Filipinos: A review of the literature. *Asia Pacific Journal of Counseling and Psychotherapy*, 5, 124–136.
- Vishyketu, Y., & Panwar, C. (2008). *Moving into bliss with yoga: A resource for yoga teacher training, yoga teachers and dedicated students*. Canada.
- Vygotsky, L. (1934/2012). *Thought and language*. MIT Press.
- Wilson, E. O. (1998). *Consilience: The unity of knowledge*. Vintage.
- Wong, P. T. P. (2010). Meaning therapy: An integrative and positive existential psychology. *Journal of Contemporary Psychotherapy*, 40(2), 85–99.
- Wrenn, C. G. (1962). The culturally encapsulated counselor. *Harvard Educational Review*, 32, 444–449.
- Yeh, C. J., Hunter, C. D., Madan-Behel, A., Chiang, L., & Arora, A. K. (2004). Indigenous and interdependent perspectives of healing: Implications for counseling and research. *Journal of Counseling and Development*, 82, 410–419.
- Zagaria, A., Ando, A., & Zennaro, A. (2020). Psychology: a giant with feet of clay. *Integrative Psychological and Behavioral Science*. <https://doi.org/10.1007/s12124-020-09524-5>

Social Exclusion of the Physically Disabled



Namita Pande

Abstract This chapter discusses issues related to the social exclusion of the physically disabled, meaning of social exclusion in their case and reasons why the disabled continue to remain at the periphery of public policy and social action. It examines the nature of societal response towards its disabled members and suggests ways in which persons with disability can be socially included. It also discusses attributes of physical disability which tend to craft disabling identities that generally lead to negative evaluation of the disabled and the stigma that results from it. The notion of ‘emancipatory research’ on disability which necessitates participation of disabled people is discussed as an alternative to positivistic research. An attempt is made to suggest some guide posts in the formulation of social policies that are informed by psychological research in creating conditions for the social inclusion of the disabled.

Keywords Physical disability · Social policy · Social inclusion · Emancipatory research · Stigma

Social Exclusion of the Physically Disabled

Happy be they who understand my strange steps while walking.....a smile on (their) lips encourage me to try again.....happy be they who listen to me, since I too have something to say. Happy be they who see me and love me as I am, as I alone am, and not as some would want me to be.

—Argentinean National Association for promotion of Disabled People.

For a physically disabled person, the world is distant, almost unapproachable, so much so that even the modest of human aspirations like attending school, earning for livelihood, getting married and having a family remain unfulfilled. Like many other dispossessed groups, the disabled persons are invisible, not only in community’s social life but also in developmental agendas and in struggles for human rights and dignity. Since the existential experience of living with a condition of physical

N. Pande (✉)

Department of Psychology, University of Allahabad, Prayagraj, Uttar Pradesh, India

disablement is unknown to the majority, persons with disability seem dispensable for the rest of the community. Ideally, the disabled persons need a more humane and a barrier-free environment, so that they can access public spaces and can enact similar roles as their able bodied peers. In reality, however, the physical infrastructure, especially in India, is such that it keeps them away from participating in social life. More worrisome are social attitudes, which keep them away from community participation. Voluminous psychological literature exists to show that the main deterrents that inhibit the disabled from leading a normal life are negative attitude (Daruwalla & Dracy, 2005). All these barriers result in development of low self-esteem, feelings of dependency and a sense of the isolation.

It is not that the conditions in which the disabled routinely lead their lives have gone unnoticed in India. Recognizing the fact that many unsuspected potentials of the disabled might lie idle; otherwise, the importance of including them socially has been recognized and dealt with by many social action and intervention programmes. Assistive aids and appliances are routinely distributed by the state and NGOs, educational facilities and incentives, such as books and school uniforms are provided. There is reservation in jobs for them in governmental organizations. Significant social policies have been framed, and laws enacted to ensure mainstreaming of the disabled. All these can be deemed as measures to encourage social inclusion of the disabled.

Despite such efforts, persons with disabilities continue to remain excluded from societal mainstream. More often than not, they live at the margins and languish in abject poverty. They feel neglected and suffer from loneliness. This happens because the restorative efforts that are made by agencies are often uninformed and taken in isolation. Disability-related policies have also been framed without assessing the community's preparedness to receive and implement such policies. Research studies that have been carried out have generally perpetuated disability-related myths and stereotypes (Rohmer & Louvet, 2018). Also, social interventions based on them have only created greater chasm between the disabled beneficiaries and their able bodied counterparts. What is missing in these variegated efforts is integration. Attention has not been paid to those aspects which undertow disability and rehabilitation efforts which, although, related actually look disconnected. Disability studies have been carried out, social policies have been framed, and interventions have been planned and executed without assigning much importance to experience of the disabled person, problems which families of the disabled people face and the community attitudes. How can this integration be achieved is the mainstay of this chapter. It purports to weave a binding thread that can put together, disparate disability issues. It begins with preliminary statistics about disability prevalence, examines the meaning of inclusion/exclusion in case of the physically disabled, identifies reasons why such persons get excluded, looks at the society's response to disability and suggests ways in which persons with physical disabilities can be socially included.

But before I do that, let me begin by recounting a personal experience which has continued to stay with me even after two decades to provide a cognitive frame for understanding what is presented in this chapter.

As one goes through life, one encounters events which apparently look mundane and commonplace, but may carry scenes and images which are so compelling that

they tend to endure. The impact that these images create seeps in slowly and silently and at times recreates the event in its full enormity. There is one such image which keeps coming back to me and urges me to understand the discourse of disability and social exclusion in its light. In doing so, I shall be reconfiguring my experiences and may fall to memory lapses and distortions and to my own idiosyncratic ways of meaning making. But since 'narrative mode of knowing' (Bruner, 1990) is credited with bringing coherence to experiences, and since stories convey a great deal of the unspoken and the unarticulated, let me begin with the story.

The Scene and the Story

It was a bright afternoon of December of early nineties when I and my Canadian colleagues were sauntering through a village in close vicinity of Allahabad city with an intent to 'get a feel' of the village where our disability rehabilitation programme was to be launched. Till then, this village was untouched by what are considered to be signs of development; there were muddy roads, thatched houses, no formal school, minimum healthcare facilities and no occupation except agriculture.

As we were moving, I saw an old, disabled, jaded man in his late sixties, sitting timidly in a corner of a verandah with an empty aluminium plate in front of him. I stood there for a while and looked at him. His eyes were vacant, clothes torn, hair unkempt, and he bore a distressed countenance conveying immense efforts that he, perhaps, made every day to tide over his state of desperateness.

I came to know about the story later. His name was Ram Lochan (name changed) a dalit who worked as a paid labourer in the fields of high caste Hindus of the village. His wife had passed away when his two sons were still in their teens. Unfortunately, one day while using a thrasher, he met with an accident and lost his right arm. With the help of the village community, he somehow managed to pull through his working life and was able to raise his two sons. Later, his sons took over from him and started working in the fields. As years passed by, they got married and had families. They now were required to shoulder the responsibilities of their wives and children, as well.

Ram Lochan was now getting old and needed the support of his family. Somehow in midst of the hustle and bustle of life and living, Ram Lochan gradually became a non-entity for his family and was relegated to the margins, literally. The verandah of his house was the sole place which belonged to him. He languished there in utter rejection, disrespect and disdain that he received from his family. Many times, he would go without food. The aluminium plate and a few tattered clothes were his only possessions. When in distress, the neighbours came forward to help him but not his family. That was my first encounter with what it means to be excluded. The story pains me every time I recall it.

The state of physical disablement is a human condition. It is one amongst many aspects of human diversity. To the extent this condition can be noticed, it has the power to override all other markers of identities such as caste, class or educational

status. For those who claim to be engaged with disability issues arduously, the real import that this state carries for those affected tends to slide and gets attended only tangentially. In a chapter like this that focuses on a special group, it is customary to begin with numbers but who declares such numbers is a matter of interesting observation. There are neatly crafted policy implementation reports which focus on the number of disabled persons in a given region and the percentage of such people who were served by a certain disability rehabilitation programme. Their numbers are highly inflated (*see* December 2013 Programme Evaluation Report, Programme Evaluation Organization, Planning Commission, Government of India, New Delhi). Alternatively, there are various NGOs, who in their reports highlight implementation lacunae and insist that only a miniscule minority of the targeted population has been served and, therefore, the benefits of various schemes do not reach the real beneficiaries. In fact, they also argue that many such programmes do not even see the light of the day. Such widespread variations are due to different motivation with which numbers are manufactured and declared. It seems to be a game of numbers in which all players wish to win. Having said that let me not partake in any such game and present the numbers in as much objectivity as possible.

Prevalence of Physical Disability

According to the WHO, 15% of World's population and eighty million people in India live with some kind of physical disability. 70% of such people live in rural areas, are poor and face stigmatization. It is intriguing to note that disability was not included in National Censuses from 1941 to 1971. First ever data regarding physical disability was published in the year 1981.

According to the National Census of 2011, 2.21% of the total Indian population is disabled out of which 56% (15 million) were males and 44% (18 million) were females. 2.24% were estimated to live in rural areas and 2.17 in urban areas. A statistical report of India on disability, published by the Social Science Division, Ministry of Statistics and Programme Implementation, Government of India, has presented a situational analysis of disabled persons in India, mainly on the basis of 2011 census. In this report, it is estimated that out of 2.21% of total population that is physically disabled (2.41% males and 2.01% females), only 36.3% disabled persons work. The first country report on disability status in India, prepared in June 2015 by the Ministry of Social Justice and Empowerment, Government of India, and submitted in pursuance of Article 35 of the U.N Convention on the Rights of Persons with Disabilities, has presented a worrying statistics. The report states that as children grow older, the disability percentage rises; from birth till about 19 years, the percentages of children with disability rise from 1.14 to 1.82. In the same country report, it is also mentioned that the OPDs of various institutes, such as National Institute of Physically Handicapped and National Institute of Orthopedically Handicapped, attend over 26 thousand physical disability cases every year.

There is an interesting collage of disability data that has been created by one Mr. Lalit Kumar in 2017. He is a polio survivor, founder of projects like KavitaKosh, GadyaKosh, TechWelkin and WeCapable and above all, is an Internet enthusiast. He has tried to put various disability statistics together to create a more holistic picture (Kumar, 2019). According to him, there are 26.8 million persons with disability in India; more than 41% never get married; locomotor disabilities are more common in rural areas and hearing and speech impairments among the urban population; only 36.3% of the disabled population (about 9.8 million) are employed out of which 7.1 million are men and 2.7 million, women. Literacy rate among women is merely 45% and for men, 62%. He also cautions that if vocational and other skills are not imparted through training, the number of disabled unemployed persons will increase phenomenally.

As one can see, the disability data varies considerably, especially when the WHO's estimates and census figures are compared. It is quite possible that the criteria of disability inclusion were a little narrow in 2011 census, leaving a sizable population out of its ambit. The Rights of Persons with Disability Act 2016 has given a more inclusive definition of disability. According to this Act, 'person with disability' means a person with long term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, hinder his full and effective participation in society. In view of this, one can hope that 2021 Census will furnish more accurate data on disability.

Physical Disability: Meaning of Inclusion

The discourse related to social exclusion or inclusion centres around the principle of egalitarianism which considers all as equals and, therefore, equal claimants to opportunities for growth and development. As a sociopolitical ideology, it argues that unfair and unjust social practices which discriminate must be replaced by a more humane, just and more inclusive social order which cleaves rather than divides. In what follows from here, the concept of social exclusion, exclusion of the physically disabled and what it entails and the question of their inclusion in the social mainstream will be discussed.

Since social exclusion has been a subject of concerted academic deliberations and has been understood with reference to various ethnic groups, women, dalits and backwards, it seems necessary to first examine the definition which is overarching and enfolds almost all aspects of exclusion. Such a definition was put forward by the UNICEF in its report 'Excluded and Invisible (2006). The report suggests that exclusion is multidimensional. It is not merely poverty that defines exclusion but denial of economic, social, political and gender-related rights also come into play. According to the UNICEF, the three basic elements of exclusion are *relativity* (comparing circumstances of individuals and communities relative to each other), *agency* (whether or not causes of exclusion can be identified) and *dynamics* (future prospects of development and not just current circumstances).

This conceptualization of social exclusion suggests that the meaning of social exclusion extends beyond a classical redistributive approach and has a strong connection with oppression according to Young (2002). He suggests that there are five facets of exclusion, namely *exploitation*, *marginalization*, *powerlessness*, *cultural imperialism* and *violence*. Social exclusion is also defined as a dynamics process of progressive and multidimensional rupturing of the social bond resulting in social disaffiliation from relationships with communities and institutions (Silver, 1994). Exclusion severs the sense of belongingness to a group or community and is also characterized by denial of various rights. In this sense, exclusion is both, a structural as well as a circumstantial phenomenon (Susinos, 2007).

Having a definition of a phenomenon which is all inclusive serves a definitive though limited purpose. It encompasses every facet of it but eventually falls short of explicating the manner in which a certain state of being impacts the lives of people in their journey for achieving coherence and personal growth. If one is to consider social exclusion as imbued with oppression, one would perhaps agree that oppression takes different forms depending upon which particular group is facing its brunt. Features of oppression take different forms for different groups. The condemnation, public's odium that persons with disabilities endure, is a matter of common observation. Facing exclusion for reasons which lie outside of one's control leads to social pain (Herman & Panksepp, 1978) and disrupts normal physiological activities (Cacioppo & Patrik, 2008). Some fMRI studies show that the pain of exclusion activates those brain areas which get triggered when physical pain is experienced (Eisenberger, Lieberman, & Williams, 2003).

Efforts of social scientists which construct the phenomenon of social exclusion have generally focused on class, culture and gender, leaving out the question of disabilities (Slee, 1997). Traditionally, specific ways in which the disabled faces barriers to inclusion have not been given enough recognition. The manner in which social exclusion and physical disability attributes combine and come to create naturalization of exclusion in the form of crafting excluded identities, merits consideration.

Identities get created when personal attributes interface social roles, which in turn lead to the development of a composite sense of self, encompassing limitations as well as needs and aspirations. In order to experience inclusion, a coherent sense of self is required so that tasks related to fulfilment of personal goals and those related to community's welfare can be undertaken. In case of persons with physical disability, acquiring a positive sense of self is an uphill task fraught with many obstacles which a disabled body and the community's perception of disability place.

Forber-Pratt is one among few researchers who has studied identity formation among the disabled, systematically. She has conceptualized a psychosocial model of disability. She suggests that identity formation of the disabled is a unique phenomenon as it rests on how the disabled perceive themselves, their bodies and their interaction with the world. This psychosocial model has four statuses, namely *acceptance*, *relationship*, *adoption* and *engagement*. She calls it statuses and not stages because, according to her, formation and synthesis of identities, in case of the disabled, is not linear. It is possible that a person may be is more than one status,

simultaneously and go through the process multiple times (Forber-Pratt et al., 2017; Forber-Pratt, & Zape, 2017).

The first status is the status of *acceptance* where the person and his/her family accept the condition of disability and reconciles to the fact that the state of physical disablement will continue for life. The second is the *relationship* status where the person with disability meets others like him/her, engages in conversation and learns the group ways in dealing with disability. The third status is that of *adoption* where the individual shares group values, and in the fourth and last status of *engagement*, the individual becomes a role model for others and helps others in coping with disability. In other words, she/he gives back his/her contribution to the disabled community.

In this model, what is perhaps missing is the *process of negotiation* through which a nuanced construction of identity takes place. A person with disability not only forges relationships with others who are like him/her but also with others who are able bodied whose response to disability can either assist or else can gravely upset and derail the process of coming to terms with the state of disablement. According to Dunn and Burcaw (2013), communal attachment (the urge to belong) and affirmation of disability are important factors in fashioning disability identities. Affirmation involves feeling fully included in the community by having same rights and responsibilities as others. They suggest that there are three themes which are relevant for disability identity along which politics and activism also emerge. These themes are *pride* which involves being proud of oneself while being aware of one's disability, *discrimination* which entails being aware of the fact that there are negative attitudes which are invisible barriers to inclusion and *personal meaning* where one constructs and modifies meaning of disability. All these comprise the negotiation process. Whether this process will run smooth or else with glitches will depend upon how well and with what motivations persons with disability are received and integrated into the community's mainstream. In other words, a wholesome identity develops and matures when the community modifies its structures to accommodate the needs of its disabled members and nourishes in them a sense of self-worth. Very often, the community tends to homogenize persons with disability in a single group and conflates identity into 'essential, fixed and preordained categories' (Murgami, 2009). The desired inclusion can take place when the community supports building of identities on the basis of unique characteristics of the disabled and is willing to reconstruct the notion of what is seen as normal (Watson, 2002). For social inclusion to take place, it is necessary that disability signs are underplayed, their capacities are recognized, appropriate roles are assigned and a positive climate is created for human flourishing.

Why Do the Physically Disabled Face Exclusion?

What causes the disabled to remain socially excluded? This is a vexed question with no simple answers. Drivers of exclusion work at several levels. There may be identities which effectively discriminate between us and them; more obvious

the difference, greater is the reinforcement to strengthen differences rather than similarities. There may be attitudes and opinions that celebrate 'the ideal' and dismiss deviance. There may be inadequate knowledge about the strength of the marginalized groups and physical environment which may be inadequately designed to remain insensitive to the special needs of the disabled. Beside these, there may be policies which foster inequalities in terms of resource allocations. According to Dahlberg and Krug (2002), social exclusion operates at the personal as well as at the levels of social and community relationships. At the personal level, it may get reflected in health anxieties, feelings of ill-being and a perceived lack of access to social support networks. At the interpersonal and community levels, discrimination and bullying, unfriendly neighbourhood, lack of access to transport facilities, lack of appreciation of disability issues, all get involved to create negative outcomes for the disabled such a poor health, more poverty, increased dependency and less community participation. Some of the reasons why the disabled face social exclusion include general reactions, misconceptions and anxieties regarding disability, negative disability attitudes and ill designed physical environment.

Evidences show that when in company of physically disabled, people rarely smile (Comer & Piliavin, 1972), gaze more and engage in odd behaviours, such as touching one's face repeatedly and playing with one's hair (Kleck, 1968; Sigelman et al., 1986). In the presence of disabled, increased GSR is reported (Heinemann et al., 1981), and specific patterns of cardiovascular activity are recorded which is associated with the perception of threat (Blascovich et al., 2001). These symptoms of arousal suggest that deep down, there are certain anxieties and negative attitudes which constrain reciprocal relationship and render a disabled, a poor social exchange partner. Besides, there are certain cultural myths which serve as mediums to portray the disabled as defiled, impure, freaks of nature, abnormal, unproductive and diseased (Cocks & Cockram, 1995).

If one only goes through the published literature on psychological processes related to physical disability, one finds that attitude is one subject which has been researched extensively. Attitudes, in a very general sense, are beliefs about a person, a group or an issue that structure the affective orientations and dispositions to act in a certain way (Allport, 1935). If there are beliefs which suggest that disability is caused by misdeeds committed in past lives or else due to the will of God, then it becomes less likely that the disabled can ever become an active negotiator of social roles in serious affairs of the community.

It seems that beneath negative attitudes, there are various anxieties which remain dormant but nevertheless, colour the relationship of the disabled with the able bodied. In the able bodied majority, physical disability arouses strong feelings about their own appearance and autonomy and generates 'existential' and 'aesthetic' anxieties (Hahn, 1988). Existential anxiety refers to the threat of possible loss of functional capacities. This anxiety is rooted in the expectation that everyone ought to achieve a desirable level of functional proficiency and autonomy. It is possible that these existential fears lie at the root of unfavourable attitudes. Aesthetic anxiety, on the other hand, is aroused by the disabled because they do not present a conventional image of human physique. Generally, research on body image suggests that a disabled

person makes others feel anxious and, therefore, becomes a person to be warded off. Persons with physical disability are regarded as failing to meet commonly accepted standards of physical appearance, and therefore, this perception can become a significant source of unfavourable attitudes. More worrisome is the fact that psychological research literature on disability subscribes to the notion of deficiency and tends to perpetuate stereotypical descriptions of the disabled such as they being maladjusted, apathetic, intellectually inferior and in need of sympathy. As one can see, such a treatment of the condition of disablement, inadvertently, spreads to describe the non-impaired characteristics of the disabled as well. Rehabilitation programs fashioned after this deficiency model consider that the disabled beneficiaries have no language, no purpose, no skills or none worth considering and the benefactors have to shoulder the burden of doling out the necessities for survival that the disabled urgently require. This is the intellectual zeitgeist which has been created so far. It builds an 'attitudinal environment' which consists of the psychological aggregate of shared values, expectations and assumptions regarding physical and behavioural attributes of person with disabilities. It functions to contrive evaluative standards against which the assumed attributes of the disabled are compared with the rest of the society. No wonder that most rehabilitation programs do not succeed because they emanate from assumptions of deficiencies and do not consider that rehabilitation is essentially a participatory exercise. These programmes are carried out in an 'attitudinal environment' which is full of prejudices and biases against the disabled.

Psychological processes which create social bonds are sensitive to conditions of the other. If the other poses threat, the immediate response is avoidance. Psychological processes pertaining to stigmatization and prejudice tend to restrict the formation of any bondage as if connecting with the stigmatized may cause ill health.

Covey (1998) has suggested that persons with disabilities are perceived as unclean and hence easy targets of diseases. Here, features of disease avoidance mechanism proposed by Park and his colleagues (2003) can be cited as reasons why a safe distance is maintained from disabled persons. Since sometimes disability is seen as condition that can lead to various diseases, mixing with the disabled is seen as unnecessary. In general, people tend to show disinterestedness and fear. While physical disfigurement due to reasons other than disease does not carry any risk, disease avoidance process does not make such finer distinctions. It is because the consequences of 'false positive' which is erroneously judging a healthy person as diseased are not as grave as the consequences of 'false negative' where a diseased individual is erroneously judged as healthy (Park et al., 2003). Therefore, psychological response to disabled matches with the response given to an individual who is suffering from some contagious disease.

'Persons with disability are not burdens but rather they are equal members of society'. Statements such as this appear not more than a cliché; statements that are tired and timeworn which do not convey any real meaning and genuine intent. Despite vociferous declarations about the rights of the disabled, particularly in India, disabled persons remain excluded because of environmental and architectural barriers.

It has been very rightly argued that space is not just a passive container of life but an active constituent of social relations. Spaces are 'currently organized to keep the

disabled in their place and are social texts that convey to disabled people that they are out of place' (Kitchin, 1998, p.345). Disabled persons are required to navigate an environment which is full of physical and architectural barriers. To the extent disability is a relational concept, where physical disability interacts with features of the environment, the magnitude of disability will be determined by the ease with which a disabled can manoeuvre through the physical world.

While leading a life in a world that is not designed to accommodate physical limitations and special needs, the disabled experiences what is known as 'design apartheid' (Imrie, 1996). No ramps, smooth floors and inadequate assistive devices, no assistance for using public transport and neither sensitivity nor any intent to modify the physical space to make life easy are real difficulties. Cresswell (1996) describes how places reproduce associated meanings in natural and common sense ways. For example, he says, that in a library it is appropriate to maintain silence. In the same way, exclusionary practices such as inaccessible places and objects also reproduce the associated common sense meaning of staying away. He suggests that very often people are unaware of the process of exclusion. Things are taken for granted. Things are in their usual ways and therefore must be accepted. People come to know their place. Whether a person feels that she/he belongs or does not belong depends upon whether the physical space is friendly and easy to navigate. Inclusive spaces, however, convey to the disabled that she/he is wanted and welcome.

How Do We Respond to Physical Disability?

When it comes to responding to the state of physical disablement, there is a noticeable attitudinal and behavioural ambivalence among people. Studies reveal that while attitude towards the disabled is decisively negative, at times, there is a positive response bias which is clearly seen (Thakur, 2013). People tend to sympathize and celebrate the achievements of disabled persons in order to convey that under difficult personal circumstances, such feats are exceptional and call for louder applause and bigger appreciation. Needless to say that such acts reinforce rather than mitigate the notion that persons with disabilities are different.

In a study, it was found that while interacting with able bodied, the physically disabled felt patronized, ignored, abandoned, mocked by, were assumed to be stupid and regarded as misfit for public view (Knight & Brent, 1999). This brings us to consider the psychological processes which come into play when an able bodied attempts to understand his/her own experiences of meeting physically disabled. There exists an unempathetic urge to somehow assign an identity which is marked. Able bodies are unmarked cases requiring no further exploration and narrative. A marked body calls for a story. Irrespective of the fact that interrogative and incessant questionings are violations of one's privacy, the disabled is forced to answer questions such as 'what happened', or 'how did it all happen'. These are not innocent questions. As has been very rightly suggested by Couser (1997), answers to such questions are used to somehow hold the disabled responsible for his state so that the interrogator's

discomfort of 'meeting a different and unusual person' is relieved. These heuristics of assigning markers serve an important purpose of 'constructing the other'. Perception of differences, categorization and the consequent diminution seem to come to us almost naturally. The construction of other who also bears the markers of disability is even more insolent and immoderate. She/he gets infantilized, considered as non-normative, depleted and his/her sexuality is denied (Agmon et al., 2016).

While expressing disability attitudes which are predominantly discrediting, we tend to show a negative response bias. According to Goffman (1963), this bias is stigma. Stigma is not simply a negative evaluation. It enfolds features which are not shared by others and which form a basis of devaluation and reasons for avoidance. Goffman (1963) has suggested that a person gets stigmatized when the stigmatizing mark is linked to dispositions that devalue the bearer of the mark. The story does not end here. Such markings initiate attributional processes through which people understand and interpret other attributes of the person on the basis of the mark. Besides, there are negative emotions which get attached to stigma. One may experience fear when the disabled body is seen as carrier of disease causing pathogens, disgust when the body looks deformed and deviant and anger when a disabled person is a partner in some important project but cannot meet performance standards due to disability. According to Wolfensberger's social role valorization theory, various roles tend to shape people's behaviour depending upon the value which is assigned to a given role. People occupying valued roles are viewed more positively. Stigmatized are those who are assigned devalued roles because of their body characteristics and unorthodox behaviour (Wolfensberger, 2000). In discrediting others, stigmatization serves important functions of boosting self-esteem of the stigmatizer, justifying the existing social order, and reiterates the criteria for justification of deservingness (Jost & Banaji, 1994).

Apart from people's response towards disability, the policy response also needs serious consideration. The policy response to disability is problematic. This is because through various intervention measures, even the most talked about disability rehabilitation programme have inadvertently, reinforced the image of disabled as weak, marginalized and inadequate. Despite vociferous proclamation made by disability and rehabilitation policies regarding their effectiveness in dealing with disability issues, there seems to be no consensus regarding the policy-related meaning of social exclusion. While conceptualizing aims and objectives of policies, either social exclusion gets bracketed with poverty or else it is included in the narrative of human rights. Besides, almost all policies are predicated on the assumption that providing aids and appliances and giving minimum wages in paid employment are panaceas for all that afflicts the disabled. In doing so, policy formulations do not pay enough heed to the lived experiences of the disabled; the prejudices, the harassment and the unequal and degrading treatment which are endured each single day. Policies are more or less silent on how to tackle the attitudinal barriers to inclusion. It is heartening to note that among the seventeen Sustainable development Goals (SDGs) set by the United Nations General Assembly in 2015, there is also a resolve to end poverty and hunger and build *just and inclusive society*. Similarly, a campaign led by the Ministry of Social Development called 'Think Differently' promises to

encourage and support change in attitudes and behaviours towards disabled persons. It seeks to mobilize action for better understanding of disability issues and building inclusive communities. It recognizes the need to modify mental models related to understanding difference, otherness, the ideal and the valued and devalued roles for societies to become more inclusive. To what extent these goals will be achieved remains to be seen.

Creating Inclusive Communities for the Physically Disabled

In the context of the above discussion, it will be appropriate to ask what catalytic roles that research and social interventions can play in creating, fair, just and inclusive communities which can support and sustain initiatives of the disabled toward self-reliance and feelings of belongingness. The contention here is that research activities too can become instruments of change to create the much needed enabling environment. The overall task of both, research as well as social/community interventions, is to address those reasons which stigmatize and isolate the disabled and, therefore, restrict the 'expansive ideas of what it means to be human' (Samual et al., 2017).

Generally, researches on disability issues have been less democratic and participatory. Concepts which enter into research process have remained vague and subjects of definitional uncertainties and confusions. In fact, the disabled themselves have come to realize that such researchers have miserably failed in improving their material circumstances (Oliver, 1992).

In view of these, the idea of emancipatory research has been proposed as a radical alternative to classical positivist research, an alternative that can affect social change and contribute in building a more inclusive community. According to Barnes, 'emancipatory research is about the demystification of the structure and processes that create disability and the establishment of a workable dialogue between the research community and disabled people' (Barnes, 1992, p.122). The emancipatory research paradigm is expected to understate the emphasis that is generally placed on terms like impairment and disability. Rather, it is expected to provide spaces so that the disabled can gain ownership of the entire research process. With this view, the need for an emancipatory disability research was visualized (Barnes, 2003). This variety of research does not rely on rhetorics but instead collects sensitive experiential data and looks for meaningful and practical outcomes. Here, the disabled become not only research participants but also learners. The research process creates opportunities for them to acquire skills and expertise and become more aware of their rights. The disabled are involved right from conceptualization of research questions to dissemination of results. It is suggested that emancipatory disability research needs to be judged in terms of its ability to empower the disabled and erode various forces which sustain disability at micro- and macro-levels (Barnes, 2001).

Societal norms which sustain situations where people stop participating due to their physical disabilities become reasons for social interventions. These norms legitimize the value of autonomy, perpetuate the myth of a citizen as a complete and independent person and provide the ideological bases of most intervention initiatives. As Nussbaum has very clearly stated that ‘complete independence and perfection are myths which hide the fact that we all have varying impairments and asymmetrical needs of dependency’ (Nussbaum, 2004, p.313). We can be both capable as well as needy. Social arrangements which create social divide between the disabled and the able bodied are glossed over by intervention programmes because the focus is on the individual’s disability-related functional limitations. The need to affirm that boundaries which differentiate the disabled from the able bodied are thin, and elusive is ignored. In fact, no one can claim to be perfectly able bodied. How deeply ingrained is the idea of normality is, in our social consciousness, can be seen in the definition of disability given by the Union of Physically Impaired Against Segregation (UPIAS). It is stated there that disability is ‘restriction of activities which is not taken into account by society and therefore those who have physical impairment are excluded from mainstream of social activities’. When the stated goals of any disability rehabilitation programme are to empower the disabled so that she/he becomes self-reliant, the bias of focusing on the individual’s limitations is visible. While empowering, the stress is on increasing employability of the disabled through increasing work-related qualifications. The circumstances wherein people will experience discrimination and distancing are not given much importance. Similarly, in fostering self-reliance, the focus again is on the individual and not on physical, social and attitudinal barriers. It has been suggested that social exclusion can also be seen as an opposite concept of social citizenship. Once that is agreed, one can identify social processes which deny inclusion of a certain group of individual within larger groups and communities. According to Barton (2000), ‘by recognizing that citizenship is a terrain of struggle, we need to understand the nature of exclusionary processes involved and their differential impact on the lives of particular individuals and group’ (p.40). Social intervention projects, which have tried to provide an interdisciplinary focus to disability issues, have succeeded only partially. Even now, emergence of such an understanding continues to remain a distant goal.

What would be the nature of an inclusive environment for the disabled? This question needs some thought because the answers it receives would perhaps serve as guideposts to formulation of a policy of inclusion. In simple terms, an inclusive environment will be one where people of all identities are heard and appreciated, where everyone engages in core activities for the betterment of the collective, where there is mutual trust and respect and value is accorded to all initiatives and contributions, where people feel needed and wish to remain associated and where inclusion becomes normative. In other words, an inclusive environment can be obtained when besides removal/modification of physical barriers, internal states, cognitions and expectations towards the disabled are also transformed. Some of these sentiments were voiced in the first United Nations Convention on the Right of Persons with Disabilities (UNCRPD) in 2006. The article 3 of the Convention lists general principles of inclusion which are as follows:

1. Respect of inherent dignity, individual autonomy, including freedom to make one's own choices.
2. Non-discrimination
3. Full and effective participation and inclusion in society
4. Respect for difference and acceptance of disability as a part of human diversity.
5. Equality of opportunity
6. Accessibility
7. Equality between men and women.

To conclude, what seems to be urgently required is an integration of knowledge about physical disability that has been created by diverse disciplines. Besides psychological literature on disability, many related disciplines such as sociology, political science and anthropology abound with significant insights which can be used for framing disability-related policies. For example, there are many sociological studies on disability which have focused on 'social oppression theory' (Bury, 1992). Many sociologists decry the medical views of disability as 'personal tragedy' and assert the need to focus on sociological aspects (Barnes & Oliver, 1993). Similarly, theories of political science have enhanced the understanding of political systems and political behaviour that either lead to or impede the participation of disabled persons in the political arena (Kimberlin, 2009). Research in anthropology suggests how 'the other' is perceived and stigma is explained. It also explains how disability can be understood in cultural contexts through ethnographic, phenomenological and cross-cultural methods (Reid-Cunningham, 2009). At another level, integration of framing of principles of social policy and strategies of policy implementation is required. It is necessary that policy statements voice sentiments of the disabled and priorities of the community so that implementation gets owned by people and interventions succeed in fulfilling their objectives. It is only then can a well discerning inclusion policy be framed which can address concern for social protection and can offer strategies for protection of human rights. In order to build its ideological bases, this policy can also engage with the concept of social capital. Here, social capital would not mean networks which can improve efficacy of societies or resources that accrue to individuals by virtue of their contacts but would mean enhancement of capacity of disabled individuals to participate fully in all domains of social life so that they can enhance economic health of the community and make their communities, more resourceful. This policy may devise various inclusion strategies such as running public awareness campaigns for increasing public knowledge and understanding of disability, taking measures to ensure that persons with disabilities acquire skills and learn competencies so that they can be protected from poverty, advocating inclusive education and employment and managing the media portrayal of disability to avoid negative labelling and to showcase the abilities of the disabled.

Acknowledgements Help provided by Dr. Priyaranjan Maral and Ms. Aditi Pande in preparation of this manuscript is gratefully acknowledged.

References

- Agmon, M., Sa'ar, A., & Araten-Bergman, T. (2016). The person in the disabled body: A perspective on culture and personhood from the margins. *International Journal for Equity in Health*, 15(1), 147–157.
- Allport, G. W. (1935). Attitudes. *A Handbook of Social Psychology* (pp. 798–844). Clark University Press.
- Barnes, C. (1992). Qualitative research: Valuable or irrelevant? *Disability, Handicap and Society*, 7(2), 115–124.
- Barnes, C. (2003). What a difference a decade makes: Reflections on doing 'emancipatory' disability research. *Disability and Society*, 18(1), 3–17.
- Barnes, C., & Oliver, M. (1993). *Disability: A sociological phenomenon ignored by sociologists*. University of Leeds.
- Barnes, C. (2001, October 24). *Emancipatory' disability research: project or process?* Public Lecture at City Chambers, Glasgow.
- Barton, L. (2000). Insider perspective, citizenship and the question of critical engagement. In M. Moore (Ed.), *Insider perspective on inclusion: Raising voices, raising issues* (pp. 36–45). Philip Armstrong Publications.
- Blascovich, J., Mendes, W. B., Hunter, S. B., Lickel, B., & Kowai-Bell, N. (2001). Perceiver threat in social interactions with stigmatized others. *Journal of Personality and Social Psychology*, 80(2), 253–267.
- Bruner, J. (1990). *The Jerusalem-Harvard lectures. Acts of meaning*. Harvard University Press.
- Bury, M. B. (1992). Medical sociology and chronic illness: A review of research and prospects. *Sociology of Health and Illness*, 13(4), 451–468.
- Cacioppo J. T., & Patrik, W. (2008). *Lonliness: Human nature and need for social connection*. New York, NY: Norton & Company.
- Cocks, E., & Cockram, J. (1995). The participatory research paradigm and intellectual disability. *Mental Handicap Research*, 8(1), 25–37.
- Comer, R. J., & Piliavin, J. A. (1972). The effects of physical deviance upon face-to-face interaction: The other side. *Journal of Personality and Social Psychology*, 23(1), 33–39.
- Couser, G. T. (1997). Disability, life narrative and representation. In *Recovering bodies: Illness, disability, and life writing*. Madison: University of Wisconsin Press.
- Covey, H. C. (1998). *Social perceptions of people with disabilities in history*. Charles C Thomas Publisher.
- Cresswell, T. (1996). *In Place/Out of Place: Geography, ideology and transgression*. London: UCL Press.
- Dahlberg, L. L., & Krug, E. G. (2002). Violence- a global health problem. In Krug, E. G., Dahlberg L. L., Mercy, J. A., Zwi, A. B., Loranzo, R. (Eds.). *World Report on Violence and Health* (pp. 1–56). Geneva, Switzerland: World Health Organisation.
- Daruwalla, P., & Darcy, S. (2005). Personal and societal attitudes to disability. *Annals of Tourism Research*, 32(3), 549–570.
- Dunn, D. S., & Burcaw, S. (2013). Disability identity: Exploring narrative account of disability. *Rehabilitation Psychology*, 58(2), 148–157.
- Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science*, 302(5643), 290–292.
- Forber-Pratt, A. J., & Zape, M. P. (2017). Disability identity development model: Voices from the ADA-generation. *Disability and Health Journal*, 10(2), 350–355.
- Forber-Pratt, A. J., Lyew, D. A., Mueller, C., & Samples, L. B. (2017). Disability identity development: A systematic review of literature. *Rehabilitation Psychology*, 62(2), 198–207.
- Goffman, I. (1963). *Stigma: Notes on the management of spoiled identity*. Prentice-Hall.
- Hahn, H. (1988). The politics of physical differences: Disability and discrimination. *Journal of Social Issues*, 44(1), 39–47.

- Heinemann, W., Pellander, F., Vogelbusch, A., & Wojtek, B. (1981). Meeting a deviant person: Subjective norms and affective reactions. *European Journal of Science*, 11, 1–25.
- Herman, B. H., & Panksepp, J. (1978). Effects of morphine and naloxone on separation distress and approach attachment: Evidence for opiate mediation of social affect. *Pharmacology Biochemistry and Behaviour*, 9(2), 213–220.
- Imrie, R. F. (1996). *Disability and the city: International perspective*. Paul Chapman Publishing.
- Jost, J. T., & Banaji, M. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, 33(1), 1–27.
- Kimberlin, S. (2009). Political science theory and disability. *Journal of Human Behavior in the Social Environment*, 19(1), 26–43.
- Kitchin, R. (1998). ‘Out of place’, knowing one’s place: Space, power and exclusion of disabled people. *Disability and Society*, 13(3), 343–356.
- Kleck, R. E. (1968). Physical stigma and nonverbal cues emitted in face-to-face interaction. *Human Relations*, 21, 19–28.
- Knight, J., & Brent, M. (1999). *Access denied: Disabled people’s experience of social exclusion*. Leonard Cheshire Foundation.
- Kumar, L. (September 13, 2019). *Lalit Kumar: Founder of TechWelkin, Kavita Kosh, Gadya Kosh*. Retrieved from <https://techwelkin.com/lalit-kumar>
- Murugami, M. W. (2009). Disability and identity. *Disability studies Quarterly*, 29(4).
- Nussbaum, M. C. (2004). *Hiding from humanity: Disgust, shame and the law*. Princeton University Press.
- Oliver, M. (1992). Changing the social relations of research production? *Disability, Handicap and Society*, 7(2), 101–114.
- Park, J. H., Faulkner, J., & Schaller, M. (2003). Evolved disease-avoidance process and contemporary anti-social behaviour: Prejudicial attitudes and avoidance of people with disabilities. *Journal of Nonverbal Behaviour*, 27(2), 65–87.
- Reid-Cunningham, A. R. (2009). Anthropological theories of disability. *Journal of Human Behavior in the Social Environment*, 19(1), 99–111.
- Rohmer, O., & Louvet, E. (2018). Implicit stereotyping against people with disability. *Group Processes & Intergroup Relations*, 21(1), 127–140.
- Samual, K., Alkire, S., Zavaleta, D., Mille, C., & Hammock, J. (2017). Social isolation and its relationship to multidimensional poverty. *Oxford Development Studies*, 46(1), 83–97.
- Sigelman, C. K., Adams, R. M., Meeks, S. R., & Purcell, M. A. (1986). Children’s non verbal responses to a physically disabled person. *Journal of Nonverbal Behaviour*, 10, 173–186.
- Silver, H. (1994). Social exclusion and social solidarity: Three paradigms. *International Labour Review*, 133(5–6), 531–578.
- Slee, R. (1997). Supporting and interactional interdisciplinary research conversation. *International Journal of Inclusive Education*, 1(1), i–iv.
- Susinos, T. (2007). ‘Tell me in your own words’: Disabling barriers and social exclusion in young persons. *Disability and Society*, 22(2), 117–127.
- Thakur, S. (2013). Disability, stigma and social exclusion. *International Journal of Arts, Management and Humanities*, 2(2), 48–51.
- UNICEF (2006). *Excluded and invisible: The state of world’s children*. Brodock Press.
- Watson, N. (2002). Well I know this is going to sound strange to you but I don’t see myself as a disabled person. *Disability and Society*, 17(5), 509–527.
- Wolfensberger, W. (2000). A brief overview of social role valorization. *Mental Retardation*, 38(2), 105–123.
- Young, I. M. (2002). *La justicia Y la politica de la diferencia*. Ediciones Catedra Feminismos.

Integrative Interventions for Managing Cancer: Issues and Concerns



Neena Kohli, Vipul Kumar, and Sonoo

Abstract The chapter focuses on integrative interventions that can be used as adjuncts to mainstream cancer treatment for reducing psychological problems associated with cancer. It enunciates the need for an integrative approach in the context of issues that deserve merit while designing interventions, such as issues related to culture, beliefs, doctor–patient communication, role of family and psychologists, and integration of biomedicine and social science. It also raises issues pertaining to integration of Yoga, meditation, spirituality and forgiveness therapy with conventional therapy. The paper calls for building bridges between East and West, and evidence-based mind–body integrative approach.

Keywords Integrative approach · Culture and beliefs · Spirituality · Forgiveness · Mind–body therapies

Cancer represents one of the leading causes of mortality and morbidity worldwide (World Health Organization, 2014). A cancer diagnosis leads to an unparalleled mental, physical and emotional burden for patients and their families. A multitude of psychosocial problems such as anxiety, depression, helplessness, despair, negative body image and social alienation are associated with the disease and treatment. Growing awareness of these psychosocial problems spurred the rise of complimentary interventions such as psychotherapy, music therapy, art therapy, spa therapy forgiveness therapy and aromatherapy for patients and their families (Ahn et al., 2020; Fallowfield, 1995; Northouse et al., 2010).

A long-standing debate on organizing health systems warrants amalgamation of particular interventions into conventional health systems to accelerate health consequences. This debate was typified by segregation of ideologies with protagonists

N. Kohli (✉)

Department of Psychology, University of Allahabad, Prayagraj, India

V. Kumar

Department of Psychology, Kashi Naresh Government PG College, Bhadohi, India

Sonoo

Department of Psychology, University of Allahabad, Prayagraj, India

for and against amalgamation (Cueto, 2004; Magnussen et al., 2004; Newell, 1988; Wisner, 1988). Recently, external funding for interventions targeting communicable and non-communicable diseases, reproductive health and nutrition has led to the re-emergence of the debate. In addition, international efforts were expanded to attain Millennium Development Goals (World Bank & World Health Organization, 2006). The promise of these interventions can be fully realized if they are unified, synthesized and integrated. The thrust of the chapter is on enunciating the need for an integrative approach, salient issues that deserve merit in designing integrative interventions, an overview of interventions, building bridges between East and West and evidence-based integrative interventions for managing cancer.

