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F Scale

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Synonyms

Infrequency scale; Infrequent responses; Overreporting

Definition

The F/F-r is a validity scale on the MMPI-2/A/-RF that assess an individual's tendency to endorse uncommon symptoms or level distress/dysfunction in certain populations.

Introduction

The F/F-r scale is a validity scale developed on the original Minnesota Multiphasic Personality Inventory (MMPI; Dahlstrom et al. 1972) and all additional versions: MMPI-2 (Butcher et al. 2001), restructured form (MMPI-2-RF; Ben-Porath and Tellegen 2008), and adolescent (MMPI-A; Butcher et al. 1992). According to the administration and scoring manual, an elevation on this scale is indicative of the individual endorsing a number of symptoms that were not reported by the majority of the original normative group and the profile produced may not be a valid representation of current symptoms. However, F scale elevations also measure distress and the severity of psychopathology in some groups, such as traumatized or psychotic patients, as opposed to exaggerating psychopathology (e.g., Brand and Chasson 2015; Klotz Flitter et al. 2003). Given the common use of the MMPI-2/RF/A in psychological assessment, it is critical to be informed of the various applications of this scale.

Development and Application

Items in the F scale were intended to identify uncommon/unusual patterns of endorsement (Dahlstrom et al. 1972). They were chosen because less than 10% of the normative sample from Minnesota endorsed the items. However, there were several items that did not meet this criterion on the original version, the total number of which varied depending on the respondent's gender. The gender differences on the F scale were corrected for the MMPI-2. All items for the F scale are contained within the first 361 questions on the MMPI/MMPI-2 (Butcher et al. 2001), with F back (Fb) providing similar information about the test taker's response style on the last 206 questions.

When the F scale is elevated, it may indicate the respondent is exaggerating their psychological

distress or randomly responded. However, it can also indicate significant psychological distress, particularly among traumatized or psychotic individuals (Brand and Chasson 2015; Butcher et al. 2001; Klotz Flitter et al. 2003). Given the possibility of potential gain from presenting oneself as severely ill in some types of evaluations (e.g., forensic contexts), these scales can provide guidance in determining the likelihood of an accurate presentation when interpreted along with other validity indicators. It is critical that a determination of over-reporting or malingering includes multi-measure/source corroboration and is never based on a single scale or measure (Rogers 2008). Two scales on the MMPI-2 and MMPI-A are utilized to determine if F scale elevations are due to random/inconsistent responding. Elevations on the variable response inconsistency scale (VRIN) may indicate random responding, and elevations on the true response inconsistency scale (TRIN) may indicate a pattern of randomly answering true to items. The MMPI-2-RF reduces the item overlap between VRIN-r and TRIN-r with the goal of providing a more valid evaluation of random or fixed responding, respectively (Ben-Porath and Tellegen 2008).

Rogers et al. (2003) meta-analysis showed a wide distribution of elevated F scale scores on the MMPI-2 ($M = 65.70$, $SD = 19.03$) for patients experiencing genuine distress, including those with posttraumatic stress disorder (PTSD) and schizophrenia. In addition, research has shown that the F scale can be considered a valid indicator of symptom chronicity in those with a genuine disorder (Cukrowicz et al. 2004). The F scale may also not be the most effective for determining exaggerated cognitive dysfunction in forensic settings because of the broad range of symptoms contained within the scale (Tsushima et al. 2013).

F Scales on the Minnesota Multiphasic Personality Inventory-2 Restructured Form (MMPI-2-RF)

Given MMPI-2-RF (Ben-Porath and Tellegen 2008) is shorter than the MMPI/MMPI-2, the infrequency scale (F-r) consists of items across the entire test. Unlike the MMPI/MMPI-2, the F-r scale only has item overlap with one overreporting scale (i.e., Response Bias Scale) that is primarily focused on

forensic (neuropsychological and disability) evaluations (Ben-Porath and Tellegen 2008).

Although the MMPI-2-RF did not utilize an updated normative sample to construct the test, the authors focused on reducing the amount of item overlap between scales to create a conceptually cleaner measure (Ben-Porath and Tellegen 2008). Goodwin et al. (2013) found that a cutoff of 105T on the F-r scale was effective at differentiating between compensation-seeking veterans and feigners. In addition, F-r showed higher elevations for those with PTSD and/or mild traumatic brain injury (mTBI) than those who did not have these conditions in a non-treatment/compensation-seeking sample, suggesting the differences are due to the nature of the condition rather than the setting.

F Scales on the Minnesota Multiphasic Personality Inventory-Adolescents (MMPI-A)

Because adolescents respond differently than adults, the MMPI-A (Butcher et al. 1992) F scale was revised to contain items that less than 20% of the normative 14–18-year-old sample endorsed. The scale is divided across the clinical scales (F_1, first 236 items) and the supplementary and content scales (F_2, last 114 items) (Butcher et al. 1992), with 33 questions in each section.

There is a dearth of research on the MMPI-A F scale. The F scale was found to be effective at differentiating between a small sample of adolescents instructed to overreport psychological symptoms or randomly respond versus honest responders (Baer et al. 1999). Archer et al. (2002) found the F scale is helpful in determining random responding across the entire test, but performs less well if it occurs only in one section (e.g., only toward the end). Adolescents with hallucinogen dependence had higher F scale scores than those with marijuana or methamphetamine dependence, which is consistent with the research showing psychotic-type experiences are associated with elevations on F (Palmer and Daiss 2005).

Conclusion

The F/F-r scale can be useful in providing information about an individual's response pattern on

the MMPI-2/RF. However, there are insufficient studies on the utility of the F scale on the MMPI-A, and the research base on the MMPI-2-RF shows promise but needs further development. Standard interpretation suggests individuals may be overreporting their level of distress when this scale is elevated on the MMPI-2. However, this interpretation is not always accurate with severely ill or traumatized groups. Thus, it is critical that assessors interpret F scale scores carefully guided by recent research, particularly related to trauma.

Cross-References

► MMPI-2
► MMPI-A

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Early Life and Educational Background

Fabrigar was born on October 14, 1965, in Arcola, Saskatchewan, Canada. He earned his A.A. in 1986 from the University of Maryland branch campus in Munich, West Germany. He earned his B.A. in 1988 from Miami University in Oxford, Ohio. In 1991, he completed his M.A. from The Ohio State University under the

supervision of Jon A. Krosnick. He earned his Ph.D. in 1995 from The Ohio State University under the supervision of Richard E. Petty.

Professional Career

Fabrigar has taught at Queen's University since 1995. He has coauthored more than 80 publications which have appeared in outlets such as *Journal of Personality and Social Psychology*, *Personality and Social Psychology Bulletin*, *Journal of Experimental Social Psychology*, *Social Psychological and Personality Science*, *Personality and Social Psychology Review*, *Journal of Personality*, *Psychological Methods*, *Psychological Bulletin*, and *Psychological Science*. He has been elected to the Society for Multivariate Experimental Psychology and the Society for Experimental Social Psychology. He is a fellow of the Association for Psychological Science, Society for Personality and Social Psychology, Society for Experimental Social Psychology, and Midwestern Psychological Association. He has served as an associate editor for *Journal of Experimental Social Psychology* and as co-editor for *Personality and Social Psychology Bulletin*.

Research Interests

Fabrigar's primary research interests fall within the domain of attitude and persuasion research. Within this domain, his research has investigated the effects of attitude structure and social context in regulating the susceptibility of attitudes to persuasion and the impact of attitudes on behavior, judgment, and information processing (Fabrigar and Petty 1999; Fabrigar et al. 2006). His research has also explored methods of measuring attitudes and their underlying structural properties (Crites et al. 1994). Other research interests include the psychological mechanisms underlying social influence tactics, the relationship between personality traits and the self, the role of attachment style in relationship processes, and methodological issues in the application of statistical methods (e.g., factor analysis and structural

equation modeling) to psychological research (Fabrigar and Wegener 2012; Fabrigar et al. 1999).

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Face Validity

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Synonyms

Contextual relevance

Definition

Face validity refers to the degree to which a layperson considers the content of a psychological test as relevant for an assumed assessment objective.

Introduction

The term face validity emerged in the psychometric literature during the 1940s and early 1950s, e.g., in articles of Mosier (1947), Cronbach (1949), and Anastasi (1954) and in the first *Standards for Educational and Psychological Tests* published by the American Psychological Association (APA 1954). These authors as well as many others generally acknowledge the relevance of the concept to psychological assessment, but they also emphasize that this type of validity has to be clearly distinguished from other types of validity, such as content, criterion, or construct validity (Nevo 1985). Moreover, face validity is considered an important feature of any psychological test (broadly defined as evaluative device or procedure [cf. American Educational Research Association, American Psychological Association, and National Council on Measurement in Education 2014] including scales, interviews, behavior observations, and assessment processes integrating information from diverse sources). Compared to tests with low face validity, tests with high face validity usually imply higher motivation of test takers and a sense of having undergone a fair and relevant assessment. Besides, employing face valid tests helps to convince policymakers, employers, and administrators to implement tests, and increase acceptance for psychological testing among the wider public (Holden and Jackson 1979; Nevo 1985).

The Concept of Face Validity

The validity of a test score interpretation is usually either inferred from empirical data (e.g., criterion or ▶ construct validity) or judged by experts (▶ content validity). Face validity is different from these types of validity – it is not about whether a test score actually measures a construct. It is about whether laypersons such as test takers (e.g., job applicants, research participants, students), nonprofessional test users (e.g., personnel administrators, psychiatrists), or the general public (e.g., parents of test takers, judges, politicians,

etc.) view the test score interpretation as valid. This attribution of face validity to a test score interpretation entails a layperson's evaluation of whether the test content (e.g., singular items, a test, or a battery of tests) is suitable to assess a hypothesized behavioral dimension, or more broadly, to achieve an assumed assessment objective. Face validity of a test is a function of the degree to which the layperson considers the test content as relevant to achieve the assessment objective. The foundations for this attribution are hypotheses generated by the layperson concerning indicators of the construct and their relation to test content. Considering work sample tests, for example, this relationship becomes easily apparent to the layperson. Work sample tests are routinely employed in personnel selection. These tests are simulations of tasks to be performed in a certain job. For example, the skills of an applicant for the position of an electrical engineer can be tested by requesting him to repair a series of defective electric devices. In this case, the relationship of test content (simulation of a real-life scenario to be encountered by an electrical engineer on the job) and the assessment objective (selecting a sufficiently skilled applicant) is apparent. Thus, work sample tests have high face validity.

It is important to distinguish face validity from other types of validity as laypersons may perceive items as highly relevant to the assessment objective (high face validity) while the test score can be completely meaningless as it does not map the construct under consideration (no construct validity). The distinction from other types of validity is important as these serve as evidence that the test score interpretation actually reflects what it is supposed to represent whereas face validity rests on the assumption of score validity by laypersons. For example, it is important to distinguish content and face validity. ▶ Content validity refers to the degree to which test items are sampled representatively from a universe of content. The content validity of a test is judged by experts for the construct under consideration. In contrast, face validity is judged by laypersons. Similarly, substantive validity – the degree to which a test item is theoretically linked with a construct (Loevinger

1957) – is also judged by experts who know about the relationships between behavioral indicators and the construct and, thus, do not need to speculate. Finally, face validity is different from criterion and construct validity as these types of validity are based on empirical data and the fit of statistical results to theoretical expectation derived from the construct's nomological net. In sum, face validity has to be distinguished from other types of validity, and these types cannot be replaced by face validity.

Quantitative Assessment of Face Validity

Although it is rarely done and interest in the concept of face validity seems marginal (cf. Nevo 1985), face validity is measurable, and its measurement may provide useful information for at least two reasons: (1) Face validity is worth considering during test development and application as it may affect other types of validity. In a study by Holden and Jackson (1979), higher criterion validities of test items were observed for more face valid items. (2) Test developers may seek to disguise or disclose the assessment objective of their test. For example, in admissions tests, high face validity is desirable to give test takers a sense of having undergone a fair and relevant assessment. In personality tests, especially in high-stakes situations, a low face validity might be desirable to reduce the possibility of faking. In these cases, information on how the validity of the test is perceived by test takers is highly relevant and can be used to modify test content depending on the assessment objective.

How can the degree to which the layperson considers the test content as relevant for an assessment objective be measured? Different approaches are proposed in the psychometric literature. One approach proposed by Nevo (1985) involves direct ratings – e.g., *How suitable is the test (item/battery) X for a purpose Y?* – on a 5-point rating scale from *extremely suitable* to *unsuitable/irrelevant.* Besides this absolute technique, he proposes a relative technique in which the rater simultaneously rates the face validity of tests by comparing them to each other. His empirical results suggest that such ratings may possess

an acceptable level of reliability and validity. In direct rating approaches, the purpose has to be made explicit, e.g., by introducing trait terms, implying the possibility of bias in subsequent judgments. Accordingly, Holden and Jackson (1979, p. 462) proposed another approach involving a free-sort procedure. They instructed participants of their study to sort the items of a personality test into groups of "items that belong together because they refer to the same personality trait or its direct opposite" and a "miscellaneous" group if an item does not seem to fit into the other groups. After the sorting, groups of items had to be named and related to dimensions of the personality test by participants. Face validity of items was calculated as "proportion of subjects who related the item to any hypothesized trait, rather than placed it in a miscellaneous category."

Conclusion

Face validity – the degree to which a layperson considers the content of a psychological test (battery) as relevant for an assumed assessment objective – is an important feature of psychological tests. Employing face valid tests helps to avoid the impression that psychological tests are irrelevant and unfair, thereby increasing the acceptance of psychological testing among test takers, nonprofessional test users, and the public. Moreover, face validity can be measured in a reliable and valid manner, and face validity scores of items or tests may provide valuable information for test development and application.

Cross-References

▶ Construct Validity
▶ Content Validity
▶ Criterion Validity

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Facebook

▶ Jealousy

Face-to-Face Relationship

▶ Encounter Group (T group)

Facial Expressions and Emotion

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Synonyms

Body language; Nonverbal communication

Definition

Facial expressions refer to the appearance changes in the face as a consequence of movement of facial muscles. They are one channel of nonverbal communication.

Introduction

The study of facial expressions of emotion can be traced back to Charles Darwin's seminal work *On the expression of emotions in man and animals* (Darwin 1872/1965). Darwin discussed not only facial expressions but also included vocal expressions, postures, and other appearance changes (such as blushing). Even though his main point was that emotion expressions serve to prepare the organism for emotion-relevant action, he very much emphasized the communicative value of what he referred to as the *language of emotions*.

Darwin's view of emotion expressions as the visible part of an underlying emotional state was disputed and rejected by those who considered facial expressions as social or cultural signals only. In fact, a number of studies in the early years of the twentieth century came to the conclusion that emotions can only be recognized at chance levels, even though some studies found good recognition rates. The disparity in findings led Bruner and Tagiuri in their 1954 *Handbook of Social Psychology* article to state that "... the evidence for the recognizability of emotional expressions is unclear" (p. 634). They concluded that, if anything, emotional facial expressions are culturally learned. This view remained basically unchanged until 1972 when Ekman, Friesen, and Ellsworth wrote a book to explicitly vindicate Darwin's idea that emotional expressions are universal and directly associated with an underlying emotional state. This book and related research by Ekman and colleagues as well as Izard (e.g., Izard 1971) were successful in making Darwin's view predominant in the field.

Yet, the notion that facial expressions are clearly linked to an underlying emotional state continued to be controversial. Thus, according to Fridlund's Behavioral Ecology Theory (Fridlund

1994) for emotion expressions to be truly useful as a communicative signal they should be linked to the organism's social motives rather than to quasi-reflexive emotions. He concluded that emotion expressions are to be considered as unrelated to an underlying emotional state and that emotional facial expressions should be viewed as communicative signals only not as a symptom of an underlying state.

This assertion, however, is also problematic. Parkinson (2005), for example, questioned why a specific display should be linked to a specific motive, or why communicating motives should be more adaptive than communicating emotions. Parkinson's extensive review concludes that facial expressions may well serve as both symptoms of an underlying state and communicative signals. This notion was first empirically tested by Hess et al. (1995) for amusement smiles and extended by Jakobs and colleagues to different contexts and emotions (e.g., Jakobs et al. 2001).

This discussion was also informed by the fact that prototypical emotion expressions seem in fact not all that common (see below). This may at first suggest a quandary. Yet, the issue of what facial expressions "truly" express is actually somewhat less important than it may at first seem. Specifically, as is amply demonstrated by the use of facial expressions in the arts, films, and literature, people understand emotional facial expressions to express emotions, and they react in accordance with this understanding (Niedenthal and Brauer 2012). And as long as all concerned behave as if what is expressed by those behaviors we naively call emotion expressions are indeed emotions and behave in accordance, this for all intents and purposes is what is expressed.

Basic Emotions

The main focus of research on emotional facial expressions has been the study of the so-called basic emotions – a set of six/seven emotions for which a specific prototype expression can be identified. This set can be traced to Paul Ekman (1972) who originally posited hard-wired programs that link the basic emotions (happiness, sadness, fear, disgust, anger, surprise, and possibly contempt; Ekman and Friesen 1986) to specific (facial) expressions.

Research from a number of domains has found supportive evidence for the notion that facial expressive patterning is systematically linked to certain emotional states – but these findings are not undisputed. Thus, the basic emotions are cross-culturally recognized above chance (e.g., Elfenbein and Ambady 2002; Izard 1971) – but there is also strong evidence for cultural dialects in the expression of these emotions (Elfenbein and Ambady 2002; see also below). Evidence from comparative research suggests overlap between expressions of human and nonhuman primates (e.g., Chevalier-Skolnikoff 1973). However, the interpretation of these findings is complicated by the fact that it is often difficult to assure that expressions actually serve as homologues across species or to ascertain emotional states in animals.

Affective neuroscience has made great strides in identifying emotion-relevant brain regions involved in both emotion recognition and production, but no brain circuits that are uniquely emotional have been identified. Finally, research in infant facial expressions also suggests a genetic basis for some facial expressive displays. In one now classic study Eibl-Eibesfeldt (1973) reports that deaf and blind children show expressions of anger, happiness, and other emotions in suitable situations even though they could not have learned them through observation. Young infants also respond differently to different emotion expressions suggesting an ability to discriminate emotion expressions (see Izard et al. 1995). However, the correspondence between prototype expressions of basic emotions and infants' expressions is often rather low (see Camras et al. 1991).

In sum, no consistent and unequivocal picture of the genetic basis for a limited set of basic emotions emerges. However, the available evidence tends to support the notion of some partial genetic basis of facial patterning as a function of emotion. Yet, more research is needed to better understand the link between facial expression and mental states.

In fact, the research focus on basic emotions has resulted in a relative neglect of the study of facial expressions of other emotions. Darwin himself discussed a large number of expressions of emotional states including not only states commonly accepted as emotional such as joy and anger but also such states as patience and sulkiness. This points to one problem in this line of research – the question of which states can be considered emotions. In the absence of a consensual definition of the term emotion, the question of whether a specific state is an emotion cannot always be clearly answered. Also, it might not always be the case that an emotion is preferentially expressed facially. Thus, both pride and shame require posture to be well recognized (Tracy and Matsumoto 2008).

In recent years though, efforts have been made to study other emotion expressions. In particular, expressions of different positive emotions and of other mental states such as confusion or worry have been studied. At the same time, the question of whether facial expressions actually signal emotional states and to what degree their interpretation depends on the context in which they are shown has been resurrected (Barrett 2013).