Need for an Integrative Approach in Health Care

The term “integration” may denote different meanings. It is based on a holistic perspective and includes both traditional and complementary and alternative medicine (CAM) and focuses on disease rather than symptoms, and lays emphasis on both physical and mental health. Integrated care aims to provide high-quality care and holds prospects to reduce redundancy, over treatment and cost control. Due to the growing burden of cancer, an integrated approach targeted at patients with cancer offers huge potential (Bardsley et al., 2013; Carter et al., 2011).

Integration can occur at two levels: horizontal and vertical. Horizontal integration refers to integration between institutions providing similar healthcare services involving caregivers and specialists who form a group within a geographical region and share their expertise. On the other hand, vertical integration refers to integration at distinct stages such as polyclinics which share processes for primary as well as secondary care or between different types of care: emotional, psychological, medical and social care. It involves a number of groups and networks which provide health care at different stages within the care pathways.

Factors such as increase in medical complexities, surge in rate of chronic diseases like cancer, cardiovascular problems and HIV/AIDS, inflating technological costs and ageing population place a significant burden on the healthcare systems (Davis et al., 2007). These issues highlight the need to come up with novel solutions which can fulfil the demands pertaining to the complex social and health needs. An integrative perspective deliberates on segmentation in patient services, fosters better holistic care and can be accomplished with systematic planning and a shared vision, focused on a target population (Maruthappu et al., 2015). It has several unique characteristics. One such characteristic is its emphasis on an individual’s spiritual beliefs and his behavioural, cognitive and physiological level of functioning (Norcross & Goldfried, 2005).

Integrative Medicine/Health Approach

The term integrative is widely used in psychotherapy and medicine/health. An integrative medicine/integrative health approach aims to combine the best of complementary, alternative medicine (CAM) therapies and conventional therapies. Complementary, alternative medicine therapies and conventional therapies combined emphasize a holistic, patient-centred perspective on well-being, includes physical, psychological, emotional, social and spiritual well-being and aims at treating the whole person rather than one organ system. As the disease progresses, goals of care change and patient's unique situation requires both integrative and conventional therapies (Marchand, 2014). The choice of an integrative therapeutic approach depends on one's cultural traditions, beliefs, lifestyle, advice from family and friends and familiarity with the therapy. Integrative therapies such as mind-body therapies and massage might appeal to majority than less common energy modalities (healing touch therapy, or reiki) or Ayurvedic medicine (Deng & Cassileth, 2013).

Salient Issues and Concerns

Cancer interventions are designed to mitigate distress in cancer and accelerate adjustment to cancer or life after cancer. However, culture plays an important role in accepting the disease, its treatment, limitations and consequences. Before designing any intervention, the practitioner must be well-versed with the norms, beliefs, practices and behaviour of the group. The salient issue is developing culturally sensitive interventions (Varricchio, 1995). The key imperatives in developing interventions are outlined below.

Culture and Beliefs

Studies exploring the role of culture in health have increased manifold, and research in the domain of health has undergone a sea change (Misra, 2018). Paniagua and Yamada (2013) state that cultural contexts exert important influence on health perceptions, attitudes and actions and individuals interpretation of illness, experience and help-seeking behaviour is rooted in cultural beliefs, practices and norms (Angel & Williams, 2013).

Beliefs can be understood as shared and assumed truths within a cultural setup. They are part of our consciousness, guiding our thoughts and actions and are imbibed during socialization. Beliefs lie in the grey area between assumptions and knowledge. Beliefs are anchored in some kind of proof, such as, authority, logic or personal observation. These could be mediated through information, whose source is considered legitimate.

Patients' response to chronic conditions depends on their larger belief system within which they understand various life events. Cultural and social milieu creates the context for formation, change and maintenance of these beliefs, and also for interpreting the experiential world we live in. The cultural ethos largely determines the understanding and the interpretation of the disease. The health beliefs of Indian people are in several ways distinct from the health beliefs of people in Western societies. Kohli and Dalal (1998) found that majority of cervical cancer patients attributed causality to metaphysical beliefs such as God's will, fate and Karma. The health-care systems based on biomedical model fail to cater to the social, psychological and emotional needs of the patients. They are geared towards providing adequate health facilities and pay scant attention to patient's perspective of health care and well-being. Patients are resigned to a stage of stoic acceptance and passivity. They are ignored in treatment regimen decisions. The success of the interventions lies in designing patient centred interventions. These interventions will go a long way in promoting recovery from a disease.

Doctor–Patient Communication

Doctor–patient communication is a salient issue that deserves merit while developing culturally appropriate interventions. There may be differences in worldviews between health providers and patients. This divergence constitutes the main argument for giving due recognition to the issues of doctor–patient communication while designing interventions. When the doctor detects the disease, the explanations offered by the doctors are at times tangential to the explanations provided by the patients. This is due to the doctors standardized medical views of anatomy and physiology (Helman, 1995). Doctors assign causality based on the biomedical model and often explain disease in terms of bacteria, virus and body malfunctioning. Conversely, Indian patients often attribute causality to metaphysical beliefs such as God's will, fate and Karma (Kohli & Dalal, 1998).

The discrepancy in the attribution of disease causality of the doctors and patients at times drives the patients to either look for alternate treatment regimen alongside prescribed treatment or non-adhere to the prescribed medical regimen. In a study of patients of Himalayan region, Joshi (1988) found that patients thronged the indigenous healers for primary causes (mental) of their disease and resorted to medical doctors for secondary (bodily) causes of their problems.

For medical practitioners, chronic illness is interpreted as a universal phenomenon regardless of the culture or community in which it occurs. At a physiological level, this may hold true, but it fails to include the varying meanings and ways in which patients make sense of their illness, especially how they answer the questions: “what are the causes of chronic illness” or “why has it happened to me” or even “why is it that some people do not fall ill”? At times the personal experiences of medical practitioners teach them that for a fairly accurate diagnosis and a beneficial treatment, it is imperative to consider patients socio-economic background, beliefs and anxieties

together with their biological state. Nevertheless, it is presumed that the patients would be passive and compliant to the medical regimen. On the contrary, in case of chronic disease, patients and their families assume an active role and frequently adopt alternative treatment (engage in “secret forms of curing”) regimen (Engel, 1977). Traditional societies, as compared to modern societies, exhibit this behaviour to a large extent. People from diverse societies and cultural background interpret the same disease differently. One group may equate the disease to a physical malfunction, the second may see it as a symbol of divine retribution, a third may see it is bad luck and a fourth may consider it a consequence of Evil eye (Helman, 1995). Doctors who use the participatory model of patient care, and establish a therapeutic bond with the patient, create a relationship of trust. This relationship is a “living relationship” (Bastos et al., 2017). Compliance is greater if the practitioner recognizes and addresses concerns and anxieties of the patients (Hulka et al., 1976; Korsch et al., 1971), and eventually it leads to better outcomes (Stewart et al., 1979). The competency of the doctor lies in his or her ability to understand the patient’s beliefs and worldviews and plan treatment accordingly.

Role of Family

In India, falling ill is a family event. When a serious illness or disability strikes an individual, the family as a whole is affected by the disease process. Families play a pivotal role in providing care to the patients and are usually available when patients’ cancer care decisions are taken (Eggle et al., 2006; Merckaert et al., 2005; Mitnick et al., 2010) and research suggests that patients are greatly satisfied and adhere to treatments more often, when their families are involved in decision making (Wolff & Roter, 2008; DiMatteo, 2004). The problem accentuates when the patient and the family members are illiterate. One often begins treating the patient but, in the end, the entire family requires counselling and support. An educated and supportive family provides a nurturing environment and helps the patients to cope with the illness (Herbert, 1996). The formal educational level of patients and their families may ease the acceptance of recommended care. With limited hospital stay and increased reliance on outpatient care, families are taking on responsibilities of providing care. In order to keep families as healthy allies in health care, it is imperative to provide disease-specific information to the family. Thus, educating the family members about the disease and treatment would be beneficial to both patients and families. Evidence shows that patients repose tremendous faith in their families regarding treatment options (Meekar & Jezewski, 2005). Majority of the patients feel comfortable if medical decisions are jointly made by their family and oncologist (Schäfer et al., 2006; Reiter-Theil, 2003). Including a family member in planning of treatment modalities increases the credibility of integrated care.

Role of Psychologists

Cancer is a potentially life-threatening disease, and whether the patient will regain emotional balance and learn to live with the disease depends on whether the patient is resilient or not. Chances of developing psychiatric symptoms would increase if patients possess a depressive predisposition, dysfunctional coping style and are surrounded by stressful life events in their present lives. Patients also have disease specific needs and concerns (Van Der Pompe et al., 1996). Psychologists can play an important role in helping the patient cope with illness-related stressors. In designing integrative interventions, the role of the psychologists needs to be recognized. Psychological recovery is as important as physical recovery. The support provided by psychologists plays an important role in helping the patient to recover psychologically.

Integration of Biomedicine and Social Science

An important issue that has not been addressed but deserves merit is how to best enhance the integration of psychotherapeutic and health interventions into the ongoing medical care of patients. Modern medicine lays stress on mind–body dualism. Its primary focus is on treatment of the physical symptoms. It considers psychological and social processes as independent of the disease process and disregards emotional needs of the patient. The proponents of modern medicine seem to be more inclined to the disease than the patient. According to Siegel (1986), medical practitioners have a myopic view of illness and subscribe to the fact that disease afflicts individuals rather than understand that individuals who are constantly exposed to the seeds of illness are more likely to catch the disease.

The root source of tension between biomedicine and social science is their allegiance to different perspectives and methodology. Social scientists regard socio, economic and historical constructs as determinants of health and behaviour and ignore the biological aspects. Conversely, biomedicine subscribes to the opposite view and explains health and illness within the framework of body (Einstein & Shildrick, 2009; Kelly, 2009). Both the approaches are equally important and to derive a meaningful whole, it is imperative to intertwine biomedicine with social science approach (Einstein, 2012; Kelly, 2009; Weber, 2006). The recognition of the potential synergies between these approaches is best reflected in burgeoning interest in interdisciplinary research.

The contribution of biomedical approaches in the area of health research is unparalleled. These approaches have provided the foundation for prevention and treatment of communicable disease, successful treatment of non-communicable diseases and mapping of human genome. These advancements led to the emergence of a “personalized” medicine approach in which the individual’s genetic imprint is used to predict his propensity to disease and to design individualized treatment (Topol, 2014).

Though this approach warrants a paradigm shift, it is still short of incorporating demographic determinants such as education, ethnicity and socio-economic status which have shown to impact disease outcomes. For a comprehensive understanding of health and for designing interventions, it is imperative that biological approaches work in tandem with social perspectives and both are assigned equal weightage.

Interventions: An Overview

There is a vast array of interventions to promote well-being. Our goal is limited as discussing all interventions is beyond the scope of this chapter. In this chapter, we will discuss only those interventions that have been tried or could be tried to deal with behavioural/ psychological problems of cancer presented to a clinician. A focus on the main types of intervention and their target would help to organize the baffling and diverse psychotherapeutic interventions. Miovic (2008) states that psychotherapy can be grossly divided into six methods of approach. The six main methods are, (i) **Psychoanalytic and psychodynamic approaches**: these focus on how important emotional attachments and relationships from childhood are internalized and repeated in both adaptive and non-adaptive ways in later life. (ii) **Cognitive-behavioural (CBT) approaches**: these examine how behaviour and emotion can be conditioned, learned and modified through behavioural reinforcement. (iii) **Suggestive/hypnotic approaches**: these use the power of suggestions to alter desired behavioural outcomes and emotional reactions. Hypnosis is used today most commonly for smoking cessation, weight loss, pain control, to reduce avoidance of medical procedures, and to treat a variety of phobias. Shamasundar (1993) noted that storytelling has a suggestive power that one could call verbal hypnosis and there certainly lies a potential in using stories and analogies from Indian methodology in a therapeutic fashion. Also there have been important Indian contributions to the scientific study of hypnosis (Palan, 2006). (iv) **Body-oriented approaches**: they use various types of touch, massage, physical postures and breath work to release emotional blocks and memories that are stored in muscle tension. Bodywork has its theoretical roots in the work of Wilhelm Reich, a psychoanalyst. (v) **Creative experience approaches**: these use the creative arts (music, painting, poetry, sculpture, others) to work with emotional material that standard “talk therapy” may not access or express as well. (vi) **Subtle-energetic approaches**: they use pranic energy and/or other non-local powers of consciousness to effect both emotional and physical healing, including Reiki, acupuncture, faith healing, chakra-balancing and so on. Creative expressive and subtle-energetic therapies sit on the border between clinical and non-clinical work and can be used to heal emotional problems. The commonalities between subtle-energetic healing and Indian Yoga are so abundant and obvious that cross-talk between these disciplines is already pandemic in popular culture and is being addressed by mental health professionals as well (Basu, 2000).

The first three approaches mentioned above are mainstream, and research has established their effectiveness in defined clinical conditions (Howard et al., 2000).

The last three belong more to the complementary/alternative (CAM) spectrum of approaches and have been shown to have significant emotional effects. Our focus in the context of cancer is on body-oriented approaches and creative-oriented approaches. These are discussed in the following sections.

Body-Oriented Approaches

The application of Yoga, meditation and spirituality in psychotherapy and its role in accelerating physical/psychological well-being has been consistently emphasized (Balodhi, 2002; Nathawat, 1996; Rangaswami, 1996; Vigne, 1997). Any one of these or a combination of these along with biomedicine can be considered for developing integrative interventions for the treatment of cancer. Examples of integrative mind–body therapies are discussed later.

(i) Yoga Therapy

Yoga, as a science of the mind, provides techniques for promoting mental peace and tranquillity (Bhusan, 1996–1997). Yoga is one among the six ancient philosophical systems of India and alludes to an array of physical, mental and spiritual practices. These practices aim at achieving a joyous, contented life and eventually divine wisdom (Alter, 2004). Patanjali defined Yoga as a “multifaceted method of bringing consciousness to a state of stillness” (Hartranft, 2003, p. 1). Studies suggest that Yoga is beneficial for reducing a number of conditions such as asthma, carpal tunnel syndrome, multiple sclerosis, anxiety and depression. Overall improvements were seen in randomized clinical trials of Yoga on measure of sleep (Cohen et al., 2004), quality of life (Moadel et al., 2007) and levels of stress (Banerjee et al., 2007). For treatment of cancer, Yoga therapy can be combined with conventional treatment method and used as a designated prospective treatment modality. Several studies have documented the efficaciousness of Yoga therapy in symptom management of cancer pain and its potential to reduce anxiety, depression and insomnia and augment overall quality of life (Danhauer et al., 2016, 2017; Khalsa et al., 2016). The dearth of conclusive research evidence in support of integrating Yoga in clinical treatment does not undermine its popularity, and it enjoys being a favoured complementary treatment (Forfylow, 2011). However, rigorous research is required to support the relevance of Yoga as an adjunct intervention (Smith & Pukall, 2009).

(ii) Meditation

Indian psychology has a rich history of meditative and related practices. “Meditation is not one but a cluster of similar techniques with a common underline principle of focusing one’s attention in a non-analytical way towards subject matter and avoiding discursive and ruminating thought” (Shapiro, 1982, p. 268). Psychologists recognize the significance of meditative techniques in alleviating symptoms and resolving inner conflicts (Akhilananda, 1946; Rama et al., 1976; Rangaswami, 1996; Verma, 2003). Meditative practices facilitate coping and help patients to deal with cancer induced

stress, negative mood states, insomnia, nausea and pain. These practices mitigate the distress associated with cancer diagnosis and help in changing patients' helpless attitude to hopeful and active fighting spirit.

The key to self-care is mindfulness, and several studies have reported the beneficial effects of meditative practices. In a study on seven tension headache patients exposed to 30 yogic meditation sessions, it was found that there was a significant reduction in perception of pain though reduction in frontal muscle tension and skin conductance was not statistically significant (Vasudevan et al., 1994).

(iii) **Spirituality**

The diagnosis of cancer and its treatment causes trauma and distress to the patients and their families (Tomich & Helgeson, 2002). The distress and negativity may last post treatment and can linger for several years (Cordova & Andrykowski, 2003). Research on adjustment to trauma suggests that diagnosis of cancer leads to a violation of global assumptions and shattering of beliefs in a just world (Park et al., 2008). These beliefs are schemas through which information about the meaning of life can be organized and at times these beliefs have a spiritual orientation (Park, 2005, 2007). Spirituality is increasingly being recognized as an integral part of well-being by cancer physicians, researchers and mental health practitioners (Aukst-Margetić et al., 2005; Yanez et al., 2009). The need for incorporating spirituality into designing of psychological interventions is necessitated by the (a) sequelae of cancer; both psychological and physical, (b) success of existing psychological interventions and (c) studies on the role of spirituality in facilitating psychological recovery from cancer.

Studies by Jenkins and Pargament (1995) and Balboni et al. (2007) report that on an average more than half of cancer patients experience spiritual needs and consider them important. In a study of female breast cancer survivors, 85% reported that spirituality was an integral part of their lives (Bloom et al., 2007). Religion and spirituality have a multi-dimensional influence on individual's well-being (Park, 2007) and spirituality can provide a meaning making framework for developing, understanding and interpreting ones' life events such as diagnosis of cancer. Spirituality plays an important role in the lives of cancer patients and is associated with reduced signs of distress irrespective of the patients' appraisal of life threat. Studies show that spirituality is associated with better quality of life and pleasant affective state (Rippentrop, et al., 2006; Yanez et al., 2009). Spirituality is deeply entrenched in Indian psyche, and spiritual perspective can be integrated in holistic paradigms of recovery. However, researches on spirituality-based interventions are scant, and many psychological interventions fail to incorporate spirituality. A novel approach Psycho-Spiritual Integrative Therapy (PSIT) proposed by Corwin et al. (2012) addresses both psychological and spiritual needs of patients. The aim of this therapy is to enhance patient's quality of life and accelerate coping.

Creative Experience Approaches

(i) **Forgiveness–Kshamadaan**

When a person falls ill, the attribution of causality can be directed either towards self or others. Breast cancer patients who attributed causality to self reported greater mood disturbance in comparison to those who did not blame themselves (Friedman et al., 2007).

Such attributions can lead to psychological pain, feelings of injustice, emotional distress and anger. Feelings of anger may be self-directed or other-directed. These feelings may lead to lack of emotional resolution by the victim and negative health consequences. Forgiveness plays a critical role in resolving such conflicts, or in reducing the anger of a victim directed towards oneself or an offender. A study on 81 breast cancer women explored whether self-forgiving attitude and spirituality were related to psychological adjustment. Findings showed that both self-forgiving attitudes and spirituality were significant predictors of less mood disturbance and better quality of life (Romero et al., 2006). Forgiveness is a positive coping strategy for hurt which primarily benefits the sufferer through a reconstruction of thoughts and actions towards the perpetrator (Wade & Worthington, 2005).

In Hinduism, forgiveness is regarded as one of the six fundamental virtues and the doctrine behind this is that one who fails to forgive, shoulders a baggage of unpleasant memories of the wrong, unresolved emotions and negativity that affect his present as well as future. The epics of Hinduism and Vedic literature define forgiveness as *Ksama* or *Kshyama*. In Sanskrit scriptures, the word *Ksama* is fused with *kripa* (tenderness), *daya* (kindness) and *karuna* (compassion), and in Rigveda, forgiveness is deliberated upon in versus dedicated to Lord Varuna in the context of the perpetrator and victim.

The concept of forgiveness is further rarefied by drawing comparisons between its feminine and masculine form. The feminine form of forgiveness can be explained through Goddess Lakshmi, and the masculine form can be best understood with the example of Lord Vishnu. Feminine Lakshmi's forgiveness is unconditional. She forgives even when the wrongdoer fails to repent, while masculine Vishnu's forgiveness is subject to wrongdoer's repentance. Hinduism celebrates feminine forgiveness and considers it exalted and virtuous in comparison to masculine forgiveness (Rye et al., 2000, p. 34).

Robert Enright (2001) a pioneer researcher on forgiveness developed an exhaustive 20-step model of forgiveness and included the concept of forgiveness into his therapies. The model consists of four phases: (1) the uncovering phase (accept rather than avoid what transpired and what one feels), (2) the decision phase (resolve to initiate the process of forgiving), (3) the work phase (engage in the actual task of forgiving) and (4) the deepening phase (start to observe the flow of negative emotions). Though these four phases are a mere overview, they provide insights into what forgiveness can offer in reality.

The effectiveness of Enright's four week forgiveness therapy in enhancing the quality of life was tested in 20 terminally ill cancer patients. Participants were

randomly assigned to either an experimental group (those who received forgiveness therapy) or a wait-list control group. The participants received forgiveness therapy in the second week of the four-week period. Measures relating to forgiveness, hope, anger and quality of life were completed by participants at all the three phases— (i) at the pre-testing phase, (ii) post-test 1 phase and (iii) post-test 2 phase. The results showed that forgiveness therapy group exhibited greater improvement than the control group (Hansen et al., 2009). The success and effectiveness of forgiveness therapy can be further explored by integrating it with biomedicine and other complimentary interventions.

East and West: Building Bridges for Sustainable Integrative Cancer Care

Cancer is one of the most dreaded diseases, and it is disconcerting to note that despite an effective and targeted approach, the desired therapeutic success remains an enigma. Treatment for cancer is pursued in a fragmented way that reflects the priorities and strategies of specific disciplines. The goal of modern medicine is to cure the bodily malignancy with little attention to patients, psychological and emotional needs. Conventional treatment alone is ill-equipped to address the unmet needs of patients. Biomedicine has a singular focus of destroying malignant cells, while losing sight of the patient's existential crisis. The dissatisfaction with conventional medicine to address psychological and emotional needs of the patient led to a rise in integrative therapies. An admixture of conventional and complementary therapies under the rubric of integrative cancer care will go a long way in mitigating the physical, psychological and existential distress of patients.

The motivation behind the endeavour is a commitment to comprehend the interplay of multiple interacting influences. Finding ways to utilize the complementarities in these differing approaches while also addressing the limitations that exist within disciplines is a further motivator. A justification behind the reach towards integration is also the awareness that although each of the disciplines and domains has considerable influence on health, they are in and themselves inherently limited. Such limitations stem directly from the fact that other perspectives are not included. Western medicine does not incorporate behavioural and psychological factors. Conversely, behavioural and psychosocial approaches fail to include biomedical perspective. A key message is that integrative care is difficult to orchestrate. It requires incremental steps in which the proponents of conventional and complementary and alternative medicine learn about each other's objectives and language and puzzle their way through a targeted agenda that brings their respective strengths together. Gradually, the East–West approach to cancer treatment may become the norm.

Endeavours to prove the ascendancy of Western science over Eastern knowledge or vice versa though not uncommon are usually unprolific. The Eastern and Western

philosophies display some very fundamental differences. The major thrust of materialistic and mechanistic Western science has been to alleviate bodily suffering. In contrast, Eastern philosophies are essentially spiritual and portray humans as mirror images of the universe, ultimately divine and directed towards the acquisition of inner freedom that is, passing beyond suffering to the experience of one's divinity. Towards this end, Eastern thinkers have developed a rich and challenging collection of spiritual techniques (Grof, 1984).

These East–West theological differences are also echoed in their healthcare perspectives. A majority of health professionals from the west subscribe to dualism and treat mind and body as independent. Eastern healers emphasize the unification of mind, body and spirit and believe that treating the body without paying heed to the psychological and spiritual dimensions would be a fragmented treatment. Each system is characterized by unique strengths, and bringing the two systems closer through cross-fertilization will further strengthen the systems.

The Western scientific approach has ignored man's search for inner blossoming and maturity, and the Eastern system in its quest for ultimate divinity has ignored day-to-day pressing problems (Sheikh & Sheikh, 1989). As Oppenheimer (1954) pointed out: "the history of science contains many examples of the fruitfulness of bringing together ideas and techniques, developed in separate contexts."

Complementary and alternative medicine (CAM) is in consonance with the beliefs of the patients and a study by Kimby et al. (2003) showed that more and more complementary and alternative medicines are being adopted patients for management of symptoms and gaining better quality of life. Complementary therapies are devoid of the toxicity of conventional therapies (Menniti-Ippolito et al., 2002; Singh et al., 2005). Depending on the needs of the patient an integrative customized cancer intervention can be developed. Together with conventional therapy, this may include Yoga therapy or meditative practices and culture specific spiritual or forgiveness therapy.

Evidence-Based Integrative Approach

Mind–Body Therapy

Mind–body therapy is a conglomeration of interactions between the brain and body, and the motive behind this is to engage the mind to facilitate physical functioning and holistic health. The use of these therapies is on the increase because of its ability to mitigate cancer-related symptoms, such as pain, nausea or fatigue. It also promotes well-being, reduces anxiety and stress and can be easily integrated into treatment regimen with minimal risk (Astin, 1998; Eisenberg et al., 1998). Modern medicine relies on pharmacological options such as stimulants or sedatives for management of cancer symptoms. However, these options may be accompanied with adverse side effects.

For example, pain reduction medication may aggravate fatigue or sleep (Kwekkeboom et al., 2010). Conversely, mind–body therapies have little or negligible side effects. They may also improve symptoms other than the targeted symptoms. For example, mind–body interventions used for pain relief may also reduce anxiety and boost relaxation.

A meta-analysis of the efficaciousness of Mindfulness-Based Stress Reduction (MBSR) oncology suggests that MBSR therapy is an effective psychosocial intervention for dealing with psychosocial stressors associated with the disease. It helped patients to reduce stress, anxiety and fatigue and relieved them of mood and sleep disturbance. It also aided in improving their psychological well-being and quality of life (Ledesma & Kumano, 2009). The significance of mindfulness-based meditation therapies for cancer survivors cannot be underestimated. However, realization of full potential of MBSR in oncology is subject to methodological rigour and adequate sample size.

There are several types of Yoga, among which are: Hatha Yoga, Iyenger Yoga and Restorative Yoga. These have been used as adjunct therapy alongside other conventional therapies. In a study of 128 breast cancer survivors, a 12-week Hatha Yoga therapy was introduced and this group was compared to a wait-list control group. Significant improvements in quality of life, fatigue, spiritual well-being, and overall mood was observed in the experimental group (Moadel et al., 2007). The efficacy of a six-week long Iyenger Yoga programme was examined in 24 cancer survivors and patients reported improvement in quality of life, spiritual well-being and mood (Duncan, 2008).

Restorative Yoga is described as a “gentle type” of Yoga. It involves a series of gentle poses using props, and special attention is paid to breathing. The props (e.g. an exercise ball) and restorative poses are beneficial to patients because it provides a safe environment for total relaxation with minimal effort. A sample of 51 women with either ovarian or breast cancer were assigned to a 10 weekly restorative Yoga classes. At the end of the therapy, patients reported improvement in depression, negative affect, state anxiety, mental health, and quality of life (Danhauer et al., 2008).

Conclusions

During the past decade, there has been substantial progress in the field of integrative interventions. Integrative interventions are inextricably tied to modern medicine and tradition. They neither deny modern medicine, nor segregate itself from traditions. Rather, the edifice of integrated interventions is built on these fields. Integration is not about embracing the new and ignoring the old. It is also not about looking behind but moving ahead. In this new era of medical research, the scope of integrated interventions to develop as a new field is vast. One major advantage of integrative intervention is that it can be customized according to individual’s needs and readiness. These interventions can be used in various combinations and can readily be

classified and chronologized. The success of integrative interventions lies in building sustainable bridges between East and West and in their ability to include cultural, contextual and structural factors for obtaining desired outcomes. Much research is needed to document the significance of integrative interventions. Advancements in research and assessment will help to capture the nuances, experiences of individuals over time and will facilitate development of effective intervention. Methodologically, rigorous and sound intervention studies will benefit patients and their families in terms of positive health.

References

- Ahn, S., Romo, R. D., & Campbell, C. L. (2020). A systematic review of interventions for family caregivers who care for patients with advanced cancer at home. *Patient Education and Counseling*, *103*(8), 1518–1530.
- Akhilananda, S. (1946). *Hindu Psychology: Its meaning for the west*. Harper Brothers.
- Alter, J. S. (2004). *Yoga in modern India: The body between science and philosophy*. Princeton University Press.
- Angel, R. J., & Williams, K. (2013). Cultural models of health and illness. In F. A. Panuagua & A. M. Yamada (Eds.), *Handbook of multicultural health* (2nd ed., pp. 49–68). Academic Press, Elsevier.
- Astin J. A. (1998). Why patients use alternative medicine: Results of a national study. *JAMA*, *279*(19), 1548–1553.
- Aukst-Margetić, B., Jakovljević, M., Margetić, B., Biščan, M., & Šamija, M. (2005). Religiosity, depression and pain in patients with breast cancer. *General Hospital Psychiatry*, *27*(4), 250–255.
- Balboni, T. A., Vanderwerker, L. C., Block, S. D., Paulk, M. E., Lathan, C. S., Peteet, J. R., & Prigerson, H. G. (2007). Religiousness and spiritual support among advanced cancer patients and associations with end-of-life treatment preferences and quality of life. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, *25*(5), 555.
- Balodhi, J. P. (Ed.). (2002). *Application of oriental philosophical thoughts in mental health*. National Institute of Mental Health and Neuro Sciences.
- Banerjee, B., Vadiraj, H. S., Ram, A., Rao, R., Jayapal, M., Gopinath, K. S., & Hegde, S. (2007). Effects of an integrated yoga program in modulating psychological stress and radiation-induced genotoxic stress in breast cancer patients undergoing radiotherapy. *Integrative Cancer Therapies*, *6*(3), 242–250.
- Bardsley, M., Steventon, A., Smith, J., & Dixon, J. (2013). *Evaluating integrated and community-based care*. Nuffield Trust.
- Bastos, L. O. D. A., Andrade, E. N. D., & Andrade, E. D. O. (2017). The doctor-patient relationship in oncology: a study from the patient's perspective. *Revista Bioética*, *25*, 563–576.
- Basu, S. (2000). *Integral health, Pondicherry*: Sri Aurobindo Ashram Trust.
- Bhusan, L. I. (1996–1997). Psychodynamic aspects in yoga. *Perspectives in Psychological Researches*, *19* & *20*, 55–59.
- Bloom, J. R., Kang, S. H., Petersen, D. M., & Stewart, S. L. (2007). Quality of life in long-term cancer survivors. In M. Feuerstein (Ed.), *Handbook of cancer survivorship* (pp. 43–65). Springer.
- Carter, K., Chalouhi, E., McKenna, S., & Richardson, B. (2011). What it takes to make integrated care work. *Health International*, *11*, 48–55.
- Cohen, L., Warneke, C., Fouladi, R. T., Rodriguez, M. A., & Chaoul-Reich, A. (2004). Psychological adjustment and sleep quality in a randomized trial of the effects of a Tibetan yoga intervention in patients with lymphoma. *Cancer: Interdisciplinary International Journal of the American Cancer Society*, *100*(10), 2253–2260.

- Cordova, M. J., & Andrykowski, M. A. (2003). Responses to cancer diagnosis and treatment: posttraumatic stress and posttraumatic growth. In *Seminars in Clinical Neuropsychiatry*, 8(4), 286.
- Corwin, D., Wall, K., & Koopman, C. (2012). Psycho-spiritual integrative therapy: Psychological intervention for women with breast cancer. *The Journal for Specialists in Group Work*, 37(3), 252–273.
- Cueto, M. (2004). The origins of primary health care and selective primary health care. *American Journal of Public Health*, 94(11), 1864–1874.
- Danhauer, S. C., Addington, E. L., Sohl, S. J., Chaoul, A., & Cohen, L. (2017). Review of yoga therapy during cancer treatment. *Supportive Care in Cancer*, 25(4), 1357–1372.
- Danhauer, S. C., Sohl, S. J., Addington, E. L., Chaoul, A., & Cohen, L. (2016). Yoga therapy during cancer treatment. In S. B. Khalsa, L. Cohen, T. McCall, & S. Telles (Eds.), *The principles and practice of yoga in health care* (pp. 339–369). Handspring Publishing.
- Danhauer, S. C., Tooze, J. A., Farmer, D. F., Campbell, C. R., McQuellon, R. P., Barrett, R., & Miller, B. E. (2008). Restorative yoga for women with ovarian or breast cancer: Findings from a pilot study. *Journal of the Society for Integrative Oncology*, 6(2), 47.
- Davis, K., Schoen, C., Guterman, S., Shih, T., Schoenbaum, S. C., & Weinbaum, I. (2007). Slowing the growth of US health care expenditures: What are the options. *The Commonwealth Fund*, 47(1), 1–46.
- Deng, G., & Cassileth, B. (2013). Complementary or alternative medicine in cancer care—myths and realities. *Nature Reviews Clinical Oncology*, 10(11), 656.
- DiMatteo, M. R. (2004). Social support and patient adherence to medical treatment: A meta-analysis. *Health Psychology*, 23(2), 207.
- Duncan, M. D. (2008). Impact and outcomes of an Iyengar yoga program in a cancer centre. *Current Oncology*, 15, S72–S78.
- Egely, S., Penner, L. A., Greene, M., Harper, F. W., Ruckdeschel, J. C., & Albrecht, T. L. (2006). Information seeking during “bad news” oncology interactions: Question asking by patients and their companions. *Social Science & Medicine*, 63(11), 2974–2985.
- Einstein, G. (2012). Situated neuroscience: Exploring biologies of diversity. In R. Bluhm, A. J. Jacobson & H. L. Maibom (Eds.), *Neurofeminism. New directions in philosophy and cognitive science* (pp. 145–174). Palgrave Macmillan.
- Einstein, G., & Shildrick, M. (2009). The post conventional body: Rethorising women’s health. *Social Science & Medicine*, 69(2), 293–300.
- Eisenberg, D. M., Davis, R. B., Ettner, S. L., Appel, S., Wilkey, S., Van Rompay, M., & Kessler, R. C. (1998). Trends in alternative medicine use in the United States, 1990–1997: Results of a follow-up national survey. *JAMA*, 280(18), 1569–1575.
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136.
- Enright, R. D. (2001). *Forgiveness is a choice*, Washington. DC: APA Life Tools, American Psychological Association.
- Fallowfield, L. (1995). Psychosocial interventions in cancer. *BMJ: British Medical Journal: International Edition*, 311(7016), 1316–1317.
- Forfaylow, A. L. (2011). Integrating yoga with psychotherapy: A complementary treatment for anxiety and depression. *Canadian Journal of Counselling and Psychotherapy*, 45(2), 132–150.
- Friedman, L. C., Romero, C., Elledge, R., Chang, J., Kalidas, M., Dulay, M. F., Lynch, G. R., & Osborne, C. K. (2007). Attribution of blame, self-forgiving attitude and psychological adjustment in women with breast cancer. *Journal of Behavioral Medicine*, 30(4), 351–357.
- Grof, S. (Ed.). (1984). *Ancient wisdom and modern science*. State University of New York Press.
- Hansen, M. J., Enright, R. D., Klatt, J., & Baskin, T. W. (2009). A palliative care intervention in forgiveness therapy for elderly terminally ill cancer patients. *Journal of Palliative Care*, 25(1), 51–60.
- Hartranft, C. (2003). *The Yoga sutra of Patanjali*. Shambala.

- Helman, C. G. (1995). The body image in health and disease: Exploring patients' maps of body and self. *Patient Education and Counseling*, 26(1–3), 169–175.
- Herbert, C. P. (1996). Introduction. *Patient Education and Counseling*, 27(1), vii.
- Howard, K. I., Krasner, R. F., & Saunders, S. M. (2000). Evaluation of psychotherapy. In B. J. Sadock & V. A. Sadock (Eds.), *Kaplan & Sadock's comprehensive textbook of psychiatry* (Vol. II, pp. 2217–2225). Lippincott Williams & Wilkins.
- Hulka, B. S., Cassel, J. C., Kupper, L. L., & Burdette, J. A. (1976). Communication, compliance, and concordance between physicians and patients with prescribed medications. *American Journal of Public Health*, 66(9), 847–853.
- Jenkins, R. A., & Pargament, K. I. (1995). Religion and spirituality as resources for coping with cancer. *Journal of Psychosocial Oncology*, 13(1–2), 51–74.
- Joshi, P. C. (1988). Traditional medical system in the Central Himalayas. *Eastern Anthropologist (The)*, 41(1), 77–86.
- Kelly, U. A. (2009). Integrating intersectionality and biomedicine in health disparities research. *Advances in Nursing Science*, 32(2), E42–E56.
- Khalsa, S. B., Telles, S., Cohen, L., & McCall, T. (2016). Introduction to yoga in health care. In S. B. Khalsa, L. Cohen, T. McCall & S. Telles (Eds.), *Principles and practice of yoga in health care* (1st ed, pp.5–13). Handspring Publishing.
- Kimby, C. K., Launsø, L., Henningsen, I., & Langgaard, H. (2003). Choice of unconventional treatment by patients with cancer. *The Journal of Alternative & Complementary Medicine*, 9(4), 549–561.
- Kohli, N., & Dalal, A. K. (1998). Culture as a factor in causal understanding of illness: A study of cancer patients. *Psychology and Developing Societies*, 10(2), 115–129.
- Korsch, B. M., Freemon, B., & Negrete, V. F. (1971). Practical implications of doctor-patient interaction analysis for pediatric practice. *American Journal of Diseases of Children*, 121(2), 110–114.
- Kwekkeboom, K. L., Cherwin, C. H., Lee, J. W., & Wanta, B. (2010). Mind-body treatments for the pain-fatigue-sleep disturbance symptom cluster in persons with cancer. *Journal of Pain and Symptom Management*, 39(1), 126–138.
- Ledesma, D., & Kumano, H. (2009). Mindfulness-based stress reduction and cancer: a meta-analysis. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, 18(6), 571–579.
- Magnussen, L., Ehiri, J., & Jolly, P. (2004). Comprehensive versus selective primary health care: Lessons for global health policy. *Health Affairs*, 23(3), 167–176.
- Marchand, L. (2014). Integrative and complementary therapies for patients with advanced cancer. *Annals of Palliative Medicine*, 3(3), 160–171.
- Maruthappu, M., Hasan, A., & Zeltner, T. (2015). Enablers and barriers in implementing integrated care. *Health Systems & Reform*, 1(4), 250–256.
- Meeker, M. A., & Jezewski, M. A. (2005). Family decision making at end of life. *Palliative & Supportive Care*, 3(2), 131.
- Menniti-Ippolito, F., Gargiulo, L., Bologna, E., Forcella, E., & Raschetti, R. (2002). Use of unconventional medicine in Italy: A nation-wide survey. *European Journal of Clinical Pharmacology*, 58(1), 61–64.
- Merckaert, I., Libert, Y., Delvaux, N., & Razavi, D. (2005). Breast cancer: communication with a breast cancer patient and a relative. *Annals of Oncology*, 16, ii209–ii212.
- Miovic, M. (2008). Therapeutic psychology and Indian yoga. In K. R. Rao, A. C. Paranjpe, & A. K. Dalal (Eds.), *Handbook of Indian psychology* (pp. 449–470). Cambridge University Press India Pvt. Ltd.
- Misra, G. (Ed.). (2018). *Psychosocial interventions for health and well-being*. Springer.
- Mitnick, S., Leffler, C., & Hood, V. L. (2010). Family caregivers, patients and physicians: Ethical guidance to optimize relationships. *Journal of General Internal Medicine*, 25(3), 255–260.

- Moadel, A. B., Shah, C., Wylie-Rosett, J., Harris, M. S., Patel, S. R., Hall, C. B., & Sparano, J. A. (2007). Randomized controlled trial of yoga among a multiethnic sample of breast cancer patients: Effects on quality of life. *Journal of Clinical Oncology*, 25(28), 4387–4395.
- Nathawat, S. S. (1996). Psychological Wellbeing and meditation. *Indian Journal of Clinical Psychology*, 23, 77–78.
- Newell, K. W. (1988). Selective primary health care: The counter revolution. *Social Science & Medicine*, 26(9), 903–906.
- Norcross, J. C., & Goldfried, M. R. (Eds.). (2005). *Handbook of psychotherapy integration*. Oxford University Press.
- Northouse, L. L., Katapodi, M. C., Song, L., Zhang, L., & Mood, D. W. (2010). Interventions with family caregivers of cancer patients: meta-analysis of randomized trials. *CA: A Cancer Journal for Clinicians*, 60(5), 317–339.
- Oppenheimer, J. R. (1954). *Science and common understanding*. Dutton.
- Palan, B. M. (2006). In memoriam: Hieshikesh Jana. *International Journal of Clinical and Experimental Hypnosis*, 54, 370–371.
- Paniagua, F. A., & Yamada, A. M. (Eds.). (2013). *Handbook of multicultural mental health: Assessment and treatment of diverse populations*. Academic Press.
- Park, C. L. (2005). Religion as a meaning-making framework in coping with life stress. *Journal of Social Issues*, 61(4), 707–729.
- Park, C. L. (2007). Religiousness/spirituality and health: A meaning systems perspective. *Journal of Behavioral Medicine*, 30(4), 319–328.
- Park, C. L., Edmondson, D., Fenster, J. R., & Blank, T. O. (2008). Meaning making and psychological adjustment following cancer: The mediating roles of growth, life meaning, and restored just-world beliefs. *Journal of Consulting and Clinical Psychology*, 76(5), 863.
- Rama, S., Ballentine, R. and Ajaya, S. (1976). *Yoga and psychotherapy: The evolution of consciousness*. Himalayan Institute.
- Rangaswami, K. (1996). Indian system of psychotherapy. *Indian Journal of Clinical Psychology*, 23, 62–75.
- Reiter-Theil, S. (2003). Balancing the perspectives. The patient's role in clinical ethics consultation. *Medicine, Health Care and Philosophy*, 6(3), 247–254.
- Rippentrop, A. E., Altmaier, E. M., & Burns, C. P. (2006). The relationship of religiosity and spirituality to quality of life among cancer patients. *Journal of Clinical Psychology in Medical Settings*, 13(1), 29.
- Romero, C., Friedman, L. C., Kalidas, M., Elledge, R., Chang, J., & Liscum, K. R. (2006). Self-forgiveness, spirituality, and psychological adjustment in women with breast cancer. *Journal of Behavioral Medicine*, 29(1), 29–36.
- Rye, M. S., Pargament, K. I., Ali, M. A., Beck, G. L., Dorff, E. N., Hallisey, C., Narayanan, V., & Williams, J. G. (2000). Religious perspectives on forgiveness. In M. E. McCullough, K. I. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory, research, and practice* (pp. 17–40). Guilford Press.
- Schäfer, C., Putnik, K., Dietl, B., Leiberich, P., Loew, T. H., & Kölbl, O. (2006). Medical decision-making of the patient in the context of the family: Results of a survey. *Supportive Care in Cancer*, 14(9), 952–959.
- Shamasundar, C. (1993). Therapeutic wisdom in Indian mythology. *American Journal of Psychotherapy*, 47, 443–450.
- Shapiro, D. H. (1982). Comparison of meditation with other self-control strategies: Biofeedback, hypnosis, progressive relaxation: A review of the clinical and physiological literature. *American Journal of Psychiatry*, 3, 267–274.
- Sheikh, A. A., & Sheikh, K. S. (1989). *Healing East and West*. Wiley.
- Siegel, B. S. (1986). *Love, medicine and miracles*. Arrow Books.
- Singh, H., Maskarinec, G., & Shumay, D. M. (2005). Understanding the motivation for conventional and complementary/alternative medicine use among men with prostate cancer. *Integrative Cancer Therapies*, 4(2), 187–194.