Prototypical Expressions

Closely linked to the notion of basic emotions is the notion of prototypical expressions. The facial expressions used by Ekman and colleagues for their intercultural research, and the expressions described by Darwin for a wider range of emotions are typically constrained to just one expression to represent any specific emotional state. However, as became evident in the research conducted in the first part of the twentieth century (cf. Bruner and Tagiuri 1954) in a given emotional context a number of different emotion expressions can be shown and more than one expression is typically associated with a given emotion in recognition studies. This raises a question regarding the status of the prototype expression compared to those other expressions.

Specifically, whereas there is evidence that the patterns of emotion expressions described by

Darwin and by Ekman and Friesen (1978) as prototypical for certain emotions tend to be highly recognizable (see above), there is much less evidence that these specific expressions are actually shown by people who report feeling the relevant emotions. That is, whereas a number of studies have found that specific facial displays can be linked to self-reports of specific affective states (e.g., Cacioppo et al. 1986) or to clearly defined emotional situations (Matsumoto and Willingham 2006), others have not (see Fernandez-Dols and Ruiz-Belda 1997). These contradictory findings could of course be attributed to differences in the procedures employed to elicit specific emotions or to differences in the complexity of the experimental situations in which they were elicited. Yet, even across well-controlled studies perfect overlap with prototypes is rarely observed. One explanation may be that facial expressions do not in fact result from emotions but rather from the underlying appraisals of the social context in which the emotion is experienced (Scherer 1992) – and as these have some variation, so should the facial expressions. Appraisal theories of emotion (e.g., Scherer 1987) posit that an emotional state results from the appraisal of the situation according to the motivations, values, and resources of the individual.

It is postulated that there is a direct causal relationship between specific appraisals and specific expressive elements such that each appraisal outcome is associated with a specific facial movement (Scherer 1992). For example, goal obstruction is associated with the drawing together of the eyebrows as suggested by Darwin. As appraisals progress, the cumulative appearance of facial movements constitutes the resulting emotion expression. Support has been found especially for goal obstruction and pleasantness appraisals (e.g., Lanctôt and Hess 2007), but more systematic research is needed to verify this proposal.

From this perspective, emotion prototypes are shown only when a situation is appraised in an emotion-prototypical fashion. However, social interactions are heavily rule based. As such emotion regulation is an integral part of any interaction and is part of the appraisal process. Hence, it should not surprise us that "classic" prototypical

expressions are the exception and not the rule in many everyday interactions. Considering emotion expressions as a readout of appraisals would therefore help to solve some of the most persistent problems in the research on emotion expressions.

Moderating Factors for Emotion Expression and Recognition

A number of influences on the communication of emotions have emerged as important. Of foremost interest was the question of whether there are cultural differences in facial expressions. Another often raised issue regards gender differences, a question that overlaps with the question regarding status differences. These two issues will be briefly outlines next.

Culture: Are Emotional Facial Expressions Universally Recognized?

Ekman and colleagues (1972) as well as Izard (1971) made strong claims that the so-called basic emotions are universally recognized, based on the notion that the expressions have developed due to evolutionary constraints and hence are in a continuity across mammalian species and universal across human cultures. Yet, a number of discussions in leading journals took issue with the methodology employed in the studies that found support for universality and social constructivist approaches to emotion emphasized differences in emotion vocabularies and disputed universality on these grounds.

Cultural Dialects

More recently, strong meta-analytical evidence for an intermediate view has emerged and led to the formulation of Elfenbein and Ambady's Dialect Theory (Elfenbein and Ambady 2002). They argue that the universal language of emotion expression has local dialects that differ subtly from each other. A study by Elfenbein et al. (2007) comparing expressions from Quebec and

Gabon found evidence for the posited dialects for serenity, shame, contempt, anger, sadness, surprise, and happiness but not for fear, disgust, or embarrassment. A decoding study also reported by these investigators showed that individuals were better at decoding expressions from their own group but also showed that they were considerably better than chance accuracy for expressions from the other group. Consistent with an appraisal approach to emotional expressions, dialects could be explained by postulating subtle differences in appraisal patterns due to differences in cultural constraints, values, and norms that reflect themselves as differences in facial expression (Hess et al. 2013).

In sum, the evidence to date suggests that emotion expressions are by and large universally recognized – at least with regard to emotions that have been categorized as basic. However, the evidence is also clear that many emotions are not universally expressed in exactly the same manner – albeit with enough overlap that they can be recognized well across cultures and subgroups.

Cultural Rules and Norms

Stronger impact on emotion expression and recognition is presented by social rules and norms. Norms may have an indirect effect because they guide attention to specific aspects of a situation. In fact, any given situation tends to contain a variety of potential emotion-relevant signals. Thus, in the same situation, different people may focus on different cues, which they also may appraise differently. As different cultures have different value systems, it should not be a surprise that the same situation may elicit different emotions in different cultural contexts.

In this sense, members of collectivist cultures tend to react more to external, socially sharable elements of a situation, whereas members of individualist cultures tend to react more to internal cues (Suh et al. 1998). This notion explains why in North America positive feelings tend to be associated with personal achievement, whereas in Asian countries they are linked to interpersonal

events (Uchida et al. 2004). Another example of the indirect influence of norms can be found in those African countries where a strong belief in witch craft persists. There, events such as sickness and death are often perceived as immoral, unfair, and as caused by human agency and not by fate and hence elicit anger instead of sadness (Scherer 1997).

The most direct impact of norms is posed by those social norms that directly pre- and proscribe certain emotion expressions in certain contexts. Ekman and Friesen (1971) called these norms display rules. These norms are generally perceived as obligatory and their transgression is usually socially punished. They are typically learned early in the socialization process. Importantly, these norms vary with culture. For example, in North America it is more socially acceptable to show anger to close others (friend, family) than to strangers, whereas in Japan the converse is the case (Matsumoto 1990).

Finally social norms do not only regulate who shows which emotion when but also the specific form the emotion expression takes. For example, it is acceptable for women but not for men to cry when angry (Crawford et al. 1992).

Gender and Status

Differences in the expression and recognition of emotion expressions can also be found with regard to status and gender of both expresser and decoder. Generally speaking, women are more emotionally expressive than men (Fischer 1993). This is best established for smiling – women smile more, and they smile more in situations where they experience negative affect. By contrast, men are perceived and perceive themselves as more likely to express anger. Interestingly, in experimental situations where anger is induced, this difference disappears (Fischer 1993).

The reason for these well-established gender differences can be traced to two – nonexclusive – sources: differences in status and differences in social roles. Thus, Henley (1995) emphasizes the inherent difference in status between men and women, which maintains to this day even in

egalitarian cultures. Henley bases her argument on the assumption that the human smile is a homologue of the primate *silent-bared-teeth display,* which typically is used as a sign of submission. From Henley's perspective smiles also signal submission and hence women as the lower status gender tend to smile more. This model may be a bit too simplistic though. On one hand people who smile tend to be rated as more dominant (Knutson 1996) and there is only limited evidence linking smiling as such to status and power. In fact, there are many different forms of smiles which serve different social functions, with the submissive smile being just one (Niedenthal et al. 2010). In this vein, Brody and Hall (2000) propose a more complex model, which includes social norms regarding gender-adequate behavior and social expectations but also a stronger trend toward positive affect experience in women.

As regards anger expressions in men, status seems to be more clearly relevant. Thus, Averill (1997) considers power and "entrance requirement" for anger. The notion being that the anger display of a person who does not have power to back up the threat is less effective and in fact less legitimate. As an example, one may think of the angry temper tantrum of a child versus an angry expression of a member of a biker gang. This view concords with the position of appraisal theories of emotion which consider coping potential – the power to redress a situation – as the key appraisal for anger (Scherer 1987).

Individual Differences in Emotional Expressivity

Despite the fact that all people tend to express their emotions outwardly, they also differ in the extent to which they tend to do so. Emotional expressiveness refers to the general disposition toward expressing different emotions outwardly including by facial expressions (Kring et al. 1994). Whereas one reason for differences in expressivity stems from personality differences, other factors such as gender, status, and culture also can determine the extent to which persons

tend to outwardly express their emotions. For example, generally speaking, women are more emotionally expressive than men (Fischer 1993).

Conclusions

Facial expressions of emotions are both symptoms of an underlying emotional state and communicative signals. Whereas there are characteristic expressions associated with specific emotions which are also highly recognizable across cultures and contexts, people rarely express their emotions by showing these characteristics expressions. In addition, contextual factors strongly affect both the expression and detection of expressions of emotions by their observers.

Cross-References

▶ Basic Emotions
▶ Body Language
▶ Emotional Expressivity
▶ Emotional Intelligence
▶ Person Perception and Accuracy
▶ Social Emotional Learning (SEL) Programs

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Factor

▶ Source Trait

Fairness

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Synonyms

Deservingness; Distributive justice; Equality; Equity; Justice; Justice sensitivity; Morality; Need; Procedural justice

Introduction

Judgments of fairness, justice, and morality are omnipresent in people's lives. People value being treated fairly and to get respect from important figures, for instance, in-group members or societal authorities (Lind and Tyler 1998). Moreover, unjust situations can evoke intense emotions, such as moral outrage, both when these situations are personally experienced and also when they are merely witnessed (Lerner 1980). That is why a great wealth of research is concerned with issues of social justice, fairness, and morality in the field of social psychology. In the current contribution, we discuss individual differences in fairness judgments and propose a taxonomy of important antecedents of these judgments.

Individual Differences in Fairness Judgments

Even though the concern for fairness seems to be a universal value (see, e.g., Lerner 1980), the strength with which people endorse this value differs dispositionally. Several scales have been developed to measure the importance of fairness and justice in people's lives (e.g., Schmitt et al. 2010). In general, valuing fairness and justice seems to be adaptive as these measures were found to be positively related to healthy functioning, such as well-being, positive affect, optimism, effective coping with stress, and long-term goal-investment (see, e.g., Bal and Van den Bos 2012).

Over time, several distinctions have been made in these general fairness and justice measures. Notably, the belief that the world is fair for you personally has been distinguished from the belief that the world is fair for others (Sutton and Douglas 2005). These measures of personal justice and general justice are only moderately correlated. The positive effects of valuing fairness and justice on psychological health indices are mainly related to personal fairness. In contrast, the latter can be related to harsh attitudes toward victims, and, as such, can legitimize social disadvantage and inequality.

A different line of studies focused on people's sensitivity to justice-related information (Schmitt et al. 2010). That is, Schmitt et al. developed a scale to measure perceptions of injustice as well as cognitive, affective, and motivational reactions to injustice. Within this justice sensitivity scale, four subscales were distinguished: victim sensitivity, observer sensitivity, beneficiary sensitivity, and perpetrator sensitivity. Victim sensitivity, for instance, measured to what degree people are sensitive to perceiving that they are treated unfairly (i.e., that they are "victims"). The four subscales correlated moderately together and are all related to openness to feelings. Moreover, in line with the findings discussed in the previous paragraph, victim sensitivity seemed to be related to hostile reactions toward others and an egoistic concern for justice, whereas the other three subscales were related to a genuine concern for justice and fair treatment for others.

A Taxonomy of Important Antecedents of Fairness Judgments

The concepts of fairness, justice, and morality show significant overlap, but there are also differences between them. Morality can be viewed as judgments between right and wrong, and as such, it is oftentimes considered to be a broader concept, encompassing fairness and justice reasoning as well as other aspects of morality, such as care, loyalty, respect, and purity (see, e.g., moral foundations theory; Graham et al. 2013). Furthermore, justice and fairness are regularly used interchangeably in theories and research (e.g., Schmitt et al. 2010). And indeed, these terms overlap to a substantial degree, which is exemplified by the fact that *justice* and *fairness* are given as synonyms in the Oxford dictionary. (The Oxford dictionary defines *fair* as (1) treating people equally, or (2) just or appropriate in the circumstances and *just* as (1) morally right and fair, or (2) appropriate or deserved.) But while there is considerable overlap between the two concepts, there are also meaningful differences to be made between justice and fairness. That is, while justice usually seems to refer to deservingness, fairness seems to be more closely related to equality. Taking these nuances into account, in the current contribution we will discuss important antecedents of fairness judgments that people use in daily life.

Equity-, Equality-, and Need-Based Fairness Judgments

A distinction can be made between three principles that people may adopt to come to fairness judgments (e.g., Deutsch 1985). That is, people may arrive at a judgment of the fairness of a situation, dependent on whether a situation is (1) deserved or equitable, (2) equal, or (3) whether those who are in need receive help. When fairness judgments are based on the principle of deservingness or equity, those who contribute more to a

certain outcome should receive more than those who contribute less (Adams 1965). The second principle, equality, refers to distributing things evenly over all individuals involved (Deutsch 1985). Finally, need-based fairness entails providing more of a certain good or outcome for those who need it more (as opposed to those who contributed more; Deutsch 1985). A preference for one of these principles may differ between individuals and can also shift across situations. Put differently, people's fairness judgments may vary situationally and dispositionally as a function of these principles.

According to equity theory (Adams 1965), people are assumed to judge an outcome as fair when their own outcome-to-input ratio equals some comparative or referent outcome-to-input ratio. For instance, when judging the fairness of one's salary, a hierarchical differentiation is used and it is accepted that those who have jobs with more responsibilities receive a higher salary than those who have less responsibilities. In line with equity theory, several studies have shown that people dislike underpayment as well as overpayment (e.g., Adams 1965). Especially this latter finding reveals that a concern for equity can be distinguished from pure self-interest and is often brought forward as proof that a concern for fairness is not (always) egocentric.

This principle of equity may be applied most often to come to fairness judgments, especially in Western, market-oriented societies (Deutsch 1985). And indeed, research has shown that when judging the fairness of situations, people (at least from Western cultures) are likely to frame these in terms of deservingness and define fairness in terms of input-outcome proportionality (Finkel 2000). When the equity principle is used to come to a fairness judgment, people are most concerned with getting the same outcomes as comparable others. That is, especially relative deprivation, getting less than someone else who is similar to you, arouses strong negative feelings of unfairness (Crosby 1976).

While equity seems mostly applicable to economical decision-making situation, equality becomes more important in solidarity-oriented groups (Deutsch 1985). In these situations fostering the relationship is people's primary concern and they will strive for attaining an equal outcome for all. Teamwork would constitute such a setting. When working in a team, people oftentimes think it is fair to distribute tasks as well as outcomes equally. In addition, the equality principle is applied when thinking about universal social or human rights. However, in this regard it is important to note that within the equality principle, a distinction can be made between a striving for equality of outcome or equality of opportunity. The former, each individual getting an identical share of a certain good, may be more readily available when thinking about equality and fairness. The latter, however, may be more common when addressing social and human rights specifically. For instance, with regard to educational rights, equality of opportunity is emphasized. That is, we want all children to have the same opportunity to get an education, but we do not necessarily strive for all children to attain an equally high education.

Finally, in caring-oriented groups, when personal welfare or personal development are primary goals, a principle of need is applied (Deutsch 1985). For instance, in schools, in a home for the elderly, or when people have been struck by a natural disaster, equity and equality may be put aside, and the primary concern is helping those in need, at times even at our own expense. We come to the aid of persons who lost their homes due to a typhoon, teach our children, and want to enhance the quality of life for the elderly.

Fairness Judgments Based on Outcomes Versus Procedures

In the distinction made above between equity, equality, and need, the fairness judgments seemed to be focused mostly on a particular outcome division. The fairness of outcomes, called distributive justice, has been the focus of much research on social justice (e.g., Adams 1965). However, an additional distinction can be made between fairness judgments of these outcome divisions, called

distributive justice, and fairness judgments based on the process leading up to a certain decision, called procedural justice. In recent decades, attention for the fairness of procedures has increased greatly and research on procedural justice and subsequent reactions has bloomed (e.g., Tyler and Lind 1992).

While distributive justice concerns the fairness of outcomes are distributed, procedural justice is focused on the process through which people arrive at a certain distribution. Hence, it concerns fairness judgments based on how people have been treated, for instance, whether they were given an opportunity to voice their opinions and concerns. According to Tyler and Lind's (1992) procedural justice framework, procedural justice consists of three additional elements besides voice. Decisions have to be neutral, transparent, and unbiased; people have to be treated in a respectful manner that makes them feel valued; and, the decision-maker has to be trustworthy. Scholars have argued that people can be satisfied with a negative outcome, as long as the procedure was judged to be fair, i.e., that procedural justice could be more important than distributive justice in fairness judgments. And indeed, in certain situations, procedural justice has been found to be more important for fairness judgments than the distributive justice (Tyler and Lind 1992).

Conclusion

With this contribution, we have tried to provide a clear taxonomy of fairness judgments. Importantly, when considering the fairness of a situation, both procedures and outcomes are important and whether one focuses more on procedural justice or distributive justice is situation-dependent. Moreover, the fairness judgments of these outcomes – and to some degree also of procedures – can be based on principles of equity, equality, or need. In a market-oriented setting, people most likely use equity as a basis to judge the fairness of a situation; when they are solidarity-oriented, they will likely use equality to guide a fairness judgement; and, when adopting a caring-orientation, they will probably use need as a guiding principle for fairness judgments.

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Faking

▶ Faking Behavior

Faking Bad

▶ Faking Behavior

Faking Behavior

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Synonyms

Aggravation; Dissimulation; Faking; Faking bad; Faking good; Impression management; Malingering; Response distortion; Self-deceptive enhancement; Simulation; Socially desirable responding

Definition/Introduction

In recent years, researchers have been paying more attention to defining faking as well as to understanding its antecedents and its effects in psychological measurement. This chapter presents an overview of the key features of faking, its antecedents and effects, models of faking, as well as approaches for detecting, correcting, or preventing it.

What Is Faking?

Faking is part of the broader phenomenon of response distortion in psychological assessment. There are various definitions of faking. Still, across all these definitions, there are some key features, even though different definitions emphasize the various features to different degrees:

First, faking is associated with some degree of deception (i.e., not being honest in a given situation). Second, faking is a behavior and not a personality trait (i.e., people differ in the extent to which they are inclined to fake across different situations). Third, faking is based on an interaction between person variables (e.g., the ability and motivation to fake) and situation variables (e.g., the necessity and opportunity to fake). Fourth, faking is goal-oriented (e.g., receiving a job

offer, reducing punishment). Fifth, most researchers describe faking as intentional (i.e., a conscious process). Sixth, faking is a social phenomenon (i.e., it is aimed at creating certain impressions in others). Seventh, faking can result in inaccurate impressions (e.g., ascription of exaggerated competencies, reduced blame).

A typical definition was provided by Ziegler et al. (2012): "Faking represents a response set aimed at providing a portrayal of the self that helps a person to achieve personal goals. Faking occurs when this response set is activated by situational demands and person characteristics to produce systematic differences in test scores that are not due to the attribute of interest" (p. 8).

How Is Faking Related to Other Concepts that (May) Also Lead to False Impressions?

Because of the different definitions, there is sometimes confusion about the specific meaning of concepts in the field of faking. For example, the term *response distortion* is sometimes used interchangeably with the term faking. However, we regard response distortion as an overarching category that includes deliberate and conscious as well as unconscious processes of altering a response. The unconscious distortion of responses may occur if people have low test motivation, respond carelessly, are nervous, or are affected by self-stereotyping. By contrast, faking is a conscious process.

Besides faking, response distortion also includes *socially desirable responding.* This phenomenon describes people's motivation to present themselves favorably. According to Paulhus (1994), it includes two facets: *self-deceptive enhancement* (i.e., a less conscious attempt to convey positive impressions of the self) and *impression management* (i.e., a more conscious attempt to convey positive impressions to others). Faking differs from self-deceptive enhancement because it is oriented toward others, whereas self-deceptive enhancement is not. Faking can be distinguished from impression management because

the adaption to social norms and the management of positive impressions does not necessarily require *deliberate* distortion (e.g., Musch et al. 2002).