- Smith, K. B., & Pukall, C. F. (2009). An evidence-based review of yoga as a complementary intervention for patients with cancer. *Psycho-oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, 18(5), 465–475.
- Stewart, M. A., McWhinney, I. R., & Buck, C. W. (1979). The doctor/patient relationship and its effect upon outcome. *The Journal of the Royal College of General Practitioners*, 29(199), 77–82.
- Tomich, P. L., & Helgeson, V. S. (2002). Five years later: A cross-sectional comparison of breast cancer survivors with healthy women. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, 11(2), 154–169.
- Topol, E. J. (2014). Individualized medicine from prewomb to tomb. *Cell*, 157(1), 241–253.
- Van Der Pompe, G., Antoni, M., Visser, A., & Garssen, B. (1996). Adjustment to breast cancer: The psychobiological effects of psychosocial interventions. *Patient Education and Counseling*, 28(2), 209–219.
- Varricchio, C. G. (1995). Issues to consider when planning cancer control interventions for women. *Women's Health Issues*, 5(2), 64–72.
- Vasudevan, A., Kumaraiat, V., Mishra, H., & Balodhi, J. P. (1994). Yogic meditation in tension headache. *NIMHANS Journal*, 12, 69–73.
- Verma, S. (2003). Psychology of meditation. *Psychological Studies*, 48(1), 65–66.
- Vigne, J. (1997). Meditation and mental health. *Indian Journal of Clinical Psychology*, 28, 46–51.
- Wade, N. G., & Worthington Jr, E. L. (2005). In search of a common core: A content analysis of interventions to promote forgiveness. *Psychotherapy: Theory, research, practice, training*, 42(2), 160.
- Weber, L. (2006). Reconstructing the landscape of health disparities research: Promoting dialogue and collaboration between feminist, intersectional and biomedical paradigms. In A. J. Schulz & L. Mullings (Eds.), *Gender, race, class and health: Intersectional approaches* (pp. 21–59). Jossey Bass.
- Wisner, B. (1988). GOBI versus PHC? Some dangers of selective primary health care. *Social Science & Medicine*, 26(9), 963–969.
- Wolff, J. L., & Roter, D. L. (2008). Hidden in plain sight: Medical visit companions as a resource for vulnerable older adults. *Archives of Internal Medicine*, 168(13), 1409–1415.
- World Bank & World Health Organization (2006). High level forum on the Health Millennium Development Goals: Selected papers 2003–2005
- World Health Organization. (2014). *Global status report on noncommunicable diseases 2014* (No. WHO/NMH/NVI/15.1). World Health Organization.
- Yanez, B., Edmondson, D., Stanton, A. L., Park, C. L., Kwan, L., Ganz, P. A., & Blank, T. O. (2009). Facets of spirituality as predictors of adjustment to cancer: Relative contributions of having faith and finding meaning. *Journal of Consulting and Clinical Psychology*, 77(4), 730.

Towards a Human Rights Based-and-Oriented Psychology



Polli Hagedaars

Abstract Psychologists have a societal responsibility for promoting human rights and preventing human rights violations. In 2013, a Board Human Rights and Psychology was established by the European Federation of Psychologists Associations (EFPA), in order to raise awareness of the importance of human rights for psychologists and of psychology for human rights. In the first section, a brief history of human rights is described. The Universal Declaration of Human Rights and related conventions, as the most widely accepted standards for human rights today, are taken as the starting point. The second section shows how the principles of human rights are in tune with the ethical codes of conduct of psychological associations, and a plea is made for the explicit inclusion of human rights in these codes. The third section presents a social–behavioural science perspective on human rights anchored in the Capabilities Approach of Amartya Sen and Martha Nussbaum. The fourth section describes the involvement of psychologists in a human rights based-and-oriented psychology, through research and practice, but particularly through concrete actions. The final section emphasizes the importance of human rights education for psychologists.

Keywords Capability approach · Dignity · Freedom · Human rights and psychology · Inclusion · Universal Declaration of Human Rights (UDHR)

All over the world, people are struggling for a life that is fully human, a life worthy of human dignity. Countries and states are often focused on economic growth alone, but their people, meanwhile, are striving for something different: they want meaningful human lives. They need theoretical approaches that can be the ally of their struggles, not approaches that keep these struggles from view (Nussbaum, 2012, p. 1).

Hagedaars, P. (2016). Towards a human-rights based and oriented Psychology, *Psychology and Developing Societies*, 28(2), 183–202, <https://doi.org/10.1177/0971333616657170>.

P. Hagedaars (✉)

Licensed clinical psychologist in private practice, Global Network of Psychologists for Human Rights (co-chair), Amsterdam, Netherlands

In 2013, the European Federation of Psychologists' Associations (EFPA) decided to form a Board Human Rights and Psychology (BoHR & PSy). 'Considering the ongoing threat to Human Rights in the world, EFPA should more strongly articulate psychologists' responsibilities and develop a policy for counteracting Human Rights violations. Human Rights are of crucial importance to everyone in the world, psychologists included. EFPA, like any professional organization, shall do what is within its scope and capabilities to raise awareness of Human Rights and (risks of) Human Rights violations, prevent Human Rights violations and alleviate the effects of Human Rights violations (EFPA, 2013).'

In this article, the relationship between human rights and psychology will be explored. It will be argued that psychologists, according to their professional codes of conduct, do have a societal responsibility, also for upholding and promoting human rights. As human rights are about human relationships and psychologists are experts of human behaviour and relationships, they have, by their expertise, special obligations.

In the first section, some introductory comments are made about human rights and the Universal Declaration of Human Rights (UDHR) of the United Nations. In the second section, it is outlined how human rights can be an inspiration and a normative frame for psychologists. The third section deals with the question how the more law-oriented UDHR can be 'translated' into a social-behavioural approach of human rights. Here, the writings of Amartya Sen and Martha Nussbaum form an excellent source of inspiration. The core argument of the fourth section is that the entitlement to certain rights is meaningless without actors providing them. Psychologists' three core themes of human rights, dignity, freedom and inclusion are explored. In the fourth section, implications of human rights for psychology, for research and practice, are mentioned with emphasis on the actions psychologists and their associations can and should take. To raise awareness of the importance of human rights for the practice of psychologists and their associations and to anchor human rights into the field of psychology, the fifth section emphasizes that human rights need to be incorporated in the education for psychologists.

Human Rights

On 28 September 1948, Eleanor Roosevelt made her famous speech 'The Struggle for Human Rights' to the United Nations, gathered at the Sorbonne University, in Paris:

We the people of the United Nations determined to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small, and to pro-mote social progress and better standards of life in larger freedom. ... This reflects the basic premise of the Charter that the peace and security of man-kind are dependent on mutual respect for the rights and freedoms of all.

The UDHR, adopted at this meeting of the United Nations, had 'dignity' as its main principle. After the atrocities of the Second World War, the world community

felt a strong need to establish peace and stability and to distance itself from the dehumanizing practices of the Nazi regime. Article 1 of the UDHR reads:

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood (United Nations, 1948).

According to Grossman (2015), morality and humanity are the basis of our existence. Human rights are about bringing morality into human relationships. The UDHR and later international conventions try to regulate these relationships between people(s) and states. The notion of universality of the values and principles of human rights has been much discussed (e.g. Allan, 2013). Some argue that they are an extension of universal and eternal values; others criticize this universality and even call the UDHR and other international conventions a sign of Western imperialism. For example, the Council of the League of Arab States (2004) adopted the Arab Charter on Human Rights (ACHR). The ACHR affirms the principles contained in the UN Charter, the UDHR, the International Covenants on Human Rights and the Cairo Declaration on Human Rights in Islam (1990). However, this Charter was found incompatible with the United Nation's understanding of universal human rights by the United Nation High Commissioner for Human Rights on points of respect to women's rights and capital punishment for children. Most of the criticisms directed at the UDHR come from conservative groups, for example, in Russia and elsewhere in the world (Coalson, 2008). Still, the UDHR is the most widely supported document on human rights. Therefore, there are strong reasons to take this document as a starting point for psychologists. At the same time, it has to be acknowledged that universality is not the same as uniformity (Hirsch Ballin, 2015) and that human rights should be embedded in local practice, priorities and actions. In short, a 'glocal' approach is needed (Friedman et al., 2015), for example, addressing global issues on a local basis—in order to connect the universal with the specific.

Human Rights and the Principle of Freedom

Next to human dignity, the principle of freedom is one of the core principles of the UDHR. There is an interesting history to freedom and how it has expanded from an elite to the whole of humanity. A key historical document was the Magna Carta (1215); it dealt with the protection of the freedom of the church, the barons and even of widows with estates from the king. During the French revolution, the document about the right of people and citizens, the '*Droit de l'Homme et du citoyen*', 1789, originated from a civilian movement to take away power from the church and the aristocracy and to get freedom for the citizens (i.e. the middle class). The UDHR (1948) was meant to give freedom to all and to be 'the International Magna Carta of all men everywhere' (Roosevelt, 1948), completing the historical movement from freedom for the few to freedom for all. Already in his famous speech in 1941, President Roosevelt mentioned 'we are one people' and listed the four freedoms:

freedom of speech and expression, freedom of worship, freedom from want and freedom from fear.

The UDHR has been followed by other covenants, such as the two International Covenants from 1966. The first of these was on Civil and Political Rights, considered as ‘liberty rights’ and implied that the state should abstain from intervening in the liberty of every human (United Nations, 1966a). The second Covenant was on Economic, Social and Cultural Rights; this Covenant is about the ‘debt obligation’ of the state to stand up for its citizens and take appropriate measures (United Nations, 1966b).

Many individual people and many organizations and non-governmental organizations (NGOs) are active in trying to make human rights a reality. Still, minority people are being discriminated and persecuted, abuse of women or genocide is continuing, children are used as weapons in many states and are fighting in armed conflicts. We just left colonial wars behind us, like the Dutch–Indonesian and the French–Algerian liberation wars. Freedom for children is of great concern, especially in the light of the many refugees. Their rights and protection are regulated in the Declaration of the Rights of the Child (1959), a logical follow-up to the UDHR, and the International Convention on the Rights of the Child (CRC) (United Nations, 1989). Article 3.1 in the latter convention is of special interest, it reads: ‘In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.’

Human Rights as an Inspiration and a Normative Frame for Psychologists

This section can start with a positive and beautiful message: psychologists have the capabilities to make a difference to human rights. The EFPA BoHR & PSy has argued: ‘*Human Rights as a normative frame can be a great inspiration for psychologists and their associations*’ (EFPA Board Human Rights & Psychology, 2015). Psychologists by their knowledge and experience can and should contribute not only to the alleviation of human rights violations, but also to the promotion of the principles and values of human rights and the prevention of (threats of) violations.

According to the ethical principles, codes of conduct for psychologists and statutes of psychologists’ associations, psychologists do have a societal responsibility. To name some examples:

The Universal Declaration of Ethical Principles for Psychologists (UDEPP) (2008) states: Ethics is at the core of every discipline. The UDEPP speaks to the common moral framework that guides and inspires psychologists worldwide towards the highest ethical ideals in their professional and scientific work. Psychologists recognize that they carry out their activities within a larger social context. They

recognize that the lives and identities of human beings both individually and collectively are connected across generations and that there is a reciprocal relationship between human beings and their natural and social environments.

The 'Ethical Principles for Psychologists' (December, 2010) of the National Academy of Psychology (NAOP, 2010) of India put it this way: 'it (the moral framework) deals with what is just, fair and right for the psychologists that are beneficial to the societal members and their quality of life. Psychologists are committed to placing the welfare of society and its members above the self-interest of the discipline and its members.' The document 'reaffirms the commitment of the community of psychologists to help build a better world where peace, freedom, responsibility, justice, humanity and morality prevail. It advocates that psychological activities must occur in order to ensure their relevance to the economy, community, customs, beliefs, and practices.' *Just* means according to what is morally right and fair; for example, fighting for a just case. *Fair* means treating people equally without favouritism or discrimination, for example, a *fairer* distribution of wealth. *Right* means morally good, true or acceptable. The starting point of the NAOP Code, like the UDEPP, lies in ethical principles based on shared human values.

Two articles of the EFPA Model Code (EFPA Board of Ethics, 2015) refer to: 'Respect for individual rights and dignity (3.1), and 'The psychologist is aware of the professional and scientific responsibilities they have towards their clients, research participants, and towards the organization and society in which they live and work' (3.3). In the APA 'Ethical Principles and Code of Conduct' (2002), general principles and ethical standards are to be distinguished. The general principles are *aspirational* in nature, meant to inspire psychologists to 'Do Well'. The ethical standards represent *obligations* to 'Do no harm'; they imply sanctions in case a psychologist has been trespassing the rules. In all these ethical codes, *respect for the dignity of persons and peoples* is a leading principle, in line with the UDHR. 'The core of human rights is the inalienability of the dignity of every person, without any distinction' according to Hirsch Ballin (2015). The ethical rules and codes of conduct should parallel the UDHR and related conventions, especially the Convention of the Rights of the Child (United Nations, 1989).

It can be mentioned that in the rather recently ratified Human Rights Declarations of the Arab and Islamic States (2004, 1990), the principle of dignity has been upheld. In the USA, 'dignity' is used as an argument in lawsuits on affirmative action, reminding that judging people by their ancestry rather than by their merits, risks demeaning their dignity (Levine & Stark, 2015).

The ethical principles of psychology are largely taken from the bioethical framework, meant to regulate the relation between clinician and patient in the medical profession. This framework has four principles: (a) respect for autonomy, (b) non-maleficence, (c) beneficence and (d) social justice (Beauchamp & Childress, 2009). In research done among medical doctors, the 'non-maleficence' (avoid doing harm) principle has been found to be the most monitored principle of the four. In cases where sanctions derived from professional codes of conduct are applied to a psychologist, these are about trespassing mandatory standards. There are no sanctions for a lack of aspiration or a lack of effort towards realizing aspirational goals. 'Human rights need

a proactive stance of psychologists and their associations to look around in society and to do good beyond the rules, regulations and time and place-restrictions of the professional setting' (Kerstin Söderstrom, personal communication, November, 2015).

Human rights as a guiding principle for action sometimes may go beyond formulations of ethical standards and even beyond the law. A change in the APA code (APA, 2010) provides a relevant case. In the 2002 version of the APA code (APA, 2002), Section 1.02 reads: 'psychologists may adhere to the requirements of the law, regulations, or other governing legal authority'. In 2010, a change was made to bring the APA code in line with the so-called Nuremberg Ethic. The text now reads: 'Under no circumstances may this standard be used to justify or defend violating human rights.' The 'Nuremberg Ethic' refers to the process against leading Nazis in the German city of Neurenberg after the Second World War, where the international tribunal made it very clear: 'People who chose to violate fundamental ethical responsibilities could not avoid responsibility by laying the blame for what they did with laws, orders, or regulations' (Pope, 2011).

A plea can be made for the explicit incorporation of human rights into the ethical principles and professional codes of conduct. Such a principle may be needed, not only with reference to individual psychologists, but also with reference to associations of psychologists. According to Buitenweg (2007), a human rights-based approach is a conceptual framework for the process of human development that is normatively based on international human rights standards and operationally directed at promoting and protecting human rights. Essentially, a rights-based approach integrates the norms, standards and principles of the international human rights system into the plans, policies and processes of our profession.

A Social–Behavioural Science Perspective on Human Rights

Human rights as a topic for analysis and discussion falls mainly within the domain of the legal sciences, based in international conventions and international law. At the same time, human rights are about social relationships and power structures, and as social–behavioural scientists, we need to move beyond a legal orientation. A foundation for a social science approach to human rights is provided in the work of Amartya Sen (2004, 2009), Nobel Prize winner, economist and philosopher, and his colleagues, including among others, Martha Nussbaum (2012) and Ingrid Robeyns (2003). They have placed human rights in a social science perspective, the 'Human Development and Capability Approach'.

Dignity (a decent existence), *freedom* (from fear and want) and *inclusiveness* (belonging) are today still a dream for many migrants, minority peoples and persons in disadvantaged positions. To Sen and Nussbaum, the concept of *freedom* means inclusiveness for everybody. The 'Human Development and Capability Approach' is directed at creating conditions for people enabling them to develop their capabilities. From a psychologist's perspective, it is important to distinguish between

external conditions -poor people face all kinds of restrictions-and internal conditions, including feelings of being powerless and a lack of autonomy.

In two impressive books, *Development as Freedom* (1999) and *The Idea of Justice* (2009), Sen calls human rights ‘recognized freedoms’, seen as entitlements of a person to the development and realization of his or her capabilities. He does not see human rights as established legal rights, but rather as strong ethical pronouncements as to what should be done for the development and realization of people’s capabilities (2009, p. 357). Sen (1999) argues that freedoms are the essence of development. Capabilities are ‘what real opportunities you have regarding the life you may lead’ (Sen, 1987, p. 36). Capabilities are essential for freedom to develop, to being human and for the realization of human rights.

Nussbaum (2011) has listed ten central human capabilities, such as the freedom for life, bodily integrity, love and being loved, control over one’s environment and so on. It may be noted how much these capabilities refer to concepts that psychologists consider important for healthy human development.

As human rights are not already established rights, but ethical pronouncements, priorities have to be discussed and determined. This can be done by following the method of ‘open impartiality’, a method Sen cited from Adam Smith.

‘We can never survey our own sentiments and motives, we can never form any judgment concerning them; unless we remove ourselves, as it were, from our own natural station, and endeavour to view them as at a certain distance from us. But we can do this in no other way than by endeavouring to view them with the eyes of other people, or as other people are likely to view them (Smith, 1759, cited by Sen, 2009, p. 125).’

An *emphatic and impartial* observer sees many problems in the world, which need a global approach for solution. Sen defends the universality of human rights, for example, when addressing worldwide poverty. If a person is entitled to something, this something has to be given. Otherwise, the ‘right’ to it is meaningless. Everyone, he argues, who is in the position to support human rights, should take his or her responsibility. Obviously, this includes psychologists.

Human rights can be compared with the aspirational goals or guidelines in the professional codes of psychologists’ associations. Psychologists can play a major role in the realization of the capabilities by promoting the well-being of people and by improving the conditions they live in, but especially, in helping people to overcome their own barriers for development. Sen goes much further than describing ‘aspirations’ for human rights. Recognized freedoms demand that something needs to be done for their realization. They imply obligations and commitment. In the words of Sen, human rights are ‘societal ethics’.

Sen remains a realist: the realization of our commitment is constrained by what is doable and feasible in a given society. For example, measures against poverty will partly depend on the gross national product (GNP) of a country, but poverty in the sense of strongly unequal distribution of affluence and an underclass of have-nots should not be acceptable to any society. The commitment of psychologists to human rights does not mean that as a profession we can address all the inequality and exclusion in the world. We cannot take the entire burden, but we have to help

carrying it: doing all what can be done may be impossible, but doing nothing is no option (Hageaars, 2014).

In summary, Sen calls human rights recognized freedoms, seen as entitlements of a person to the development and realization of his or her capabilities. He argues for a form of societal ethics, in which human rights are not so much already established legal rights, but ‘strong ethical pronouncements as to what should be done’ (Sen, 2009, p. 357). This is in line with, but at the same time, implies a stronger commitment to action than the aspirational goals formulated in our professional codes of conduct.

Towards a Human Rights Based-and-Oriented Psychology

Human rights and psychology have a double relationship, like a ‘two-way traffic’:

- The UDHR of the United Nations forms a normative frame for psychologists and their associations.
- Psychologists and their associations can and should contribute to human rights; an action-oriented approach is being asked for.

In a policy report of the EFPA Board Human Rights & Psychology (2015), this was formulated as follows:

Although it is the duty of any member of a democratic society to act on Human Rights violations and to prevent their emergence as well as to reduce their negative consequences, psychologists by their knowledge and experience, have a special responsibility.

The principles, values and goals of the UDHR can be taken as starting points, as goals to achieve or as instruments in the work of psychologists; equally the Covenants can be of great help and serve as guidance and justification. To achieve a human rights based-and-oriented psychology, the theory and research of psychology, the methods and the practices psychologists use, as well as the psychologists themselves as instruments in diagnosis and therapy, should be addressed. As argued earlier, talking about human rights is meaningless, if this is not followed by actions. On the basis of their scientific knowledge and professional expertise, experienced psychologists are fit to promote the well-being of people.

As mentioned, Sen (e.g. 2009) is referring to enhancing the freedoms of people, so they can develop their capabilities. The science and practice of psychology is based on understanding human behaviour and aimed at enhancing the resilience and developmental capabilities of people. This does not only apply to external circumstances, but also to all kinds of internal factors that may hinder full development. In the three following subsections, research, practice and the person of the psychologist in relation to human rights will be discussed.

Research

Research can add to a psychology based on and oriented towards human rights. Exclusion of people cannot be ignored; prejudices and intolerance continue to exist, and poverty and income inequalities are even increasing in many societies and worldwide. The effects on well-being, health and education are often underestimated (Wilkinson & Pickett, 2009). Our methods for research and knowledge on how to bridge the gaps between religions and ethnic-cultural groups have significantly progressed, although there remain obvious shortcomings. Still, a critical attitude towards research is required. Carol Gilligan (1982) in her revolutionary book *In a Different Voice* criticized the inbuilt gender preferences of some research and theories. Nimisha Patel (2003) argued that researchers should critically consider whether their work does not endorse the social order and as such may contribute to the maintenance of inequalities and injustice. Research in clinical psychology and therapy is primarily addressing how the traumatized person can be helped to address the trauma and deal with it, and less often is aimed at interventions to improve health and well-being through social change.

Another example is research on minority groups. Such research is urgently needed given the discrimination often faced by migrants and minorities. But we may well ask who is conducting the research. Often, researchers from 'outside' rather than the target groups as the primary stakeholders set the objectives of studies and determine research questions. The use of 'ethnicity' in research has to be handled very carefully, also in the way the outcomes are publicized. The way in which findings are reported can lead to stigmatization and restriction of freedoms.

A thematic issue of the journal *Psychology and Developing Societies* (Thapa & Kumar, 2015) provides a good example of how much research and thinking already has been done on the relationships between mental health and social exclusion. Social exclusion is defined as '*structural, institutional, or agentic processes of repulsion or obstruction*' (Fischer, 2008, p. 3, quoted in Krishnan, 2015). Institutional forms of discrimination are mostly unintended, but also mostly unseen. A recent report on educational success in the Netherlands shows a sharp divide between children of parents with higher and parents with lower education (Inspectie van het Onderwijs, 2016). Psychologists are in the position to address this issue and help to develop strategies that lead to more equality and fairness.

Practice

As argued by the former President of EFPA, Robert Roe, for the psychologist today the world does not stop at the door of the consulting room, like in Freud's time (Roe, 2014). The applicability of psychology in serving human rights demands action in professional practice. A significant amount of research has been done on social exclusion, but the implementation of the findings in every day practice leaves to be

desired. In our interactions and interventions with clients, we have to move from an 'us - them' opposition to an open and inclusive 'we' (Helberg & Kal, 2015). To 'include' means to connect and reconnect groups. Human rights psychology is *per se* contextual, historical and directed at enhancing resilience in people and peoples. In a recently published book in Dutch, Tripathi (2015) argues that psychologists could play a major role in destigmatizing and inclusion. In order not to consolidate people in their disadvantaged position, to remain stuck in the process of 'othering' (Tripathi, 2015), more needs to be done than just helping. Low self-esteem and an inadequate view of options for action keep poor people where they are; they remain 'the other'. Psychologists have to assist in the process of 'un-othering' and in developing new identities. The Caribbean French Algerian psychiatrist Frantz Fanon (1961) stated: '[e]xclusion makes ill'. Exclusion affects well-being, health and learning possibilities.

Former unequal relationships have had their influence on the practice of psychology: the long debate about so-called racial differences, mostly about group differences in intelligence, is a stained page in the history of psychology that we have still not fully turned. The testing of intelligence and interpretation of intelligence test scores without taking fully into account the ethnic, minority or migrant background of the test taker is continuing. In many instances, test scores still are interpreted with one set of norms that is the same for all groups in the society. Sometimes, test users excuse themselves with the argument that assessment without standardized tests may be even more discriminatory, because children have to attend the same (mainstream) schools. Fairness of tests and testing has been well defined (e.g. Camilli, 2006), and such excuses are a poor testimony for our profession. A related example can be taken from work and organization psychology, where psychologists play an important role in selection and placement. With selection and job placement, a distinction can be made between three interested parties, the individual applicant for a job, the organization that has the job vacancy and the society at large which has an interest in a balanced distribution of jobs across various groups in the labour market. By and large, psychologists tend to give priority to the interests of the employer by selecting the applicant with the highest abilities and competencies (Poortinga & Klieme, 2016). However, it is questionable whether in this way the principle of fairness is not violated. In European countries, it is known that migrants and members of minority groups tend to face discrimination in the labour market.

The human rights discourse in psychology needs to be more in terms of social (in)equalities and (in)justices than that of pathology, deviancy and dysfunctional behaviours of minorities (Patel, 2003). A human rights based-and-oriented psychology includes the context and history of the people involved.

The following gives an example of involvement of psychologists in enhancing children's rights. Decisions on the future of asylum seeking children have to be in their best interests and offer opportunities for their prosperous development, in line with the Convention on the Rights of the Child (United Nations, 1989). A diagnostic pedagogic assessment tool has been developed-the best interest of the child questionnaire (BIC-Q),- that is being filled in by a parent, by the child itself and by a professional (Zijlstra, 2012). On a voluntary basis, psychologists are being trained

to use this method and to prepare a report on the basis of which an expert advice will be given in the asylum procedure from both a behavioural and a children's rights perspective.

The Psychologist

The need of belonging is a basic need of human beings; consequently, the prevention of exclusion as a human right is very important. Psychologists have studied the mechanisms and the effects of exclusion extensively. They are well equipped to work through diagnosis and therapy on the effects which exclusion, marginalization, discrimination and dehumanization have on people and also to recognize people's inability to realize their capabilities due to adverse circumstances. At the same time, psychologists are their own professional instruments and influenced by their personal history and the society they live in, for example, by power structures, colonialism, social Darwinism and Islamophobia. Beliefs, prejudices and attitudes are part of the psychologist's *habitus* (Wekker, 2015).

In general, psychologists are very motivated to do good to persons and society, but this does not take away that they are also influenced by society. For example, there are still psychologists judging homosexuality to be a disease; although in the most widely recognized international diagnostic system, the International Classification of Diseases of the WHO, this has been long abandoned. In Europe, there is still a lack of recognition and acknowledgement of the aftermath of slave trade and colonialism of which the consequences continue to be felt today. Mbembe (2013) wrote a sharp criticism of present global relations. Exclusion has been learnt, he argues. Migrant workers are replacing the slaves of previous times. Armed conflicts and economic exploitation bring forward refugee seekers and economic migration to Europe. It is one of the constructive tasks of psychologists (in the Western world) to help people and societies to 'unlearn' societal and economic exclusion.

Actions

As mentioned before, human rights are meaningless without actions, without assisting people in growing to their full potentiality, and to replace 'the domination of circumstances over individuals by the domination of individuals over chance and circumstances' (Sen, 2005, p. 155, citing Marx).

For the profession of psychology, often portrayed as a helping profession, it is important to prevent violations, exclusion and dehumanizing circumstances or practices. The ethical codes of conduct outline clearly the principles and rules for this and mention sanctions if we do not act in accordance with the rules. The codes also reflect the aspirations of psychologists to do well. A real commitment to do well goes beyond the expression of intentions: a human rights based-and-oriented psychology

implies active involvement. Professional psychologists must act according to human rights standards and not remain stuck in a 'human rights oratory' (Sen, 1999, p. 227). Actions are the responsibility of individual psychologists as well as of their associations, local, national and international. Such actions have a broad scope; they can be directed at human rights of individual persons, groups and the society at large. Of course, psychologists cannot take the entire burden on their shoulders, but can help carrying it: doing all what can be done may be impossible, but doing nothing is no option (EFPA Board Human Rights & Psychology, 2015).

A human rights orientation among individual psychologists will expand interventions from trauma treatment and building resilience to suggestions for and assistance with concrete actions. Such an orientation will also lead to active intervention when it is noted that discriminatory practices exist in some organization to which a psychologist is rendering professional services. The psychologist need not act alone. In the Netherlands, a legalistic interpretation of the rights of residence of refugees sometimes leads to expulsion of families with children raised for several years in the country. Psychologists have used their competence to channel public indignation about such cases and making the public voice heard at the right places. Any psychologist can think of a host of further examples; individual action is a matter of accepting responsibility and engagement.

At the level of national and international associations, an explicit strategy for a human rights policy and an agenda for activities are recommended. A few items for such an agenda can be mentioned. Perhaps, an early step is the articulation of human rights in each national code of conduct and ethics processes. Maybe a further principle needs to be added to 'Do no harm' and 'Do well'; it would express something like: 'To do everything within the reach of our professional competences to prevent, attack and relieve dehumanizing processes and to promote humanity.' More positively stated: societal responsibility of psychologists implies commitment and action on human rights. Another item on the agenda for our associations should be action on policies that have negative consequences for vulnerable groups in a society. With the exception of the area of health, most associations of psychologists are not recognized advisers of their national government or city councils. Compared to other professions, notably economists, psychologists are rarely seen in public debates. Psychologists should seize more opportunities to bring the 'Human Factor' back into the public debate and to show the public what they have to offer.

At a concrete level, there is a host of specific actions that could be mentioned; let me give some examples:

- The president of the Surinamese Psychologists Association wrote in 2014 an open letter to protest against a popular song, discriminating lesbian, gay, bisexual and transgender (LGTB) people.
- The Netherlands Institute of Psychologists (NIP) prepared a report on protection of privacy of clients in (youth) health care that was threatened by administrative regulations.
- APA president Susan McDaniel (2015) sent a letter to US president Barack Obama, asking him to fully sign the UN Anti-torture Convention.

In summary, psychologists individually and through their associations should carry out their mission. We should not only be the 'sutlers', walking behind the troops in the wars on human rights, we should be involved actively in the fighting.

Outlook

This article has argued for the importance of a human rights perspective as a guiding principle for psychologists and how they can actively contribute to the promotion of human rights. So far, human rights and human rights education is neither a standard subject in university programmes for psychology nor in postgraduate curricula, nor in requirements for Continuous Professional Development (CPD). Education provides the opportunity to create a learning environment for both teachers and students for the promotion of human rights and the well-being of people and peoples. The introduction of human rights in curricula will be a good catalyst for the further development of social science-based approaches to human rights in all its aspects. Curriculum development implies a definition of the knowledge and competencies needed for a human rights based-and-oriented profession. Sommer and Stellmacher (2009) found that human rights education can be effective in higher education. Through seminars, knowledge of human rights and appreciation of their importance was shown to increase. In 'Going *glocal* in higher education' (Friedman et al., 2015), a framework is provided for *glocal* education, reviewing existing education paradigms, combining a global approach with local culture, 'internationalization at home' and decolonial practices of learning.

From earlier sections of this article, it should be clear that not only the legal aspects of human rights should be part of a relevant curriculum, but also social science-oriented theories like those of Sen and Nussbaum, ethics and ethical dilemmas and good practices from various fields of work. Nussbaum (1997, 2010) has sharply criticized the current educational system that is driven by economic profit. She gives concrete examples of how education and schooling can play a central role in the building of humanity and world citizenship. Human rights education must not be restricted to learning facts, but should contribute also to the personal development of the psychologist: awareness of the own attitudes, 'decolonizing' the mind and learning to jump over one's own shadows. As Barry Burke (2000) stated: 'Mahatma Gandhi proposed to stand the education on the head'. Education needs to be a programme of social transformation. If psychologists are their own instruments, they need, like every other instrument, a regular *calibration*.

In summary, this article has argued for the importance of a human rights perspective as a guiding principle for psychologists. Psychologists by their professional knowledge and expertise can and should actively contribute to the promotion of human rights. The further development of a social science-based approach of human rights in all its aspects should be promoted.

References

- Allan, A. (2013). Are human rights redundant in the ethical codes of psychologists?. *Ethics & Behavior*, 23(4), 251–265.
- APA (American Psychological Association). (2002). Ethical principles of psychologists and code of conduct. *American Psychologist*, 47(12), 1597–1611.
- APA (American Psychological Association). (2010). 2010 amendments to the 2002 'ethical principles of psychologists and code of conduct'. *American Psychologist*, 65(5), 493.
- Beauchamp, T. L., & Childress, J. F. (2009). *Principles of biomedical ethics* (6th ed.). Oxford University Press.
- Buitenweg, R. (2007). *Human rights, human plights in a Global Village*. Clarity Press.
- Burke, B. (2000). *Mahatma Gandhi on education, the encyclopaedia of informal education*. Retrieved from <http://infed.org/mobi/mahatma-gandhi-on-education>
- Camilli, G. (2006). Test fairness. In R. L. Brennan (Ed.), *Educational measurement* (4th ed., pp. 221–256). American Council on Education and Praeger Publishers.
- Coalson, R. (2008). *Russian conservatives challenge notion of 'universal' values*. Radio Liberty. Retrieved December 15, 2015, from http://www.rferl.org/content/Russian_Conservatives_Challenge_Notion_Of_Universal_Values/1358106.html
- Council of the League of Arab States. (2004). *The statute of the Arab court of human rights*. Retrieved April 2, 2016, from http://www.acihl.org/articles.htm?article_id=6
- EFPA. (2013). *Tasks and recommendations of new TF Human Rights*. EFPA, General Assembly, Brussels. Retrieved December 11, 2015, from <http://www.efpa.eu/>
- EFPA Board of Ethics. (2015b). *Model Code*. Retrieved December 15, 2015, from <http://www.efpa.eu/>
- EFPA Board Human Rights and Psychology. (2015). *Psychology matters in human rights—Human rights matter in psychology*. EFPA policy and action in the area of Human Rights and Psychology. Retrieved December 15, 2015, from www.Efpa.eu
- Fanon, F. (1961). *Les damnés de la terre*. Paris: Éditions Maspéro. [In English: (1963) *The wretched of the earth*. New York: Grove Press.]
- Friedman, J., Haverkate, V., Oomen, B., Park, E., & Sklad, M. (2015). *Going global in higher education: The theory, teaching and measurement of global citizenship*. University College Roosevelt.
- Gilligan, C. (1982). *In a different voice*. Harvard University Press.
- Grossman, D. (2015). *Ademen met beide longen* [Breathe with both lungs]. Amsterdam: Nationaal Comité 4 en 5 mei. Stichting Collectieve Propaganda van het Nederlandse Boek.
- Hagensaars, P. (2014, July). *Human rights, a responsibility of psychologists*. Paper presented at the ICAP conference, symposium 'Emerging Issues in International Ethics', Paris.
- Helberg, G., & Kal, D. (2015). Voor wie ik liefheb wil ik heten [For whom I love I want to have a name]. In H. Beijers, P. Hagensaars, & E. Minkenberg (Eds), *Identiteit: uitsluiten of verbinden; Professionals bekennen kleur* [Identity: excluding or connecting; Professionals show their colours] (pp. 153–165). Utrecht NL, De Graaff.
- Hirsch Ballin, E. (2015). Human dignity: Culturally different, nevertheless universal. *Right now*, 6–8. Tilburg University.
- Inspectie van het Onderwijs. (2016). *De staat van het onderwijs, onderwijsverslag 2014–2015*. [The state of education, education report 2014–2015]. Den Haag, NL: Inspectie van het Onderwijs, Ministerie van Onderwijs Cultuur en Wetenschap. (Ministry of Education).
- Krishnan, L. (2015). Social exclusion, mental health, disadvantage and injustice. *Psychology and Developing Societies*, 27(2), 155–174.
- Levine, S. S., & Stark, D. (2015). Diversity makes you brighter. *International New York Times* (December 9, 2015), Op-ED Contributors.
- Mbembe, A. (2013). *Critique de la raison nègre* [Critique of Black reason]. La Decouverte.
- McDaniel, S. H. (2015). *Letter to president Obama*. Retrieved from www.APA.Org

- NAOP (National Academy of Psychology of India). (2010). *Ethical principles for psychologists*. Retrieved 20 December 2015, from <http://www.naopindia.org/ethical-principles>
- Nussbaum, M. C. (1997). *Cultivating humanity: A classical defence of reform in liberal education*. Harvard University Press.
- Nussbaum, M. C. (2010). *Not for profit: Why democracy needs the humanities*. Princeton University Press.
- Nussbaum, M. C. (2011). *Creating capabilities: The human development approach*. The Belknap Press of Harvard University Press.
- Nussbaum, M. C. (2012). *The new religious intolerance: overcoming the politics of fear in an anxious age*. Belknap Press of Harvard University Press.
- Patel, N. (2003). Clinical psychology: Reinforcing inequalities or facilitating empowerment? *The International Journal of Human Rights*, 7(1), 16–39.
- Poortinga, Y. H., & Klieme, E. (2016). History and current status of testing across cultures and countries. In F. T. L. Leong, J. Gregoire, J. Hattie, F. M. Cheung, & K. F. Geisinger (Eds.), *ITC international handbook of testing and assessment* (pp. 14–28). Oxford University Press.
- Pope, K. S. (2011). Are the American Psychological Association's detainee interrogation policies ethical and effective? *Zeitschrift Fur Psychologie*, 219(3), 150–158.
- Robeyns, I. (2003). *The capability approach: An interdisciplinary introduction*. University of Amsterdam.
- Roe, R. A. (2014). *Diversity and collaboration in psychology*. Lecture at the CANPA conference in Paramaribo.
- Roosevelt, E. (1948). *The struggle for human rights*. Address to the General Assembly of the United Nations, Sorbonne, Paris. Retrieved from <http://www.gwu.edu/~erpapers/documents/speeches/doc026617.cfm>
- Sen, A. (1987). *On ethics and economics*. Blackwell.
- Sen, A. (1999). *Development as freedom*. Allen Lane.
- Sen, A. (2004). How does culture matter? In V. Rao & M. Walton (Eds.), *Culture and public action* (pp. 37–58). Stanford Social Sciences, Stanford University Press.
- Sen, A. (2005). Human rights and capabilities. *Journal of Human Development*, 6(2), 151–166.
- Sen, A. (2009). *The idea of justice*. Allen Lane & Harvard University Press.
- Sommer, G., & Stellmacher, J. (2009). *Menschenrechte und Menschenrechtsbildung. Eine psychologische Bestandsaufnahme* [Human rights and human rights education: A psychological inventory]. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Thapa, K., & Kumar, R. (2015). Social exclusion and mental health. *Psychology and Developing Societies*, 27(2), 143–154.
- Tripathi, R. C. (2015). Identiteit en armoede [Identity and poverty]. In H. Beijers, P. Hagedaars, & E. Minkenberg (Eds.), *Identiteit: uitsluiten of verbinden; Professionals bekenen kleur* [Identity: excluding or connecting; Professionals show their colours] (pp. 65–78). De Graaff.
- United Nations. (1948). *The universal declaration of human rights*. United Nations.
- United Nations. (1966a). *International covenant on civil and political rights*. United Nations.
- United Nations. (1966b). *International covenant on economic, social and cultural rights*. United Nations.
- United Nations. (1989). *Convention on the Rights of the Child*. United Nations.
- Universal Declaration of Ethical Principles for Psychologists (UDEPP). (2008). Retrieved from International Union of Psychological Science. <http://www.iupsys.org/ethics/univdecl2008.html>
- Wekker, G. (2015). Identiteit en uitsluiting [Identity and exclusion]. In H. Beijers, P. Hagedaars, & E. Minkenberg (Eds.), *Identiteit: uitsluiten of verbinden; Professionals bekenen kleur* [Identity: excluding or connecting; Professionals show their colours] (pp. 53–64). De Graaff.
- Wilkinson, R., & Pickett, K. (2009). *The spirit level: Why greater equality makes societies stronger*. Allen Lane.
- Zijlstra, E. (2012). In the best interest of the child: A study into a decision-support tool validating asylum-seeking children's rights from a behavioural scientific perspective (Doctoral thesis). University of Groningen, Netherlands.

For a Society Beyond Justice



Jayant Lele

This paper is dedicated to the memories of two friends: Ajit Dalal and Rajendra Singh. I wish they were still around to question my conclusions and assist me in correcting my mistakes.

Marx seems to have thought this precept (from each according to his abilities, to each according to his needs) would apply only when the circumstances of justice are surpassed; for it belongs to a fully developed socialist society when work itself is life's principal need ... and the limitations of moderate scarcity no longer hold. Thus, in a sense, it is not a precept of justice but for a society beyond justice.

Rawls (1974)

Abstract An integrated theory framework for psychology that spans disciplinary boundaries and ensures a commitment to improving quality of life and wellbeing requires concepts with minimal preconceptions but is comprehensive enough. It must also be able to address challenges to human welfare that have escalated in our times. The first part of the paper suggests a minimalist-comprehensive framework within which an integrated discipline of psychology could situate itself. It recognizes three constitutive dimensions of the human condition as nature, society and self. Following Habermas' (1976:15) suggestion that the essence of rationality is human inability to “not-learn”, it associates them with the three dimensions of rationality: cognitive/instrumental, moral/practical and transformative/liberating. I see psychology as focusing on the third dimension. Work, as creative and productive social activity, is central to the human condition. It brings into play all three dimensions. Change in its content and context reflects shifts in nature, society and the individual. The second part deals with norms of justice that govern formal liberal democracies and examines

Lele, J. (2020). For a society beyond justice, *Psychology and Developing Societies*, 32(1), 54–64. <https://doi.org/10.1177/0971333619900045>.

J. Lele (✉)
Queen's University, Kingston, Canada

their inadequacy in responding to challenges to human welfare. The paper concludes by recognizing the fact that justice can only serve as a placeholder for true equality until societies move beyond justice.

Introduction

In this paper, I hope to show why the two projects of disciplinary integration and of contributing to human wellbeing should be seen as closely interlinked. Their roots lie deep in the history of social crises in globally integrated human communities and their historic attempts to overcome fragmentation and suffering. I see this as an important background for analysing and responding to the two challenges for the discipline of psychology.

In the first part of the paper, I suggest a comprehensive minimalist framework within which the integrated discipline of psychology can, perhaps, be situated. The second part attempts to respond to the challenge of ensuring that the discipline contributes to human welfare and to the improvement of the quality of individual life. An ever-emerging *telos* of the efforts to enhance human wellbeing can be thought of as what John Rawls, a neo-Kantian American philosopher citing Karl Marx, calls “society beyond justice”.

I am an outsider to the discipline of psychology. My own professional interests are directed towards examining the relationship between human sciences and human wellbeing. The problem of fragmentation faced by psychology is shared by other disciplines such as sociology and politics, the disciplines of my formal education and profession. I believe the problem is rooted in the shared history of these and other disciplines. In my own work so far, I have found it necessary to ignore disciplinary boundaries. I have searched for links that, in one way or another, touch on the relationship between human beings, the external nature and society. As a result, I feel a need to articulate something equivalent to a framework as the basis of my cross-disciplinary inquiries. This paper allows me the opportunity to try to do that so as to enter into a dialogue with concerned psychologists about their two-fold quest. Therefore, I shall make an attempt to share the assumptions that I recognize as being at the base of my own work. In order to do that, I begin by invoking the thought of two major philosophers of the European Enlightenment: Kant and Condorcet.