There are additional concepts that specify the goal and the context of faking. In personality assessment, a distinction is made between *faking good* (i.e., trying to make a good impression) and *faking bad* (i.e., trying to make a bad impression). In clinical psychology, *simulation/malingering* (i.e., pretending to have symptoms, illnesses, and weaknesses) and *dissimulation* (i.e., hiding symptoms, illnesses, and weaknesses) are used. In research contexts, the terms *faking high* and *faking low* are used, both referring to the scores that are faked. These terms cannot be used interchangeably. For example, faking high may represent faking good on a measure designed to assess concentration but faking bad on a measure designed to assess depression. Likewise, depending on whether the test taker has or does not have symptoms and whether he or she is trying to pretend or to hide them, the terms simulation/ malingering or dissimulation may be appropriate.

Models of Faking

There are several models that describe the faking process and distinguish antecedents and potential effects of faking on measurement outcomes (e.g., Goffin and Boyd 2009; Levashina and Campion 2006; Marcus 2009; Tett and Simonet 2011). It would go far beyond the scope of this chapter to describe these models in detail. Most of these models have not yet been entirely empirically tested, which may be due in part to their complexity. Recent research has indicated that several variables have to be taken into account when investigating faking. For example, some measures are easier to fake than others, and faking direction (i.e., faking high vs. faking low) can make a difference (Röhner et al. 2011). As a consequence, different measures may be differently related to different antecedents and effects, an assumption that is in line with recent findings (Bensch et al. 2019).

However, there is a least common denominator in faking models: Faking is a function of people's motivation to fake (e.g., they have something at stake), their ability to fake (e.g., they have the cognitive ability to fake), and their opportunity to fake (e.g., a measure is fakeable). If the motivation, the ability, or the opportunity is lacking, faking is not likely to occur.

Antecedents of Faking

Antecedents are variables that impact the motivation, the ability, and the opportunity to fake. Among the antecedents that have been discussed, some are related to the person and some to the situation (see Table 1; e.g., Goffin and Boyd 2009; Griffith et al. 2006).

Although many antecedents have been suggested, empirical research has been contradictory and sparse. For example, it had been assumed that people with higher scores on intelligence would be better able than others to understand the test procedure and intentions and could thus more easily present themselves in the "desired" manner. However, some studies have demonstrated a positive relation, whereas others have not found a significant relation (Heggestad 2012). A study by MacCann (2013) may offer an explanation: Faking seems to be more strongly related to crystalized than to fluid intelligence. The positive relation between faking and crystalized intelligence and the nonsignificant relation between faking and fluid intelligence have been backed up by recent research (Geiger et al. 2018; Röhner 2014). Thus, results may depend on the facet of intelligence under investigation.

Effects of Faking

In terms of faking effects, discussions have centered on statistical parameters, the psychometric properties of the measures, and decisions (see Table 2; e.g., Marcus 2009; Salgado 2016).

Several studies have tested such effects (e.g., Viswesvaran and Ones 1999), however, the results have been inconclusive and partially contradictory (for an overview, see Ziegler et al. 2012). Still, there seems to be a consensus that faking affects scale means, the validity of the measures, rank orders, and decisions (Ziegler et al. 2012). Consequently, there has been strong interest in detecting, correcting, and preventing faking.

Faking Behavior, Table 1 An overview of prominent antecedents of faking as discussed in faking models. The expected relation to faking is indicated in parentheses. A positive relation to faking is indicated by +, a negative relation to faking is indicated by −, < indicates that the first option is related to less faking than the second one, and > indicates that the first option is related to more faking than the second one.

	Category	Antecedent (relation to faking)
Variables related to the situation	*Assessment of the situation*	*Perceived dishonesty of other test takers* (+) *Perceived fairness of the measure* (−) *Perceived attractiveness of a goal* (+) *Perceived behavioral control* (+)
	Characteristics of the measure	*Availability of information about the construct to be measured* (+) *Item format* (forced-choice < Likert) *Item scoring* (nonobvious < obvious) *Face validity of a measure and its items* (+)
	Characteristics of the situation	*Presence of test administrator* (−) *Supervision* (−) *Unfair treatment within the test situation* (+)
	Consequences of faking	*Expected negative consequences* (−); e.g., Warnings that faking can be detected; Warnings of verification *Expected positive consequences* (+); e.g., achieving one's goal with faking
Variables related to the person	*Attitudes and beliefs*	*(Positive) attitudes toward faking* (+) *Rule consciousness* (−) *Internal locus of control* (+) *Morality* (−) *Self-efficacy* (+)
	Demographic variables	*Age* (young > old) *Experience in faking* (+) *Gender* (male > female)
	Motives	*Achievement motivation* (+) *Need for approval* (+)

	Personality traits	*Big five*
		    Openness (+)
		    Conscientiousness (−)
		    Extraversion (+)
		    Agreeableness (−)
		    Neuroticism (+)
		 Impression management (+)
		 Integrity (−)
		 Machiavellianism (+)
		 Narcissism (+)
		 Self-esteem (+)
		 Self-monitoring (+)

	Skills	*Cognitive abilities* (+) *Emotional intelligence* (+)

Is There a Way to Detect, Correct, or Even Prevent Faking?

There are proactive approaches and reactive approaches that can be applied to fight faking (e.g., Dilchert and Ones 2012). Whereas the first encompasses strategies to prevent faking, the latter is aimed at detecting faking and correcting it (see Table 3).

Studies on proactive approaches have been inconclusive and sometimes disappointing: For example, warning participants that faking can be detected reduced faking in some studies (e.g., Law et al. 2016), but others found that participants simply used more elaborate faking techniques (Youngjohn et al. 1999). Recent research has also highlighted that the type of warning has an impact (i.e., warnings that mention the consequences of faking are

Faking Behavior, Table 2 An overview of the most prominent suggested effects of faking as discussed in faking models. The expected effect of faking is indicated in parentheses. An increase is indicated by ↑, a decrease is indicated by ↓.

Category	Example (effect of faking)
Statistical measures	*Fakers' test scores* (↑↓ according to the faking direction)
	*Shifts in means in faking group*s (↑↓ according to the faking direction)
	Standard deviation (↓)
Quality criteria	*Factor structure of measures* (↓)
	Reliability (↑↓)
	Validity (↑↓)
	Construct validity (↓)
	Criterion validity (↑↓)
Decisions	*Validity of rank orders* (↓)
	Quality of selection decisions (↓)

Faking Behavior, Table 3 An overview of prominent approaches that are applied to handle faking.

Proactive approaches	Reactive approaches	
	Faking detection using	Faking correction
Changing items: *Using nonevaluative and subtle items with low face validity* Changing measures: *Grouping or randomizing item order* to reduce participants' understanding of what is being measured *Using measures that are assumed to be more resistant to faking* (e.g., indirect measures) *Using measures with forced-choice formats* Influencing participants': *beliefs that they can fake without being caught* (e.g., by warning that faking can be identified)[a] *attitudes toward faking* (e.g., by appealing to values)	Known *faking strategies* *Responses that are extremely rare* *Response latencies* (e.g., extremely long or short latencies) *Response inconsistency* *Responses to* built-in *validation/lie scales* *Socially desirable responding*	*Adjustment of scores* (e.g., isolating true from faked variance) *Interpreting test results cautiously* (e.g., not relying on the result of one measure) *Removing the detected fakers from the data set* before doing further analyses *Removing detected faked responses from the data set* (e.g., if only some items were faked) *Retesting fakers*
	Diffusion model analyses (e.g., identify and separate parameters that are associated with variance unrelated to the construct)	

[a]It is, however, questionable whether lying to participants about the use of valid faking detectors is appropriate.

more effective than others) and that warnings may also have unintended negative effects (i.e., decreasing perceived test quality or increasing test anxiety in test takers; e.g., Burns et al. 2015). In another study, measures that were assumed to be faking-resistant turned out to be fakeable (Röhner et al. 2011). Studies on reactive approaches have indicated that so far, there is no valid method for detecting faking because none of these methods have worked without misclassification. However, there have been advances in revealing faking strategies (e.g., Röhner et al. 2013) and also in creating faking indices (e.g., Holden and Lambert 2015).

Nevertheless, there are efforts to correct faked scores (Note that a correction first requires the valid detection of faking.). For example, recent research investigated whether diffusion models are able to remove faking-related variance from a measure's score (Röhner and Ewers 2016; Röhner and Thoss 2018). Removal was not entirely possible, which can be explained by the fact that participants may use faking strategies such as taking the role of someone who possess the requested trait, a strategy that will affect faking-related as well as construct-related variance – which means the two types of variance are not easily distinguished. This once more showed the complexity of faking behavior.

Conclusion

There are key characteristics that are consistently included in definitions of faking. Several models

of the faking process specifying antecedents and effects have been suggested. Now empirical research on the specific personal and situational antecedents of faking on various measures and its effects is needed. On the basis of such findings, faking may be better understood, which in turn would offer ways to better prevent faking or detect it and correct for it.

Cross-References

► Deceitfulness
► Impression Management
► Malingering
► Personality Assessment
► Reliability
► Socially Desirable Responding on Self-Reports
► Validity

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Faking Good

► Faking Behavior

False Belief Understanding

► Theory of Mind

False Pride

► Neurotic Pride (Idealized Image) and Neurotic Self-Hate

False Self

► Glory (Horney)

False Self-Esteem

► Neurotic Pride (Idealized Image) and Neurotic Self-Hate

False-Negative Error

► Error Management Theory

False-Positive Error

► Error Management Theory

Family Constellation

► Birth Order
► Style of Life

Fantasy

► Dreams
► Imagination

Farley, Frank

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Frank Farley, Ph.D., is the Laura H. Carnell Professor (professorship in honor of Temple University's first dean that recognizes faculty who have illustrated unique interest and dedication to research, scholarship, teaching, and the creative arts) in the Department of Psychological

Studies in Education at Temple University. He is an educational psychologist that ascribes to humanistic theory and is internationally recognized as an expert in psychology and human behavior.