The ideas that follow are tentative proposals for a dialogue with scholars in various human science disciplines including, of course, psychology. They are of a very preliminary and exploratory nature and need to be investigated and discussed in greater detail by those more competent than me in many of the areas that are touched upon. I recognize that there is an urgent need for such dialogue about a paradigm shift that can encompass both natural and human sciences in the interest of confronting the current crisis and for advancing the cause of human wellbeing through a partnership between our internal and external nature.

Part I

How are we to visualize the project of an integrative psychology that sustains its commitment to human welfare? The task of creating an integrated theory framework for psychology, in view of its enormous diversity of interests and approaches as well as its ever-widening research enterprise, seems formidable. To span this divide, we must find a way to move beyond persistent dualisms, such as mind–body, nature–culture and reason–emotion, which continue to plague the discipline. We must also find a way to overcome the impact fragmentation has on research and teaching through the proliferation of subdisciplines and specializations. As Healy (2012) points out, in line with the growing complexity and multidimensional actuality of our mental life, the presence of diverse approaches and different theoretical assumptions is inevitable. It needs an encompassing integrating framework that should contain, sustain and benefit from diversity. Such a framework must, at the same time, rest on the principle of parsimony and build upon fewest and simplest possible axiomatic assumptions.

Psychology shares many traits with other social and human sciences. However, it is unique in its relationship to neuroscience, which Henriques (2004) sees as being “boxed between” natural and human sciences. The advantage it lends to psychology and the limitations it imposes on such a framework have to be kept in mind.

Let us begin by exploring the possibility of a minimal starting point that is capable of being shared by all human sciences and is conducive to the necessary paradigm shift that can encompass concerns about all sciences. An adequate comprehensive analysis of today’s all-encompassing crisis, with its diverse economic, cultural, ecological, political and psychological manifestations, demands such an exercise. We could begin by recognizing the dynamic relationships we have, as human beings, with nature on one hand and society on the other. I believe this can be accomplished by an appeal to two interrelated concepts about the human condition: reason and work. Both were first invoked in Europe’s Age of Enlightenment. They received extensive and often contradictory treatment by the philosophers of that period and have been rethought and reinterpreted since then in response to the epochal changes in human society. Their dynamic history seems to me to be a promising starting point.

The possibility of enhancing human welfare through scientific intervention and organized collective action was asserted with great confidence for the first time in that era. A century of dramatic social and economic developments had preceded it. That had led to a great deal of rich rethinking about nature and society. It called for a more scientific understanding of nature. Events that followed in the wake of the Enlightenment were also, in part, responsible for the fragmentation of scientific disciplines and the disillusionment about the promise of progress towards enhanced human welfare. It seems desirable, therefore, to explore both the context and the content of the ideas of the philosophers of the Enlightenment.

The Enlightenment project emerged as the culmination of major intellectual and practical changes that had been taking place in Europe’s economic, social and cultural relations over several centuries. While the feudal order had endured for centuries

through a widely shared belief in divine dispensation, peasants had been making small technological changes on their farms. They must have induced small but significant changes in the thinking of the working people. This steady accumulation of small innovations in everyday life practices and thoughts slowly led to demands for qualitative shifts in production relations. Old beliefs no longer corresponded to the daily experience of peasants and led to a slowly accelerating decline in the legitimacy of existing institutions. Advances in science came towards the end of this process with growing confidence in human capability to better understand the phenomena of nature.

Three themes dominated the deliberations of the philosophers of this age: science, reason and progress. The idea of ‘divine reason’ was replaced with that of ‘human reason.’ Science had already demonstrated that nature could be understood systematically and modified through human action and used for the betterment of the species. The idea of progress meant the possibility of liberation of all human beings from want through a better understanding of the previously unexplained forces of nature and from long centuries of oppression through transformative action against the dominating “estates” of priesthood, aristocracy and empire. The corrupt acts of the masters who had been violating the virtues they were preaching to the common people deserved to be challenged and replaced. The French Revolution was the first massive experiment of transformative action that marked the culmination of the Age.

The Age of Enlightenment also saw the emergence of the idea of the individual as an autonomous and conscious being with personal conflicts and private interest but drawn at the same time into networks of organizations, institutions and publicity. It became, as a result, the object of study by a new discipline called psychology. Concerns about alienation, abstraction, loss of identity and distinctness of work and leisure also began to surface. In the latter half of the eighteenth century, psychology was already an established discipline in college and university curricula (Hatfield, 1998). Kant, arguably the most influential philosopher of the Enlightenment, did not expect psychology to ever become a science in his sense of that term, however, as Leary (1982:18) states, he laid the foundation for later developments in the broad field of inquiry that had already been labelled “psychology.”

The Human Condition

Kant’s following four questions sum up the issues that need to be addressed by a minimalist integration framework for knowledge seeking disciplines.

- What can I know?
- What ought I to do?
- What may I hope?
- What is the human being?

The first three questions correspond roughly to the three dimensions of nature, society and self and are constitutive of a comprehensive answer to the fourth question.

Together they point us to the fact that every new human being, upon its arrival into the world, is confronted by a pre-existing context of nature on one hand and society on the other. A human being is nature, in the sense that it is (has) body and yet it can and does distinguish itself from nature. Moreover, a human being is also society, in the sense that it is necessarily part of society and yet it can and does see itself as separate from it. We are all shaped by but also shape nature, just as we are shaped by and shape society. In other words, every human being, as it moves through life, creates itself as a natural and social being, anew. It establishes its subjectivity, by actively mediating its way along the two axes of nature and society of which she/he is part. With such a three-dimensional conception of the human condition, we should be able to explore the complex relationships within and between various disciplines with a view to effectively address the complexities of their plurality and fragmentation and to link them at the same time to the concerns about human wellbeing. This way of looking at a discipline seems well suited for psychology in view of its mediating status between natural and social sciences.

Kant's own understanding of these three dimensions and his responses to the questions were guided by his material context. It led to the distinctions he made between the real and the ideal and between phenomenal and noumenal worlds. It also influenced his conceptions of knowledge, science and reason. For Kant, the answer to the first question was to be found in metaphysics, to the second in morality and to the third in religion. Although his insights were potentially path breaking, their real implications, in view of rapidly changing times, remained underdeveloped. The distinction between actual, real (meaning that which is materially possible and recognizable but not yet here) and ideal (as it should be in view of those possibilities) had yet to be spelled out in concrete terms in relation to specific historical contexts. Questions about transformative action for the realization of the ideal as real had not yet been raised. These concerns led critical students of his philosophy, first Hegel and then Marx in particular, to substantially rethink, reformulate and enrich his ideas.

Kant's second question relates to the self-society relation. In his concept of progress, the self and society move in tandem. Kant argues that they move from heteronomy and immaturity, from the tutelage of nature or social custom to mature rational autonomy and enlightenment of the human subject. If every human being were to remain fully aware of its being embodied as nature and embedded in society, as it mediates its way through life and grows up to be an adult, she/he would fulfil Kant's ardent hope of "mature autonomy" (*muendigkeit*). They would, by gaining genuine self-knowledge, find good for all human beings in their own best of desires. However, Kant did not historicize this process and instead relied on the distinction between what he saw as 'real' and what he projected as 'ideal'.

Given the context of their times and indeed not surprisingly, most of the Enlightenment philosophers expressed beliefs that upheld a patriarchal understanding of women as being "by nature" inferior to men when it came to public affairs. Montesquieu, for example, advocated the "domestication" of women. Kant admired women for their kindness, benevolence, profundity and compassion, as merits appropriate to their sex.

A notable exception for those times from among these, mostly male, Enlightenment philosophers was Condorcet, a radical feminist and a true egalitarian. Condorcet's thought is uniquely sensitive to the importance of human diversity and hence he does not repeat the common mistake of treating equality as sameness. For him, equality and liberty were the two mutually reinforcing values associated with human rationality because freedom, he notes, can ensure the realization of equality while equality, in turn, enhances freedom. Sensitive to the pedagogic violence perpetrated for centuries by still dominant ideologies of his times, Condorcet placed a great deal of emphasis on education for all in order to nurture human critical potential or, in other words, human reason. As Wood (2000:423) puts it, "Condorcet's universalism and his optimism about human progress rest on the same foundation as his commitment to equality, his respect for the authenticity and integrity of other cultures, his attack on imperialism."

The Enlightenment is usually treated as the point of culmination of Western Europe's transition from tradition to modernity. That narrative runs parallel to and overlaps with another narrative, that of the transition from feudalism to capitalism. While the locus of Enlightenment was primarily France but also Italy and Germany, as well as Scotland, that of the transition to capitalism was England. Scottish philosophers were the ones who reinterpreted some basic Enlightenment ideas in response to some of the positive aspects of England's transition to capitalism. Thus we arrive at liberalism as the ideology that eminently corresponds to the logic of capital. It has since served as a legitimating ideology of the capitalist mode of production. I return to this aspect in the second part of the paper as it is directly relevant to the analysis of the current crisis that has threatened some of the gains in human wellbeing that were made in preceding decades.

Reason

For the philosophers of European Enlightenment, reason was to be the weapon against the prevailing regime of ignorance and dogma. Their hope was that once unfettered of that regime, which had lasted for many centuries, human communities would attain freedom and equality for all and would be able to engage freely in the pursuit of truth. They believed that reason should, in the long run, bring true enlightenment to the human community.

Although it is recognized as a faculty that is inherent to us as humans and is routinely invoked in all disciplines and discussions, there seems to be no fully shared understanding of the concept as human faculty and of its powers. I see this as a faculty that develops throughout our lives as we mediate in and as nature, in and as members of society. Habermas (1975:15) aptly describes reason as the automatic human inability to "not-learn". Whereas he leaves this insight at the level of mere conjecture, I see it reflected in every child's insatiably precocious urge to ask the question "why!" In other words, it is the insatiable human urge to move beyond the given, beyond what is, by making new sense, in terms of what it is not. Our language

faculty is also at the root of our need, desire and ability to make new sense together. It also implies an urge to act together so as to change it. In keeping with the three dimensionality of the human condition, reason is a three-dimensional quest for the discovery of new sense and action for a new way of life. Habermas goes on to say that it is “not learning”, in reference to the irrationality of the history of the species, that which requires explanation. As we take up the question of the current crisis in the following pages, we focus on how the perpetuation of that irrationality has been made possible in our times.

A child’s *why* question captures the intuitive three dimensionality of reason. It includes the urge to question a given explanation of what is. It also implies listening to the answer given in the present with a desire to believe in it but not without scepticism. Furthermore, the question looks for a more satisfying meaning that should be forthcoming or may have emerged on the horizon, as a result of everyday acts of reason. Therefore, it is an urge to believe in an interpretation and explanation of the actual only as long as it makes rational sense, a sense that corresponds to experience. Everyday activities of members of human communities, of working and communicating with each other together, keep affecting and changing the present. This goes on while the established authoritative answers to the *why* question begin to lag behind. It is the need and desire of those in power to sustain their domination in spite of its obsolescence that perpetuates irrationality of the history of the species. It must and does, however, lead eventually to resistance, struggle and, at some point, qualitative change. Since all three dimensions of reason correspond to the three dimensions of the human condition and human activity, every *why* question, when taken up in its totality, seeks an answer that links all three aspects of our life: objective-material, intersubjective-social and subjective-personal. To put it differently, it is a question that has descriptive, ethical and aesthetic/transformational import, all at the same time. This intuitive three dimensionality of the *why* question faces serious obstacles, under conditions of dominance, as it does in our times.

On Autonomy

For Kant, reason was to be the weapon for human mind in its struggle against passions. Deeply suspicious of our natural desires, he trusted our natural/rational potential for uncovering the obstacles to genuine self-knowledge and to arrive at mature autonomy. For the early promoters of neoliberal ideas such as Hayek, the fear of the state was also the central motif.

For Kant and Kantians, the idea of autonomy is central to the conception of person. Kant’s reflections on autonomy and reason have had a great deal of influence on liberal political theory (Rawls) and Developmental psychology (Kohlberg). Kant’s primary interest in autonomy was to capture the basis of an individual’s moral responsibility. The liberal idea of autonomy emphasizes protection of individual freedom. Liberal philosophers distinguish between personal autonomy and moral autonomy. They treat personal autonomy as being ‘natural’ to humans. To them, it implies behaviour

that is subject to no involuntary restraint whereas moral autonomy, by contrast, is associated with the relation between one person's pursuit of his own ends and others' pursuit of theirs (Waldron, 2005).

Liberal tradition valorizes personal autonomy as an expression of its abridged version of freedom. Since being in society requires cooperation and compromise with other members of the community social responsibility is seen as requiring curtailment of freedom. It sees demands for equality of distribution and recognition as threats. It juxtaposes even the constrained conceptions of freedom and equality as being in competition with each other. According to liberal political theory, a society under a capitalist democracy with 'free market' is where autonomous individuals are free to pursue their own interests. It claims that this accords best with human needs and human nature.

The original focus of autonomy for Enlightenment thinkers was the fear of an absolutist state. They postulated that the desired state was to be based on a 'social contract' and subject to the will of free and independent citizens. That fear of state's overreach is carried over in liberal political theory through the split between state and civil society. Critical objections to liberal democracy's claims that it has inherited this vision in practice come from a variety of directions. They collectively point to the fact that, in practice, we are dealing with 'a patriarchal-capitalist-territorial-nation-state'. Each of these terms points to the different ways in which serious exclusionary practices continue to prevail in today's formal-procedural democracy.

In the historical context of the Enlightenment, autonomy as a character ideal in which a person has the courage to defy centuries of domination of an outdated orthodoxy made eminent sense. Autonomy in this sense also meant that s/he would exercise critical self-reflection about his/her relation to nature and society. The notion that the individual is an atomic entity, unencumbered by its social relations seems to be the core of liberal Idea of autonomy. Society becomes a mere collection of such individuals. An assumption such as this also implies that a person's self can be defined without having to take into account any conceptions of the good that s/he holds. This clearly contradicts the fact that human beings are finite, concrete, embodied beings who are firmly rooted in nature and in their communities at the time of their birth and remain dependent and integrated in such relations for the rest of their lives. There seems to be an emerging disciplinary consensus around the notion of "relational autonomy" that replaces the more traditional, "atomistic" notion of a self-sufficient but ethical individual unaffected by social relationships. The latter, as has been noted, was driven by an abridged sense of reason that tried to strip the distorting influences of feelings and emotions. Some contemporary liberal thinkers emphasize the kernel of truth in personal autonomy claims, suggesting that pressures to conform to community norms, even when they contradict reason, require the courage to defy them (Taylor, 2005).

The underlying patriarchal assumptions behind the claims about the necessity and attainability of autonomy in Kant's ideas were exposed by the Gilligan-Kohlberg controversy in developmental psychology. It also raised doubts about a great deal of work in the discipline in general. Several cultural psychologists have criticized the "the unreflective exportation of Western psychology" to other cultural contexts

(Gergen et al., 1996) while others, such as Eckensberger (2008), have attempted to locate in other than western cultures the universal dimension of Kantian autonomy and its distinctness from the context-specific liberal notions of individualism.

The gender-based critique of developmental psychology also brought attention to the issues of nurture, reproduction, love and care. They had been previously relegated to the realm of nature alone. In her immanent critique of both Kohlberg and Rawls, Benhabib (1985) calls for a dialogic model to replace the implicit monologic Kantian model of their assumptions. Such dialogue must recognize the involvement of a finite, concrete, embodied self in conversation with similarly endowed concrete others. Rethinking autonomy in a three-dimensional way can bring into focus the issues not fully highlighted by those who emphasize only some specific neglected dimensions of nature-society-self mediation.

For Kant, the individual was the battleground of struggles for better life. With “the seed of discord” planted by nature and its bidirectional propensity to associate with as well as compete and fight against each other, the human individual could work towards and hope for a shared future of perpetual peace. Nature had willed, Kant believed, that reason should bring concord out of discord (Louden, 2011). Kant saw our undeveloped internal nature as the enemy of reason. It had to be conquered through self-control and self-development or it may have to be subjected to externally imposed constraint. He demanded strict constraint of our desires and dispositions in order to make living together possible. This reflects his understanding of self-society relation as “unsociable sociability” (Gear, 2015:234; Wood, 1991). His idea of reason has been described as “disembedded” and “disembodied” and “subjective rather than substantive” in its relationship to society and nature (Benhabib, 1985:409; Nicholas, 2012). Marx’s historical and materialist reformulation of the human condition restores reason to its embedded, embodied and substantive totality.

Anticipations of future often situate themselves in aesthetic and religious domains where they can be shielded from the repressive gaze of authorities in power. Myths and folk tales from the past encapsulate past struggles. They keep alive the memories of successes and failures of attempts to move beyond the then present. They harbour the potential that could trigger action to change the present into a better future through critical revival and reinterpretation that can remove the crust of blind faith over them and recover the hidden message. It is in this sense that Ricoeur et al. (1978:222) refers to the presence of an urge in us to suspect and to listen or to be an adult critic and a naïve child at the same time. Kant’s answer to the third question about hope where it points to the role of religion carries a few traces of these ideas. Marx and Freud added new substance to them while Ricoeur has further enriched their contributions, as did Bloch (1986) and Alisdair MacIntyre with his thoughts on how to begin moral and political inquiry by first situating oneself in one’s own context (1985: 70–85). Bloch’s idea of “concrete utopia” responds to Marx’s warnings about transformative action as being oriented to exploring alternatives that are inherent in the history of the species and which may begin to manifest themselves on the horizon when circumstances emerge.

Since all three dimensions of reason correspond to the three constitutive dimensions of human condition and human activity, every *why* question, when taken up

in its totality, must seek an answer that addresses all three aspects of our life: the natural world of meaningful things, the social world of symbols and dialogue and the personal world of hopes, aspirations, beliefs and dreams that look beyond the quotidian unless institutionally prevented from being able to do so. It is with Marx that we are able to engage all three dimensions of reason as he expands and reorients our understanding to reflect the changes that had occurred in lifeworlds before, during and since the Enlightenment. In view of that new understanding, Marx found a way to capture the source and the energy that drives our emancipatory urges and developed a critical method for responding to the challenges that the actual always presents to transformative efforts. These the Enlightenment had only vaguely anticipated. Hence as Zeitlin (1968:vii) points out, Marx was its true heir in the nineteenth century.

For Marx, in contrast to Kant, the institutionalized economic and political relations are the real battleground for the struggles for better life. Kant was obliged to answer the question ‘what can I hope for’ by pointing to religion as the harbinger of hope (Smith, 2005:48). Marx also recognized the enormous power of religion to provide solace under conditions of inequality and unfreedom (as ‘the sigh of the oppressed’) but he also saw its malignant face (as ‘opium’) that is now reflected in the hands of fundamentalist demagogues and evangelicals. Nevertheless, he recognized that the way out is through transformative action. A meaningful response to Kant’s third question, appropriate for our time is to be found in Marx’s reflections on religion and in those of one of his most perceptive and sensitive interpreters of religion and emancipation, Ernst Bloch (Anderson, 2006:691–2).

The three dimensions of reason relate to the three dimensions of human condition and thus encompass the universal human values of truth, equality and freedom. Habermas (1970:372) has hinted at the fact that these values are reflected in the structure of human language. As expressions of the universality of human condition, and like language, they belong to all traditions. The interpretation of what each one of them means concretely has been and will remain specific to the historical contexts of specific cultures. Explorations of universality claim about truth as human value have had a complex fascinating history but it is beyond the scope of this paper. The two values, equality and freedom, are of central importance to the question of human welfare and the quality of individual life, and I shall return to them in the second part of the paper.

The unity of reason remained unexplored by the philosophers of the Enlightenment. It was overshadowed by their enthusiasm for the methodology of natural science, based on its accomplishments of preceding decades. Progress for them had meant that human communities will work towards elimination of want and oppression. They could accomplish this through rational mastery over external nature and by developing rational socio-political institutions. The latter would, of course, require mastery over our internal nature. This optimism was misplaced. It was belied by the dramatic changes that were already underway in the economic and socio-political reality of Europe.

A view of the world, as integrated under ‘divine reason’ was being replaced with the hope that in the end, a new, shared sense of integration would emerge. An

enlightened and mature human subject will ensure that all three dimensions of life are integrated in thought and action. Kant projected this unity on to the noumenal subject and pinned his hope, in his answer to the third question, on an enlightened understanding of religion. The transitions at the material level that were happening at the same time were to belie such hopes. The ‘Romantic Reaction’ witnessed the abridgement of reason under these changing conditions and challenged the Enlightenment claims about reason’s ability to put an end to ignorance and dogma and to usher in perpetual peace. Starting as a countermovement to the Enlightenment Idealism, it warned against “allowing passions and impulses to be stifled by the deadening influence of a calculating rationality” (MacIntyre, 2016:21).

“Calculating rationality” was the actual truncated form of reason that had come to prevail. It was associated with the subservience of natural sciences to the dominance of profit-oriented technology which, in turn, was the driving force for the emerging, capitalist mode of production. In the second half of the nineteenth century, with the stabilization of the capitalist economic and political order, science was reduced to being a “productive force” for industrial society. In keeping with this change, the meaning of reason became trifurcated into positivism, historicism and pragmatism. These became the distinct chosen methods for the study of nature, history and society. This led to the establishment of three independent domains of inquiry and action (Habermas, 1974a, b:262).

Science, morality and art were split from each other and became three distinct domains subjected to the control of “experts” and subservient to the consumption logic of capital. This split cannot and does not reflect everyday experience to the extent that life is still embedded in communities and embodied as nature. It does, however, given the dominance of a culture of expertise, inflict a heavy price on the lifeworld as it diminishes the prospect of a return to the three-dimensional exercise of our reason in work which means that it deforms our formal cultural, economic and political exchanges with others.

Work

Marx captures the uniqueness of the relationship between self, society and nature in the concept of work. It brings into play all three dimensions of reason. Work embodies and enacts reason. Marx encompasses all human activity in his concept of work. The *why* question arises in work and seeks and finds answers through it. In other words, it is a form giving activity that creates meanings and objects as it transforms matter into meaningful objects (Sayers, 2007a, b). It is a necessary social activity of natural-social beings. To be successful, it requires working together with other human beings. Hence, Marx refers to it as social labour (*gesellschaftliche Arbeit*). Change in the content and context of work reflects changes that occur in nature, society and the individual. Marx has tracked the history of social labour from the earliest stages of the emergence of human communities. He looks at their future possibilities in terms of what they have accomplished as well as what they have failed to accomplish so far.

He also looks at their potentiality, at what they can and should be able to accomplish under changing conditions.

The idea of human potentiality, inherited from Aristotle, is central to Marx's conception of work. Work can and should be a fulfilling and liberating activity. It can and will be under right conditions. Human communities are capable of creatively balancing nature's sustainability and their changing needs and desires as long as they arise with and respond to all three dimensions of reason. In the past, communities have both managed and prevented themselves from doing so. At the core of Marx's writings are the considerations of the constraining conditions, changes that humans have effected in them in the past and may continue to make in the future through their creative activity (McCarthy, 1986:5). Work is for Marx a social activity of intellectual self-development that results through interaction with nature and fellow workers. It is not only the key to economic progress of human communities; it is the activity that is capable of leading to "a process of emancipatory intellectual self-development (*Bildung*)" (Honneth & Ash, 1982: 32–53; Thompson, 2006).

Our relationship to nature and society remains open to change as the outcome of our urge to ask the question *why* and to act on discoveries that result from it. Marx rarely speculated on what a society that ensures our freedom to act on our potentiality will look like. The shape of a "fully developed socialist society" was to be determined democratically as an exercise of the same potentiality by its creators. He spoke of the necessity of protecting every individual's freedom of asking the *why* and *why not* questions and to work with their fellow beings towards the realization of what ought to be, based on the discoveries emerging out of the questioning. For Marx, our contextually shaped understanding of what can and should be will, when arrived at freely, encompasses all three dimensions of our condition and the collective action that will follow will be characterized by mutually enriching diversity.

Marx's analysis of work as nature–human mediation is of central importance for an understanding of the deepening environmental crisis. It involves regulation and control of the "metabolism" between human beings and nature. It brings worker's inner nature (body–mind) in contact with external nature so as to give that nature a form. That nature is adapted to human needs through work. Marx calls this relationship nature–man metabolism. Metabolic interaction implies, for Marx, that under undistorted conditions, workers will have a rational awareness of what nature establishes as the limit of their metabolic interaction. Capitalism brings about a "metabolic rift" when profit maximizing technology is developed and work is transformed into "alienated labour" (Foster, 1999). Marx goes on to point out how the emergence of the capitalist mode of production produced the most elaborate ways to ensure that the worker is prevented from making the work process a truly creative, fulfilling and liberating 'metabolic' activity.

Worker–nature relationship changed dramatically under capitalist production. Work was emptied of any content and turned into abstract labour. From a concrete three-dimensional activity, as it was in craft production, it became a measurable, marketable abstract entity. A sense of practical-moral, sensuous-aesthetic and material-cognitive unity had characterized craft activity. Workers interacted with

their materials and with each other with a sense of intimacy with nature, family and community.

The philosophers of the Enlightenment did not anticipate the submission of science to the constraining dominion of profit-making technology under private control and the resultant metabolic rift. This instrumental understanding of work has contributed to our insensitivity towards the mounting environmental crisis. Equally important has been the elimination from our conceptualization of work any “confidence in the liberating, consciousness-building potential of the social labor process” (Honneth & Ash, 1982:46). Most human communities of the pre-scientific times developed an implicit understanding of nature and its secure guardrail along which they survived and thrived. Those who failed to do that disappeared. The *philosophes* had expected natural sciences to take away that uncertainty. They did not appreciate the limits of scientific method and failed to anticipate the instrumental misappropriation of scientific knowledge by profit-seeking technology.

Cognizing, the act of coming to know, of turning information into knowledge, is work. It stems from the urge to ask the question *why*. It involves the arts of suspecting and listening at the same time. What we often call knowledge is only information. It is a product, “stock”, of all previous social labour left behind for us by members of our species in their own acts of “coming to know”. Every act of knowing involves all three dimensions of nature (outer and inner nature), self and society. We come to know, in response to our urge to ask the question *why*, in three interconnected ways: about actuality (facts), about what is right and wrong (norms) and in terms of our sense orientation to love, beauty, and our hopes about the future and about the ways to get there.

Communities and societies do, of course, vary in their ways of making sense and the stock of knowledge they develop or have access to. Neither the diversity of ways of making sense nor the stock they may have access to violate the universality of the process itself. Marx introduces us to the dialectics of the unique and universal in terms of historically specific (unique) forms that the universals of reason, work and the ‘nature-society-self’ relation take. His method makes it possible to study specific situations on their own terms without losing sight of their place within the universality of the human condition. While the search for universals such as “psychic unity” or “universalism without uniformity” by cultural psychologists (Shweder, 1999) seems like a step in the right direction, but without being informed by a sensitive critique of the history and context of each unique event, attempts to treat it as a specific manifestations of the universals of the human condition may suffer from an uncritical commitment to empiricist methodologies (Valsiner & Brinkmann, 2016).

Reason is implicated in every act of coming to know in these three ways. It touches all three domains of our activity and experience: objective, intersubjective and subjective. Every cognitive experience involves (a) making sense of nature and of all nature-like relations, (b) understanding, communicating and questioning the meanings of the social world of symbolic, linguistic and ‘practical’ (normative) activity and (c) self-reflection or conversations with oneself about the personal world of meanings, feelings, hopes and aspirations. It involves our intentions and actions in terms of what can be and should be realized. All work of coming to know is

determined by the level of development of our capability to understand and act based on the specific stage and place of development of our subjective, objective and intersubjective worlds. Cognitive sciences need to enrich themselves through greater awareness of these preconditions.

Contemplating the journey from actual (what is) to what is materially possible and desirable (what should be) is the act that responds to Kant's third question about hope. Hope in our times has to be understood in terms of action. Marx's concept of potentiality implies transformative action (*praxis*). It is a journey towards arriving at three-dimensional truths encompassing all three dimensions of human temporality, the past, present and future. The past has the potential to direct us towards a desirable future. It is a journey that gives new substance to Kant's third question and offers directions for finding an answer. It calls for openness to a future beyond the horizon of immediate possibilities and willingness to trust our utopian energies fuelled by the unfulfilled promises from the past. The utopian kernel that drives hope to action is often hidden in the false promises made by those in power. They know that those promises constitute the substance of hope for the deprived and dispossessed. However, they also know that any honest moves to fulfil them would mean giving up dominance and control. Expectation of their fulfilment and the substance of hope remain encrusted in legitimating ideologies of the rulers and are sometimes projected on to the divine beyond. Yet for Bloch and White (1968), they also exist in everything around us, from daydreams to the ideals encrusted in great religions (Kellner, 1997:41).

While warnings against scientism in psychology and recognition of the presence of ambiguities that seem unresolvable need to be heeded, the problem of persistent "antinomality" of human knowledge (Koch, 1981:2620) may have to be rethought with greater attention to history and to the possibility of going beyond through transformative action. Marx's reformulations of Kant, as the dialectic of historical materialism based on prior rethinking by Hegel, are aimed at showing the way out of Kantian antinomies. It is through transformative action that human communities can preserve the sustainable elements and resolve the conflict by moving beyond the conflicting circumstances to new ways of living life and making sense. New contradictions will no doubt continue to emerge as the creative exercise of social labour keeps producing new challenges.

How should human sciences relate to such an encompassing framework in their context-specific engagement with the actual? It seems to follow from the discussion so far that they should be able to situate their theories and practices based on relative primacy of one of the three: nature, self and society. They can, in this way, ensure that their basic objectives correspond to the larger shared objective of enhancing the wellbeing of human community. If they remain mindful of the intimate relationship between their chosen dimension and the other two, the implications of their findings for the future of humankind are unlikely to escape their attention. It may also help with the rethinking of the issue of fragmentation.

Psychology is best placed to study and help transform the ways in which human individuals think and act as mediating subjects of nature, their own nature as well as society and their own sociality. Given its rapidly developing links to natural sciences

and well-established overlaps with social sciences, it is well placed to draw on their insights and discoveries. This advantage also seems to have been, up until now, a major source of fragmentation in the discipline. In the act of theorizing, psychologists are confronted with dualisms such as subjectivism/ objectivism or agency/structure or quantity/quality, all of which seem to point to the “boxed in” status of the discipline (Henriques, 2003:150).

Goertzen (2008:846) suggests a dialogue between the protagonists of different positions. Recognition of a state of crisis may be a prerequisite for the possibility of a successful dialogue leading to a new understanding that demands and leads to a transformative action and to a new all-encompassing understanding based on the best of all contesting positions taken into account and made meaningful in a new way.

Henriques (2013) questions the adequacy of the commitment to quantitative methodology in training and research as an adequate source of discipline’s unification and offers a framework for conceptual unification. Other similar attempts (Melchert, 2013) also show a strong desire to seek integration based on the model of natural sciences. However, Valsiner and Brinkmann (2016:1–4–15) contest what they see as “physics envy” running through the history of psychology and, as caution, refer to Wittgenstein’s observation that in psychology problems and methods pass each other by and flag the fact, noted by Alasdair MacIntyre, that molecules don’t read chemistry textbooks whereas humans do read psychology books.

Claims of fragmentation and the need for finding ways to overcome it are themselves questioned by some scholars who see diversity of interests and approaches as necessary, while others, such as Goertzen, accept the value of diversity but advocate ways to protect healthy plurality while seeking greater integration through “dialectical pluralism”. Goertzen (2008) calls for ongoing dialogue between the protagonists of different positions. He relies on an abridged and modest concept of dialectic of Joseph Royce and hopes that sustained tension between competing theories will somehow bring about integrative resolutions of contradictions. Mere hope rather than active engagement with history and context of events and interpretations seems to me a rather inadequate step towards engaging dialectics as a means to integration. It also shies away from dealing with the issues of wellbeing that have become urgent in our neoliberal times. In sum, my very cursory and minimal review of the literature on integration in psychology suggests that the discipline will benefit on all accounts by consciously situating itself within a strong, three-dimensional understanding of the human condition.

Recognition of fragmentation as a problem, and a desire to overcome it, are prerequisites for initiating a dialogue among the proponents of diverse and often conflicting views of the nature and mission of psychology as a discipline. We are confronting a state of comprehensive crisis in the world today that affects every aspect of our life: economic, political, socio-cultural and psychological. There exists a noteworthy dialectical relationship between crisis and critique. A crisis can lead those with conflicting perspectives on norms, institutions and practices of the existing social order to join in a dialogue to interrogate them and to seek ways to go to new consensus on how to transform them in order to overcome the crisis. Similar

considerations apply to a crisis of shared understanding about the nature and mission of a discipline.

Toulmin and Leary (1985) and Indick (2002) have carefully documented the implications of the split about the domains of inquiry in psychology and its positivist turn. They also propose a way out of the weaknesses, imperfections and limitations of the positivist perspective. Mitchell (2003) points to the limitations of “the quantitative imperative” while Martin (2003) examine points to the unfortunate isolation of mainstream psychology from much of the major rethinking in the literature on the philosophy of science. Faulconer and Williams (1985) do the same for the impact of both positivism and historicism on psychology. They suggest turning to Gadamer’s critical hermeneutics and to the consideration of temporality as the proper and productive grounding for all human sciences including psychology. An attempt that also fascinates me is delivered by Parker (2009) who addresses the impact of the three *isms* (pragmatism, empiricism, positivism) on psychology. He proposes a Marxist alternative that is ready to engage the psychological dimension of current neoliberal crisis. Healy’s (2012) proposal for a dialogic hermeneutic approach to integration resonates well with what I have been suggesting here and elsewhere (Lele, 2008: 17–42) by invoking the ideas of Gadamer and Habermas, as he does, but I also add those of Ricoeur. While all of these initiatives appear to me to be possible entry points for taking psychology beyond its fragmentation and for designing its entry into a new paradigm anchored in the human condition, I must leave that task to competent psychology insiders.

I believe psychology can and should see itself as a discipline that aims at not merely synthesizing contradictory pulls but at investigating the potential for transcending them and moving beyond them. It can and should undergo a paradigm shift that will enable it to rebuild human agency potential for action to confront the devastation caused by the current crisis and to move it towards a society beyond justice. It only needs to begin with the recognition that the human subject, as an integrated natural-social being, is both willing and able to confront and answer Kant’s three questions as a cognizing, ethical and transformative agent.

What I am suggesting is not a proposal for de-differentiation of the discipline or a plea for a grand narrative. It only calls for an ongoing dialogue, with simultaneous consideration of all three dimensions as a necessary prerequisite, so as to create links beyond ruptures, redefine disciplinary boundaries and open roads for new understanding (Zittoun et al., 2009: 113; Barrett, 2009; Farah & Heberlein, 2007). I have tried to sketch some prerequisites for the integration of the discipline and for the associated need for a paradigm shift. It seems to me that dissatisfaction with the history of scientism and empiricist-positivist-experimental methodology has produced a great deal of rethinking in the discipline but it has yet to jell into a level of integrating self-reflection to facilitate a paradigm shift. The main difficulty that I see as an outsider has to do with the spectre of the liberal individual that still haunts the discipline in the same way that it does the discourse of social justice and human rights. This being the case, I am trying to find a way beyond this conundrum by an appeal to Marx’s method. My cursory survey of the initiatives in the discipline shows increasing indications of a climate favourable for such a paradigm shift. If I am right then such

shift should be encouraged to avoid the danger of such advances dissolving into a whirlpool of disenchantment and frustration generated by the neoliberal crisis.

I am suggesting, therefore, that psychology should see itself as a discipline that is engaged in a systematic exploration of the naturally embodied and socially embedded self that negotiates its way through the life cycle as it transforms itself with and by transforming nature and with and by transforming society. The transformation of nature and of self can be enriching for all three as long as it moves along the forever changing but ‘forever present’ secure guardrail of nature. The discipline should see its mission as cultivation of the self that engages in the transformation of itself and society along with members of its community in keeping with a concrete and community-specific understanding of the unique manifestations of universal values of truth, equality and freedom. With this orientation to self, psychology can call on the advances in natural sciences, in neuroscience in particular, to map the guardrail of nature for our times that ensures its continuous progress towards enhanced human wellbeing. It can also call on its insights into the culturally specific manifestations of understanding of the values of truth, equality and justice that are space–time specific in order to ensure maximum human wellbeing.

Part 2

In this part, I hope to explore the implications of my proposals for psychology’s role in working towards an ever evolving, always emerging and therefore “always yet to come” end point of universal human wellbeing and fully enriched quality of individual life. I shall treat John Rawls’ idea of “society beyond justice” as a helpful marker of that objective. Rawls, in his theory of justice, was looking for ways to fully actualize the potential of his society for maximizing human material wellbeing by reconfiguring its institutional arrangements of the then existing socio-political context. Rawls lived and wrote during the golden age of capitalism and its decline and beginnings of its descent into the current crisis. Despite attempted shifts in his writings during this period to reflect the changing global and national conditions, it remained anchored in a firm belief in liberal democracy’s potential for reform through public deliberations (Lele, 2011).

In order to understand why the conditions that formed the basis of Rawls’ optimism about liberal democracy disappeared, and to track the events leading up to the current crisis and to appreciate the forces at work that made the crisis inevitable, I shall return briefly to the Enlightenment Era, the transition from tradition to modernity and to the parallel transition, that of feudalism to capitalism. The latter saw the emergence of liberalism as the ideological scaffolding of capitalism.

Up until the early seventies, the prevalent understanding of socio-economic relations in the older capitalist countries was Keynesian (in terms of macro-economic policies) with Fordist–Taylorist mode of manufacture, involving mass production and mass consumption. It was coupled with a “social contract” that tied profits and wages to each other through collective bargaining. The state invested heavily in the

physical and social infrastructure and thus cut costs for privately owned capital. It also made the ‘not-yet’ or ‘no-longer’ employable citizens (children and senior citizens) a responsibility of the state through massive investments in education and old-age security programmes.

Habermas (1974a, b/1964:54) described those times as the age of “social welfare state and mass democracy”. In all the “three worlds of development”, the state was in the driver’s seat promoting or implementing projects of ‘modernization’ (Pletsch, 1981). The capitalist state had learned from the preceding crisis of capitalism that in order to avoid falling once again into the crisis trap, the market needed to be guided and controlled by the state. Being liberal became equal to being progressive in this era of the New Deal and the Welfare State. It also saw the establishment of new institutions of market guidance such as the World Bank, the International Monetary Fund and the World Trade Organization. That is why these two decades are often thought of as ‘the golden age of capitalism’ (Reidy, 2014:9). Under the ‘welfare-state mass democracy’ regime, the USA established a system in which profits and wages would rise simultaneously. This ensured a steady increase in the wellbeing of industrial workers in the expanding organized sector of the economy. American assistance also helped the restoration of Western Europe’s severely damaged infrastructure of capitalist production. These conditions of expanding capitalist economies in the West, rapid state-planned and directed industrial development in former socialist societies and the focus on industrial development in the emerging post-colonial Third World together created a hopeful aura of continuing increase in prosperity and better life for all human communities. In all “Three Worlds” the state was in the driver’s seat in setting the direction of economic development. John Rawls’ early ideas about justice as fairness had evolved during these times. These conditions started to deteriorate, however, by the early seventies. Towards the end of Rawls’ life, the USA had entered a state of deep economic crisis and was taking the rest of the world down with it. Rawls’ main concern became the defence of “well-ordered” liberal societies against what he saw as threats from “unreasonable” people within and beyond.

All major concepts featured prominently in Rawls’ theory: property, ownership, citizenship, political freedom and basic rights, are indicative of his faith in the efficacy of a formal, procedural democracy for maximizing economic equality. They are also part of the founding principles of liberalism. Although the Enlightenment ideas of freedom and equality were central to his thinking, there was a strong liberal commitment towards freedom as the more basic value. There was also the belief that within a political order committed to the protection of individual liberty and private property rights, one could still pursue the cause of maximum economic equality.

Enlightenment philosophers had interpreted the ideas of reason and progress in terms of their own rapidly changing times. French philosophers gave expression to the material interests of the French bourgeoisie who were predominantly either the office holders of the Old Regime or professionals and intellectuals. They emphasized equality as the primary value, because it was so eminently absent in their hierarchical social order of estates, French Revolutionaries made an attempt to implement those ideas in practice rather prematurely because the circumstances were not right and hence failed. The Italian radical Enlightenment thinkers such as Vico and

Doria developed their own understanding and interpretation of science, reason and progress in light of their own glorious Greco-Italian philosophical past (Israel, 2006). The thinkers of the Scottish Enlightenment thought of them in a different light in view of their own status as citizens of a British colony and their awareness of the contrast between England's growing prosperity and their own poverty. Apart from their contribution to the ideas about progress in culture, politics and morality, it was their amazement at the success of English capitalism and the English model of progress and the ideas of property and productivity that prevailed. It distinguished them and their ideas from those of the Europeans (Wood, 2000).

The two main Scottish philosophers of the Enlightenment era were Adam Smith and David Hume. Smith holds a position similar to that of Locke in the classical liberal tradition. They were conscious of the contrast between English prosperity and Scottish poverty at the time of the Union in 1707. Although they were inspired by ideas similar to those of French philosophers, they were also impressed by the dramatic increases in wealth for the "new middle class" in England. The English bourgeoisie was predominantly the old gentry that had turned into assertive and successful capitalists, by making agriculture capitalist and profitable through dispossessing peasants and tenants of the land that they had been cultivating for centuries.

In view of the changes in England, Hume and Smith became defenders of an emerging capitalist society and reinterpreted the meanings of equality and freedom to accommodate Britain's "economic miracle". Most accounts of this period of history tend to mix liberalism, capitalism and the intellectual project of the Enlightenment and treat it as part of a single event, label it 'modernity' and associate it with capitalism's global expansion through colonialism and imperialism.

John Locke (1632–1704) is often described as the father of liberalism. He was an English philosopher whose thoughts on epistemology had a significant influence on Enlightenment philosophers. Writing in the early years of the emergence of capitalism in England, he interpreted human creative potentiality ('work' for Marx) as 'productivity' that creates property. His way of connecting work and production of surplus with property and profit helped establish liberalism as the ideology of capitalism.

In that vein, what was transmitted to the rest of the world, along with colonialism and capitalism, was liberalism. It has been the subject of debates and interpretations since its emergence. In its dominant version, both as theory and practice, we encounter systematic distortions of the two basic Enlightenment values: freedom and equality. They are juxtaposed and treated as antithetical. In order to ensure or enhance one the other, it is claimed, must be shrunk or sacrificed. Such a belief becomes ingrained in the minds of citizens often through a profound misunderstanding that treats equality as sameness. Demand for equality is translated as denial of the presence of differences in individual abilities for specific tasks. Proponents of equality, it is claimed, dismiss the importance of uniqueness and differences of talent.

Liberalism makes private property and profit legitimate by placing them at the root of personal freedom. Liberalism anchors liberty in private property and treats it as part of the natural order.

It splits the unity of the ideas of equality and freedom and allows their abridgement into formal, hyphenated forms such as equality before law or freedom of expression or faith. Liberty and equality are the two founding principles of democracy. Liberals believe that formal, procedural democracies are capable of ensuring basic wellbeing of all citizens through the Rule of Law. As an ideal type, it presumes that decisions affecting all citizens are arrived at in response to their formal and informal pressures. They are all expected to be active, as citizens, in the public sphere while they act as individuals in the private or civil sphere. If they do, they are all said to benefit equally. Citizens, as ‘the public’ are expected to reflect on the way the formal institutions and their procedures work and to call for their reform when necessary so as to enhance citizens’ capabilities to participate in the process of decision-making.

In the private sphere, individuals are free to pursue their exclusively selfish interests as long as they do not interfere with other individuals doing the same. While they are in the ‘public’ domain, they are expected to bracket self-interest and get involved in deliberations to help develop and implement policies intended to protect and promote common interests. They must also be willing to participate in developing situation-specific reinterpretations of the basic principles of freedom and equality so as to protect democratic practice. In formal democracies, freedom means freedom of speech, electoral participation and equality means formally open access to national community’s decision-making apparatus through participation in the public sphere. Liberalism, while affirming these virtues of democracy, insists that there needs to be a “delicate balance” between equality and liberty.

In practice, it means public policy swings away from even this minimal requirement of (political) equality as it responds to cyclical turns and crises in the fortunes of capital. Liberty and equality thus remain in a contradictory tension. This elasticity lets liberal democratic governments’ policies oscillate between responsibility for human wellbeing and capitalism’s survival needs. It does not contemplate the possibility of ever moving beyond this contradiction. A belief in the claim that there can be no better alternative to this form of government is systematically cultivated through institutional mechanisms of ‘manufacturing consent’ (Herman, 2000).

The liberal discourse shrinks equality to equal “political” rights and justice to “fairness” of distribution. Both are noticeably elastic concepts. Income inequality is inherent to the wage-profit contradiction. Capitalism also effectively uses inequalities of recognition and respect that are inherent to identities such as race, gender or caste in different social and cultural contexts. They are manipulated with indifference to consequence and in ways that are necessary and convenient for sustaining the profitability of investments.

Capitalism rests on three pillars of capital, labour and the state. Capital and labour are the basic elements of an antagonism on which the capitalist economic order rests. The state mediates that relationship through a set of three control mechanisms: accumulation, legitimation and coercion. All are variably employed depending on the circumstances. The formal-procedural model of liberal democracy tries to ensure that the state can effectively pacify the likely conflicts between capital and labour through the use of these mechanisms. It sustains the illusion of broad-based participation in decision-making by managing the size and composition of the elites who are entitled

to compete in periodic elections to claim to represent the citizens in the process of decision-making which impacts their lives. Politics of liberal democracies is, therefore, best described as the politics of ‘elite pluralism and class rule’ in which the plurality of competing elites can sustain the illusion of openness while limiting access to a small and manageable segment of aspirants (Lele, 1981).

Capitalism, both in theory and practice, transforms social relations among people into economic relations among things. Such relations operate in an alien way, independently of our intentions and actions. In this way, individuals “made autonomous” by market society and an apparently alien economic system that confronts them are brought together out of necessity. Therefore, alienation is not only a subjective appearance; it is an objective feature of such societies. The dominant logic of capitalist production deeply affects human self-conception which Marx captures in the three-dimensional concept of alienation. Marx had exposed the folly of assumptions about hardy, self-sufficient men who order their environment according to their preferences and act on it without needing cooperation of others as “Robinsonades” (Sayers, 2007a, b).

In the political life of formally democratic societies, what we witness as the contradictory pull of freedom and equality is, however, an artefact of historical circumstances and is closely linked to the cyclical movements of capitalism. It can be transcended under right circumstances if and when they can be established. Rather than causing competitive divisions, the differences between individuals and groups could enrich equality in a community of fully free individuals. Being able to conceptualize this possibility required rethinking of the relation between freedom and equality as the dialectic of unique and the universal. Marx initiated the method by which it becomes possible. Put simply, that method requires that any study of events related to the human condition should follow two basic principles: historicize and contextualize. In other words when accounting for the present (or ‘the actual’), and always do it from the perspective of the future (or ‘the desirable possible’) while taking into account the consequences of the past.

Current Crisis

Capitalism is by its very nature prone to crisis because of the inherently contradictory nature of capital-labour and wage-profit relations. It oscillates between boom and bust cycles that tend to deepen into states of crisis overtime. Moreover, the state’s response to the needs of capitalism and to the demands of its citizens oscillate between the imperatives of support for accumulation of capital and to its own legitimacy as the agency responsible for and responsive to the needs of all its citizens. This is reflected in policies that swing in emphasis between the values of freedom and equality. Equality and freedom, as practiced in today’s capitalist productive relations, constitute the most complete form of “merely legal and political” equality (Wood, 1978:228).

An enduring crisis of capitalism began in the early nineteen seventies as a crisis of profitability for capital. It started in the USA in the mid-sixties, signalled by prolonged stagflation and spread quickly to all older, western, capitalist countries. Elite response to the crisis came after some faltering attempts to refashion the older welfare state during the seventies through expansionary spending policies that miserably failed. Initial attempts to shift the burden of the effects of the crisis triggered some dramatic spatial and technological shifts in the organization of capitalist production. These are often included under the label of globalization. At the end of the decade, at the level of public policy, an aggressive monetarism replaced the faltering attempts at priming the public investment pump. The neoliberal ideologues succeeded in pushing for ultra-tight credit, a super-high dollar, tax breaks to the corporations, and a major push towards financial deregulation. Since then, the world order has witnessed further catastrophic changes. Neoliberal policies were intended as a solution to the crisis of welfare-state capitalism. They have, as has become even more obvious since the events of 2008, driven capitalist democracies into a much deeper crisis.

Policy elasticity of liberal democracy naturalizes existing inequalities of all forms. The global spread of all forms of inequality is most glaringly visible in today's dominant neoliberal form of capitalism. It has transformed selfhood to match its needs. As demonstrated by a number of scholars, cultural practices associated with the dominant form of capitalist political economy have now deeply penetrated self-conceptions and subjectivities of the working people (Gill, 2008:436; Davies & Saltmarsh, 2007). These are reinforced with renewed emphasis on the doctrine of personal autonomy that declares "freedom as the ultimate goal and the individual as the ultimate entity" (Friedman, 1982:12).

Neoliberalism is a mix of several congenial ideological strains that it asserts as necessarily true. They correspond to a number of aspects of the globalization of the production process that emerged as a response to the crisis of welfare-state capitalism. It combines a range of policy prescriptions required to meet the changing needs of capital with a range of claims about the nature of the state, individual and what it considers to be the correct socio-cultural values. It resurrects the neoclassical faith in the invisible hand of the market and insists that individuals who make 'rational' entrepreneurial choices are always rewarded and that the market only punishes the incompetent ones. It also demands that the state cease intervention and let capital, in its fluid financial form, flow wherever it chooses to flow around the globe in pursuit of profit with unconstrained access to cheap natural and human resources. In essence, as McNally (2009:74) has shown, it has now become a crisis of life-values including "land, water, food, housing and income" that are all threatened by the current crisis. They have direct implications for all the three dimensions of the human condition and thus threaten the basic human values of truth, equality and freedom in complex ways.

Neoliberalism encompasses all aspects of social life. It includes an analysis of social life and deploys it as a form of "governmentality" or a state of mind in which citizens begin to treat the new economic-political system as natural and obey its demands without it having to use much of its coercive powers. It reaches out to the mind of the citizen-subject; it dictates education policy that includes new ways

of reasserting the empire of capital. Abridgement of reason, where it is reduced to market rationality, is no longer primarily focused on the economy as such. It extends and disseminates market values to all institutions and to all social action, but still retains the market as the distinctive and primary player (Brown, 2003). It enforces a reorganization of subjectivity. It emphasizes individual responsibility and promotes an idea of autonomy that requires individuals to make a single-minded commitment to the pursuit of happiness. It demands that the state places no obstacles in that pursuit. It valorizes a sense of self that is supposed to be self-directing, self-reliant and adept at the exercise of calculating rationality. The tragedy is that this involves a remaking of oneself as capable of vigilant self-constraint in a rapidly deteriorating and challenging natural and social environment with little or no political or social support for confronting it.

Neoliberalism has been responsible for dramatically deepening myriad social processes that have dispossessed small producers and driven forward worldwide proletarianization (Ferguson & McNally, 2015:10). One of the two salient and now most widely recognized consequences associated with this crisis is the staggering level of inequality of income and wealth all around the globe (Duménil & Lévy, 2015). It thrives on and feeds into other aspects of inequality such as gender, recognition and respect. The other is the massive dispossession and displacement of large numbers of people who are desperately seeking employment and refuge, elsewhere away from home, in a world of shrinking employment opportunities.

An array of “morbid symptoms” characterizes this crisis. False promises of good times along with refurbished portrayals of past national glory continue to be made by governing state elites around the world. An important consequence of the current crisis has been the rise, in several formally democratic liberal nation-states, of a highly polarized governing elite turned demagogues who acquired to positions of authority using established institutional democratic conventions and are then ready and able to misuse or defy them. Popular cynicism about the legitimacy of established liberal democratic institutional arrangements has grown dramatically because these new elites have used them through clever media management to rise to positions of command and control. They are promoting retrograde forms of nationalism and racism using the new media of manufacturing consent. As a result, the political discursive space is now dominated by extreme intolerance of dissent often denounced using labels such as anti-national and treasonous (Fraser, 2015).

To make sense of these shifts, some scholars have turned, for comparison, to the crisis of capitalism of the nineteen thirties and to Freudian analyses of popular support for fascist rulers and regimes in terms of authoritarian personality studies (Gandeha, 2018; Pettigrew, 2017). Others have turned to the structural analyses of the various “morbid symptoms” (Gramsci, 1971:276) that arose at that time. These comparisons make sense when placed in the context of the fact that capitalist societies are inherently crisis prone. This crisis, the response to it and its consequences are, however, qualitatively different from the previous one.

Short bursts of growth in some parts of the world have allowed the political-economic elite in major states to cash in on them to raise false hopes and to nurture illusory expectations about the better days around the corner in order to legitimize

and enforce widespread deprivation demanded by the accumulation imperative of capital. The result has been a mounting sense of anxiety about life and wellbeing. Although economic in origin, the crisis now engulfs every dimension of human life: natural, personal and social. Individuals, communities and the environment are all subject to severe adverse effects. These are reflected in the dramatic changes in the nature of work and its impact on nature–self–society relation.

Work and Worker in Neoliberal Times

Studies of labour process under capitalism, from the days of assembly line manufacture to the current digital workplace, show how strategies by which worker's time-motion is manipulated, managed and controlled are adjusted to the changing needs of capitalist production. In all cases, the focus is on how their access to information is limited to a minimum so as to control worker-autonomy and ensure profit maximization (Huws, 2010; McNally, 2010). The successive technological rationalizations of the work process under capitalism have meant finding new ways to siphon off the creative potential of the work experience away from the worker and on to managers and machines thus preventing labour from becoming a truly creative experience for workers. During the Fordist–Taylorist times, revolts in the form of sabotaging the distorted work process and absenteeism were common. These were indicative of resistance to the misappropriation of their need and desire for a return to true creativity and sociality of work.

The process unleashed by the neoliberal crisis is qualitatively different and provokes a different kind of response. Fumagalli (2015:230) labels the “Post-Fordist” changes in production relations as “bio-cognitive capitalism”. This characterizes new ways of subjugating labour as to meet the demands of capital in its new fluid globalized form. Therefore, new instruments of control have been developed; they are at work at both national and international levels. He identifies debt and precarity as the two main pillars of “life subjugation” under this new stage of capitalism. A third, even more effective control mechanism operates through the system of education in which the need for employability and minimization of critical competence are emphasized.

Those looking for work are being forced to develop a new self-understanding as entrepreneurs trying to thrive under precarious labour market conditions. They must think of themselves not as workers who sell their labour in return for wages but as investors of ‘human capital’. They are asked to make every possible effort to maximize returns through strict self-discipline. This entrepreneurial mode of defining oneself is also made to resonate with retrograde forms of nationalism and racism that support restrictive citizenship and employment rights. Through this process of neoliberal subjectification, today's digital worker has internalized the new imperative to perform. Consequently, every worker becomes an observing entrepreneurial subject and, at the same time, an observed, objectified labouring body.

While these modifications are qualitatively different, the techniques that were effective during the Taylorist era are also still at work and carry with them significant deskilling potential. At the level of the individual, they target worker's subjectivity, expertise and individuality, starting with the demand that workers redefine themselves as entrepreneurs. They must believe to be in control of their "human capital" and free to invest, themselves and in themselves, so as to enhance their self-value. The flip side of this illusory sense of autonomy is that these self-directing, self-reliant and rational decision-making agents must also practice self-restraint. They must constantly remake themselves. They must also watch themselves as objects that are exercising self-control by monitoring themselves at all times to achieve and sustain success and wellbeing (Türken et al., 2015). Such self-monitoring is made easy by the technological achievements of "wearable self-managing/monitoring/tracking devices" or WSTDs. Through the application of these devices, the self-defined and self-observing entrepreneur becomes, at the same time, an observed and objectified worker-body. Workplaces, whether "art houses" or "warehouses", now require the worker to continuously measure her/his own productivity and health (Moore & Robinson, 2016).

This "quantified self" must also exercise austerity even as it remains steeped in anxiety, being aware of intense competition and the prospect of being replaced by someone who is still in the "reserve army", that includes robots as well. Not surprisingly, such anxious selves often find an outlet for their frustrations in acts of intolerance and violence against those others whom she/he is encouraged to define as enemy who steal jobs or want to terrorize the nation and/or its revered traditions. Pedagogic violence that precedes such acts finds its way into the curricula set by state elites and agencies seeking cultural legitimation in advance of their inevitable economic and political failures to deliver on the promise of wellbeing of all citizens (Lele, 1996).

A cursory look at some of the studies by professional psychologists suggests that they have attempted to analyse specific symptoms of the neoliberal malaise, such as anxiety, insecurity and precarity resulting from the neoliberal austerity regime. The changing self-definition initiated by the neoliberal dogma among working people have also been identified. There are some critical and some laudatory assessments of "Positive Psychology", which seems to have become a firmly institutionalized worldwide phenomenon (Cabanas, 2018). While its claimed intention to develop a universal science of human flourishing is recognized, its reliance on "western ideologies" is said to make it more of a "disguised ideology" that perpetuates status quo (Christopher & Hickinbottom, 2008). Similar criticism is also aimed at contemporary practices in all "psy-disciplines" such as psychology, psychiatry and psychotherapy. They are blamed for making neoliberalism internal to themselves (Ferraro, 2016). It is beyond the scope of this paper and my own competence to assess and deliver any verdict on these claims. Nevertheless, I would like to urge competent scholars in the field to determine whether taking into account the three dimensionality of the human condition and the centrality of the concepts of reason and work as manifestations of human potentiality would enrich the work of adjudicating the virtues and faults

of the various ideas and practices that are involved in confronting the impact of the current crisis on our sense of self.

Justice: The Placeholder for Equality

Expressions of concern about differential life conditions for different sections of the same community are to be found in all major traditions of thought. The idea of social justice as a matter of concern with potential for collective action in its pursuit, however, seems to have emerged in late eighteenth century Europe. It acquired central importance in Europe's major nation-states with the spread of capitalism. The widening disparity was highlighted by its contradictory consequences. Thus came in focus the "pauperism and the rampant poverty associated with early industrialization" and "fixed attention on the incomprehensible fact that poverty seemed to go with plenty" notes Brodie, citing Karl Polanyi. She also points to the fact that the rallying calls for social justice are growing ever louder in the politics of the twenty-first century. She identifies "the ultimate paradox of our neoliberal times" as "the historically unprecedented human capacity to enhance and secure human well-being, locally and globally" that has, at the same time, "generated such degrees of precarious existence for the vast majority of humanity, indeed for all things living" (Brodie, 2007:96–104).

In liberal democracies, where the idea of justice has been institutionalized, justice functions as a derivative concept. The term is used to evaluate the performance of specific legal, political and economic institutions of such a society. The actual working notions of justice are also derived from the same institutions to which they are then applied in determining their performance. The vision of what a just society ought to be is also drawn primarily from the existing institutional arrangements. Thus, it seems, an entire society is assessed with standards developed for and from some of its parts, yet this kind of assessment is not considered to be misguided (Ake, 1975).

Iris Young (2011) chooses oppression as the term to encompass the various forms injustice takes in contemporary societies. She defines justice in terms of institutionalized conditions and social settings. To be just, they must make it possible for all to participate in decision-making, express their feelings, experiences and perspectives on social life in contexts where others can listen and respond. This represents conditions that liberalism projects as its ideal. Hopes and expectations of the possibility of its actualization tend to rise during the upward movement of the boom cycles of capitalism and are shattered when it moves through its downward spiral of busts and crises. The democratic state claims legitimacy and takes credit for its welfare policies during good years and claims there is no alternative to austerity and suffering when it becomes helpless under conditions of crisis.

Rawls seems to have shared, with most liberals, the fear of state's overreach, as he saw welfare-state policies leading to surveillance and intrusion into civic life of citizens. This was seen as being against the principle of liberty. He attempted

to set up an abstracted version of a just society using a small number of realistic assumptions so as to derive a set of principles that would, presumably, form the basis of reforms of liberal institutions of justice. The idea was to find a way to maximize human wellbeing without having to transform the entire political and economic social order. He was attempting to project a reformed capitalism that could coexist with a reformed formal, liberal democracy that was better than then existing welfare-state capitalism. In his idea of ‘public reason’ and as citizens of a well-ordered pluralist society, persons were to respect their duty of civility and keep their commitment to abide by the rules set up by public institutions for public dialogue while offering reasons for their preferences to one another in ways that all could be reasonably expected to endorse.

His theory of justice rests on a set of assumptions about a non-utilitarian liberal personality that is shaped by the dominant cultural context of his times. Hence, it seems reasonable to examine the socio-cultural context in and for which Rawls was offering a theory of justice. He was the first American thinker to revive political philosophy with an egalitarian project after it had disappeared from the American academic scene during the McCarthy era of hunting down “communists” from academic, cultural and diplomatic life in the USA (McCumber, 1996). He chose, given this political context, to offer what he claimed was a “realistic” utopian alternative to the post-war welfare-state capitalism. His theory evolved to reflect the dramatic changes taking place in the world around him. Consistent with his aim to offer an egalitarian vision of justice that remains ‘realistic,’ he made changes to his proposals that tried to be sensitive to the changing times. His Kantian-egalitarian commitment to being egalitarian proved constant (Lele, 2011:12–13).

His realistic utopian vision was that of a dramatic reduction in income and wealth inequalities. His idea of ‘justice as fairness’ was intended for a society of reasonable, free and equal citizens with political freedom and basic rights. They were expected to cooperate with each other in “a reasonably egalitarian economic system” with a structure of taxation that would benefit the least favoured. Its implementation would greatly reduce, if not eliminate, inequality. He had claimed that his “maximin” criterion of taxation (which, simply stated, claims that social and economic inequalities are just only if they work to the maximum benefit of the least advantaged), would conform to Marx’s precept about needs and abilities (Rawls, 1974a:145). On subsequent consideration, he realized that to suggest that the very basis of capitalist exploitation could be transformed through taxation was an unrealistic expectation (Rawls, 1974b:654).

Justice is experienced only by its absence: as “injustice” and as an outcome of denials of our “natural” sense of equality with all human beings as species beings. In other words, we experience injustice as the denial of both freedom and equality as human beings (Narotzky, 2016:82). Therefore, surpassing the circumstances of justice implies challenging and overcoming all forms of obstacles to substantive equality and freedom, that is freedom for everyone to actualize their potential as human beings. What is claimed as a felt experience of injustice arises out of a sense of what is good and right. Conceptions of good and right emerge out of experiences of struggles against unequal treatment.

New perspectives on justice and equality that have emerged out of critical reflections from the margins of liberal democratic societies are indicative of the diverse ways in which inequality is experienced in different sectors of formally democratic societies based on their specific cultural contexts. The mainstream understanding of justice has been dominated by patriarchal, racial, upper class, upper caste modes of self-understanding and remained unexposed until recently. Multiple forms and locations of unequal relations and the ensuing experiences of injustice are now being highlighted. Given these developments, and in view of a multidimensional neoliberal turn in capitalist liberal democracies with global consequences, a more comprehensive analysis of the underlying forces behind the deepening experiences of injustice is called for.

Institutions of justice do provide a modest ethical gap between the ethical principles that the formal liberal democratic practice claims to uphold in the public domain (as indicative of “the possible real”) and the uncontrollable operations of capitalist economy (the “actual”). Despite its commitment to defend private property rights, protect instrumental individualism and endorse Hobbesian assumptions of social contract, in practice, procedural democracy preserves a certain moral commitment to the ideal of equality. It thus permits groups thrown on to the margins of society by the logic of capital to persevere in their struggles for substantive equality and to put pressure on the formally open competitive arena of parliamentary politics to enlarge its scope through electoral and party politics as well as through social movements (McAdam & Tarrow, 2010). Their critique of the oppressive order and their utopian urges find their expressions not only through street demonstrations and sit-ins, but also through literary and musical works and cartoons (Young, 2001:688). The weapon they all have is that of justice. Democracy has thus provided, so far, some “insulation against the ghastliness of life exhaustively ordered by the market and measured by market value” (Brown, 2003:22). Under these conditions, justice must act as the placeholder for substantive equality. We must remember, therefore, that the struggle for social justice is not an end in itself but a necessary step in the long march towards substantive equality and society beyond justice (Baynes, 2000; Panayotakis, 2003).

Prospects for Rawls’ “realistic utopia” have now disappeared from the horizon. Today, any invocation of Marx’s idea of a society beyond justice may seem too far-fetched. Since its official acceptance in the seventies as the preferred policy-package for the management of the economy and as remedy to overcome the crisis of welfare-state capitalism in the older capitalist states, neoliberalism has been implemented by practically all nation-states, either by necessity or choice. The consent-manufacturing media have systematically cultivated an aura of ‘there is no alternative (TINA)’. Austerity policies have been pursued with great enthusiasm along with promises such as ‘good days are just ahead’. Since 2008, these illusions have begun to disintegrate as this claimed remedy against crisis took the global economy to an even deeper level of crisis. Numbers of those confronting precarious conditions of life have grown exponentially. At the same time, resentment against those ready to risk death by leaving home to seek relief in better-off nations fuels upsurge of right-wing politics around the globe. At the same time, we are beginning to witness some signs of

realization by the younger generation everywhere that their own future is in jeopardy and that they must rise in revolt and seek serious transformative action against this unprecedented deterioration in the human condition.

It is precisely under such conditions of deep crisis that an urgent invocation for action to transform institutions that promise but fail to deliver justice emerges. It calls for a vision of a society beyond justice so as to reawaken the utopian urges of those suffering from the worst consequences of this crisis. In hindsight, it seems this change could have been anticipated with a clearer understanding of the logic of the capitalist mode of production and its intimate links to liberal political culture. Karl Marx had already analysed them so prophetically. Therefore, this is a good time to rethink the meanings of terms such as actual, real, possible and desirable and venture beyond the actual to explore the signs of ‘the real possible’, which Bloch calls “concrete utopia” (Levitas, 2007:295; Kellner & O’Hara, 1976:29–30). Bloch’s thoughts, as well as Marx’s two precepts and Rawls’ idea of society beyond justice, are perhaps the best markers for exploring, generating and sustaining utopian energies among today’s increasingly disenchanted youth.

Towards a Society Beyond Justice

Marx rarely spoke or sketched out a vision of a fully developed socialist society. It was in keeping with his dialectical method and his conviction that those who will be responsible for shaping the post-capitalist society will do so democratically on their own and not on the basis of any blueprints provided by external theorists. The precepts cited by Rawls were part of a message sent by Marx to the party members who had assembled in Gotha, in 1875, to develop a common programme of action that included several proposals that Marx found objectionable. The letter was meant to be only for private circulation among members. However, these comments constitute what McLellan (2000:615) calls Marx’s “most important statement on organization in the future communist society”. The text contains important insights that clarify Marx’s position on the concept of justice. Marx reminds his associates at Gotha that judgments about justice cannot be made independently of the level of development of society under consideration. It indicates Marx’s sensitivity to the context-specific nature of values such as justice and freedom. For Marx, the meaning of these values must be explored and interpreted with the context of each different tradition and the specific level of development of the society which it represents (see Nielsen, 1986:25).

In these comments, Marx also pointed to work itself as having become life’s principal need in a fully developed socialist society. As discussed earlier, Marx regarded work as the socially shared basic activity of the human species. It is also the defining expression of the three-dimensional human reason which is in essence, as Habermas puts it, our “inability to not learn” and which I translate as “the insatiable urge to ask the question *why*”. For Marx, this human potentiality has been and will continue to be of momentous consequence for the history of the species. In a fully

developed socialist society, work as creative transformative activity will become life's principal need and so will determine the necessity and desirability of all other needs through the decisions made by communities of free and equal citizens. This will stand in contrast with all preceding social orders in which work was reduced to the necessary instrument of fulfilling other, externally determined needs. Under capitalism, work gets organized in ways that are socially alienating. It abstracts the creative and self-actualizing potentiality of the worker from her/his actions and invests it in managers and machines. In a fully developed socialist society, needs arise and change in keeping with the changing stages of its development. Indeed, this does not describe a society at "stationary state" but a continuously developing human community that is always transforming itself through free exercise of three-dimensional reason through work. It will forever continue to approach its 'always yet to come' *telos*.

Marx's words in the "Critique of the Gotha Program" about the fully developed socialist society, "all the springs of co-operative wealth flow more abundantly" have been interpreted to mean that the constraint of scarcity, even moderate scarcity, will no longer hold. The question of scarcity has been a source of serious debates in classical, neoclassical and Marxist economics, and the diverse interpretations of Marx' ideas about scarcity and abundance have been offered and debated. For Marx, scarcity as a condition, whether it is severe, moderate or absent, is linked to the constraints placed on human potentiality both in pre-capitalist and capitalist societies. The postulate of scarcity reveals the two faces of liberalism's strategy for legitimating capitalism. On one hand, in Smith, Hume and Rawls, it serves to justify the institutions of property and market through the discourse of securing property rights "without the necessity of posting some transcendental principle of legitimacy". In Mill and Keynes, on the other hand, it works in the opposite direction in the justification of the same institutions in the present by invoking the possibility of overcoming scarcity in some distant future (Xenos, 1987:239).

The notion of scarcity in neoclassical economics is based on a non-transformative understanding of society and its institutional structures (Nell, 1980:177). This is antithetical to the Marxist dynamic-dialectical understanding of human-nature-society relations. Most of the objections to the idea of absence of scarcity result from liberal individualist assumptions about competitive self-interest as being basic to human self-identity. Scarcity concerns are directly linked to human needs. Given the plasticity of all needs other than work, they can and should develop in conformity with our changing understanding of nature and the unfolding of our potentiality. This will be achieved once work is liberated from the alienating conditions that capitalist society requires for its continuation. Hence, struggle against capitalism is a struggle against "the artificial reproduction of scarcity" (Panayotakis, 2003:99) that helps perpetuate oppression in all its forms.

The following conclusion can be drawn from the earlier discussion of the three-dimensional human reason, Marx's analysis of its historic potential, expressed through the history of work, and the history of science and technology: we must continue to identify past moments of advances made towards a society beyond justice and recognize and learn from the disheartening setbacks to our utopian hopes that

followed. Psychology's commitment to human wellbeing will require that it does not remain caught in the current dominant mode in which human subjects seek only coping adjustments to a selfhood designed for neoliberal work ethic under conditions of expanding inequalities and declining opportunities. Indeed, it should orient itself towards developing the human subject capable of imagining and implementing ways to ensure a full and free life for all on this earth.

Conclusion

In my cursory survey of a small number of articles by psychologists on the disciplinary fragmentation and the current crisis, I am encouraged by the fact that a significant number of contributions offer insightful analyses of their causes and consequences for human subjectivity. Some even go beyond that to explore the possible pathways to countering fragmentation and/or the neoliberal hegemony. Goertzen (2010) offers dialectical pluralism and 'intertextualism' as a middle ground between positivist-empiricist and pragmatic pluralist ways of attempting integration. Several articles, such as that by Zittoun et al. (2009), suggest serious, organized dialogue and collaborative research projects between practitioners of various perspectives. This resonates with my earlier observation that recognition of a crisis often makes scholars with distinct and contradictory views on the nature of science and method willing to engage in a dialogue that allows not only peaceful coexistence but, more importantly, guides them to the pursuit of ways that lie beyond contradiction. This is achieved by historicizing, locating the source and transcending the conditions that turn diversity into fragmentation. A requisite for a successful outcome of such dialogues will be that the scholars place their own professional practices and their socio-political and economic contexts on the transformative agenda (Arfken, 2015; Gjorgjioska & Tomicic, 2019; Walsh-Bowers, 2010).

Psychology's interface with neuroscience on one hand and critical social sciences on the other should enable it to exploit its advantage. It need not feel "boxed in"; on the contrary, it should help determine, for human selfhood, the contours of what I have called "the secure guardrail of nature" such that human communities can continue to advance their wellbeing without exceeding the limits that threaten the survival of the species, as it does now. While analysis of the complexities of actual discoveries of neuroscience is beyond the scope of this paper and also beyond my personal full comprehension, a cursory survey of some discussion on the subject seems sufficiently indicative of the reluctance of serious scholars to draw one-sided deterministic conclusions about the relationship between nature and nurture. Instead there appears to be a strong desire to "integrate the complexities of human biology with the richness of culture" (Sasaki & Kim, 2017:4). In responding to the question: "is Self Special?", Gillihan and Farah (2005:76) claim that self-representation questions are shifting to the province of brain and cognitive sciences, but they also seem to agree with Pinker (1997:564) and his assertion that "The *I* is not a combination of body parts or brain states or bits of information, but a unity of selfness over time, a

single locus that is nowhere in particular.” These authors conclude that much of the research negates the idea of “a unitary common system despite individual’s objective experience of a unified self”. Decety and Sommerville (2003), Decety and Jackson (2006), and Adolphs (2010) make a similar point about self as being social and unique at the same time and further explore the implications of social-neuroscience on empathy.

One thing that is common to all of these specialized explorations of various dimensions of the relationship between the human self and its natural and social environments is their openness to dialogue. The ideas that I have tried to bring together in the first section, ideas about reason and work under the rubric of human condition are intended to suggest a possible starting point for such transformative dialogues. I believe it is both necessary and adequate as a prerequisite for a minimal but comprehensive agreement on some basic principles.

On the current crisis, the necessity of transformative dialogue among concerned psychologists hardly needs stressing. The very recognition of its severity for human beings and their communities around the globe has led them to generate a large and highly diverse body of innovative responses. They are finding new ways to capture the nuances of how and why human subjectivity has changed. Türken et al. (2015) do so, for example, with reference to the “technology of neoliberal subjectification”. In sketching out the impact of precariousness on life, Layton (2010) points to the resulting traumas that produce “perverse forms of subjectivity” thus confirming Freud’s insight that when a truth is too painful to bear, we substitute for it a less painful lie or a disavowal that eventually issues in perversion. McGuigan (2014) points to how leading celebrities such as high-tech entrepreneurs become models of achievement for the aspiring young as the ideal type for “the neoliberal self.” This is observed even though they seldom are, or can be, emulated in life yet continue to be treated as guides for appropriate conduct in a ruthlessly competitive and unequal world. Neilson (2015) points to how the response to precarity and how it correlates with anxiety is highly class variegated. He turns to Gramsci’s theory of ideology and to concepts such as “ontological security” and “existential anxiety” to map responses that are emerging within the neoliberal form of the global class structure.

The task of cultivating a three-dimensional subjectivity is made urgent by the systematic damage that began during the practice of liberal democracy and was exacerbated by its neoliberal turn. We now seem to be confronted with a severely damaged mediating potentiality of the human subject (Giroux & Giroux 2009; Whitebrook, 1984). Today’s fundamentalist polarization of attitudes is reminiscent of the times of intolerance resulting in more than a century of religious wars in Europe. It triggered a counter-response that created conditions for the emergence of the liberal democratic alternative. Similar forms of intolerance have now taken the central stage in practically all formally democratic societies. In countries where neoliberal economy and culture have been in ascendance and control for some decades, new morbid symptoms have emerged through the rise and popularity of dictatorial rulers. Once again, religious intolerance merges with resentment against, and for the denial of, home, citizenship or decent livelihood to those displaced by violent conflicts initiated and perpetrated by vested economic interests. At the same time, we also bear witness to

the resurgence of utopian energies in sections of youth in many of the same societies. Türken et al. (2015:44) recognize that the majority of the poor and the working class may not have a coherent or consistent alternative political vision. Consequently, they refer to Sullivan et al. (2011) who draw on Gramsci to suggest that we critically think about those whose activisms are now routinely labelled as “uncivil” and whose protests are treated as violent criminal acts, and how these characterizations are deployed as to control and suppress them and their utopian urges (Fassin & Defossez, 2019). Rutherford (2018) calls on feminist psychologists to move away from the emphasis on “feeling empowered” and towards “being empowered” so as to disrupt and displace neoliberal forms of subjectivity.

Psychology is ideally placed to investigate and enrich the manner in which the human subject, as nature (and distinct from it) and as society (but also distinct from it) mediates its relationship, as ‘the other’ of both nature and society during its lifetime of self-formation. With the enormous spread of its subdisciplines, psychology reaches every corner of our subjectivity and it can thus play a central role in enriching the human condition. If my proposal, as developed in this paper, makes sense then the pedagogical task of nurturing, guiding and organizing the rekindled utopian energies of younger generations and protecting them from the despair that otherwise tends to engulf them should be clear. It will not be, however, an easy task. As the project of “militant hope”, it has to be political and pedagogic at the same time. For Paulo Freire, subjectivity is the material of politics and a platform whereby the struggle over consciousness and resistance takes place (De Lissoyoy, 2018; Giroux, 2017:904–905). In that vein, the new pedagogy of and for the oppressed must emerge out of the psychologist’s activity as well as seek implementation in all related domains: classroom, research and therapeutic practice.

If thus reconfigured for researching and rebuilding human subjectivity, psychology will approach its enormous diversity with this purpose in mind. On one hand, it will reinterpret its discoveries about the relationship between our bodily nature and external nature and those about the interactions between the self with its own social and cultural attributes, and others, including distant strangers with their own unique socio-cultural heritage. Consequently, it will be able to fulfil its commitment to human welfare through a better understanding of the human condition and full awareness of what true improvement of the quality of life of human individuals entails.

References

- Adolphs, R. (2010). Conceptual challenges and directions for social neuroscience. *Neuron*, 65(6), 752–767.
- Ake, C. (1975). Justice as equality. *Philosophy & Public Affairs*, 5(1), 69–89.
- Alejandro, R. (1993). Rawls’s communitarianism. *Canadian Journal of Philosophy*, 23(1), 75–100.
- Anderson, B. (2006). “Transcending without transcendence”: Utopianism and an ethos of hope. *Antipode*, 38(4), 691–710.

- Arfken, M. (2015). From the bourgeois individual to class struggle. In I. Parker (Ed.), *Handbook of critical psychology* (pp. 24–34). Routledge.
- Barrett, L. F. (2009). The future of psychology: Connecting mind to brain. *Perspectives on Psychological Science*, 4(4), 326–339.
- Baynes, K. (2000). Rights as critique and the critique of rights: Karl Marx, Wendy Brown, and the social function of rights. *Political Theory*, 28(4), 451–468.
- Benhabib, S. (1985). The generalized and the concrete other: The Kohlberg-Gilligan controversies and feminist theory. *Praxis International*, 5(4), 402–424.
- Bhatia, S., & Priya, K. R. (2018). Decolonizing culture: Euro-American psychology and the shaping of neoliberal selves in India. *Theory & Psychology*, 28(5), 645–668.
- Bloch, E. (1986). *The principle of hope: Volume One* (E. Bloch & N. Plaice, Trans.). Massachusetts Institute of Technology Press.
- Bloch, E., & White, W. R. (1968). Man as possibility. *CrossCurrents*, 18(3), 273–283.
- Brodie, J. M. (2007). Reforming social justice in neoliberal times. *Studies in Social Justice*, 1(2), 93–107.
- Brown, W. (2003). Neo-liberalism and the end of liberal democracy. *Theory & Event*, 7(1).
- Cabanas, E. (2018). Positive psychology and the legitimation of individualism. *Theory & Psychology*, 28(1), 3–19.
- Christopher, J. C., & Hickinbottom, S. (2008). Positive psychology, ethnocentrism, and the disguised ideology of individualism. *Theory & Psychology*, 18(5), 563–589.
- Davies, B., & Saltmarsh, S. (2007). Gender economies: Literacy and the gendered production of neo-liberal subjectivities. *Gender and Education*, 19(1), 1–20.
- De Lissovoy, N. (2018). Pedagogy of the anxious: Rethinking critical pedagogy in the context of neoliberal autonomy and responsabilization. *Journal of Education Policy*, 33(2), 187–205.
- Decety, J., & Jackson, P. L. (2006). A social-neuroscience perspective on empathy. *Current Directions in Psychological Science*, 15(2), 54–58.
- Decety, J., & Sommerville, J. A. (2003). Shared representations between self and other: A social cognitive neuroscience view. *Trends in Cognitive Sciences*, 7(12), 527–533.
- Duménil, G., & Lévy, D. (2015). Neoliberal managerial capitalism: Another reading of the Piketty, Saez, and Zucman data. *International Journal of Political Economy*, 44(2), 71–89.
- Eckensberger, L. H. (2008). Morality from a cultural psychology perspective. In G. Zheng, K. Leung, & J. G. Adair (Eds.), *Perspectives and progress in contemporary cross-cultural psychology: Proceedings from the 17th International Congress of the International Association for Cross-Cultural Psychology*. https://scholarworks.gvsu.edu/iaccp_papers/25/
- Farah, M. J., & Heberlein, A. S. (2007). Personhood and neuroscience: Naturalizing or nihilating? *The American Journal of Bioethics*, 7(1), 37–48.
- Fassin, D., & Defossez, A. C. (2019). An impossible movement? *New Left Review*, 115(1), 77–92.
- Faulconer, J. E., & Williams, R. N. (1985). Temporality in human action: An alternative to positivism and historicism. *American Psychologist*, 40(11), 1179–1188.
- Ferguson, S., & McNally, D. (2015). Precarious migrants: Gender, race and the social reproduction of a global working class. *Socialist Register*, 51(51), 1–23.
- Ferraro, D. (2016). Psychology in the age of austerity. *Psychotherapy and Politics International*, 14(1), 17–24.
- Foster, J. B. (1999). Marx's theory of metabolic rift: Classical foundations for environmental sociology. *American Journal of Sociology*, 105(2), 366–405.
- Fraser, N. (2015). Legitimation crisis? On the political contradictions of financialized capitalism. *Critical Historical Studies*, 2(2), 157–189.
- Friedman, M. (1982). *Capitalism and freedom*. The University of Chicago Press.
- Fumagalli, A. (2015). The concept of subsumption of labour to capital: Towards life subsumption in bio-cognitive capitalism. In E. Fisher, & Fuchs, C. (Eds.), *Reconsidering value and labour in the digital age* (pp. 224–245). Palgrave Macmillan.

- Gandesha, S. (2018). "Identifying with the Aggressor": From the authoritarian to neo-liberal personality. In R. Dannemann, R. Pickford, & H. E. Schiller (Eds.), *Der aufrechte Gang im windschiefen Kapitalismus* (pp. 273–297). Springer VS.
- Gergen, K. J., Gulerce, A., Lock, A., & Misra, G. (1996). Psychological science in cultural context. *American Psychologist*, 51(5), 496–503.
- Gill, R. (2008). Culture and subjectivity in neoliberal and postfeminist times. *Subjectivity*, 25(1), 432–445.
- Gillihan, S. J., & Farah, M. J. (2005). Is self special? A critical review of evidence from experimental psychology and cognitive neuroscience. *Psychological Bulletin*, 131(1), 76–97.
- Giroux, H. A. (2017). White nationalism, armed culture and state violence in the age of Donald Trump. *Philosophy & Social Criticism*, 43(9), 887–910.
- Giroux, H. A., & Giroux, S. S. (2009). Beyond bailouts: On the politics of education after neoliberalism. *Policy Futures in Education*, 7(1), 1–4.
- Gjorgjioska, M. A., & Tomacic, A. (2019). The crisis in social psychology under neoliberalism: Reflections from social representations theory. *Journal of Social Issues*, 75(10), 169–188.
- Goertzen, J. R. (2008). On the possibility of unification: The reality and nature of the crisis in psychology. *Theory & Psychology*, 18(6), 829–852.
- Goertzen, J. R. (2010). Dialectical pluralism: A theoretical conceptualization of pluralism in psychology. *New Ideas in Psychology*, 28(2), 201–209.
- Gramsci, A. (1971). *Selections from the prison notebooks* (G. N. Smith, Trans.). Lawrence and Wishart.
- Grear, A. (2015). Deconstructing anthropos: A critical legal reflection on 'anthropocentric' law and anthropocene 'humanity.' *Law and Critique*, 26(3), 225–249.
- Habermas, J. (1974). The public sphere: An encyclopedia article (S. Lennox, & F. Lennox, Trans.). *New German Critique*, 3(1), 49–55. Original work published in 1964.
- Habermas, J. (1975). *Legitimation crisis* (T. McCarthy, Trans.). Beacon Press.
- Habermas, J. (1970). Towards a theory of communicative competence. *Inquiry*, 13(1–4), 360–375.
- Habermas, J. (1974). *Dogmatism, reason and decision: On theory and praxis in our scientific civilization in theory and practice*. Beacon Press.
- Hatfield, G. (1998). Kant and empirical psychology in the 18th century. *Psychological Science*, 9(6), 423–428.
- Healy, P. (2012). Toward an integrative, pluralistic psychology: On the hermeneutico-dialogical conditions of the possibility for overcoming fragmentation. *New Ideas in Psychology*, 30(3), 271–280.
- Henriques, G. R. (2004). Psychology defined. *Journal of Clinical Psychology*, 60(12), 1207–1221.
- Henriques, G. R. (2013). Evolving from methodological to conceptual unification. *Review of General Psychology*, 17(2), 168–173.
- Herman, E. S. (2000). The propaganda model: A retrospective. *Journalism Studies*, 1(1), 101–112.
- Honneth, A., & Ash, M. G. (1982). Work and instrumental action. *New German Critique*, 26(1), 31–54.
- Huws, U. (2010). Expression and expropriation: The dialectics of autonomy and control in creative labour. *Ephemera: Theory and Politics in Organization*, 10(3/4), 504–521.
- Indick, W. (2002). Fight the power: The limits of empiricism and the costs of positivistic rigor. *The Journal of Psychology*, 136(1), 21–36.
- Israel, J. I. (2006). *Enlightenment contested: Philosophy, modernity, and the emancipation of man 1670–1752*. Oxford University Press.
- Kellner, D. (1997). Ernst Bloch, utopia and ideology critique. *Jaargang*, 44(2), 40–48.
- Kellner, D., & O'Hara, H. (1976). Utopia and Marxism in Ernst Bloch. *New German Critique*, 9(1), 11–34.
- Koch, S. (1981). The nature and limits of psychological knowledge: Lessons of a century qua "science." *American Psychologist*, 36(3), 257–269.
- Layton, L. (2010). Irrational exuberance: Neoliberal subjectivity and the perversion of truth. *Subjectivity*, 3(3), 303–322.