Early Life and Educational Background

Farley was born in Edmonton, Alberta. He stayed in Canada and earned both his bachelor's and master's degrees from the University of Saskatchewan and received a Ph.D. from the Institution of Psychiatry at the University of London.

Professional Career

Farley has taught at the University of Wisconsin-Madison (between 1966 and 1995), at the University of California-Berkeley, and at Temple University since 1995. He has also been a visiting scholar at Stanford University. Farley is also a former president of several professional and scholarly organizations, including the American Psychological Association (APA) in 1993. As the president of the APA, Farley became a part of unique history as one of only three Canadians to have ever been elected to the position (joining Albert Bandura and D. O. Hebb). Further, he is the only president of the APA to have obtained a British Ph.D. He has also been a president of the American Educational Research Association (AERA); the International Council of Psychologists; the Society for the Psychology of Aesthetics, Creativity, and the Arts; the Society for Humanistic Psychology; the Society for Media Psychology and Technology; the International Facet Theory Association; the Society for General Psychology; the Society for Educational Psychology; the Society for International Psychology; the Society for the Study of Peace, Conflict, and Violence; the Midwest Educational Research Association; and the Society for the Scientific Study of Sexuality Midcontinent Region. Currently, Farley is the president-elect for the Society for Experimental Psychology and Cognitive Science; a

council member of the APA Council of Representatives; a member of the board of directors for the Eastern Psychological Association, the Foundation for Scientific Study of Sexuality, and the Elwyn Institute; and a cochair on the Global Summit on Diagnostic Alternatives. He has also authored over 250 publications in his career. Farley is also on the editorial boards of several scholarly journals, including the *Journal of Popular Media Culture*; *Spirituality in Clinical Practice*; *Psychology of Aesthetics, Creativity, and the Arts*; *The Humanistic Psychologist*; *The Amplifier Magazine*; and the *International Journal of Cyber Behavior, Psychology and Learning*.

Other Relevant Experiences

Farley authors a blog on psychologytoday.com entitled "The People's Professor" and was one of the founders of the Federation of Associations in Behavioral and Brain Sciences. Additionally, as a result of putting himself in the position to meet risk-takers, Farley has adopted the hobby of racing hot-air balloons. He is also openly unhappy with the DSM-5 and is chairing a committee to make the next version better, so as not to "over-pathologize" American society.

Awards

Farley is the recipient of numerous awards including the E. L. Thorndike Award for Distinguished Psychological Contributions to Education, the Award for Distinguished Lifetime Contributions to Media Psychology, the Karl Heiser Award for Contributions to the Statutory Definition of the Practice of Psychology, the Award for Distinguished Contributions to the Science of Psychology, the Award for Psychology in the Media of the Pennsylvania Psychological Association, and the Alumni of Influence Award at the University of Saskatchewan in 2014. He is a recognized fellow of the American Association for the Advancement of Science, the AERA, and the Society for the Scientific Study of Sexuality.

Research Interests

Farley's research interests are extensive and wide ranging. He will tell others that psychology is such a broad and interesting field that it is difficult for him to stick to a single niche. In large part, however, Farley has been fascinated by studying personality and individual differences between people. Specifically, he has focused on heroism and risk-taking behavior, coining the term "type T personality." The type T personality refers to individuals who thrive in uncertainty and take risks in order to achieve actualization. Farley prefers to study in the field and meet these risk-takers than study in a lab setting, which has allowed him to meet many of those belonging to this population of interest and experience the behavior himself. He is interested in what motivates these people to do such extreme things.

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Fascination

▶ Wonder

Fatalism

▶ Determinism

Father of Operant Conditioning

▶ Skinner, B. F.

Fault

▶ Responsibility

Favoritism

▶ Discrimination

Fear

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Synonyms

Alarm response; Anxiety; Defensive state; Panic; Terror; Threat response

Definition and Summary

The term fear is colloquially used to denote the multifaceted experiential, behavioral, and physiological responses of human beings (and sometimes nonhuman animals) to perceived danger. Recently, authors in Psychology, Neuroscience, and Philosophy have argued that *fear*

should be primarily used when referring to the emotional feeling experienced by humans whereas more precise terms such a defensive or aversive response be used for measurable fear responses. In this entry, conceptual issues are discussed in light of recent psychological and neurophysiological studies, and contemporary models of fear and defense are applied to the study of interindividual differences on dimensions of fearfulness and anxiety.

Introduction

When exposed to aversive or dangerous situations, most complex organisms display a cascade of adaptive responses that aim to cope with the perceived challenge and thus maximize the chance of survival. In human beings, the subjective feeling of fear can be considered one of these adaptive defensive responses. Mirroring the wide range of situations and stimuli that may pose a threat to humans, people's descriptions of fearful feelings vary greatly: They include anticipatory apprehension, feelings of helplessness, the desire to fight, avoid, or escape, and the feeling of panic or terror. These perceptions tend to be accompanied by different physiological sensations (e.g., being cold or hot, breathless, sweating, having slowed or pacing heart beat), and by a spectrum of behaviors ranging from immobility to complex avoidance or confrontation strategies.

Thus, defensive responses are multifaceted and variable, as they occur in the service of addressing specific environmental challenges. An extensive body of research has also demonstrated that defensive responses dynamically unfold in time, dependent on the nature of the specific threat or challenge that needs to be addressed: Upon sensing a threat, the central and autonomic nervous systems respond by engaging processes which enhance sensory intake, optimize the functioning of the entire organism for the challenge at hand, and select optimal motor responses (Lang and Bradley 2010). The variability and flexibility of these adaptive responses extend into the realm of interindividual differences, with some individuals displaying exaggerated or diminished defensive

reactivity. The mechanisms for these differences in fear and anxiety are increasingly well understood and are discussed at the conclusion of this entry.

Fear as an Emotion: Implications for Its Definition and Application

Contemporary work in Psychology, Philosophy, and Neuroscience increasingly use the term fear when referring to an individual's unpleasant subjective experience in situations perceived as threatening or dangerous (LeDoux 2012). By contrast, physiological and behavioral responses to danger, such as freezing, running, fighting, sweating, cardiac, and hormonal changes, are often characterized as defensive responses. This usage emphasizes that defensive responses are seen in many nonhuman animals, in which the experience of fear cannot be assessed through verbal report. This latter aspect points to the wider definition problem that applies to all emotional processes, including fear: The feeling aspect of an emotional response can be considered a philosophical qualia-problem, in which an individual's first-person experience cannot be shared or validated by an external observer, unless other information is available or strong auxiliary assumptions are made.

To overcome this problem, many researchers have conceptualized emotional processes as adaptive action tendencies that occur in response to changes inside or outside the organism (Lang and Bradley 2010). Specifically, these changes refer to those that challenge states and systems necessary for survival. This definition pragmatically focuses on phasic emotional responses with a well-defined time course, related to a specific eliciting event. It also includes the aspect of physiological and behavioral readiness that many theorists have seen as essential for a complete description of fear. For example, William James, the founder of modern Psychology in the United States, proposed that the physiological and behavioral responses to an emotionally engaging event determine and precede the subjective emotional experience. The thought experiment he proposed

is still a worthwhile exercise: "What kind of an emotion of fear would be left, if the feelings neither of quickened heart-beats nor of shallow breathing, neither of trembling lips nor of weakened limbs, neither of goose-flesh nor of visceral stirrings, were present, it is quite impossible to think" (James 1884, p. 195).

Perhaps due to its intuitive appeal and straightforward function, the emotion of fear has had an important place in many different theories of emotion. This is true particularly for theories claiming that emotions are organized into qualitatively distinct elementary building blocks (the so-called Basic Emotions) of which the full spectrum of emotional processes is composed. Although Basic Emotion theories vary greatly regarding the exact numbers and kinds of basic emotions, fear is almost always regarded as one of them (Ekman et al. 1983). Alternative models of human emotional processing include models that explain emotions in a dimensional fashion, as gradual implementations of survival strategies promoting appetitive or defensive function. Fear responses play an important role in these perspectives as well (Löw et al. 2008). Research in both theoretical domains has provided rich information regarding the physiological underpinnings of fear, discussed next.

The Defense Cascade: Unwrapping the Time Course of Fear

Given the fundamental role of fear and defense for human and animal behavior, much is known about the biological and behavioral processes unfolding during a fear episode. Although many of these processes occur in parallel, fear can be characterized as a sequence of changes that have been referred to as the *defense cascade* (Fanselow 1994). Notably, the temporal unfolding of responses to a threat stimulus varies for different physiological and behavioral systems. Thus, different cascades are seen at the level of the central nervous system, cardiac changes, sweat gland activity, reflex modulation, and at the level of observable behavior (Bradley et al. 2001).

Central nervous system changes: Upon first detection of a potential threat, by any sensory modality, the neural processing for this threat becomes amplified. This amplification facilitates the heightened ability of human observers to detect and identify threatening things in their environment, compared to nonthreatening things. The neural processes mediating enhanced threat detection are still debated, but it has been shown that repeated, predictable threat enhances the earliest stages of sensory processing in the brain's gray matter (50–80 ms after stimulus onset). In parallel to this enhanced sensory processing, a network of other brain areas is engaged, which include regions responsible for indepth cognitive processing of the threat, motor regions, and brain structures associated with autonomic activation, such as the insula and amygdala. These brain regions are thought to mediate the cascade of visceral and behavioral responses discussed next.

Changes in heart rate and breathing: Most people have experienced heart rate changes during fear situations, which may include initial deceleration of the heart ("my heart stopped for a moment") followed by heart rate acceleration ("my heart is racing"). Initial detection of a potentially threatening stimulus is characterized by a rapid, brief deceleration. If the initial sensory analysis of the stimulus results in the appraisal of the situation as dangerous, then the defense circuitry of the brain is fully engaged, prompting a cardiac defense response. This response includes a heart rate increase (up to 20 beats per minute), followed by a second deceleration, and potentially additional accelerations and decelerations, depending on the nature of the fear situation. Heart rate increase during a fear response is thought to facilitate oxygen circulation throughout the body, which optimizes sensory and motor function. Similar changes are seen in respiratory (breathing) activity, in which panting and accelerated breathing during fear facilitate enhanced oxygen intake to prepare for action.