- Leary, D. E. (1982). Immanuel Kant and the development of modern psychology. In W. R. Woodward & M. G. Ash (Eds.), *The problematic science: Psychology in nineteenth-century thought* (pp. 17–42). Praeger.
- Lele, J. (1996). Hindutva as pedagogic violence. In N. Crook (Ed.), *Transmission of knowledge in South Asia: Essays on education religion history and politics*. Oxford University Press.
- Lele, J. (2008). Ganesh at the crossroads: Reflections on Dnyaneshwar's theory of dialogue. In M. Naito, I. Shima, & H. Kotani (Eds.), *Mārga: Ways of liberation, empowerment, and social change in Maharashtra*. New Delhi: Manohar.
- Lele, J. (2011). Reflections on the relation between theory and practice for our times. In M. Kulkarni (Ed.), *Interdisciplinary perspectives in political theory*. Sage Publications.
- Lele, J. (1981). *Elite pluralism and class rule: Political development in Maharashtra, India*. University of Toronto Press.
- Levitas, R. (2007). Looking for the blue: The necessity of utopia. *Journal of Political Ideologies*, 12(3), 289–306.
- Louden, R. B. (2011). *Kant's human being: Essays on his theory of human nature*. Oxford University Press.
- MacIntyre, A. (1985). *After virtue: A study in moral theory*. Duckworth.
- MacIntyre, A. (2016). *Ethics in the conflicts of modernity: An essay on desire, practical reasoning, and narrative*. Cambridge University Press.
- Martin, J. (2003). Positivism, quantification and the phenomena of psychology. *Theory & Psychology*, 13(1), 33–38.
- McAdam, D., & Tarrow, S. (2010). Ballots and barricades: On the reciprocal relationship between elections and social movements. *Perspectives on Politics*, 8(2), 529–542.
- McCarthy, G. (1986). German social ethics and the return to Greek philosophy: Marx and Aristotle. *Studies in East European Thought*, 31(1), 1–24.
- McCumber, J. (1996). Time in the ditch: American philosophy and the McCarthy era. *Diacritics*, 26(1), 33–49.
- McGuigan, J. (2014). The neoliberal self. *Culture Unbound: Journal of Current Cultural Research*, 6(1), 223–240.
- McLellan, D. (2000). *Karl Marx: Selected writings*. Oxford University Press.
- McNally, M. B. (2010). Enterprise content management systems and the application of Taylorism and Fordism to intellectual labour. *Ephemera: Theory & Politics in Organization*, 10(3/4): 357–373.
- McNally, D. (2009). From financial crisis to world-slump: Accumulation, financialisation, and the global slowdown. *Historical Materialism*, 17(2), 35–83.
- Meehan, J. (Ed.). (2013). *Feminists read Habermas: Gendering the subject of discourse*. Routledge.
- Melchert, T. P. (2013). Beyond theoretical orientations: The emergence of a unified scientific framework in professional psychology. *Professional Psychology: Research and Practice*, 44(1), 11–19.
- Mitchell, G. R. (2003). Did Habermas cede nature to the positivists? *Philosophy & Rhetoric*, 36(1), 1–21.
- Moore, P., & Robinson, A. (2016). The quantified self: What counts in the neoliberal workplace. *New Media & Society*, 18(11), 2774–2792.
- Narotzky, S. (2016). Between inequality and injustice: Dignity as a motive for mobilization during the crisis. *History and Anthropology*, 27(1), 74–92.
- Neilson, D. (2015). Class, precarity, and anxiety under neoliberal global capitalism: From denial to resistance. *Theory & Psychology*, 25(2), 184–201.
- Nell, E. J. (1980, Fall). Value and capital in marxian economics. *The Public Interest*, 0, 174–200.
- Nicholas, J. (2012). *Reason, tradition, and the good: MacIntyre's tradition-constituted*. University of Notre Dame Press.
- Nielsen, K. (1986). Marx, Engels and Lenin on justice: The critique of the Gotha programme. *Studies in East European Thought*, 32(1), 23–63.
- O'Neill, O. (1997). Kant on reason and religion. *Tanner Lectures on Human Values*, 18(1), 267–308.

- Panayotakis, C. (2003). Capitalism's "dialectic of scarcity" and the emancipatory project. *Capitalism Nature Socialism*, 14(1), 88–107.
- Parker, I. (2009). Critical psychology and revolutionary Marxism. *Theory & Psychology*, 19(1), 71–92.
- Pettigrew, T. F. (2017). Social psychological perspectives on Trump supporters. *Journal of Social and Political Psychology*, 5(1), 107–116.
- Pletsch, C. E. (1981). The three worlds, or the division of social scientific labor, circa 1950–1975. *Comparative Studies in Society and History*, 23(4), 565–590.
- Rawls, J. (1974). Concepts of distributional equity: Some reasons for the maximin criterion. *American Economic Review*, 64(2), 141–146.
- Rawls, J. (1974). Reply to Alexander and Musgrave. *The Quarterly Journal of Economics*, 88(4), 633–655.
- Reidy, D. A. (2014). From philosophical theology to democratic theory. In J. Mandle & D. A. Reidy (Eds.), *A companion to Rawls* (pp. 9–30). WileyBlackwell.
- Ricœur, P., Reagan, C. E., & Stewart, D. (1978). *The philosophy of Paul Ricœur an anthology of his work*. Beacon Press.
- Rutherford, A. (2018). Feminism, psychology, and the gendering of neoliberal subjectivity: From critique to disruption. *Theory & Psychology*, 28(5), 619–644.
- Sasaki, J. Y., & Kim, H. S. (2017). Nature, nurture, and their interplay: A review of cultural neuroscience. *Journal of Cross-Cultural Psychology*, 48(1), 4–22.
- Sayers, S. (2007). Individual and society in Marx and Hegel: Beyond the communitarian critique of liberalism. *Science & Society*, 71(1), 84–102.
- Sayers, S. (2007). The concept of labor: Marx and his critics. *Science & Society*, 71(4), 431–454.
- Shaw-Taylor, L. (2001). Labourers, cows, common rights and parliamentary enclosure: The evidence of contemporary comment c. 1760–1810. *Past & Present*, 171(1), 95–126.
- Shweder, R. A. (1999). Why cultural psychology? *Ethos*, 27(1), 62–73.
- Smith, N. (2005). Hope and critical theory. *Critical Horizons*, 6(1), 45–61.
- Sullivan, S., Spicer, A., & Böhm, S. (2011). Becoming global (un) civil society: Counter-hegemonic struggle and the Indymedia network. *Globalizations*, 8(5), 703–717.
- Taylor, R. S. (2005). Kantian personal autonomy. *Political Theory*, 33(5), 602–628.
- Thompson, C. (2006). Adorno and the borders of experience: The significance of the nonidentical for a "different" theory of Bildung. *Educational Theory*, 56(1), 69–87.
- Toulmin, S., & Leary, D. E. (1985). The cult of empiricism in psychology, and beyond. In S. Koch & D. E. Leary (Eds.), *A century of psychology as science* (pp. 594–617). McGraw-Hill.
- Türken, S., Nafstad, H. E., Blakar, R. M., & Roen, K. (2015). Making sense of neoliberal subjectivity: A discourse analysis of media language on self-development. *Globalizations*, 13(1), 32–46.
- Valsiner, J., & Brinkmann S. (2016). Beyond the "Variables": Developing metalanguage for psychology. In Klempe S., & Smith R. (Eds.), *Centrality of history for theory construction* (Vol. 14). Switzerland: Springer.
- Waldron, J. (1988). When justice replaces affection: The need for rights. *Harvard Journal of Law and Public Policy*, 11(3), 625–648.
- Waldron, J. (2005). Moral autonomy and personal autonomy. In J. Christmas & J. Anderson (Eds.), *Autonomy and the challenges to liberalism: New essays* (pp. 307–329). Cambridge University.
- Walsh-Bowers, R. (2010). Some social-historical issues underlying psychology's fragmentation. *New Ideas in Psychology*, 28(2), 244–252.
- Whitebook, J. (1984). Reason and happiness: Some psycho-analytic themes in critical theory. *Praxis International*, 4(1), 15–31.
- Williamson, T. (2000). Understanding enclosure. *Landscapes*, 1(1), 56–79.
- Wood, A. W. (1991). Unsociable sociability: The anthropological basis of Kantian ethics. *Philosophical Topics*, 19(1), 325–351.
- Wood, E. M. (1978). CB Macpherson: Liberalism and the task of socialist political theory. *Socialist Register*, 15(15), 215–240.
- Wood, E. M. (2000). Capitalism or enlightenment? *History of Political Thought*, 21(3), 405–426.

- Xenos, N. (1987). IV. Liberalism and the postulate of scarcity. *Political theory*, 15(2), 225–243.
- Young, I. M. (2001). Activist challenges to deliberative democracy. *Political Theory*, 29(5), 670–690.
- Young, I. M. (2011). *Justice and the politics of difference*. Princeton University Press.
- Zeitlin, I. M. (1968). *Ideology and the development of sociological theory*. Englewood Cliffs.
- Zittoun, T., Gillespie, A., & Cornish, F. (2009). Fragmentation or differentiation: Questioning the crisis in psychology. *Integrative Psychological and Behavioral Science*, 43(2), 104–115.

Challenges of Integrative Psychology



Lilavati Krishnan

Abstract In the recent past, there has been a call for a change in some aspects of contemporary psychology, one aspect being that of making psychology integrative. The present essay examines some major challenges posed by the idea of integrative psychology particularly with regard to teaching. These are: understanding why an integrative approach is needed at all, clarifying the meaning of “integrativeness” considering diverse views and dealing with a sense of disconnectedness in certain domains. Attention is drawn to issues regarding interdisciplinary and intradisciplinary disjuncture in psychology, disjointedness between individual (micro-level), group (meso-level) and societal (macro-level) psychological processes, between methods, contemporary and traditional thought systems, between psychological research and public policy, between the human welfare goal of psychology and the content of the discipline, and between the conceptualizations of integration and actual practice of these concepts. The need for giving greater importance to the human welfare aspect in integrative psychology is highlighted. It is further pointed out that along with an interdisciplinary approach towards integrative psychology, disciplinary identities also need to be sharpened for effective integration. A comment is made on the problems in teaching of the discipline in a fundamentally transformed way, especially in certain educational systems. Some of the hurdles include a lack of openness to integrativeness, the discipline-focused training of teachers, the need to motivate students for an integrative approach, and a job market that may not appreciate an integrative or multi-disciplinary approach. Suggestions are given for introducing an integrative element in the existing state of psychology. It is concluded that psychology can be made integrative only by developing an inclusive attitude towards other areas of inquiry, and towards different ideas, methods and theories. Ultimately, psychology should become integrative as a science of human beings, as suggested by Valsiner.

Keywords Integrativeness · Inclusiveness · “Tree of Knowledge” · Meta-disciplinarity · Human science

L. Krishnan (✉)

Department of Humanities & Social Sciences, Indian Institute of Technology Kanpur, Kanpur, India

e-mail: lk@iitk.ac.in

Psychology's future lies in the integration of careful empirical investigations with basic scientific ideas. It is time for a new synthesis of knowledge ... in psychology, and in all of behavioral sciences.

—Jaan Valsiner (2007, p. 2).

In the past two decades or so, there has been a call among psychologists for bringing about fundamental changes in psychology as a discipline. One such change is with respect to the notion of an “integrative” psychology. Although psychologists’ views differ with regard to the nature and direction of the changes that should be brought about, there seems to be sufficient support for moving towards an integrative psychology, with the objective of a well-rounded understanding of psychological processes as a whole, that would be reflected in teaching and research activities in psychology, professional training in the field and its applications. Attaining this objective would be a task that is daunting, yet possible.

The present essay examines some challenges in making psychology integrative. Without referring to a particular branch of psychology, the question of why an integrative psychology is needed at all is briefly considered. Various meanings and views of “integrativeness” are summarized, that may themselves pose challenges in executing the idea of integration. A comment is made on the problems in teaching of the discipline in a fundamentally transformed way, especially in certain educational systems. Attention is drawn to the fact that the human welfare aspect is insufficiently highlighted in the existing conceptualization and practice of integrative psychology.

There may be numerous challenges in the context of making psychology integrative, but in the present discussion, the focus will be on three major challenges. The first challenge is a rudimentary question: *Why* is an integrative psychology needed at all? Exactly what are the drawbacks or deficiencies in the existing mainstream psychology that can be addressed through an integrative approach?

The second challenge is to understand, with sufficient clarity, the various meanings attached to the concept of integrativeness. A survey of the different views of this concept will help to learn how the drawbacks of the existing mainstream psychology can be addressed.

The third challenge is to review the perceived disconnectedness in several domains of psychology as a discipline, and see whether integrative psychology can contribute to the required linking process.

Overall, the notion of integrativeness is approached from the academic perspective, especially that of teaching psychology in an integrative form.

Why an Integrative Psychology is Needed

Beginning with the first challenge, that is, to understand and to convince the academic community about the meaningfulness of making psychology integrative, it may be mentioned that the idea was described many years ago (Marston et al., 1931; Thorne, 1967), but it has been dormant until recent times. There seems to be a perception

particularly among psychologists, but also in other disciplines, that psychology as a discipline has not appropriately achieved its claimed or intended objectives of understanding, explaining and predicting human mental processes and behaviour. Nor have psychologists succeeded in the optimal application of information from their discipline in the direction of human well-being, except in limited ways. One of the grounds of such a perception is the lack of connectedness within psychology (between different schools of thought, between fields of specialization, between methods, between theory and practice and so on), and between psychology and other disciplines (physical and life sciences, humanities and social sciences). This point has been mentioned above as the third challenge to be taken up later in the present discussion. It is felt by some experts that adopting a wholistic perspective, working towards integration within and outside psychology and making it a more comprehensive human science would facilitate the discipline in achieving both its intellectual goal (understanding, explaining and predicting) and human welfare goal. The latter goal, however, has received much less attention than it deserves.

Some examples may be cited to show that moving towards integrative psychology would be both necessary and useful. In the arena of teaching, integrative psychology may not have taken off in a visible way, but it seems to have entered into some other activities that psychologists have undertaken, and there seems to be merit in such engagements. For example, a non-profit organization named the Centre for Integrative Psychology describes as its objective the unification of “...*empirical paradigms of psychology with alternative traditions of healing*”, “*comprehending cultures and their underlying spiritual dimensions*” and “...*seeking personal and social wellness*” in human beings (<http://www.centerforintegrativepsychology.org/>).

Another group called the Association for Integrative Psychology (AIP) works to “...*facilitate wholeness*”, and “...*addresses the intrapsychic, interpersonal, and spiritual functioning of the individual within the context of their culture*”, and thereby promotes integrativeness (<http://www.aiponline.org/>). The Integrative Psychology Services, a mental health clinic (<http://integrativepsychologyservices.com/>), follows the idea of integration by combining diverse therapies.

Speaking of a different domain, specialized journals have been brought out to publish critical, analytical and incisive views related to integrativeness in psychology, and between fields of inquiry in general. Journals such as *Integrative Psychological and Behavioural Science (IPBS)*, *Journal of Scientific Psychology*, *Issues in Integrative Studies*, *Journal for the Theory of Social Behaviour*, *Theory & Psychology*, and the like, provide information about expert views and debates regarding integrativeness among social sciences, among other issues. To quote the mission of *IPBS*, this journal strives to integrate “*knowledge from many fields in a new synthesis of universal social science – overcoming the post-modernist fragmentation of ideas*” (<https://www.springer.com/psychology/journal/12124/PSE>).

Moreover, in the past several years, the question of making psychology broadly integrative is being dealt with in *specific areas* of psychology, such as clinical psychology (Carlstedt, 2009; Thorne, 1967), organizational behaviour (Kristof, 1996), social psychology (Jackson, 1988; Mather, 2007) and personality (Ryan,

1995), or by linking a particular social science to another social science (Rosenberg, 2003).

To this may be added the observation that a contradiction is often sensed about psychology as a discipline, because it has two opposite features that co-exist: the appearance of an overarching unified scientific character, and a set of diverse sub-fields that appear to be unified, but are actually not. This leads to an “... *uneasy compromise between unification and fragmentation*” (Henriques, 2004, p. 1207). In the same vein, various authors have written about the perceived disconnectedness in psychology in multiple facets, as mentioned earlier.

To sum up the point, the examples cited above should suffice to indicate that the existing state of psychology indeed requires a transformation, and one way in which this can be brought about is through efforts towards integration. Some groups collectively engage in professional activities that aim at integration; in-depth analyses of integrative psychology are discussed through academic media among the wider intellectual community; a promising move towards integrative psychology has already commenced in diverse fields of psychology; a contradiction between psychology as an undivided discipline and also as a splintered discipline needs to be resolved, and links are required in many facets of psychology that seem to be disjointed. These instances and grounds should convince psychologists and other academicians, that making psychology integrative is a meaningful engagement, is serious business, and not just a passing fad.

The Meaning of “Integrativeness”: Various Views

The second major challenge to be considered here is to comprehend the *meaning* of the notion “integrative”, with sufficient clarity, so that it can be translated into teaching and professional practice. In the light of the diverse meanings of this term, this issue necessitates a relatively long discussion.

- As will become evident, the discussion of what ‘integrative’ means, or should mean, is largely theoretical. The word in question is commonly understood as the quality of bringing together, unifying or combining entities that are otherwise separate and different. It can mean putting together something that is fragmented. At another level, it implies the enabling of the perception of common ground and continuity between entities or branches of knowledge that may have some similar and dissimilar features. The word “integrative” and a closely related term “integrated” are sometimes used interchangeably. In a literal sense, whereas “integrated” implies that certain elements or entities already exist in a combined or united form; “integrative” implies the quality of bringing about integration. It is true that something what is already integrated can also be integrative. In some contexts, “integrated” refers to a feature of the curriculum, such as an extension of an academic programme from a lower to a higher degree—for example,

an integrated bachelor's-cum-master's programme in psychology, or a master's-cum-doctoral programme, or something similar. It could also refer to a blending of two or more fields. For example, environmental psychology deals with features of the physical environment blended with design, human engineering, social and community psychology. Cognitive science may be considered an example of both an integrated and integrative discipline, a compound of several areas of inquiry that deal with cognitive processes investigated in different perspectives.

- In other contexts, “integrativeness” has been defined as exploring “.....*pluralistic and ecological frameworks*”... “*from a systems perspective*” (<http://www.centerforintegrativepsychology.org/>), or nurturing “*acceptance of complementary, alternative...approaches to human behavior as viable ways to facilitate change*” (<http://www.aiponline.org/>).
- One of the other meanings of integrative psychology, described in rather abstract terms, is the concept of the ‘*unit response*’, proposed many years ago by Marston et al. (1931). Beginning with an elaborate description of the automat or ‘hidden machinery’ in humans, the unit response is conceptualized as the totality of the elementary reactions, classified as dominance, compliance, submission and inducement. These reactions, in turn, may take on varying forms, namely alliance or opposition, and increase or decrease in activity. An attempt is made to explain all psychological processes, including motivational and cognitive processes, the self and consciousness, in terms of these elementary unit responses. Methods are suggested to collect empirical evidence for these responses. Thus, the ‘unit response’ is proposed as an overarching ‘integrative’ concept binding all psychological processes. Marston et al. do not support introspection, behaviourism or Freudian theory, but they do incorporate some of the ideas proposed by these schools into an integrative psychology. One may not agree entirely with the interpretations of Marston et al. Reviewers have described the authors’ attempt, on one hand, as “*ingenious*” (Spratt, 1932), or on the other, as a “*folly of trying to write a systematic psychology*” (Griffith, 1934, p. 365).
- Taking a different perspective, Thorne (1967) conceptualizes integrative psychology as “...*the integrated state of the person*” and integration as “*an existential imperative*” (p. 3), necessary for efficient functioning.

Moreover, as exemplified above, some experts translate the idea of integrativeness into application *within* a particular specialization. For example, in clinical psychology, often ‘integrative’ means combining diverse psychotherapies, or a contemporary therapeutic system with a traditional approach. Others interpret “integrative” in a different way. Social psychology may be presented with an “integrative orientation”, essentially linking the earlier approaches with the contemporary ones (Gregory, 1990; Jackson, 1988). To re-iterate, the term “integrative” suggests amalgamating or mixing, in the broadest sense, multiple fields, methods, perspectives and schools within psychology, and also connecting psychology with other disciplines.

Some examples may be cited. When teaching socialization as part of social psychology, sociological and anthropological approaches, along with a developmental-psychological perspective, need to be combined. A second example can

be found in the Reasonable Person Model (Kaplan & Kaplan, 2009), an excellent instance of an integrative perspective. This model exemplifies a blending of cognitive processes with environmental behaviour. It suggests how mental-model building can be linked to meaningful action and being effective in pro-environmental behaviour. Addressing the disturbing issue of unreasonable environmental behaviour, this model points attention to the human cognitive capability of envisaging situations in which certain actions have negative influences on the environment. As another illustration, an integration of methods, perspectives and schools can be found in the idea of *'holigrative'* (holistic + integrative) *psychology*, a term coined by Mathews (2004). According to the proponent of this approach, an integration between Western (modern) psychology, the psychology of consciousness, parapsychology and oriental psychology (what is more familiar as Indian psychology, drawing from Indian philosophical systems). An instance of integration as amalgamation may be exhibited when a teacher introducing psychology as a science and can highlight the common abstract idea running through various forms of science. As eruditely stated by Valsiner (2007), an organism's "*exchange relationships*" with its environment, and its potential for change, are themes that unify all branches.

Ultimately, an effective integrative psychology implies an alliance between fundamental scientific ideas, and what emerges from empirical inquiries, resulting in a within-discipline integration as well as integration of psychology with other disciplines. Valsiner (2007) calls this "*a new synthesis of knowledge*" (p. 2).

- A term frequently used in the context of integration is 'interdisciplinary', implying that scholars in one discipline go beyond its boundary and have dialogues with those in other disciplines. The aim of each discipline is to learn from each other and work together to come up with a meaningful fusion of their respective expertise. 'Interdisciplinarity' is said to be expressed as multi-disciplinary, cross-disciplinary and trans-disciplinary approaches (Miller, 1982) and also pluri-disciplinary and meta-disciplinary approaches (Nissani, 1995). Each of these represents an extension beyond the discipline, and all of them have the goal of some form of integration.

Multiple meanings of the word 'integrative' are evident in several conceptualizations, some in the form of metaphors. The more significant among these are described below.

- With regard to interdisciplinarity as a form of integration, a culinary metaphor has been proposed by Nissani (1995). He defines interdisciplinarity as "...*bringing together distinctive components of two or more disciplines*", in the realms of "*knowledge, research, education, and theory*" (p. 119). Citing the example of a fruit salad, Nissani likens interdisciplinary efforts to the appropriate mixing of fruits, or making a smoothie. How good the fruit salad or smoothie would turn out to be can be known by considering the '*amalgamation quotient*', a hypothetical indicator. This quotient is determined by four factors, namely the *number* of fruits included, the *distance*, that is, the degree of dissimilarity among the fruit, the *novelty* of what is mixed, and *integration*, or the extent and nature of the mixing.

In the academic and educational sphere, this ‘fruit salad’ analogy would mean that the kind of interdisciplinary outcome would be affected by the number of disciplines combined, the degree to which the constituent disciplines vary from each other, the ways in which the combination would be something new, and how well the disciplines are blended. In many ways, the fruit salad-smoothie analogy applied to inter- and multi-disciplinarity, taken a step further, closely resembles the notion of integration. In the same context, an analogy from Indian cuisine is that of a *thali*: many different food items (covering the whole menu), served together in small bowls on a large platter. The various items maintain their separate identities, but at the end of the meal, the guest enjoys a wholistic experience of the varied flavours of diverse food items served in the same *thali*. Translated into teaching, this example would be closer to a multi-disciplinary approach. A combination that is a compound (in which disciplinary boundaries intermingle) would be more integrative than one that is a mixture (in which disciplinary boundaries are maintained). Thus, integrativeness is not synonymous with interdisciplinarity, and goes beyond the latter.

In another simple metaphor, a textbook of psychology with an integrative orientation is likened to an “*integrative, thematic quilt*”, created by an attempt “..... *to stitch together.... the patchwork of traditional introductory psychology topic areas.*” These are the words of Cacioppo and Frieberg (2012), authors of a textbook titled ‘*Discovering Psychology: The Science of Mind*’, who introduce their book as one that presents psychology as an “*integrated hub science*”. This patchwork-turned-into-quilt image suggests strongly that the treatment of topics in many of the existing psychology textbooks may be somewhat disjointed or piecemeal, as in a patchwork. That is, the topics are treated as parts of an inadequately highlighted whole. Such a situation presents a challenge to both teachers and learners of psychology.

- A fourth view of integration comes from Campbell (1969), in the form of a “*fish-scales*” metaphor. He addresses the “tribalist” or “ethnocentric” attitude of specialists towards their respective specializations that obstruct efforts towards making the whole area of inquiry integrated and comprehensive. Campbell attempts to examine the group processes that help in institutionalizing science, as part of the sociology of science. In that context, he suggests that, for the creation of a “*comprehensive, integrated multiscience*”, one remedy is to view specializations as fish-scales that overlap. Instead of compartmentalizing these areas and isolating them from each other, they should be allowed to intersect, and the gaps between them should be closed. This concept is named “*the fish-scale model of omniscience*”. This interpretation of integration facilitates “... *collective comprehensiveness through overlapping patterns of unique narrownesses*” (p.328). Some practical problems are pointed out that are likely to be encountered in the teaching of social sciences with an integrative orientation, at the university level. Possible solutions to these problems are also suggested. Campbell’s view seems to advocate integration between specializations as well as disciplines, allowing for interdisciplinary overlaps and extensions, while appreciating the unique identities of separate specializations and disciplines.

- Another approach to integrative psychology is the metaphor of the ‘*Tree of Knowledge*’, a phrase that has been used in diverse contexts. From a common person’s perspective, it is no surprise that knowledge can be imagined or visualized as a tree, the idea being that there is a common root out of which the tree trunk grows, and numerous branches emerge from the trunk. The root and trunk may be taken to represent the theoretical base of an area of academic inquiry, and the branches, the specializations in that discipline. Apparently, there may be no direct link between the different branches, and each of them may flourish in its own way. Despite this variation and independence, all branches grow out of the same trunk, that in turn, has the same root, and thereby remain connected.

In the present discussion, the uses of this phrase by Maturana and Varela (1987) and by Henriques (2004) are being described. Maturana and Varela adopt the Tree of Knowledge (ToK) metaphor to explain the complex processes encompassed in “*knowing how we know*”, that is, the processes involved in cognition in its totality. The fundamental process is ‘*autopoiesis*’, which refers to the process whereby a system can reproduce and maintain itself (an organismic concept, borrowed from biology and extended to human science as a whole). Beginning with rudimentary biological processes, these authors go on to analyse how the human being has evolved, and is organized physically, physiologically, neurologically and mentally. The impact of history, culture and language on cognition and behaviour is also elaborately described. Maturana and Varela are not discussing integrativeness in *psychology* per se, but through their detailed discussion of autopoiesis, they demonstrate continuity between biological roots, cognitive processes, sociocultural and linguistic factors, and their influence on daily experience. In other words, in these authors’ analysis, the notion of integrativeness emerges spontaneously in their adoption of the ToK as a metaphor, applicable to any area of inquiry, including psychology.

The second use of the ToK metaphor is found in Henriques’ (2004) elaborate discussion of how psychology should be defined. At the start, Henriques acknowledges the difficulty of providing a satisfactory or complete definition of psychology as a field of inquiry. Pointing out that this difficulty (of defining psychology appropriately) is primarily because of epistemological issues, he presents a theoretical Tree of Knowledge system, a model for investigating and understanding various discipline. A classification is proposed, with four levels or dimensions of knowledge at the base, namely, Matter, Life, Mind and Culture, that vary in complexity. The subjects of study corresponding to these dimensions are material objects, organisms, animals and humans, respectively, that, in turn, can be included under the physical, biological, psychological and social sciences, respectively. An interesting notion, the *theoretical joint point*, is proposed that acts as a kind of integrator (‘*joint*’), between the basal dimensions. The joint point explains how that dimension emerged (provides a “*causal explanatory framework*”, Henriques, p. 1209). Each joint point is associated with a specific theory, and each theory, with a theorist who represents a particular discipline and/or school of thought.

A noteworthy feature of Henriques’ view of psychology is that he sees the discipline as being constituted of two domains, which he terms “*psychological formalism*”

and “*human psychology*”. Psychological formalism deals with the “*science of mind*” and studies “*the behaviour of animal objects*”. Human psychology deals with psychological processes in the individual, also incorporating sociocultural elements. It is described as a “*hybrid discipline*” because it amalgamates psychology as a science with other social sciences.

To summarize, the Tree of Knowledge metaphor applied to the notion of integrativeness helps to bring out aspects that highlight connectedness in any field of inquiry. Henriques’ approach incorporates psychology, enables linkages within the discipline, as well as linkages with other disciplines, and extends the boundary of psychology.

- A sixth meaning of integrativeness can be found in Kono’s (2010) proposed paradigm of the ‘extended mind’ that moves towards integrative psychology. By the ‘extended mind’ approach, or “ecological approach to humanized environment”, Kono means an approach to the study of psychological processes that takes into account the totality of the interactive effects of the brain and body. Specifically, it is an understanding of the entire “*the brain-body-environment*” (Kono, 2010, p. 329), including both cognitive and neurophysiological processes, that will facilitate a proper study of the mind. He comments on Kohler’s (2010) view of the ‘organic paradigm’, that itself is presented as a better alternative to the existing machine paradigm in psychology. Kohler points out that the existing machine paradigm in psychology has several limitations, such as determinism and linear causality, no allowance for the person as an agent, and no place for analysis based on the person’s experience. An “organic paradigm”, as proposed by Kohler, would be broader and more comprehensive than a mechanistic approach. Kono suggests further modifications in Kohler’s view, by way of a move towards a systems approach that is being supported to a certain extent in psychology. In this context, he refers to autopoiesis as a systemic process, an aspect highlighted by Maturana and Varela (1987) in the context of the science as a whole.
- The notion of an ‘expanded hybrid psychology’ (Brinkmann, 2011, building on Harre’s 1997 concept of “hybrid ontology”) is yet another way to view integrative psychology. Brinkman’s view has been elaborated and critiqued by Gaete and Cornejo (2012). Considering that “*in psychology, the basic ontological unit is the person*”, Gaete and Cornejo (2012, p. 70) take Brinkmann’s idea of hybrid psychology a few steps further. This extension can be described as ‘integrative’ because, according to its proponents of hybrid psychology, when studying the person, the mind and mental processes can be completely understood only by including theories about “...*the brain, the body, social practices, and technological artifacts*” (Gaete & Cornejo, 2012, p. 70). In other words, the proposal of the expanded hybrid psychology enriches Kono’s ‘extended mind’ idea by adding the social and technological aspects, that are indispensable components of a truly integrative psychology.
- The eighth perspective is the view that evolutionary psychology can act as a unifier across psychology, biology and other disciplines (Caporael, 2001). Combined with a systems approach, it can link psychology, science and society. Taking

this combination even further, a modified version of the evolutionary psychology view is the “dynamical evolutionary psychology” approach that highlights interactionism (Kenrick et al., 2002), as a step towards an integrative psychology. Kenrick et al. take the cue from evolutionary psychology and a systems approach in psychology. In view of the complexity of human nature largely due to the inescapable continuous interactions between within-person and environmental variables, Kenrick et al. point out how the dynamical perspective helps in making sense of interactions, yet avoiding the ‘hall of mirrors’ circle of infinite reflections (an analogy used by Cronbach, 1975, p. 119) generated by higher-order interactions. The dynamical system is seen as a parallel to the evolutionary system in psychology, with *self-organization* as a key process. This process is strongly reminiscent of Maturana and Varela’s notion of autopoiesis, and can be seen as its subset, but allows also for social and cultural components. The authors present a framework that allows for the study of changes in cognition and behaviour, at the individual and social level, extending to the cultural level. Six goals, pertaining to specific domains, are identified, namely *self-protection*, *coalition formation*, *status-seeking*, *mate choice*, *relationship maintenance* and *offspring care*. In addition, a framework is proposed for organizing the unit of analysis (within-person or between-people) in the context of the time frame (short-term changes, developmental changes and evolutionary changes). In short, this perspective extends the evolutionary approach to the individual and social-cultural level of analysis and allows for a comprehensive understanding of cognitive and behavioural processes. If adopted correctly, this would strengthen efforts in making psychology integrative.

- One more view of integrative psychology is from an ontological perspective. Writing about “*psychology as a science of subject and comportment, beyond the mind and behaviour*”, Perez-Alvarez (2018) persuasively argues for studying psychology in a multi-dimensional ontological framework. He begins with a critical comment on the dominance of the positivistic, “*natural scientific method*” in psychology, resulting in a dualistic ontology, a divide between the ‘inner’ and the ‘outer’, and between mental processes and behaviour. The corresponding dualistic epistemology distinguishes between subjective and objective methods, treating them as disparate. The enthusiasm for adopting the scientific method seemed to be stronger than that for understanding the complexity of the human being. The entry of the qualitative approach and methods have helped in highlighting the importance of the subjective component, and also the numerous limitations imposed by the dualistic approach. Considering all of these aspects, Perez-Alvarez advocates a pluralistic ontology so that psychology can be studied as a “*Radically Human Science*” (p. 32). Specifically, he argues for a tripartite or “three-world” ontological approach to psychology, represented by the (1) material plane, consisting of physical, biological and neurophysiological aspects, (2) subjective plane, constituted of subjective and behavioural aspects and (3) abstract plane, made up of ‘supraindividual’, social and cultural aspects, respectively.

Lundh (2018) upholds the idea of a ‘three-part’ ontological approach, with some modifications. He points out that Perez-Alvarez’ view tacitly implies a separation between the three planes or parts. But in his own view, the three components have common ground, and the ontology is better understood as a *three-dimensional* one. He prefers to label the dimensions *material realities*, *subjective realities* and *social-constructional realities* (Lundh, 2018, p. 52).

Taking the views of Perez-Alvarez and Lundh together, it can be said that approaching psychology in terms of its ontology would aid in giving it a more integrated and wholistic character.

- Finally, one may end the list of concepts of integration by mentioning a perspective that can be named ‘culture as an integrator’. In the realm of social sciences and humanities, culture figures as a background variable in several disciplines, such as anthropology, sociology, linguistics, psychology, literature and philosophy. Its formal inclusion in the Euro-American (“western”) tradition of psychology seems to come later than in other social sciences. Nevertheless, culture would be an appropriate starting point of an integrative approach to the study of psychology. Considering the breadth of the culture concept, the integrative potential of this concept cannot be under-estimated in attempts to give psychology a new paradigm. One observation is that sociology, anthropology, literature, linguistics, philosophy and psychology deal with the subject of culture in their own diverse ways. Another engaging point of view is that culture is “*a problem that cannot be solved*” (Nuckolls, 1998), the title of a multi-faceted book on the subject. Yet another scholar describes culture as “... *a traveler, still negotiating its entrance into the walled city of psychology*” (Valsiner, 2009a, p. 5—editorial in one of the issues of the journal *Culture & Psychology*). It might appear paradoxical that cultural psychology and cross-cultural psychology hold divergent perceptions, although both examine psychological processes through the lens of culture. The study of cultures brings to light the variety of world views that exist that have been insufficiently explored because of the perceived representativeness of a few cultures. Cross-cultural comparisons have great value, they adopt conventional objective methods, as well as those that lie outside the mould of the ‘scientific’ approach (e.g. the investigation of the self among the Indians and Japanese by Roland, 1988). In uncovering both similarities and differences between cultural groups, they assume common psychological denominators that cannot always be identified. There is much to be said in favour of cultural psychology and of cultural specificity of psychological processes. Exploring culturally specific aspects very often necessitates a change in method and construal of the human being. The reward is usually a more wholistic, enriched understanding of culture and appreciation of indigenous cultures. For example, major contributions have been made with regard to the Indian culture that reveal new ways of interpreting cultural realities (Paranjpe, 2002; Rao et al., 2008; Sinha & Tripathi, 2001). As Valsiner (2009a; b) vociferously and cogently argues, we require an inclusive orientation, to give the place due to indigenous world views, such as those coming from non-Western, or Eastern cultures), and ultimately an “*International Synthesis of Ideas*” (p. 16).

Wang (2016) debunks popular myths about cultural psychology, including one that pre-supposes cultural universality in basic psychological processes. Wang further confidently suggests that all psychologists should take the cultural-psychology point of view, so that important psychological processes can be studied in their cultural context, and add the much-needed ingredient of integration to the discipline. In short, studying culture, as the fibre that runs through several disciplines, with a cultural-psychology or cross-cultural psychology focus would help in integrating psychology.

One may find other views of integration in addition to the ones described above. These approaches, no doubt, illustrate the scholarly analyses undertaken by a large number of experts. For a balanced view of integration, disagreements may be expected with some of these interpretations and meanings outlined above. Despite all of these perceptive approaches to integrative psychology, there is still a set of practical issues that have to be faced and resolved: The need to resolve these problems, and to establish links between required aspects where they are weak, has been experienced by (a) teachers, prompted by the reactions of students, (b) practitioners in various fields of psychology and (c) academicians in other disciplines including the physical and life sciences, and the humanities and social sciences.

Attention will now be turned to these issues.

Practical Issues in Moving Towards Integrative Psychology

(1) Interdisciplinary and intradisciplinary disjuncture in psychology

Historically, mainstream psychology as a discipline has taken pride in being classified as a ‘science’ and has adopted the positivistic approach, dominated by the experimental method. Its place among the social and biological sciences has been acknowledged. In spite of this antecedent, with a few exceptions, it is rare to find interdisciplinary or integrative psychology curricula in which science, social science and humanities courses are combined with psychology courses. The exceptions are academic programmes adopting a “liberal arts” thinking (a fairly recent entrant). So are those curricula that allow freedom to psychology students to take courses in disciplines outside their main one. Similarly, interdisciplinary collaborative research incorporating psychology and the physical sciences is uncommon. Interdisciplinary ties between psychology, and the life sciences began to be forged some years ago, and are getting stronger. The absence of ‘mixing’ between psychology and the physical sciences (physics and chemistry) should not be surprising, given the difference in the subject of study in these disciplines, although the methodological approach has been similar for a long time. But the disjointedness between psychology and the *social sciences* is more surprising and needs to be remedied. Thus, in most educational systems, for a long phase, psychology seems to have functioned as a disciplinary “*silo*” (Byrne & Mullally, 2016) essentially with little or no links with other disciplines. Fortunately, the links of psychology with philosophy have been

revived quite some time back, and those with sociology have also been strengthened. Neuro-psychology and economics are teaming up more often in areas such as “neuroeconomics” and decision-making. Behavioural and experimental economics have the potential of being included in social psychology or cognitive psychology courses.

While there is a loud call for removing ‘silozation’ and transcending disciplinary boundaries in the contemporary academic world (Byrne & Mullally, 2016), voices can also be heard supporting the strengthening of disciplines (Jacobs, 2013). It may be argued that psychology education has had a disciplinary rather than interdisciplinary focus, probably because of expediency. However, a more acceptable ground in favour of disciplinarity is that preserving the identity of a constituent discipline is a prerequisite for effective interdisciplinarity. Consequently, most teachers today during their student days have undergone such an education. Therefore, even if most present-day psychology departments, thankfully, do not function exactly like “*hermetically sealed silos within a ‘multiversity’ setting.*” (Byrne & Mullally, 2016, p. 25), teachers would require additional training and exposure in order to get out of their disciplinary mould and become interdisciplinary and integrative in their outlook.

In the same vein, different fields within psychology seem to have become “...*a heterogeneous federation of sub-disciplines*” (Henriques, 2004, p. 1207). They also need to be interlinked adequately. Professionally, specialization seems inevitable within any theoretical or applied field of inquiry. However, if specialization is taken to such a level that the connections of the specialized area to the other areas, and to the integrating base of the discipline are lost, then the optimal growth of the discipline is likely to be stunted. Thus, studying psychology without sufficient attention to intradisciplinary connectedness will make it even more difficult to establish interdisciplinary links. The challenge lies in conveying the following message: referring to the metaphor of the Tree of Knowledge, the Tree will flourish to the extent that all of the branches are nurtured for healthy independent growth, with strong joints or nodes, a firm connection with the base, with some entanglements between them, but without creating a shadow for each other.

(2) *Lack of linkage between individual (micro-level), group (meso-level) and societal (macro-level) psychological processes*

Most views of an integrative psychology (e.g. the dynamical evolutionary psychology approach) assume or imply links between micro-, meso- and macro-level analyses, without necessarily mentioning these levels. However, as many scholars acknowledge, psychology has mainly dealt with processes and behaviour at the individual or micro-level, without adequately taking into account the group or meso-level, and societal or macro-level phenomena. This has made psychology an incomplete study of “mind and behaviour”. Referring to Henriques’ elaborate analysis of an adequate definition of psychology, Gilbert (2004) underlines the macro-level aspects that should be included in the discipline as a whole. Jaspal et al. (2016) refer to the continuing weak macro-analysis in psychology as “*the puzzle of individual-society integration*” (p. 266). They illustrate a specific social phenomenon that would be studied by social psychologists and demonstrate how two social-psychological theories,

namely Identity Process Theory (Jaspal, Carriere & Moghaddham, 2016) and Social Representation Theory (Moscovici, 1988), can help in integrating the three levels of analysis. The Identity Process Theory elaborates on the two processes by which “...people construct, regulate and protect their identities”, namely “*assimilation-accommodation*” and “*evaluation*” (Jaspal et al., 2016, p. 267). According to the Social Representation Theory, social representations are “... *systems of values, ideas, and practices regarding a given social object*”... “*are context specific*”, entail “...*a shared social reality*”, and act as “... *tools for communicating with one another*” within a group or community (Jaspal et al., 2016, p. 268). Evidently, both of these theories inherently entail meso- and macro-level thinking. More such attempts at theorizing would not only add to integrative efforts, but also make the discipline more complete.

The lack of adequate integration between the three levels has other implications as well. As will be pointed out below, analysis at the meso- and macro-levels necessitates a change in method. Moreover, going beyond the micro- or individual-level analysis, and giving prominence to macro-level analysis is often required for bringing psychological research closer to policy.

(3) *Disconnectedness between methods, and between contemporary and traditional thought systems*

A major arena of divided opinions within psychology is that of method. The discipline has gone through a phase of strong, almost fanatic, support of the positivistic approach (modelled after the physical sciences), favouring the experiment and quantitative techniques as the most acceptable approaches to be adopted in scientific psychology. More recently, the qualitative approach has picked up momentum with enthusiasm that matches that which was shown for the experimental—quantitative approach. The dissension may be between the experimental and non-experimental methods, between quantitative and qualitative methods, or between methods within any of these approaches. Thus, there appear to be competing “qualitative–quantitative” camps, one claiming precision and objectivity, and the other, greater realism and richness. For the discerning researcher, there are advantages as well as limitations in both quantitative and qualitative approaches. Fortunately for psychology, in spite of disagreements, there is a move towards combining diverse methods, and the advocacy of the use of multiple methods to investigate an issue. The ‘multi-method’ approach is now part of the training of many budding researchers, although staunch “purists” still exist in both the ‘qual’ and ‘quant’ camps. Triangulation, an approach described as a “...*combination of methodologies in the study of the same phenomenon*” (Denzin, 1978, p. 291), is a step towards integration in method, now becoming more common. Triangulation is possible with respect to *data, method, investigator* and *theory*, allowing for a broad scope of application, a requisite for integration.

Sometimes, disagreement in method arises because of a dilemma between following contemporary or modern practices, on one hand, and following traditional thought systems, on the other. Psychiatric medicine, clinical psychology and any area related to health would be good examples of this dilemma. Particularly in

cultures with a long tradition, practitioners might see greater effectiveness in techniques suggested in traditional thought, than in contemporary practices. Frequently, the two thought systems might be consistent with each other, but there may also be mismatch between the two. In such cases, some experts boldly recommend an integration between the contemporary and the traditional. As suggested by the term, the aim is to proceed in a holistic way with a humanistic orientation towards overall personal growth of the individual. The methods recommended are essentially experiential, but some aspects (for instance, specific personality characteristics) can be assessed through a questionnaire. Such a view might not find a great deal of support in academic psychology and professional practice. However, the concept of an integrative psychology that is holistic, and blends together contemporary and traditional methods, cannot be ignored.

Consider the state of psychology in India, as an example. Taking into account the varied psychological themes in traditional Indian philosophical systems, some scholars have suggested a unification of the contemporary with the traditional. For example, Dalal and Misra (2002) trace the growth of social psychology in India, parallel to that in the West. They describe how social psychology began in India, in the pervasive Euro-American school, and how it adopted the theories and methods that were part of that school. With time, traditional Indian approaches started influencing contemporary thinking in psychology, as evident in the emergence of the indigenous-psychologies approach in cultural/cross-cultural psychology. In the West also, alternative approaches were proposed, and more than one kind of psychology became acceptable. This marked the emergence of *cultural psychology*, *ethnomethodology*, *narrative psychology*, *discursive psychology*, *symbolic interactionism* and *ethogenics* as new branches of then contemporary social psychology. While many psychologists continue empirical inquiries using the quantitative experimental or correlational approach, several others engage in qualitative methods that are required in these new branches. Alongside this development is the rise of what has come to be labelled 'Indian Psychology'. This approach is rooted in traditional Indian philosophical thought and adopts methods that are fundamentally dissimilar to those of mainstream psychology. Indian psychology addresses cognitive themes such as mind and consciousness, albeit from a different perspective. The interest in searching for Indian ways of understanding several psychological phenomena, mainly of the experiential kind, can be taken as an instance of indigenization. This changed indigenized perspective has not become very popular among contemporary psychologists, but from many points of view, it provides a more wholistic, more unified colour to mainstream psychology. Some researchers have delved into traditional Indian thought, gathered ideas relevant to psychology and attempted to link them to their contemporary equivalents or counterparts. Likewise, attempts have been made to use modern-psychology methods, such as questionnaires, to assess traditionally proposed concepts (e.g. the three '*gunas*' proposed in the *Sankhya* philosophy) (Larson, 2001). Although disagreement has been expressed with such exercises in some quarters, the present author is of the view that such attempts, if kept within logical limits, can be seen as indicators of one kind of integration.

(4) *Lack of connection between psychological research and public policy*

For some, a weak research-to-public policy connection is another hindrance in the path towards integrative psychology. It is evident that psychologists should be in demand in policy-making in all domains that affect, or are affected by human behaviour (Fischhoff, 1990). These include areas such as social justice, health, education, environmental issues, child development, intergroup relationships, crime prevention and many others. Some applied fields of psychology and topics or research areas seem closer to public policy than others (Pallak, 1990). There is also an opinion that policy-makers need to use psychological research to test the impact of public policies through psychological research (Oullier, 2013). Yet, a gap between psychological research and public policy exists in most countries or societies.

There can be many reasons for the lack of integration between research and policy. Experts writing on social policy and psychological research (Shonkoff, 2000) assert that social policy is guided largely by political factors (Tripathi & Sinha, 2013), keeping in mind the stakeholders. In the context of India, attention has been drawn to several domains in which psychological research can contribute much (Tripathi & Sinha, 2013), and yet there is very little that appears as part of social policy. The following could be some of the reasons for the research-policy gap. First, policy-making is based on priorities, and possibly, at least in some societies, most of the areas of psychological research do not match these priorities. Secondly, social policy implies execution at a wider level, that, in turn, involves political will and resources: these may be at a low level. Thirdly, the bulk of psychological research has a micro-level focus rather than macro-level focus, making it a little difficult for those who are in government to see the research-policy linkage.

With regard to macro-level psychological research and policy, there can be an argument in favour of policy-making being connected to micro- and meso-level research, provided that the latter levels can be extended to the macro-level. Shonkoff (2000) discusses how child development research, often carried out at the micro-level, can still become part of social policy-making. Similarly, in the case of India, several instances can be cited of micro- or meso-level research in psychology that find a place, however indirect, in social policy (Tripathi & Sinha, 2013).

(5) *Gap between the human welfare goal of psychology, and the content of the discipline*

Even at the outset of the present discussion human welfare as a goal of psychology was mentioned as an aspect that deserves attention. The definitions and views of integrative psychology described earlier in the present discussion do not specifically include a human welfare theme. Conversely, psychologists incorporating welfare in their theory, approach and practice do not explicitly mention integration. Besides, there are those who believe that human well-being is not necessarily a goal for psychologists to pursue. Supporting those who do think that it is, the 'welfare gap' in psychology needs to be bridged through an integrative approach.

It is not as though psychologists have been impervious to the human welfare component as a goal of their discipline. For instance, two professional organizations

in the USA (referred to earlier in the present discussion), namely, the Centre for Integrative Psychology, and Integrative Psychology Services, incorporate a welfare component, in the extended sense, in their activities. The Centre for Integrative Psychology provides training in clinical psychology with an underlying philosophy that psychological practices cannot be effective without a good insight into the self, along with an understanding of socio-cultural aspects. The training includes experiential practices, with a place for spirituality, and community interaction with an attitude of social inclusion (<https://centerforintegrativepsychology.net>). Going beyond conventional practices, Integrative Psychological Services provide psychological services related to individual and family therapy, and psychological evaluation. As stated in its aims, this professional group adopts humanistic approach, and re-defines the concept of wellness, following a motto of “Restoring lives in truth, goodness, and beauty” (<https://integrativepsychologyservices.com>). Miller’s (1969) now-famous message of “giving psychology away” conveyed the potential of psychology as a discipline to work for the good of humanity. Years before that, the advent of humanistic psychology as the “third force” exhibited that a wholistic approach to the human being can lead to a better comprehension of components that had not been touched upon by the “first” and “second” forces, namely psychoanalysis and behaviourism. Discovering oneself as a human being is also a facet of well-being or welfare, and this has been amply demonstrated through various techniques of counselling and psychotherapy. Mention must be made of logotherapy, proposed by Frankl (1984), through which he provided valuable insights into “*man’s search for meaning*”. This perspective introduced a transcendent, spiritual and optimistic element into the otherwise insipid scientific approach to psychological processes. Even in the post-modernist phase of psychology today, positive psychology seems to have made a place for itself as a worthwhile approach to life, with research on topics such as well-being and happiness.

Alongside these efforts at bringing in a human welfare component into psychological endeavours, questions have been raised about whether psychology can, indeed, help humanity. Zimbardo (2004) underlines the need for psychologists to feel “societal accountability” and also records the contributions made in various areas of psychology, many of which are, in fact, intended to make life better for people. In their thought-provoking article, Lilienfeld et al. (2009) make a strong case for ‘de-biasing’ research that can tackle extremist ideology by “*correcting cognitive errors*”, and ultimately work towards a more tolerant society.

Injecting further hope into this discourse is an explicit statement from Schneider (Schneider, 2011; Schneider et al., 2002), a humanistic psychologist, speaking strongly in favour of an integrative feature in psychology. He suggests that psychology is at “*an incredible threshold*”, and that it faces the following options—that of creating “*a generous science of humanity*”, “*a competing anarchy of factions*”, or a “*monolithic elite*” (Schneider et al., 2002, p. 672). Schneider (2011) affirms that humanistic psychology has “*to move toward serious cultural and professional integration.*”, “*.... an expanded psychology of humanity.*”

In other words, if serious efforts are put into highlighting the theme of human welfare in all the activities of psychology as a discipline (and the humanities and

other social sciences), the whole area of inquiry dealing with human beings is bound to become integrative. As a support for this point of view, we find a book titled “Psychology as the Science of Human *Being*” (Valsiner et al., 2016), with the word ‘being’ italicized and the added clarification that this word is *not* being used with an ontological meaning. The content and contexts of the book express integration in a cultural perspective. If one could extend the meaning of this title to *human being* (*human* italicized) as well, the integration would be complete.

(6) *The divide between the conceptualizations of integration, and actual practice of these concepts*

This chasm is possibly the greatest challenge to psychologists. Most of the concepts related to integrativeness are abstract, making it particularly challenging for new initiates (teachers, students and researchers) to translate these concepts of integration into practice. Minimally, psychologists on the path to integrative psychology need to be creative and imaginative, with a broad-minded attitude of inclusiveness, and the willingness to engage in discourse with other specialists, both within and outside psychology. The existing interdisciplinary and intradisciplinary disjuncture in psychology (discussed above in some detail) may, of course, be a hindrance to be overcome. But once there is readiness for becoming interdisciplinary or integrative with regard to two or more fields, that may open up a plethora of techniques and strategies for teaching and research.

Some of these techniques are already being used by teachers and researchers, and they need to be strengthened. These would include exposure of students to multi-disciplinary interactions of various kinds, through diverse modes, but without weakening disciplinary identity.

Attempts to integrate the contents of psychology with those of other disciplines have commenced, even in a scattered form. One major way is for teachers to adopt integrated learning.

Multiple research methods are to be used with the aim of examining a research problem in a comprehensive and integrative way, but not with the approach of “a jack of all trades but master of none”. A better approach might be to become “a jack of many trades, and master of at least one”.

Two systemic hurdles may have to be crossed. One has already been mentioned. With the exception of a few educational institutes and universities, most of the teachers have undergone discipline-focused training and do not have the facility or opportunity to easily develop an interdisciplinary or integrative approach on their own. Related to this is the second hurdle: a closed approach on the part of the educational system, because of which innovations in the direction of integration are not truly welcome. This would be true of those educational systems that prefer to perpetuate the *status quo* and do not take kindly to any fundamental change in the existing practices. Besides, the acceptability of an overhauled, new curriculum called ‘integrative psychology’, in the job market, needs to be considered. In such circumstances, much depends on the teachers’ and students’ intrinsic motivation and creativity to move in an integrative direction, while maintaining the strength and identity of the discipline.

Some educational systems (such as that in India) have inherited an intellectual tradition that is already integrated. But they have been essentially divorced from this tradition because of western influences that have their positive features. In such a scenario, instead of completely rejecting either the modern, contemporary thought system, or the traditional one, the situation can be turned into an advantage. Having access to two broad, albeit discrepant, world views can actually be fertile ground for integrating knowledge.

In terms of pedagogy, there may be debates between teaching for integrated learning or interdisciplinary learning by students. Leonard (2012) argues in favour of integrated learning, but also points out that the line of distinction between the two may be thin. She underlines four processes on the continuum of integration, namely Application, Comparison, Understanding context and Synthesis. Preserving the flavours of constituent disciplines in interdisciplinary education may be a necessity, but it is possible to facilitate integrated learning while doing so. Undoubtedly, creativity would be required in teachers for imparting an integrative approach, and in students, for imbibing it.

With regard to the practical implementation of the idea of an integrative psychology, it is suggested that certain topics should be included in teaching and research, that cut across several disciplines, and thus act as integrators. Each topic would be discussed from the perspectives of all those disciplines, without underlining disciplinary boundaries.

One such theme, namely culture, has already been discussed as one of the conceptual frameworks for defining integrativeness. Two other topics could be *causality* and *justice*, briefly described below. There could be many more of such topics. All of these themes can be found in most fields of human inquiry that are classified under the humanities and social sciences. The suggestion is that courses can be taught with a title that depicts an integrative theme, rather than the label of a field of specialization.

Causality. Cause–effect questions, or “Why?” questions, are the backbone of human inquiry. They reflect a natural curiosity, and the “naïve scientist” (Kelly, 1955) in every person. Approaching causal questions from diverse perspectives, causal relationships or causation can be explored in numerous ways, such as the multiple causes explicated in some systems of philosophy like *Nyaya-Vaisheshika* (Matilal, 1975), causal processing (White, 1989) and Piagetian developmental stages of causal reasoning (Fuson, 1976), comparing and combining mechanism and covariation (Perales et al., 2010), examining causal thinking in specific cultures (Nuckolls, 1991), investigating attribution of causality and responsibility (Malle, 2011), or by understanding statistical models of causal analysis (Cox & Wermuth, 2004).

Justice: Different forms of justice have been examined in multiple fields with varying approaches, beginning with texts like Aristotle’s *Nicomachean Ethics* (Stewart, 1996) and Kautilya’s *Artha-shastra* (Kangle (1965) and spreading to contemporary, multi-disciplinary discourses on the concept (Sen, 2009; Stewart, 1996). Considering that justice, along with caring, can be comprehended as basic motivations underlying human behaviour, it can be a basis for understanding gender (Gilligan, 1982). An integrative element is brought into the analysis of justice by Skitka, Aramovich, Lytle and Sargis (2011). These authors view the field of justice

as the legendary elephant being ‘experienced’ by blind men. They speak in favour of “*knitting together the justice elephant*” (pp. 7–13), and propose a contingency theory that integrates diverse approaches to justice reasoning, in terms of three dimensions of the human being, namely *homo economicus*, *homo socialis* and *homo moralis*—the economic, social and moral human being.

Another perspective is provided by Marsella (2014) who describes justice as an ‘arbiter’, and draws attention to the need for a moral authority through which the injustices prevalent in today’s world, can be addressed and redressed. Tracing the history of justice concerns back to the *Rig Veda* in ancient India, Marsella proclaims that justice is a lexicon of terms that spell virtue (such as empathy, altruism, non-violence, equality, dignity and the like), and in that sense, a key ingredient of human welfare. Moreover, justice represents the fundamental human forces of “fission and fusion”, “separation” or fission in the sense of diversity, and “convergence” or fusion, in the sense of “unity”. In his view, awareness of the role of justice has to be propagated by making it “*the central theme in education*” (p. 11), tacitly implying an integrative, pan-disciplinary approach.

Bringing Integrative Psychology into Teaching: Some Examples from India

The discussion above was meant to highlight several ideas related to integrativeness in psychology that can be made part of teaching, in spite of some hurdles. If one looks for examples of institutes or universities that actually teach integrative psychology, one is likely to be disappointed: such places of education are in very small numbers even at the international level. In a country like India, deviation from the existing or conventional educational system becomes particularly difficult because of the factors mentioned. Nevertheless, like a ray of hope, we find instances of groups and organizations that adopt a non-conventional educational systems at the school level. As a disclaimer, it should be mentioned that these alternative education or the Waldorf system (Steiner, 1996) do not directly involve ‘integrative *psychology*’, in the sense discussed in the present context. They do, however, bring integrative elements into education in terms of philosophy, pedagogy, intellectual stimulation, and above all, human welfare by way of human and environmental sensitivity—while maintaining a link with mainstream education. Others such as Swami Vivekanand, Aurobindo Ghosh, Mahatma Gandhi, Maria Montessori, Rabindra Nath Tagore and J. Krishnamurthi further promoted the idea of non-conventional school education that had an integrative and holistic orientation. Schools following the alternative education system provide opportunities for studying conventional disciplines combined with arts, crafts, music, theatre, and even horticulture and agriculture. The aim of the alternative education schools is to impart education in an inclusive environment, to bring children closer to nature, to develop human relationships and to learn in a stress-free, non-competitive climate. There is a fairly large number of such schools,

the prominent ones being the J. Krishnamurthi schools, the Waldorf schools, Centre for Learning and the like.

It is suggested here that the idea of alternative education at the school level can be extended to the university level, in the form of “alternative universities”. Shanti Niketan and Viswa-bharati are examples of alternative universities. Some universities provide liberal arts education, and a few of them attempt to move towards integrative education. All of these notions may include, and be included in, the teaching of psychology. In the international sphere, as an example, one may cite Jacobs University in Bremen, Germany. This private university provides master’s and doctoral programmes with integrative curricula, including uncommon themes such as Mobility (of People, Goods and Information), Health and Diversity in modern societies. Within each theme, there are specified programmes related to different disciplines. The majority of students come from different countries, thus adding a rich cultural element to the educational environment. Likewise, some American universities have integrated curricula in some branches of psychology, and in some other disciplines.

It is suggested here that as long as teachers are allowed freedom in their teaching styles, individually, they may find ways of making their teaching integrative. Essentially, this requires blending varied bits of seemingly unrelated information in order to raise and answer questions, without necessarily attaching a discipline title. Of course, this requires imagination and creative thinking on the part of both teachers and students. It would be fascinating to see how students respond to stray ideas that initially appear strange, even ridiculous or ‘crazy’, but later can be linked in a logical, objectively verifiable way to familiar topics or disciplines. The small example below deals with a Hindu marriage ritual. It illustrates a theme that can set rolling a course in cultural psychology, combined with anthropology, sociology and mathematics, and possibly, other disciplines. Students of such a course might be asked to list all those bits of information that this question–answer set suggests to them, and use their responses to guide the course.

A message sent through a popular social media network contained the following question and answer.

Question

Why do the bride and groom go round the fire seven times in the marriage rituals?

Answer given by a mathematics teacher

Each circle consists of 360 degrees. The only number from 1 to 9 which cannot divide 360 is 7. So the bride and groom go round the fire seven times ensuring that nothing can divide their relationship.

Hats off to our Vedic mathematics !

A second suggestion is that community groups or organizations that work towards social welfare be invited to participate in teaching, as part of higher education. There are several such groups. One instance is Ashoka Changemakers, an organization that not only runs schools but also works in other walks of life. Possibly, their

participation can add an integrative, discipline-free or interdisciplinary colour to the existing curricula.

Such steps may not ensure inclusion of the human welfare aspect. Clearly, this facet has not been a major concern at the social or national level in educational systems in general. In the case of India, one can only surmise that this aspect gets overshadowed by other dominating concerns, such as making educational opportunities available to everyone, and also the problems discussed earlier. Yet this should not rule out ‘micro-’ level attempts of the kind suggested in the present discussion.

In short, one may attempt to apply approaches from school-level integrative and alternative education systems to the university level. If integrative curricula already exist in an educational system, teachers of psychology need to promote them. In the absence of such curricula, teachers require the liberty to individually use innovative methods for making their teaching integrative. Participation by community groups in teaching would add another dimension to the move towards integrative education in general, and possibly, integrative psychology in particular.

Concluding Comments

The aim of this essay was mainly to address the challenges that one would face in moving towards integrative psychology. Beginning with why an integrative approach is needed at all, the diverse views and conceptualizations of ‘integrativeness’ were summarized. The sense of disjointedness in various domains pertaining to psychology as a discipline were discussed, including a brief comment on the need for linking psychological endeavours to human welfare. Suggestions were given that support the idea of promoting integrative and interdisciplinary learning that also preserve disciplinary identity, and allows teachers, researchers and practitioners to adopt the conceptualization of integration that suits them best.

The message that the present author would like to convey is that an integrative approach in psychology must involve an *inclusive* attitude towards as many fields of inquiry as possible. From the teachers’ and students’ point of view, integrative learning needs to be encouraged. No idea, theory or method deserves to be considered an evil spirit to be exorcised from the discipline of psychology, as long as it affirms human welfare. At the same time, practical considerations, such as the existing background of teachers, the motivation among students, the match between teachers’ teaching style and students’ learning style, how receptive the job market would be to integrative psychology, and similar factors, would come into the picture. The notion of an integrative psychology might appear desirable, but idealistic or impractical to some. Yet it is hoped that attempts will be made, to the extent possible, to move gradually in the direction of developing psychology with an integrative approach, “... as a human science (social, cultural, behavioral)” (Perez-Alvarez, 2018), through “...a peaceful revolution based on a new conception of human nature” (Miller, 1969). This will ensure that psychology becomes the science of human *beings* (Valsiner et al., 2016), and also of *human* beings.

References

- Brinkmann, S. (2011). Towards an expansive hybrid psychology: Integrating theories of the mediated mind. *Integrative Psychology and Behavioral Science*, 45, 1–20.
- Byrne, E. P. & Mullally, G. (2016). Seeing beyond silos: Transdisciplinary approaches to education as a means of addressing sustainability issues. In W. L. Filho, & S. Nesbit (Eds.), *New developments in engineering education for sustainable development*. World Sustainability Series. Springer International Publishing.
- Cacioppo, J. T., & Frieberg, L. A. (2012). *Discovering psychology: The science of mind*. Wadsworth Cengage Learning.
- Campbell, D. T. (1969). Ethnocentrism of disciplines and the fish-scale model of omniscience. In M. Sherif & C. W. Sherif (Eds.), *Interdisciplinary relationships in the social sciences* (pp. 328–348). Aldine Publishing Company.
- Caporael, L. R. (2001). Evolutionary psychology: Toward a unifying theory and a hybrid Science. *Annual Review of Psychology*, 52, 607–628.
- Carlstedt, R. A. (2009). *Handbook of integrative clinical psychology, psychiatry, and behavioral medicine: Perspectives, practices, and research*. Springer Publishing Company.
- Cox, D. R., & Wermuth, N. (2004). Causality: A statistical view. *International Statistical Review/revue Internationale De Statistique*, 72(3), 285–305.
- Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist*, 30, 116–127.
- Dalal, A.K. & Misra, G. (2002). Social psychology in India: Evolution and emerging trends. In A. K. Dalal & G. Misra (Eds.), *New directions in Indian psychology (Vol. 1: Social Psychology)* (pp. 1–26). Sage Publications.
- Denzin, N. (1978). *Sociological methods*. McGraw-Hill.
- Fischhoff, B. (1990). Psychology and public policy: Tool or toolmaker? *American Psychologist*, 45(5), 647–653.
- Frankl, V. E. (1984). *Man's search for meaning: An introduction to logotherapy* (p. 1984). Simon & Schuster.
- Fuson, K. (1976). Piagetian stages in causality: Children's answers to "Why?" *The Elementary School Journal*, 77(2), 150–158.
- Gaete, A., & Cornejo, C. (2012). Psychology is about persons: On Brinkmann's expansion of Harré's hybrid psychology. *Integrative Psychological and Behavioural Science*, 46(1), 70–77.
- Gilbert, P. (2004). A much needed macro level view: A commentary on Henriques' "Psychology Defined". *Journal of Clinical Psychology*, 60(12), 1223–1226.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Harvard University Press.
- Gregory, S. W., Jr. (1990). Book review: Social psychology, past and present—an integrative orientation. *Social Forces*, 68(4), 1327–1328.
- Griffith, C. R. (1934) Reviewed work(s): Integrative psychology: A study of unit response by William M. Marston, C. Daly King, & Elizabeth H. Marston. *The American Journal of Psychology*, 46 (2), pp. 365–366.
- Harré, R. (1997). Forward to Aristotle: The case for a hybrid ontology. *Journal for the Theory of Social Behaviour*, 27, 173–191.
- Henriques, G.R. (2004). Psychology defined. *Journal of Clinical Psychology*, 60(12), 1207–1221.
- Jackson, J. M. (1988). *Social psychology, past and present—an integrative orientation*. Lawrence Erlbaum Associates Inc.
- Jaspal, R., Carriere, K. R. & Moghaddham, F. M. (2016). Bridging micro, meso, and macro-processes in social psychology (pp. 265–276). In J. Valsiner, G. Marsico, N. Chaudhary, T. Sato, & V. Dazzani (Eds.), *Psychology as the science of human being- 2016: The Yohama Manifesto*. Springer International.
- Kangle, R. P. (1965). *The Kautilya Arthashastra, Part 3, A study*. Motilal Banarsidass.

- Kaplan, S. & Kaplan, R. (2009). Creating a larger role for environmental psychology: The reasonable person model as an integrative framework. *Journal of Environmental Psychology*, 1–11.
- Kelly, G. A. (1955). *The psychology of personal constructs*. WW Norton.
- Kenrick, D. T., Maner, J. K., Butner, J., Li, N. P., Becker, D. V., & Schaller, M. (2002). Dynamical evolutionary psychology: Mapping the domains of the new Interactionist paradigm. *Personality and Social Psychology Review*, 6(4), 347–356.
- Kohler, A. (2010). To think human out of the machine paradigm: *Homo Ex Machina. Integrative Psychological and Behavioral Science*, 44, 39–57.
- Kono, T. (2010). The “Extended Mind” approach for a new paradigm of psychology. *Integrative Psychological and Behavioural Science*, 44, 329–339.
- Kristof, A. I. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement and implications. *Personnel Psychology*, 49 (1), 1–49.
- Larson, G. J. (2001). *Classical Sāṃkhya: An interpretation of its history and meaning*. Motilal Banarasidas Publication.
- Leonard, J. B. (2012). Integrative learning: A grounded theory. *Issues in Integrative Studies*, 30, 48–74.
- Lilienfeld, S. O., Ammirati, R., & Landfield, K. (2009). Giving debiasing away: Can psychological research on correcting cognitive errors promote human welfare? *Perspectives on Psychological Science*, 4(4), 390–398.
- Lundh, L.-G. (2018). Psychological science within a three-dimensional ontology. *Integrative Psychological and Behavioural Science*, 52, 52–66.
- Marsella, A. (2014). Justice as Arbiter: Educating for moral authority, legitimacy, and credibility. *Transcend Media Service*, 1–12.
- Marston, W. H., King, C. D., & Marston, E. H. (1931). *Integrative psychology; A study of unit response*. Harcourt, Brace.
- Mather, R. D. (2007) Toward a unified social psychology: The integrative social paradigm. *Journal of Scientific Psychology*, 8–13.
- Mathews, V. G. (2004). *Holigrative psychology*. <http://www.psychology4all.com/VGM-IPsy-Reviewed.htm>
- Matilal, B. K. (1975). Causality in the Nyāya-Vaiśeṣika school. *Philosophy East and West: The Problems of Causation: East and West*, 25(1), 41–48.
- Maturana, H. R., & Varela, F. J. (1987). *The Tree of Knowledge: Biological roots of human knowledge*. Shambhala Publications Inc.
- Miller, G. A. (1969). Psychology as a means of promoting human welfare. *American Psychologist*, 24(12), 1063–1075.
- Miller, R. C. (1982). Varieties of interdisciplinary approaches in the social sciences: A 1981 overview. *Issues in Integrative Studies*, 1, 1–37.
- Moscovici, S. (1988). Notes towards a description of social representations. *European Journal of Social Psychology*, 18, 211–250.
- Nissani, M. (1995). Fruits, salads, and smoothies: A working definition of inter-disciplinarity. *Journal of Educational Thought*, 29, 119–126.
- Nuckolls, C. W. (1991). Culture and causal thinking : Diagnosis and prediction in a South Indian fishing village. *Ethos: Journal of the Society for Psychological Anthropology*, 19(1), 3–51.
- Nuckolls, C. W. (1998). *Culture: A problem that cannot be solved*. Wisconsin University Press.
- Oullier, O. (2013). Behavioural insights are vital to policy-making. *Nature*, 501, 463.
- Pallak, M. S. (1990) Public policy and applied social psychology. In J. Edwards, R.S. Tindale, L. Heath, & E. J. Posavac (Eds.), *Social influence processes and prevention. Social Psychological Applications to Social Issues* (Vol 1). Springer.
- Paranjpe, A. C. (2002). Indigenous psychology in the post-colonial context: An historical perspective. *Psychology and Developing Societies*, 14(1), 27–43.
- Perez-Alvarez, M. (2018). Psychology as a science of subject and comporment, beyond the mind and behavior. *Integrative Psychological and Behavioural Science*, 52, 25–51.

- Rao, R., Paranjpe, A. C. & Dalal, A. K. (Eds.) (2008). *Handbook of Indian psychology*. Foundation Books, an imprint of Cambridge University Press.
- Roland, A. (1988). *In search of the Self in India and Japan: Towards a cross-cultural psychology*. Princeton University Press.
- Rosenberg, S. M. (2003). Theorizing political psychology: Doing integrative social science under the condition of postmodernity. *Journal of the Theory of Social Behaviour*, 33(4), 427–460.
- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63(3), 397–427.
- Schneider, K. J. (2011). *Some thoughts on an integrative humanistic psychology*. <https://www.psychologytoday.com/us/blog/awakening-awe/201105/some-thoughts-integrative-humanistic-psychology>
- Schneider, K. J., Bugental, J. F. T., & Pierson, J. F. (2002). *The handbook of humanistic psychology: Leading edges in theory, research, and practice*. Sage Publishing Co.
- Sen, A. (2009). *The idea of justice*. The Belknap Press of Harvard University Press.
- Shonkoff, J. P. (2000). Science, policy, and practice: Three cultures in search of a shared mission. *Child Development*, 71(1), 181–187.
- Sinha, D., & Tripathi, R. C. (2001). Individualism in a collectivist culture: A case of coexistence of opposites. In A. K. Dalal, & G. Misra (Eds.), *New directions in Indian psychology (Vol. 1). Social Psychology* (pp. 241–256). Sage.
- Skitka, L. J., Aramovich, N. P., Lytle, B. L., & Sargis, E. G. (2011). Knitting together an elephant: An integrative approach to understanding the psychology of justice reasoning. In D. R. Bobocel, A. C. Kay, M. P. Zanna, & J. M. Olson (Eds.), *The psychology of justice and legitimacy: The Ontario Symposium* (Vol. 11, pp. 1–26). Psychology Press, Taylor & Francis Group.
- Sprott, W. J. K. (1932). Reviewed work: Integrative psychology, by W. M. Marston, C. D. King, & E. H. Marston. *Mind*, 41(164), 495–501.
- Steiner, R. (1996). *Foundations of Waldorf education*. Anthroposophic Press.
- Stewart, R. M. (Ed.). (1996). *Readings in social and political philosophy*. Oxford University Press.
- Thorne, F. (1967). Integrative psychology. *Journal of Clinical Psychology*, 23(1), 3–11.
- Tripathi, R. C., & Sinha, Y. (Eds.) (2013). *Psychology, development and social policy in India*. Springer India.
- Valsiner, J. (2007). Becoming integrative in science: Re-building contemporary psychology through interdisciplinary and international collaboration. *Integrative Psychological and Behavioural Science*, 41(1), 1–5.
- Valsiner, J. (2009a). Cultural psychology today: Innovations and oversights. *Culture & Psychology*, 15(1), 5–39.
- Valsiner, J. (2009b). Integrating psychology within the globalizing world: A requiem to the post-modernist experiment with *Wissenschaft*. *Integrative Psychological and Behavioral Science*, 43, 1–21.
- Valsiner, J., Marsico, G., Chaudhary, N., Sato, T., & Dazzani, V. (Eds.). (2016). *Psychology as the science of human being- 2016: The Yokohama Manifesto*. Springer International Publishing.
- Wang, Q. (2016). Why should we all be cultural psychologists? Lessons from the study of social cognition. *Perspectives on Psychological Science*, 11(5), 583–659.
- White, P. A. (1989). A theory of causal processing. *British Journal of Psychology*, 80(4), 431–454.
- Zimbardo, P. G. (2004). Does psychology make a significant difference in our lives? *American Psychologist*, 59(5), 339–351.

Author Index

A

Acharya, B. M., 182
Adams, G. S., 54
Adamson, R. E., 20
Adams, R. M., 220
Addington, E. L., 236
Adesope, O. O., 177
Adolphs, R., 294
Agmon, M., 223
Aguinis, H., 48
Ahmad, S., 198
Ahn, S., 229
Ajaya, S., 236
Ake, C., 288
Akhilananda, S., 236
Albertazzi, L., 39
Albrecht, T. L., 233
Alfonso-Reese, L. A., 73
Ali, M. A., 238
Alkire, S., 224
Allan, A., 249
Allport, G. W., 22, 220
Alter, J. S., 236
Altmaier, E. M., 237
American Psychological Association
(APA), 252
Ammirati, R., 317
Anderson, B., 272
Anderson, J., 104
Anderson, J. R., 64
Anderson, N., 47
Ando, A., 194
Andrade, E. D. O., 233
Andrade, E. N. D., 233
Andreas, D., 10
Andrew, S., 35

Andrykowski, M. A., 237
Angel, R. J., 231
Annamalai, E., 165
Annis, R. C., 127, 133
Ann Sunil, G., 197
Antoni, M., 234
Appel, S., 240
Aramovich, N. P., 319
Araten-Bergman, T., 223
Arfken, M., 293
Ariel, R., 95
Arnold, R., 85
Arora, A. K., 203
Asch, S. E., 45
Ashby, F. G., 66, 67, 69, 73–75
Ash, M. G., 274, 275
Astin, J. A., 240
Atkinson, D., 39
Atkinson, D. R., 197
Aukst-Margeti´c, B., 237
Avasthi, A., 197
Avolio, B. J., 51, 58

B

Bahuchet, S., 127, 133
Bailey, T. M., 69
Bain, B., 169
Bakan, D., 1
Baker, B., 51, 58
Baker, C., 168, 169
Bakhtin, M. M., 194
Bak, T. H., 85
Balboni, T. A., 237
Bali, R. S., 173
Ballard, D., 39

- Ballentine, R., 236
 Balodhi, J. P., 236, 237
 Balsiger, P. W., 113
 Baltes, P. B., 84, 93
 Banaji, M., 57, 223
 Banaji, M. R., 52, 57
 Banerjee, A. V., 46
 Banerjee, B., 236
 Banks, C., 109
 Bano, S., 135
 Barac, R., 174
 Bardsley, M., 230
 Barlow, S. H., 204
 Barnes, C., 224, 226
 Barrett, L. F., 6, 278
 Barrett, R., 241
 Barton, L., 225
 Baskin, T. W., 239
 Bassetti, B., 176
 Bastos, L. O. D. A., 233
 Basu, S., 235
 Baucal, A., 194
 Bauer, A., 6
 Bauman, P. J., 204
 Baynes, K., 290
 Beauchamp, M. H., 11
 Beauchamp, T. L., 251
 Beaumont, J. G., 31
 Bechtel, W., 64
 Becker, D. V., 310
 Beck, G. L., 238
 Behere, A. P., 206
 Behere, P. B., 206
 Beheshti, I., 82
 Belaguli, G., 206,
 Benartzi, S., 46
 Benegal, V., 196, 198
 Benetka, G., 23, 31, 32
 Benhabib, S., 271
 Benson, C., 183
 Ben-Zeev, S., 169, 171
 Bergin, A. E., 204
 Bergmann, M., 113
 Berinsky, A. J., 57
 Bernier, A., 11
 Berretty, P. M., 67, 69
 Berry, J. W., 5, 123–125, 127, 130,
 132–136, 141, 142, 144, 146, 149,
 156, 197
 Beshears, J., 46
 Bevk, C., 106
 Beyer, N., 37
 Bhattacharyya, K. C., 147
 Bholra, P., 197
 Bhusan, L. I., 236
 Bialystok, E., 171–179
 Birnbaum, M. H., 53
 Bišćan, M., 237
 Biswabandan, B., 184
 Blakar, R. M., 287, 294, 295
 Blanch, A., 195
 Blanchard-Fields, F., 83
 Blank, T. O., 237
 Blascovich, J., 220
 Blixen, C. E., 37
 Bloch, E., 271, 276
 Block, S. D., 237
 Bloom, J. R., 237
 Blumenfeld, H., 177, 178
 Bockelman, P., 40
 Bogale, B., 183
 Bogulski, C. A., 178
 Bohil, C. J., 66, 69
 Bohm, D., 2
 Böhm, S., 295
 Bojuwoye, O., 197,
 Bologna, E., 240
 Bond, R. M., 45, 46
 Boomer, J., 74
 Boris, K., 10
 Borsboom, D., 10, 11
 Borst, G., 20
 Bosch, D. A., 73
 Bostock, W. W., 107
 Bouvette-Turcot, A.-A., 11
 Bowers, J. S., 64
 Boyd, D., 8
 Braakmann, D., 23, 31, 32
 Brach, N., 206
 Braddy, P. W., 58
 Bradely, B., 93
 Brady, A. M., 36, 40
 Branam, N., 7
 Brent, M., 222
 Breugelmans, S. M., 123–125, 130, 136
 Brierley, B., 84
 Brinkmann, S., 275, 277, 309
 Brockelman, P., 40
 Brodie, J. M., 288
 Brouwers, S. A., 131
 Brown, K. G., 46
 Brown, W., 290
 Bruck, M., 173,
 Bruckman, A., 57
 Brundtland, G. H., 110
 Bruner, J., 215

Bryant, P., 173
 Brysbaert, M., 21, 22, 26, 33, 177
 Buck, C. W., 233
 Bugental, J. F. T., 317
 Bugge, C., 36
 Buhmester, M., 53
 Buitenweg, R., 252
 Burcaw, S., 219
 Burdette, J. A., 233
 Burke, B., 259
 Burns, C. P., 237
 Burton, R. J. F., 113
 Bury, M. B., 226
 Butner, J., 310
 Butterfield, N., 205,
 Byrd, M., 82
 Byrne, E. P., 312, 313
 Byrne, G., 36, 40

C

Cabanas, E., 287
 Cacioppo, J. T., 218, 307
 Cagigas, X. E., 75
 Camarda, A., 20
 Cameron, R., 36
 Camilli, G., 256
 Campbell, C. L., 229
 Campbell, C. R., 241
 Campbell, D. T., 32, 307
 Campos, J. J., 149
 Cancino, H., 175
 Canham, R. O., 85
 Caplan, M., 206
 Caplan, R. D., 12
 Caporael, L. R., 309
 Capra, F., 2
 Caracelli, V. J., 35
 Carew, A. L., 113
 Carlisle, J. F., 176
 Carlson, S. M., 11
 Carlstedt, R. A., 303
 Carnap, R., 143
 Carroll, A., 205
 Carpenter, S., 110
 Carretié, L., 92, 94
 Carriere, K. R., 313, 314
 Carrier, J., 11
 Carstensen, L. L., 83, 84, 92–94
 Carter, K., 230
 Carusi, D. A., 85
 Cascio, W. F., 48
 Cassel, J. C., 233
 Cassidy, B. S., 95
 Cassileth, B., 231
 Cassotti, M., 20
 Castro, L., 70
 Cavalli-Sforza, L. L., 127, 133
 Cervone, D., 53, 55
 Chakraborty, A., 199
 Chalouhi, E., 230
 Chandler, J., 53
 Chandra, V., 85
 Chang, C. C., 9
 Chang, J., 238
 Chaoul, A., 236
 Chaoul-Reich, A., 236
 Charles, S. T., 83, 84, 93
 Charlier, S. D., 46
 Chasiotis, A., 123–125, 130, 136
 Chatterjee, M., 104
 Chatterjee, S., 173
 Chaubey, A. C., 135
 Chaudhary, N., 318, 322
 Chavan, B. S., 196, 198
 Chengappa, S., 175
 Cherian, P. J., 85
 Cherodath, S., 173
 Cherwin, C. H., 241
 Cheung, C. K. T., 46, 47, 57
 Chiang, L., 203
 Childress, J. F., 251
 Choi, S., 127
 Choi, W., 46, 47, 57
 Christensen, L., 32
 Christopher, J. C., 287
 Christopherson, H., 171
 Church, B. A., 74
 Cicchetti, D., 103
 Cincotta, C. M., 75
 Cisler, J. M., 84
 Clark, V. P., 37
 Clauss-Ehlers, C. S., 105
 Coalson, R., 249
 Cocking, C., 103, 104, 106, 109
 Cockram, J., 220
 Cocks, E., 220
 Cohen, J., 49, 57
 Cohen, L., 236
 Cohen, R., 128
 Collier, V. P., 183
 Colquitt, J. A., 50
 Comer, R. J., 220
 Conaway, N., 70, 73
 Conboy, L. A., 206
 Congdon, W. J., 46

- Cook, T. D., 32
 Corbin, J., 29
 Cordova, M. J., 237
 Corkin, S., 84
 Corneissen, R. M. M., 148
 Cornejo, C., 309
 Cornish, F., 1, 278, 293
 Corwin, D., 237
 Council of the League of Arab States, 249
 Couper, M., 57
 Couser, G. T., 222
 Covey, H. C., 221
 Cowling, R. M., 113
 Cox, D. R., 319
 Craig, S., 73
 Craik, F. I. M., 82, 177–179
 Cramer, A. O., 10, 11
 Craske, M. G., 11
 Cresswell, T., 222
 Creswell, J. W., 28, 30, 35–38
 Cromdal, J., 175
 Cronbach, L. J., 310
 Csikszentmihalyi, M., 102
 Cueto, M., 230
 Cummings, J. L., 85
 Cummins, J., 171, 174, 175, 184
 Cunningham, W. A., 83
 Currawala, K., 173
 Curtis, W. J., 103
 Czarniawska, B., 28
- D**
- Dahlberg, L. L., 220
 Dalal, A. K., 232, 311, 315
 Dalal, P. K., 196, 198
 Dandeneau, F. S., 103, 105
 Danhauer, S. C., 236, 241
 Danziger, K., 46
 Darcy, S., 214
 Daruwalla, P., 214
 Darwin, C. R., 149
 Das, A. K., 199, 204, 206
 Dasen, P. R., 127, 132, 197
 Dashiell, J. F., 149
 Dash, T., 177
 Dash, U. N., 182,
 Da Silva, T. L., 206
 Das, T., 173
 Davidenko, N., 56, 57
 David, G., 72
 Davidson, B. J., 85
 Davidson, D., 49
 Davidson, R. G., 175
 Davidson, R. J., 149
 Davies, B., 284
 Davis, C. J., 64
 Davis, K., 230
 Davis, L. H., 176
 Davis, R. B., 240
 Dawson, K., 85
 Dawson, N. V., 37
 Dazzani, V., 318, 322
 Decety, J., 294
 De Costa, P. I., 39
 Defossez, A. C., 295
 Dehaene, S., 11
 De Lissovoy, N., 295
 Delvaux, N., 233
 Dena, R. R., 183
 Deng, G., 231
 Denzin, N., 314
 De Temple, J. M., 175
 Deuri, S. P., 196, 198
 Devy, G., 165
 de Waal, B. M., 149
 De Weg, H. B., 7
 Diaz_Guerrero, R., 128
 Dick, A. M., 206
 Diethelm, K., 174
 Dietl, B., 233
 DiMartino, D. M., 206
 DiMatteo, M. R., 233
 Dixon, J., 230
 Dixon, R., 93
 Dixon, R. A., 95
 Dobbin, F., 52
 Dodds, P. S., 51
 Dolcos, S., 95
 Donald, H., 72
 Don, C., 72
 Dorff, E. N., 238
 Doyle, L., 36, 40
 Droll, J. A., 38
 Droop, M., 9
 Drury, J., 103, 104, 106, 109
 Duflo, E., 46
 Dulay, M. F., 238
 Duménil, G., 285
 Duncan, M. D., 241
 Duncan, S., 6
 Dunn, D. S., 219
 Dunne, P. J., 205
 Dunnette, M. D., 47
 Durgonoglu, A. Y., 176,
 Dussias, P. E., 178,

Dutton, K., 83
 Dynes, R. R., 106

E

Ebner, N. C., 94
 Eckensberger, L. H., 271
 Eden, D., 46, 47
 Edmondson, D., 237
 Edmunds, C., 70
 Edwards, D., 171,
 Edwards, D. J., 69
 Edwards, S., 136
 EFPA, 247, 248
 EFPA Board Human Rights and
 Psychology, 250, 254, 258
 EFPA Board of Ethics, 251
 Egerod, I., 37
 Eggly, S., 233
 Ehiri, J., 230
 Einstein, G., 234
 Eisenberg, D. M., 240
 Eisenberger, N. I., 218
 Eisenberg, L., 200
 Ekman, P., 148, 149, 153–158
 Elias Smith, C., 64
 Elledge, R., 238
 Ell, S. W., 69, 73, 74
 Elmqvist, T., 110
 Engel, G. L., 233
 English, T., 94
 Enright, R. D., 238, 239
 Enriquez, V. G., 5
 Epskamp, S., 10, 11
 Erwin, E., 196
 Espejo, A., 54
 Ettner, S. L., 240
 Eviatar, Z., 174