Changes in sweat gland activity: Heightened sweat gland activity is mediated by activation of the sympathetic branch of the autonomic (peripheral) nervous systems. The sympathetic branch activates bodily systems for overt action.

As such, heightened sweat gland activity is considered a measure of the tendency to engage in defensive action (fight, escape), greatly enhanced in situations that are experienced as intensely fearful, compared to mildly aversive situations.

Changes in somatic reflexes and behavior: The initial contact with a potential threat stimulus is defined by heightened sensory perception (see above), but also by motor inhibition (sometimes amounting to freezing-like states) and diminished responsivity of bodily reflexes such as the startle response to an unexpected loud noise. In mammals, this pattern aids in avoiding detection by predators and facilitates information gathering. When the danger is imminent, however, the opposite pattern is observed: In the face of engaging with a manifest threat, strong motor activation is accompanied by heightened sensitivity of defensive reflexes. This can be demonstrated by measuring the eye blink startle reflex: Probing this protective reflex with a loud noise shows that when an individual is fully engaged with an imminent threat, the eye blink reflex is magnified considerably, compared to calm states. Thus, a large body of research into fear and anxiety has used the startle eye blink reflex as a metric of defensive engagement.

Interindividual Differences in Fear and Defense

Epidemiological studies have noted the high and increasing prevalence of fear, anxiety, and mood disorders in the United States (Kessler et al. 2015). A growing body of research suggests that dysfunctional fear reactivity lies at the core of many psychiatric disorders. As a potential neural substrate of interindividual differences in fear and anxiety, the brain circuits mediating defensive responses to threat have been extensively studied. This research has led to the notion that people may differ in terms of how reactive or sensitive their defensive brain circuits are: Individuals with hyperreactive fear circuits may respond to minimal stimulation with exaggerated fear. By contrast, those with hyporeactive circuits may not be

able to discriminate between safe and threatening situations, and may lack adaptive responses to short-term threat.

Selectivity and chronicity of fear are further dimensions of defensive reactivity along which individuals have been shown to vary. There is growing evidence that impaired selectivity of the fear response, in which fearful responding occurs in the presence of safety signals (such as a closed tank around a venomous snake), contributes to the emergence of clinical anxiety. Impaired discrimination between threat and safety cues has also been observed across disorders in the anxiety spectrum (Craske et al. 2012) and has been shown to co-vary with quantitative dimensions such as comorbidity and chronicity (McTeague et al. 2009).

States of chronic fear keep bodily systems in a sustained state of defensive activation, which can be detrimental to one's health. For instance, a sample of 17,380 healthy Israeli adults reporting high levels of fear-of-terror for chronic periods of their lives had significantly increased likelihood of cardiovascular health deterioration (Tsalik 2015). Findings like these illustrate the tight links between the psychological and bodily aspects of fear. They also illustrate the health relevance of fear for example when considering that cardiovascular problems have been the leading cause of death in the United States for the past 80 years.

Conclusion

Fear and defensive activation are constructs that refer to multifaceted adaptive responses of the entire organism when facing perceived challenges. These defensive responses have evolved as flexible devices to optimize responses to threat and danger. In humans, defensive activation is often accompanied by the subjective feeling of fear and anxiety, an unpleasant emotional feeling state that in conjunction with characteristic bodily and behavioral changes promotes avoidance, escape, or elimination of the threat. Human beings differ greatly with respect to the sensitivity and specificity of their defensive systems, with

anxious individuals often showing hypersensitive but also unspecific fear responses to low-intensity threat, or despite the present of evidence of safety.

Cross-References

▶ Amygdala
▶ Anxiety
▶ Arousability
▶ Defense Mechanisms
▶ Fight-Flight-Freeze System
▶ Hypervigilance
▶ Negative Affectivity
▶ Panic
▶ State Anxiety
▶ State-Trait Anxiety Inventory
▶ Terror
▶ Trait Anxiety

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Fear and Trembling

▶ Moral Anxiety

Fear of Death

▶ Terror

Fear of Rejection

▶ Separation Insecurity

Fear of Separation

▶ Separation Insecurity

Fear System

▶ Fight-Flight-Freeze System

Fearfulness

Fearless Dominance

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Synonyms

Boldness; Fearlessness; Parmia

Definition

Fearless dominance is a broad set of traits encompassing a lack of sensitivity to potential threat, physical and interpersonal boldness, social poise and persuasiveness, relative immunity to stressors, and emotional resilience. The relevance of fearless dominance to psychopathic personality has been a flash point of contention in the literature.

Introduction

Psychopathic personality (psychopathy) is a condition characterized by a distinctive constellation of interpersonal, affective, and behavioral features (Cleckley 1941/1988; Hare 1991/2003). Specifically, psychopathy is marked by superficial charm and poise conjoined with grandiose narcissism, callousness, guiltlessness, dishonesty, manipulativeness, emotional detachment, and poor impulse control, among other traits. This combustible combination of traits places psychopathic individuals at heightened risk for antisocial and criminal behaviors, although such actions are not traditionally regarded as either necessary or sufficient indicators of psychopathy (Lilienfeld 1998). Nevertheless, the nature and boundaries of psychopathy, especially the relative roles of boldness and other potentially adaptive features in this condition, remain unclear.

The Role of Adaptive Features in Psychopathy

Over the past decade, scientific controversy has swirled around the question of whether psychopathy is a purely maladaptive condition or whether it is also marked by adaptive personality attributes (Lilienfeld et al. 2015b). Some authors maintain that psychopathy is by definition associated with unsuccessful outcomes, such as criminality and otherwise irresponsible behavior, so the very notion that psychopathy is tied to adaptive traits is conceptually incoherent (Lynam and Miller 2012). Others maintain that psychopathy is, by definition, a personality disorder and therefore cannot be associated with adaptive outcomes.

In contrast, other authors contend that psychopathy is inherently a hybrid condition marked by a paradoxical combination of superficial charm, poise, emotional resilience, and venturesomeness on the outside but deep-seated affective disturbances and impulse control deficits on the inside. From this perspective, psychopathy is in part characterized by psychologically adaptive traits (Blonigen 2013), which provide afflicted individuals with a superficial veneer of normality. Furthermore, according to this view, psychopathy may be linked to at least some interpersonally successful outcomes, such as effective leadership, business accomplishments, and heroism (Lilienfeld et al. 2015b; Lykken 1995).

The Emergence and Conceptualization of Fearless Dominance

The construct of fearless dominance emerged from Lilienfeld's (1990) work on the construction of the Psychopathic Personality Inventory (PPI), which has since been revised (now the Psychopathic Personality Inventory-Revised, or PPI-R).

The PPI is a self-report inventory that was designed to detect the core personality traits of psychopathy. It contains eight subscales developed using a combination of deductive and factor analytic approaches: Machiavellian Egocentricity, Social Potency (now termed social influence in the PPI-R), Fearlessness, Coldheartedness, Stress Immunity, Carefree Nonplanfulness, Impulsive Nonconformity (now termed rebellious nonconformity in the PPI-R), and Blame Externalization (Lilienfeld and Andrews 1996). Higher-order factor analyses of these subscales by Lilienfeld (1990) pointed to three broad dimensions, one marked by low social and physical anxiety, one marked by impulse control deficits, and one marked by emotional detachment.

Subsequent work helped to clarify the nature of this first higher-order dimension. Specifically, research revealed that the PPI subscales of Social Potency, Fearlessness, and Stress Immunity tended to coalesce into a reasonably coherent higher-order dimension that Benning et al. (2003) dubbed "Fearless Dominance." This dimension appears to assess a lack of sensitivity to potential threat, physical and interpersonal boldness, social poise and persuasiveness, relative immunity to stressors, and emotional resilience.

Although the fearless dominance construct per se is relatively novel, clinical descriptions of individuals with elevated levels of allied traits have a lengthy history in clinical psychology and psychiatry. For example, French psychologist Theodule Ribot (1839–1916) described the "active" personality type as comprising persons who are highly energetic, adventurous, spontaneous, and heroic (Crocq 2013). Personality psychologist Raymond Cattell (1905–1998), too, anticipated fearless dominance in his descriptions of "parmia," a personality dimension characterized by social boldness, venturesomeness, and equanimity (Cattell and Eber 1966). Later, Patrick et al. (2009) termed the disposition assessed by PPI Fearless Dominance "boldness" and contended that it reflects a relative threat insensitivity of the brain's defensive systems. They further contended that boldness may help to account for many of the adaptive correlates of psychopathy in everyday life, such as

effective deception and short-term corporate success. In this respect, boldness may shed light on the contentious and still inadequately researched construct of "successful psychopathy" (Hall and Benning 2006).

Fearless Dominance: Correlates and Behavioral Implications

The correlates of PPI/PPI-R fearless dominance have been the subject of numerous investigations. In the personality domain, fearless dominance is consistently associated with several traits in the widely adopted five factor model of personality, most notably extraversion, stability (reversed neuroticism), and certain aspects of openness to experience, especially those tied to seeking out novel experiences (Lilienfeld et al. 2015b). In contrast to other major psychopathy dimensions, fearless dominance tends to confer a relative immunity to distress-related psychopathology. For example, high scores on this dimension are associated with low levels of anxiety-related and depressive symptoms (Benning et al. 2003, 2005; Sellbom et al. in press) and low levels of suicidal ideation and attempts (Douglas et al. 2008; Verona et al. 2001). Consistent with the hypothesis that PPI Fearless Dominance is linked to adaptive interpersonal outcomes, studies suggest that scores on this dimension are associated with (a) "everyday heroism," that is, risky altruistic actions that are relatively common in daily life (Smith et al. 2013b); (b) historians' ratings of effective leadership, including crisis management and public persuasiveness, among US presidents, whose levels of psychopathy dimensions were estimated by presidential biographers (Lilienfeld et al. 2012); and (c) holding high-risk occupations, a category that included such diverse jobs as police officer, lifeguard, bobsledder, and fireworks technician (Lilienfeld et al. 2014).