F

Fallot, R. D., 195
 Fallowfield, L., 229
 Fanon, F., 256
 Farah, M. J., 278, 293
 Fariss, C. J., 45, 46
 Farmer, D. F., 241
 Farokhian, F., 82
 Farquharson, B., 36
 Farrell, P. O., 113
 Fassin, D., 295
 Faulconer, J. E., 278
 Faulkner, J., 221
 Feldman, J., 70

Felix, T., 10
 Fenster, J. R., 237
 Ferguson, S., 285
 Ferraro, D., 287
 Ferrer, R. A., 56
 Fielding, A., 104
 Fiksel, J., 105
 Filoteo, J., 75
 Filoteo, J. V., 74, 75
 Fischer, H., 94
 Fischer, N. R., 197
 Fischhoff, B., 316
 Fisher, J., 203
 Fjell, A. M., 82
 Flick, C., 57
 Folke, C., 110
 Fonagy, P., 103
 Forber-Pratt, A. J., 219
 Forcella, E., 240
 Forfylvow, A. L., 205, 236
 Forsyth, D., 200
 Foster, J. B., 274
 Fouladi, R. T., 236
 Fowler, J. H., 45, 46
 Fox, E., 83
 Fraley, R. C., 53
 Francesconi, D., 40
 Frank, J. B., 197
 Frank, J. D., 197
 Frankl, V. E., 195, 317
 Fraser, I., 113
 Fraser, N., 285
 Fredman, M., 179
 Freedman, M., 179
 Freemon, B., 233
 Frerks, G., 105
 Frieberg, L. A., 307
 Fried, E. I., 10
 Friedman, J., 249, 259
 Friedman, L. C., 238
 Friedman, M., 284
 Frijda, N. H., 149, 150
 Fry, G., 113
 Fumagalli, A., 286
 Fung, 93
 Fuson, K., 319

G

Gadgil, M., 102
 Gaete, A., 309
 Galambos, S. J., 171, 175
 Galing, S., 46

- Gallagher, S., 40
 Gandesha, S., 285
 Ganguly, M., 9, 85
 Ganz, P. A., 237
 Gard, T., 206
 Gargiulo, L., 240
 Garnezy, N., 102, 103
 Garssen, B., 234
 Ge, 83
 Gega, L., 195
 Gelaes, S., 73
 Gelo, O., 23, 31, 32
 Genesee, F., 172, 173
 George, A., 85
 Gergen, K. J., 271
 Gest, S. D., 102
 Geva, E., 176,
 Ghildyal, P., 201
 Gilbert, A., 112
 Gilbert, P., 194–196, 313
 Gilby, J., 85
 Gillespie, A., 1, 278, 293
 Gilligan, C., 255, 319
 Gillihan, S. J., 293
 Gill, R., 284
 Ginsburg, A. E., 113
 Giordano, P. J., 7
 Giri, A. K., 196, 198
 Giroux, H. A., 294, 295
 Giroux, S. S., 294
 Gitelman, D., 75
 Gjorgjioska, M. A., 293
 Glaser, B. G., 22, 29
 Glauthier, P., 70
 Gluck, M. A., 70
 Goertzen, J. R., 277, 293
 Goffman, I., 223
 Golafshani, N., 35
 Goldfried, M. R., 230
 Goldstein, D. G., 50
 Goleman, D., 153, 156
 Golembiewski, R. T., 47
 Gomez-Carrillo, A., 199
 Gonzalez, P., 175
 Good, B., 200
 Goodenough, D. R., 133
 Goodman, N. D., 64
 Gopinath, K. S., 236
 Gopukumar, K., 85
 Gorczynski, P., 195
 Gordon, M. E., 47
 Goren, D., 84
 Gornbein, J., 85
 Gorsuch, R. L., 85
 Gosling, S. D., 53
 Gramsci, A., 285
 Gray, K., 85
 Grear, A., 271
 Greenberg, A., 55
 Greenberg, J., 46, 47
 Greene, J. C., 35
 Greene, M., 233
 Greenwald, A. G., 52, 57
 Gregory, S. W., 305
 Grenen, E. G., 56
 Grewal, P., 86
 Griffith, C. R., 20, 305
 Griffiths, T. L., 64
 Grigorenko, E. L., 4, 6
 Grof, S., 240
 Gronchi, 93
 Gross, J. J., 95
 Grossman, D., 249
 Growdon, J. H., 84
 Grünh, D., 84, 93
 Guillory, J. E., 45, 57
 Gulerce, A., 271
 Gulutsan, M., 169
 Gunderson, L., 110
 Guo, T., 178,
 Gupta, R., 94
 Gururaj, G., 196, 198
 Gutches, A. H., 95
 Guterman, S., 230
 Gutmann, M. L., 35, 36
 Guzman, F. A., 54
- H**
- Habermas, J., 268, 272, 273
 Hadorn, G. H., 113
 Hafenbrack, A., 54
 Hagens, P., 254
 Hagen, E., 125
 Hahn, H., 220
 Haidt, J., 152, 156
 Hakuta, K., 171, 175
 Halcomb, E. J., 35
 Hall, C. B., 236, 241
 Hallisey, C., 238
 Hall, J., 103
 Hall, J. S., 11
 Hamann, T. H., 110
 Hammock, J., 224
 Hancin-Bhatt, B. J., 176
 Hancock, J. T., 45, 57

- Haney, C., 109
 Hans, B. A., 10
 Hansen, M. J., 239
 Hanson, W. E., 35, 36
 Hardcastle, K., 64
 Hardcastle, V. G., 64
 Hardin, C. D., 52
 Harper, F. W., 233
 Harré, R., 309
 Harris, M. S., 236, 241
 Hartranft, C., 236
 Hasan, A., 230
 Hasher, L., 82
 Hatfield, G., 266
 Hauser, O. P., 50
 Haverkate, V., 249, 259
 Hayhoe, M., 39
 Hayhoe, M. M., 38
 Healy, P., 265, 278
 Heaton, R. K., 74
 Hebb, D. O., 5
 Heberlein, A. S., 278
 Hedden, T., 95
 Hegarty, F., 38
 Hegde, S., 236
 Heinemann, W., 220
 Heine, P. J., 124
 Heine, S. J., 124
 Helberg, G., 256
 Helgeson, V. S., 237
 Helie, S., 75
 Helman, C. G., 232, 233
 Hel, T., 113
 Hemam, N. S., 102
 Henriques, G., 4
 Henriques, G. R., 265, 277, 304, 308, 313
 Henshel, R. L., 50
 Herberger, E. R., 74
 Herbert, C. P., 233
 Herling, S. F., 37
 Herman, B. H., 218
 Herman, E. S., 282
 Herman, J., 175
 Hernández, P., 103
 Herskovits, M. J., 124
 Heugh, K., 183
 Hickinbottom, S., 287
 Higginbotham, H. N., 200
 Higgitt, A., 103
 Hilchey, M. D., 177
 Hines, P., 69
 Hinojosa, J. A., 92
 Hirsch Ballin, E., 249, 251
 Hoch, E. M., 201
 Ho, C. S., 173,
 Hodges, J. R., 85
 Hodges, J. R., 85
 Ho, D. Y. F., 200
 Hogg, M. A., 107
 Holling, C. S., 110
 Hollingworth, A., 93
 Holzel, B. K., 206
 Honneth, A., 274, 275
 Hood, V. L., 233
 Hoshmand, L. T., 199
 Hosmanek, A., 46
 Houde, O., 20
 Hough, L., 47
 Hovland, C. I., 70
 Howard, K. I., 235
 Howe, K. R., 33
 Hubbard, J. J., 102
 Hughes, T. F., 9
 Hulka, B. S., 233
 Hund, A. J., 37
 Hundal, P. S., 127
 Hunter, C. D., 203
 Hunter, S. B., 220
 Husserl, E., 29
 Huws, U., 286
 Hwang, W. C., 197
- I**
- Ianco-Worrall, A., 169, 171
 Ibrahim, R., 174
 Ijalba, E., 175,
 Imrie, R. F., 222
 Indick, W., 278
 Ing, A., 75
 Ing, A. D., 75
 Inkeles, A., 126
 Inspectie van het Onderwijs, 255
 Ipeiros, P. G., 53
 Irfan, M., 195
 Irvine, S. H., 130
 Isaac, C., 103, 105
 Isaacowitz, D. M., 83, 84
 Israel, J. I., 281
 Izard, C. E., 149
- J**
- Jabbi, M. K., 129
 Jablonski, M., 206
 Jackson, J. M., 303, 305

- Jackson, P. L., 294
 Jacob, K., 197
 Jahn, T., 113
 Jahoda, G., 124
 Jain, S., 95
 Jäkel, F., 65
 Jakobsen, C. H., 113
 Jakovljević, M., 237
 James, W., 21, 40
 Jaspal, R., 313, 314
 Jayapal, M., 236
 Jayaram, S. S., 196
 Jayaswal, M., 130
 Jellesmark, A., 37
 Jenkins, H. M., 70
 Jenkins, R. A., 237
 Jezewski, M. A., 233
 Johnson, B., 32
 Johnson, E. J., 50
 Johnson-Laird, P. N., 6
 Johnson, R. B., 34
 Johnson, R. L., 10
 Jolly, P., 230
 Jome, L. M., 197
 Jones, J. J., 45, 46
 Jones, K. M., 95
 Jones, P. J., 10
 Joseph, C., 72
 Joshi, M. R., 173
 Joshi, P. C., 232
 Joshi, S., 129, 130, 132, 134
 Jost, J. T., 223
 Juang, L., 125
- K**
- Kacperczyk, O., 50
 Kagitcibasi, C., 127
 Kahai, S. S., 51, 58
 Kahneman, D., 6
 Kahn, R. L., 46
 Kakar, S., 199, 200, 203
 Kal, D., 256
 Kalev, A., 52
 Kalidas, M., 238
 Kamradt, J. M., 206
 Kangle, R. P., 319
 Kang, S. H., 237
 Kanuch, S. W., 37
 Kao, H. S. R., 127
 Kaplan, R., 306
 Kaplan, S., 306
 Karanth, P., 176
 Kar, B. R., 86, 173, 177
 Karmiloff-Smith, A., 131
 Katapodi, M. C., 229
 Katsumi, Y., 95
 Katz, D., 46
 Kauffman, S. A., 9
 Kavishvar, A. B., 196, 198
 Keele, S. W., 72
 Kellner, D., 276, 291
 Kelly, G. A., 319
 Kelly, U. A., 234
 Kemmis, S., 23
 Kemp, C., 64
 Kennedy, Q., 84
 Kenrick, D. T., 310
 Kensinger, E. A., 84
 Kercher, K., 37
 Kessler, R. C., 240
 Khalsa, S. B., 236
 Khare, V., 177
 Kharkhurin, A. V., 170, 177
 Kievit, R. A., 10, 11
 Killian, L. M., 106
 Kimberlin, S., 226
 Kim, B. J., 73
 Kim, H. S., 293
 Kim, S., 73
 Kim, U., 4, 127
 King, C. D., 302
 Kirby, J. N., 195, 196
 Kirmayer, J. L., 103, 105
 Kirmayer, L. J., 195, 197, 199
 Kitayama, S., 197, 203
 Kitchin, R., 222
 Klандermans, B., 107
 Klatt, J., 239
 Kleck, R. E., 220
 Kleinman, A., 200
 Klieme, E., 256
 Klien, R. M., 177
 Kline, S. B., 175
 Kloos, H., 69
 Knight, B. G., 93
 Knight, J., 222
 Knobloch, T., 113
 Koch, S., 1, 276
 Kohler, A., 309
 Kohli, N., 232,
 Kokane, A., 196, 198
 Kolbeck, C., 64
 Kölbl, O., 233
 Kolhatkar, K. K., 144
 Koltko-Rivera, M. E., 197

- Kono, T., 309
 Koopman, C., 237
 Korsch, B. M., 233
 Kortzen, D. C., 111
 Kosera, R., 173
 Koster, E. H., 84
 Kotemane, R. B., 144
 Kowai-Bell, N., 220
 Kramer, A. D., 45, 46
 Kramer, A. D. I., 45, 57
 Krantz, J. H., 50
 Krasner, R. F., 235
 Kraut, R., 57
 Krishnan, L., 255
 Kristic, K., 194
 Kristof, A. I., 303
 Krohn, W., 113
 Kroll, J. F., 178
 Kroustalis, C. M., 58
 Krug, E. G., 220
 Kuhn, T. S., 20, 49
 Kuligowsky, E., 106
 Kumano, H., 241
 Kumaraiat, V., 237
 Kumar, D., 86
 Kumar, L., 217
 Kumar, R., 197, 255
 Kumar, U., 173
 Kundu, M. N., 182,
 Kupper, L. L., 233
 Kuppuswamy, B., 145
 Kurtz, K., 69
 Kurtz, K. J., 70, 71, 73
 Kuruvilla, A., 197
 Kutty, B. M., 205
 Kwang, T., 53
 Kwan, L., 237
 Kwekkeboom, K. L., 241
- L**
- Lachaux, J. P., 40
 Lakens, D., 50
 Lambert, W. E., 168, 169, 179
 Lamm, H., 8
 Landfield, K., 317
 Larkin, G. L., 84
 Larson, G. J., 315
 Lathan, C. S., 237
 Layton, L., 294
 Lazar, S. W., 206
 Leary, D. E., 266, 278
 LeBeau, R. T., 11
- Le Bon, G., 106
 Ledesma, D., 241
 Lee, B. O., 197
 Leech, N. L., 33
 Lee, I. A., 95
 Lee, J. W., 241
 Lee, J.-Y., 49
 Lee, L. O., 93
 Leffler, C., 233
 Lehman, R. A., 74
 Leiberich, P., 233
 Lele, J., 278, 279, 283, 287, 289
 Lenin Singh, R. K., 196, 198
 Leonard, J. B., 319
 Leopold, W., 170
 Levering, K. R., 71
 Levi, L. L., 105
 Levine, E., 55
 Levine, S. S., 50, 251
 Levin, T., 177
 Levitas, R., 291
 Levitt, S. D., 46
 Lévy, D., 285
 Lewandowsky, S., 73
 Lewin, K., 46
 Libert, Y., 233
 Lickel, B., 220
 Lieberman, M. D., 218
 Lieder, F., 64
 Lieff, J., 6
 Lilienfeld, S. O., 317
 Lindenberger, U., 94
 Linehan, M., 205
 Linos, E., 50
 Li, N. P., 310
 Linton, R., 124
 Liow, S. J. R., 176,
 Lippitt, R., 46
 Liscum, K. R., 238
 List, J. A., 46
 Lock, A., 271
 Loew, T. H., 233
 Loudon, R. B., 271
 Louvet, E., 214
 Love, B. C., 64
 Luisi, P. L., 2
 Luk, G., 173, 175, 177–179
 Lundh, L.-G., 311
 Lundqvist, D., 94
 Lupoli, M., 55
 Lush, E., 206
 Lushene, R., 85
 Luthans, B. C., 46

Luthans, F., 46
 Luthans, K. W., 46
 Luthar, S. S., 103
 Lutz, A., 40
 Luyten, H., 9
 Lyew, D. A., 219
 Lynch, G. R., 238
 Lynch, J., 205
 Lytle, B. L., 319

M

Maathai, W., 136
 MacIntyre, A., 273, 277
 MacKenzie, S. B., 49
 Mackintosh, N. J., 131
 Madan-Behel, A., 203
 Maddox, W., 75
 Maddox, W. T., 66, 69, 73–75
 Magnussen, L., 230
 Mair, P., 10
 Majumder, S., 175
 Maner, J. K., 310
 Manickam, L. S. S., 197
 Maral, P., 173
 Marchand, L., 231
 Margetić, B., 237
 Margolis, M. F., 57
 Marian, V., 177, 178
 Markus, H. R., 197, 203
 Marlow, C., 45, 46
 Marr, D., 63, 64
 Marsella, A., 320
 Marshall, I., 2
 Marsico, G., 318, 322
 Marston, E. H., 302
 Marston, W. H., 302
 Martinerie, J., 40
 Martín-Loeches, M., 92
 Martsin, M., 194
 Maruthai, N., 205
 Maruthappu, M., 230
 Maskarinec, G., 240
 Maslow, A. H., 22
 Masten, A. S., 102, 103
 Mather, M., 83, 84, 92, 93
 Mather, R. D., 303
 Mathew, R., 85
 Mathews, V. G., 303
 Math, S. B., 196, 198
 Mathuranath, P. S., 85
 Mathur Gaiha, S., 197
 Matilal, B. K., 319

Matsuda, H., 82
 Matsumoto, D., 125,
 Matthews, S., 75
 Maturana, H. R., 308, 309
 Mawson, A. R., 106
 Maxwell, J., 32
 May, C. P., 82
 Mbembe, A., 257
 McAdam, D., 290
 McBride-Chang, C., 173
 McCabe, C., 38
 McCall, T., 236
 McCann, S., 38
 McCarthy, G., 274
 McClelland, D. C., 126
 McCormick, R. A., 37
 McCumber, J., 289
 McDaniel, M. A., 72
 McDaniel, S. H., 258
 McDonnell, J. V., 69
 McDowd, J. M., 82
 McFall, R. M., 72
 McGee, M., 205
 McGhee, D. E., 52
 McGraw, K. O., 50
 McGuigan, J., 294
 McKenna, S., 230
 McKinley, S. C., 70
 McLachlan, C., 136,
 McLaughlin, W. J., 113
 McLellan, D., 291
 McMahon, G., 205
 McNally, D., 284, 285
 McNally, M. B., 286
 McNally, R. J., 10
 McNemar, Q., 47
 McQuellon, R. P., 241
 McTaggart, R., 23
 McWhinney, I. R., 233
 Meade, A. W., 58
 Mead, M., 125
 Medford, N., 84
 Meekar, M. A., 233
 Meeks, S. R., 220
 Mega, M., 85
 Mehta, R. Y., 196, 198
 Melchert, T. P., 277
 Mendelowitz, E., 194
 Mendes, W. B., 220
 Menniti-Ippolito, F., 240
 Menon, S., 197
 Menon, U., 151, 152, 156
 Mercado, F., 92

- Merckaert, I., 233
 Merilyn, F., 136,
 Mertens, D. M., 36
 Mervis, C. B., 65, 69, 72
 Mesquita, B., 149, 150
 Mesulam, M. M., 75
 Meyvis, T., 56, 57
 Miculas, W. L., 155
 Mikels, J. A., 84
 Mikulas, W. L., 3, 199, 200
 Milchman, A., 110
 Miles, F., 93
 Miles, S. J., 66, 67, 69, 70
 Milgram, S., 51
 Milkman, K. L., 46
 Mille, C., 224
 Miller, B. E., 241
 Miller, G. A., 317, 322
 Miller, P., 36
 Miller, R. C., 306
 Milton, F., 70
 Minda, J. P., 66, 67, 69, 70, 72, 73
 Mioshi, E., 85
 Miovic, M., 235
 Mishra, B., 171, 172
 Mishra, H., 237
 Mishra, M. K., 178, 182,
 Mishra, R. C., 123, 124, 127, 130–135,
 146, 156
 Mishra, R. K., 177
 Misra, G., 148, 231, 271, 315
 Mitchell, G. R., 278
 Mitchell, J., 85
 Mitchell, K. S., 206
 Mitchley, J., 113
 Mitnick, S., 233
 Moadel, A. B., 236, 241
 Mogg, K., 93
 Moghaddam, F. M., 111
 Moghaddham, F. M., 313, 314
 Mohanty, A. K., 164–173, 179, 181–184
 Mohanty, M. M., 182
 Mohlman, J., 93
 Moleiro, C., 229
 Mood, D. W., 229
 Moore, P., 287
 Moore, S. C., 6
 Morris, J. C., 85
 Moscovici, S., 314
 Moustakas, C., 28
 Mueller, C., 219
 Muhamad, R., 51
 Mullally, G., 312, 313
 Murphy, G. L., 73, 74
 Murray, K., 103
 Murray, K. E., 11
 Murthy, A. R. V., 206
 Murthy, R. S., 196
 Muter, V., 174,
 Myers, D. G., 8
 Myhill, M. E., 171

N
 Naeem, F., 195
 Nafstad, H. E., 287, 294, 295
 Nagendra, R. P., 205
 Nag, S., 184
 Nagy, W. E., 176
 Naidu, R., 145
 Nandy, A., 126
 Narayanan, V., 238
 Narotzky, S., 289
 Nathawat, S. S., 236
 Navarro, D. J., 69
 Negrete, V. F., 233
 Neilson, D., 294
 Neki, J., 197
 Nel, J. L., 113
 Nell, E. J., 292
 Netten, A., 9
 Newell, K. W., 230
 Nicholas, J., 271
 Nielsen, K., 291
 Nigam, R., 176
 Niles, B. L., 206
 Nisbett, R. E., 6, 49, 73, 124
 Nissani, M., 306
 Noggle, J. J., 206
 Nomura, E., 75
 Norcross, J. C., 195, 196, 230
 Norenzayan, A., 73
 Northouse, L. L., 229
 Norton, B., 39
 Nosek, B. A., 57
 Nosofsky, R. M., 70–72
 Nuckolls, C. W., 311, 319
 Nuñez, R., 38
 Nussbaum, M. C., 247, 252, 253, 259

O
 O'Hara, H., 291
 Oakes, P. J., 107
 Oaksford, M., 6
 Oatley, K., 6

Oberoi, G., 173
 Obler, L. E., 175
 Oliver, M., 224, 226
 Olson, J., 57
 Ones, D. S., 47
 Onwuegbuzie, A. J., 33, 34
 Oomen, B., 249, 259
 Opitz, P. C., 95
 Oppenheimer, D. M., 56, 57
 Oppenheimer, J. R., 240
 Osborne, C. K., 238
 Oullier, O., 316

P

Padakannaya, P., 172, 173, 176
 Padmala, S., 6
 Palan, B. M., 235
 Pallak, M. S., 316
 Palmeri, T. J., 70, 72
 Panayotakis, C., 290, 292
 Panda, M., 164, 182–184
 Panda, S., 171, 172
 Pandav, R., 85
 Pande, N., 145
 Paniagua, F. A., 231
 Panksepp, J., 218
 Panwar, C., 205
 Paolacci, G., 53
 Paranjpe, A. C., 3, 145, 148, 152, 154, 155,
 311
 Pargament, K. I., 237, 238
 Park, C. L., 237
 Park, E., 249, 259
 Parker, I., 278
 Park, J. H., 221
 Parrish, T., 75
 Passmore, J., 144
 Patel, N., 255, 256
 Patel, S. R., 236, 241
 Pathak, K., 196, 198
 Patrik, W., 218
 Patwardhan, A., 206
 Paul, E. J., 73, 74
 Paulk, M. E., 237
 Peal, E., 168, 169, 179
 Pedersen, D., 197
 Peetet, J. R., 203
 Pehlivanoglu, D., 95
 Pellander, F., 220
 Penner, L. A., 233
 Perez-Alvarez, M., 310, 322
 Perfors, A., 69

Pergament, K. I., 69
 Perlman, A., 69
 Perregaux, C., 169
 Pershad, D., 85
 Persson, J., 95
 Perzynski, A. T., 37
 Pessoa, L., 6
 Peteet, J. R., 237
 Petersen, D. M., 237
 Peterson, R. A., 47
 Petitmengin, C., 40
 Pettigrew, T. F., 285
 Phillipson, R., 164, 183
 Pickett, K., 255
 Pierson, J. F., 317
 Piliavin, J. A., 220
 Pinninti, N., 195
 Plano Clark, V. J., 35, 36
 Pletsch, C. E., 280
 Podsakoff, N. P., 49
 Podsakoff, P. M., 49
 Poggio, T., 63
 Pohl, C., 113
 Poirel, N., 20
 Ponterotto, J. G., 23, 24
 Poon, K. K. L., 176
 Poortinga, Y. H., 123–125, 130, 136, 256
 Poortinga, Y. P., 197
 Pope, K. S., 252
 Portillo, A., 206
 Posner, M. I., 5, 72, 85
 Post, B. C., 195
 Pothos, E. M., 69, 74
 Pradhan, A., 182
 Price, C. J., 65
 Price, R. B., 93
 Prigerson, H. G., 237
 Prihodova, L., 205
 Priya, K., 178
 Proeve, M., 205
 Pukall, C. F., 236
 Purani, A. B., 147
 Purcell, M. A., 220
 Putnik, K., 233

Q

Queller, S., 67, 69

R

Rabi, R., 66, 67, 69, 70
 Raguram, A., 197

- Raina, M. K., 200
 Rajyalakshmi, C., 129
 Ram, A., 236
 Ramachandra Rao, S. K., 145
 Rama, S., 236
 Ramasubramanian, C., 196, 198
 Ram, D., 196, 198
 Ramirez, J. D., 183,
 Ramirez, M., 102
 Rangaswami, K., 206, 236
 Rao, G. N., 196, 198
 Rao, K. R., 3, 145, 148, 154, 155
 Rao, R., 236, 311
 Rao, S. L., 85
 Raschetti, R., 240
 Rasmussen, P., 205
 Rastle, K., 21, 22, 26, 33
 Ratcliff, G., 85
 Rathod, P., 195
 Rathod, S., 195
 Rautela, U., 199
 Ravindran, A. V., 206
 Ravindran, L. N., 206
 Rawls, J., 289
 Rayner, S., 133
 Razavi, D., 233
 Raz, N., 83
 Ready, R. E., 95
 Reagan, C. E., 271
 Reber, P., 75
 Reddy, B. M., 102
 Reicher, S. D., 103, 104, 106, 107, 109
 Reid-Cunningham, A. R., 226
 Reid, D., 198
 Reidiger, M., 83, 94, 95
 Reidy, D. A., 280
 Reinerman-Jones, L., 40
 Reinerman, L., 40
 Reips, U.-D., 47, 50
 Reiter-Theil, S., 233
 Rekha, D., 176
 Reuter-Lorenz, P. A., 82, 84
 Rey, A., 85
 Reyers, B., 113
 Richardson, B., 230
 Richards, P. S., 204
 Ricoer, P., 271
 Riding, R. J., 133
 Riediger, M., 94
 Rimzhim, A., 173
 Rioux, J., 205
 Rippentrop, A. E., 237
 Rist, G., 136
 Robeyns, I., 252
 Robinson, A., 287
 Robinson, A. L., 74
 Roche, D., 38
 Rodriguez, M. A., 236
 Roeder, J. L., 74, 75
 Roen, K., 287, 294, 295
 Roe, R. A., 255
 Rogelberg, S. G., 47
 Rogers, C. R., 196
 Rogers, T., 50
 Rohmer, O., 214
 Roland, A., 196, 197, 200, 311
 Romero, C., 238
 Romo, R. D., 229
 Roosevelt, E., 249
 Rosa, A., 7
 Rosch, E., 65, 69, 72
 Rosedahl, L., 75
 Rosenberg, A., 110
 Rosenberg, S. M., 304
 Rosenberg-Thompson, S., 85
 Rosselli, M., 177
 Roter, D. L., 233
 Rothbart, M. K., 5
 Roux, D. J., 113
 Ruckdeschel, J. C., 233
 Rushton, J. P., 127
 Russell, A. W., 113
 Russo, R., 83
 Rutherford, A., 295
 Rutter, M., 103
 Ryan, R. M., 303
 Rye, M. S., 238
 Rynes, S. L., 46
- S**
 Sa'ar, A., 223
 Sabelli, F., 136
 Safaya, R., 145
 Sagar, R., 198
 Saha, P. K., 196, 198
 Saleebey, D., 102
 Salehi, K., 35
 Salmon, P., 206
 Salthouse, T. A., 82
 Saltmarsh, S., 284
 Salvatierra, J. L., 177,
 Salvatore, S., 194
 Salvia, E., 20
 Samarani, G., 95
 Sam, D. L., 123–125, 130, 135, 136

- Šamija, M., 237
 Samples, L. B., 219
 Samuel, K., 224
 Sances, M. W., 57
 Sanders, C. A., 72
 Sandra, D. Y., 183,
 Sargis, E. G., 319
 Sasaki, J. Y., 293
 Sato, T., 318, 322
 Saunders, S. M., 235
 Savani, K., 53, 55
 Savitha, H. P., 206
 Saxe, J. F., 19
 Sayers, S., 273, 283
 Scandura, T., 46, 47
 Schäfer, C., 233
 Schaller, M., 221, 310
 Scheibe, S., 93
 Scherer, K. R., 149, 150
 Schick, A. G., 46
 Schilke, O., 50
 Schmidt, M., 85
 Schmittmann, V. D., 10, 11
 Schmitt, N., 47
 Schmitt, T. A., 26
 Schneider, K. J., 317
 Schoenbaum, S. C., 230
 Schoen, C., 230
 Schramm, E., 113
 Schultz, T., 205
 Schwartz, J. L. K., 52
 Schwarz, N., 49
 Searle, J. R., 7
 Seely, L., 206
 Segall, M. H., 197,
 Seger, C. A., 75
 Sehdev, M., 103, 105
 Seligman, M. E. P., 102
 Sen, A., 136, 252–254, 257, 258, 319
 Senechal, C., 127, 133
 Sen, I., 145, 147
 Sephton, S. E., 206
 Serratrice, L., 171
 Settle, J. E., 45, 46
 Shagrir, O., 64
 Shah, C., 236, 241
 Shamasundar, C., 235
 Shankar, M., 46
 Shany, M., 176
 Shapiro, D. H., 236
 Sharma, P., 206
 Sharma, S., 85
 Shaw, R. J., 82
 Sheibi, S., 83
 Sheikh, A. A., 240
 Sheikh, K. S., 240
 Shepard, R. N., 70, 72
 Shepherd, A., 36
 Sherman, K. J., 206
 Shibukumar, T. M., 196, 198
 Shih, T., 230
 Shildrick, M., 234
 Shonkoff, J. P., 316
 Shriberg, P., 175
 Shulman, H., 136
 Shumay, D. M., 240
 Shweder, R., 151
 Shweder, R. A., 150–152, 158, 198, 275
 Siegel, B. S., 234
 Siegle, G., 93
 Sigelman, C. K., 220
 Silver, H., 218
 Simmons, A. N., 75
 Simon, B., 107
 Sinangil, H. K., 47
 Singh, A. K., 129, 130, 133
 Singh, A. N., 203
 Singh, H., 240
 Singh, L. K., 196, 198
 Singh, N., 173, 177
 Singh, N. C., 173
 Singh, R. H., 206
 Singh, R. P., 46
 Sinha, D., 5, 123, 127, 130–135, 141, 145,
 146, 148, 153, 156, 157, 311
 Sinha, J., 144
 Sinha, J. B. P., 127
 Sinha, Y., 316
 Skitka, L. J., 319
 Sklad, M., 249, 259
 Skutnabb-Kangas, T., 164, 166–168, 170,
 182–184
 Slade, L. A., 47
 Slee, R., 218
 Sloutsky, V. M., 69, 70
 Small, B. J., 9
 Smith, D., 126
 Smith, E. E., 73
 Smith, G. A., 134
 Smith, G. W., 107
 Smith, J., 84, 230
 Smith, J. D., 72–74
 Smith, K. B., 236
 Smith, N., 272
 Smith, R. S., 102
 Smith, S. L., 85

- Snitz, B. E., 9
 Snow, C. E., 175
 Snyder, C. R., 85
 Sobel, D., 134
 Sodi, T., 197
 Sohl, S. J., 236
 Sollins, B., 40
 Sollod, N., 203
 Soman, D., 46
 Sommer, G., 259
 Sommerville, J. A., 294
 Song, L., 229
 Sonnenfeld, J. A., 46
 Sosik, J. J., 51, 58
 Soto, F. A., 75
 Southworth, F. C., 169
 Sparano, J. A., 236, 241
 Sparkes, A. C., 34
 Spharim, G., 176
 Spicer, A., 295
 Spielberger, C. D., 85
 Spreen, O., 85
 Sproat, R., 173
 Sprott, W. J. K., 305
 Srinivasan, N., 94, 177
 Srinivasaraju R., 196, 198
 Srivastava, R. K., 133
 Srivastava, S. P., 145
 Stafford, T., 71
 Stanton, A. L., 237
 Stark, D., 251
 Steele, H., 103
 Steele, M., 103
 Steiner, R., 320
 Stellmacher, J., 259
 Sternberg, R. J., 4, 6
 Steven, S., 72
 Stevens, C. J., 113
 Steventon, A., 230
 Stewart, D., 271
 Stewart, M. A., 233
 Stewart, R. M., 319
 Stewart, S. L., 237
 Stilson, D. W., 74
 Stock, P., 113
 Stoddart, K., 36
 Stoller, E. P., 37
 Strauss, A., 29
 Strauss, A. L., 22, 29, 106
 Strauss, E., 85
 Street, A. E., 206
 Stricker, G., 195
 Subbakrishna, D. K., 85
 Sue, D. W., 197
 Sullivan, M. A., 198
 Sullivan, S., 295
 Sumathi, T. A., 173
 Sunderman, G., 178,
 Sunstein, C. R., 46
 Surya, N. C., 196
 Susinos, T., 218
 Svärd, J., 94
 Sylvester, C.-Y. C., 82
- T**
- Taber, J. M., 56
 Tam, J. W., 178
 Target, M., 103
 Tarrow, S., 290
 Tashakkori, A., 36
 Taylor, E., 155
 Taylor, R. S., 270
 Teddlie, C., 36
 Tellegen, A., 102
 Telles, S., 236
 ten Brinke, L., 54
 Tenenbaum, J. B., 64
 Thakur, S., 222
 Thaler, R. H., 46
 Thapa, K., 196–199, 203, 206, 255
 Thibaut, J.-P., 73
 Thibaut, J. W., 46
 Thomas, B., 10
 Thomas, C. L., 37
 Thomas, M. B., 113
 Thomas, W. P., 274
 Thompson, C., 274
 Thompson, R. A., 83
 Thompson, T., 177
 Thorne, F., 302, 303, 305
 Tierney, K., 106
 Tilak, B. G., 147
 Tomich, P. L., 237
 Tomicic, A., 293
 Tomlinson, E. C., 46, 47
 Tooze, J. A., 241
 Topol, E. J., 234
 Torrey, F., 199
 Toulmin, S., 278
 Travers, J., 51
 Treat, T. A., 72, 93
 Trempler, J., 40
 Tress, B., 113
 Tress, G., 113
 Triandis, H. C., 127, 128

Tripathi, K. M., 206
 Tripathi, R. C., 5, 53, 55, 123, 124, 127,
 129, 135, 146, 157, 256, 311, 316
 Truong, L., 95
 Tucker-Ray, W., 46
 Tuliao, A. P., 197
 Tunmer, W. E., 171
 Türken, S., 287, 294, 295
 Turner, J. C., 107
 Turner, L. A., 34
 Turner, R. H., 106
 Tyler, E. B., 124
 Tyrrell, A. M., 85

U

UNESCO, 166
 Ungerleider, C., 177
 UNICEF, 217
 United Nations, 123, 249–251, 256
 Universal Declaration of Ethical Principles
 for Psychologists (UDEPP), 250,
 251
 Urry, H. L., 95

V

Vadraj, H. S., 236
 Valdes-Kroff, J., 178
 Valentin, V. V., 75
 Valsiner, J., 7, 275, 277, 302, 306, 311, 318,
 322
 Van de Koppel, J. M. H., 127, 133
 Van Der Pompe, G., 234
 Vanderwerker, L. C., 237
 Van de Vijver, F. J. R., 131
 van Manen, M., 28
 Van Rompay, M., 240
 Van Vlaenderen, H., 112
 Varela, F. J., 40, 308, 309
 Varghese, M., 196, 198
 Varma, S., 148
 Varricchio, C. G., 231
 Vasudevan, A., 237
 Veissière, S., 199
 Verhaeghen, P., 95
 Verhoeven, L., 9
 Verma, A., 177
 Verma, S., 236
 Verma, S. K., 85
 Vidal, J., 20
 Vigne, J., 236
 Vigo, R., 70
 Vihman, M., 176

Vihman, M. M., 171
 Viken, R. J., 72
 Vishvketu, Y., 205
 Visser, A., 234
 Viswesvaran, C., 47
 Vogelbusch, A., 220
 Vohs, K., 54
 Völkle, M. C., 94
 Vong, W. K., 69
 Vygotsky, L., 194
 Vygotsky, L. S., 171

W

Wade, N. G., 195, 238
 Wade-Woolley, L., 176,
 Wadlinger, H. A., 84
 Wagner, G. G., 94, 95
 Waldorp, L. J., 10, 11
 Waldron, E. M., 73
 Waldron, J., 270
 Waldschmidt, J. G., 75
 Walhovd, K. B., 82
 Walker, B., 110
 Wallace, A. F. C., 125
 Wall, K., 237
 Walsh-Bowers, R., 293
 Walsh, C., 205
 Wang, Q., 312
 Wang, T., 9
 Wanta, B., 241
 Warneke, C., 236
 Warner, J., 105
 Wasserman, E. A., 70
 Waters, A. M., 11
 Watkins, M., 136,
 Watson, J. B., 21
 Watson, N., 219
 Watts, D. J., 51, 52
 Weber, L., 234
 Webster, N. J., 37
 Weierich, M. R., 93
 Weijs, B., 105
 Weil, B., 20
 Weinbaum, I., 230
 Weinberger, M. I., 95
 Wekker, G., 257
 Wermuth, N., 319
 Werner, E., 103
 Werner, E. E., 102
 West, S., 200
 Wetherell, M. S., 107
 White, B., 205

Whitebrook, J., 293
 White, P. A., 319
 White, R. K., 46
 White, W. R., 276
 Whitley, R., 103, 105
 Wickson, F., 113
 Wierzbicka, A., 150, 153
 Wilkey, S., 240
 Wilkinson, R., 255
 Williams, C., 49
 Williams, E. A., 46, 47
 Williams, J. G., 238
 Williams, K., 231
 Williams, K. D., 46, 47, 57, 218
 Williams, R. N., 278
 Wills, A. J., 70, 74
 Wilson, E. O., 196
 Wilson, H. R., 84
 Wilson, R. A., 2
 Wilson, T. D., 49
 Winter, D., 126
 Wisner, B., 230
 Witkin, H. A., 127, 133
 Wittgenstein, L., 65
 Wojtek, B., 220
 Wolfensberger, W., 223
 Wolff, J. L., 233
 Wong, P. T. P., 194
 Wong, S. P., 50
 Wood, A. W., 271
 Wood, E. M., 268, 281, 283
 World Bank & World Health Organization,
 230
 Worthington Jr, E. L., 238
 Wrenn, C. G., 199
 Wrzus, C., 94, 95
 Wu, H. S., 175
 Wundt, W., 21
 Wu, S., 82
 Wylie-Rosett, J., 236, 241

Y

Xenos, N., 292
 Yadav, R., 206
 Yamada, A. M., 231
 Yanez, B., 237
 Yang, C., 82
 Yang, L., 95
 Yardi, S., 8
 Yeh, C. J., 203
 Yim, H., 70
 Yohannes, M. A. G., 183
 Yoon, C., 95
 Yoon, G., 127
 Young, I. M., 218
 Young, I. M., 288, 290
 Yu, A., 169
 Yun-Dai, D., 6

Z

Zacks, R. T., 82
 Zagaria, A., 194
 Zakrzewski, A. C., 74
 Zape, M. P., 219
 Zautra, A., 103
 Zautra, A. J., 11
 Zavaleta, D., 224
 Zednik, C., 65
 Zeitlin, I. M., 272
 Zelazo, P. D., 95
 Zeltner, T., 230
 Zennaro, A., 194
 Zhang, L., 229
 Ziaei, M., 95
 Zijlstra, E., 256
 Zimbardo, P. G., 10, 109, 317
 Zittoun, T., 1, 278, 293
 Zohar, D., 2
 Zucker, L. G., 50

Subject Index

A

Adivasi society, 129, 131–133, 137
Affect-cognition interaction, 94, 95
Affective prioritization, 81
Algorithmic level, 63, 64, 71, 76

C

Capability approach, 252
Cognitive ageing, 81, 83, 96
Computational level, 63–65, 69, 71, 76
Cross-cultural psychology, 5, 122–125,
130, 148–150, 311, 312, 315
Cultural change, 123
Cultural factors in psychotherapy, 14, 193,
196
Culture and beliefs, 231

D

Dignity, 133, 213, 226, 247–249, 251, 252,
320
Dot probe task, 84–86, 92–94

E

Emancipatory research, 13, 213, 224
Executive control, 163, 177, 178, 180
Experimental method, 47, 48, 53, 143, 278,
312, 314

F

Forgiveness, 201, 204, 229, 238–240
Freedom, 57, 136, 147, 181, 202, 226, 240,
248–255, 268–270, 272, 274,
279–285, 289, 291, 312, 321

G

Human rights and psychology, 14, 248,
250, 254–258
Human science, 14, 152, 264, 265, 276,
278, 303, 308, 310

I

Implementational level, 63, 64, 74–76
Inclusion, 13, 85, 200, 203–206, 213, 214,
217–219, 223, 225, 226, 247, 248,
256, 311, 317, 322
Inclusiveness, 111, 252, 318
Indian versus Western Psychologies, 141,
146, 156
Indigenous psychology, 155
Integration, 3–6, 8, 10–14, 20–22, 34, 40,
64, 65, 67, 75, 96, 105, 113, 128,
129, 134, 135, 141, 142, 145, 148,
155–158, 193–196, 199, 200, 203,
205–207, 214, 226, 229, 230, 234,
239, 241, 264, 266, 272, 277, 278,
293, 301–307, 311–319, 322
Integration in psychotherapy, 194
Integrative approach, 9, 11–13, 101, 115,
193, 199, 202, 207, 229, 230, 240,
301, 302, 311, 316, 318, 319, 322
Integrative science, 114, 193, 194
Integrativeness, 14, 301–305, 307–309,
318–320, 322
Inter-cultural relations model, 141

M

Marr's levels of information processing, 63,
64

Meta-disciplinary, 306
 Metalinguistic awareness, 169–172, 174,
 176, 177, 179
 Mind–body therapies, 231, 236, 240, 241
 Modernization, 126, 280
 Multilingual education, 163, 164, 183, 184
 Multilingualism, 13, 163–165, 169, 170,
 172, 176–184

O

Organizational Behaviour (OB), 12, 45–51,
 53, 58, 59, 303

P

People-centric development, 101, 105, 110,
 111, 113
 Physical disability, 213, 214, 216–218,
 220–222, 225, 226
 Positivity bias, 213, 214, 216–218,
 220–222, 225, 226
 Psychological processes, 3–10, 12, 13, 121,
 129, 220–222, 301, 302, 305, 309,
 311–313, 317

R

Resilience, 11, 101–112, 115, 195, 254,
 256, 258

S

Social inclusion, 13, 213, 214, 219, 317
 Social policy, 13, 213, 214, 226, 316
 Societal development, 121–123, 125,
 127–129, 135, 137
 Sociocultural context, 4, 14, 193, 196, 197
 Spiritual concerns in psychotherapy, 195
 Spirituality, 142, 154, 158, 195, 203–205,
 229, 236–238, 317
 Stigma, 197, 213, 223, 226
 Sustainable development, 11, 101,
 110–112, 114, 115, 223

T

Tree of Knowledge, 4, 308, 309, 313

U

Underdeveloped groups, 121
 Universal Declaration of Human Rights
 (UDHR), 14, 248–251, 254

V

Visual category learning, 63, 65, 75, 76
 Vulnerability, 45, 46, 102, 104, 105–112

W

Web-based experiments, 12, 45, 47, 50–54,
 56–59