Fearless Dominance: Controversies and Unresolved Questions

These findings aside, the nature and correlates of fearless dominance are controversial. Two meta-analyses (Marcus et al. 2013; Miller and Lynam 2012) indicate that PPI Fearless Dominance scores tend to display low or at best modest

correlations with total and factor scores on the Psychopathy Checklist-Revised (PCL-R; Hare 1991/2003), an interview-based measure that is widely regarded as the most extensively validated indicator of psychopathy. Some authors have interpreted these findings to imply that fearless dominance is largely or entirely irrelevant to psychopathy (Vize et al. 2016).

Nevertheless, because the PCL-R was developed and initially validated in prison samples, it is unlikely to contain much representation of boldness or other largely adaptive personality features. Indeed, given that fearless dominance traits are thought to parlay individuals into more successful outlets, these traits may not be well represented in forensic settings insofar as these samples comprise predominantly unsuccessful individuals on account of their incarceration. Along these lines, community or undergraduate samples may better represent boldness and may comprise individuals who evade detection for their crimes, channel their traits into more constructive outlets, possess certain protective factors (e.g., higher levels of intelligence) that contribute to their success, or have some combination of these possibilities.

As a consequence, psychopathy measures developed in nonclinical (e.g., student, community) samples may display more pronounced associations with boldness. Corroborating this possibility, Lilienfeld and colleagues (2015) meta-analyzed PPI Fearless Dominance's relations with a broader swath of psychopathy measures, namely, those not closely aligned with the PCL-R. Their findings revealed that scores on PPI Fearless Dominance and closely allied measures of boldness were moderately to highly (mean weighted $r = .39$) associated with total scores on psychopathy measures that were not derived from the PCL-R, with the correlation being higher for well-validated measures of psychopathy ($r = .44$). These results strongly suggest that fearless dominance is substantially associated with at least some established measures of psychopathy, especially those designed for settings in which adaptive correlates would be expected to be manifested. Moreover, our findings suggest that previous meta-analyses may have underestimated the relevance of fearless dominance to psychopathy.

In addition, the content of fearless dominance requires clarification. In the PPI and derivative measures, this dimension is heterogeneous, comprising three lower-order factors that are only modestly intercorrelated. Nevertheless, some data suggest that low levels of trait anxiety, as assessed by the PPI Stress Immunity scale, may be largely unassociated with other key features of psychopathy (Visser et al. 2012). Hence, the internal structure of fearless dominance is worth revisiting in future research (Neumann et al. 2008).

At least two other questions regarding the behavioral correlates of fearless dominance remain unresolved. First, it is unclear whether fearless dominance alone is related to psychopathy or whether it is associated with psychopathy-related sequelae only in the presence of other personality features, such as deficits in impulse control or empathy. Hence, in future research it will be crucial to ascertain whether the association between fearless dominance and other psychopathy features is additive or multiplicative (interactive) when it comes to statistically predicting real-world outcomes, such as criminality, substance abuse, and high-risk sexual behavior. The data bearing on this question are mixed (Smith et al. 2013a; Vize et al. 2016). Second, it is unknown whether the relation between fearless dominance and life outcomes is purely linear or whether it may in some cases be curvilinear. For example, fearless dominance may be associated with adaptive outcomes at medium levels but maladaptive outcomes at high levels; this intriguing conjecture has received scant research attention (but see Vize et al. 2016).

Conclusion

Fearless dominance is a set of traits linked to social and physical boldness, emotional resilience, and closely related features. Research strongly suggests that this dimension is substantially associated with some, but not all, measures of psychopathy. It is plausible, if not probable,

that fearless dominance helps to account for the interpersonally successful manifestations of psychopathy, especially those that have long been observed in the business and political worlds. Although the correlates and boundaries of fearless dominance are controversial, further investigation of the structure and correlates of this dimension are likely to elucidate a number of unresolved mysteries regarding the causes and behavioral manifestations of psychopathy.

Cross-References

▶ Boldness
▶ Callousness
▶ Fearlessness
▶ Hare Psychopathy Checklist
▶ Manipulativeness
▶ Psychopathic Personality Inventory (PPI)
▶ Psychopathy
▶ Psychopathy Checklist-Revised (PCL-R)

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Fearless Temperament

▶ Boldness

Fearlessness

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Synonyms

Fearless dominance; Invulnerability; Social potency; Stress immunity

Definition

A keenness for risk-seeking behaviors and a lack of the fear that typically accompanies these behaviors

Introduction

Fearlessness and the construct of fearless dominance (FD) are often associated with psychopathy. The following narrative will explicate the construct of fearlessness by (1) discussing the fearlessness hypothesis of psychopathy, (2) reviewing the research pertaining to the association of fearlessness and attentional deficits, (3) alluding to literature on fearlessness and aggression, and finally (4) evaluating whether fearlessness or fearless dominance (FD) traits are sufficient, without the presence of antagonism, disinhibition, and antisocial behavior, to signal the presence of psychopathy.

The Fearlessness Hypothesis of Psychopathy

Common traits of psychopathy include superficial charm, shallow affect, and a lack of empathy and remorse. The fearlessness hypothesis posits the notion that temperamental fearlessness is the central trait that lays the groundwork for the development of psychopathy in adulthood. This hypothesis is based on evidence that psychopaths show diminished classical conditioning and quasi-conditioning responses to aversive stimuli, like electric shock or loud noises. More specifically, Sylvers et al. (2011) discovered that individuals with traits of psychopathy and children with high callous-unemotional (CU) scores exhibit pre-attentive or automatic preconscious fear recognition and disgust recognition deficits.

Fearlessness as an Attention Deficit

Researchers suggested that the fear processing deficits observed in psychopathic individuals may result from attentional deficits pertaining to processing peripheral information (Sylvers et al. 2011). Similarly, while some suggest that psychopathic behavior is typically attributed to a fundamental, amygdala-mediated deficit in fearlessness that challenges social conformity, Newman et al. (2010) propose the alternative view that psychopathy involves an attention-related deficit that impairs the processing of peripheral

information, including fear stimuli. In their 2010 study, Newman et al. discovered that psychopathic individuals exhibited normal fear-potentiated startle (FPS) under threat-focused conditions, but showed a significant impairment in FPS under alternative-focus conditions. More generally, psychopath's reduced reactivity to fear stimuli and emotion-related cues more generally reveal idiosyncrasies in attention that constrain their effective processing of peripheral information. Although psychopathic individuals are typically portrayed as cold-blooded predators, who don't appear interested in self-improvement, the attentional impairments described in Newman et al.'s (2010) study identify an alternative explanation of the chronic impulsivity and insensitive interpersonal style of individuals with psychopathy.

Fearlessness and Aggression

Research has linked adolescent stimulation seeking, fearlessness, and body size to antisocial behavior. Raine et al. (1998) tested the hypothesis that stimulation seeking, fearlessness, and increased body size predict aggression at 11 years of age.

The researchers noted that fearless children appear more likely to pursue a physical fight to gain rewards and social status since they do not fear the adverse consequences of their aggressive actions due to a lack of fear conditioning. Analysis of variance showed that aggressive relative to non-aggressive children scored higher on fearlessness and stimulation seeking. Overall, the study results suggested that (1) large body size, stimulation seeking, and fearlessness may be associated with the development of childhood aggression; (2) there may be a critical window in development when biological processes impact later aggression; and (3) early processes may be relevant to the etiology of early aggression.

Fearless Dominance

Fearless dominance is identified by the Social Potency, Fearlessness, and Stress Immunity content scales of the Psychopathic Personality Inventory (PPI; Lilienfeld and Andrews 1996). Researchers suggest that the trait of fearlessness signals the underactivity of the brain's defensive motivational system (Edens and McDermott 2010). Moreover, researchers posit that fear dominance might reveal "social lubricant" characteristics of psychopathy that reflect a façade of psychological health and well-being. In their 2010 study, Edens and McDermott studied the construct validity of the Fearless Dominance (FD) and Self-Centered Impulsivity (SCI) Scales of the Psychopathic Personality Inventory-Revised (Lilienfeld and Widows 2005) across a variety of domains in a sample of 200 forensic psychiatric inpatients. The researchers discovered that the Self-Centered Impulsivity (SCI) Scale positively and specifically predicted anger, hostility, impulsivity, total psychiatric symptoms, drug abuse or dependence, antisocial behavior, and violence risk, while fearless dominance (FD) predicted anger, depression, and anxiety symptoms negatively and alcohol abuse and dependence positively (Edens and McDermott 2010).

This negative relationship among fearless dominance and anger, depression, and anxiety symptoms aligns with Lynam and Miller's (2012) suggestion that elevated levels of fearless dominance (FD) are insufficient to fully characterize psychopathy. The researchers intimated that individuals who are high in FD, but who do not exhibit higher rates of antagonism, disinhibition, and or antisocial behavior (ASB), should not be labeled psychopathic. Moreover, antagonism, disinhibition, and ASB are sufficient for psychopathy in the absence of higher rates of FD. The researchers suggest that Lilienfeld et al. (2012) diminished the integral nature of antisocial behavior in previous conceptualizations of psychopathy and magnified the role of psychological health in these conceptualizations. As aforementioned, however, Lynam and Miller (2012) did agree that FD traits are not sufficient to signal the presence of psychopathy, but traits associated with FD may play a role in psychopathy. These findings are interesting in light of the fact that a variety of researchers are now

proposing that fearless dominance (FD) alone, without self-centered impulsivity or narcissism, might reflect aspects of positive adjustment and may even be related to the boldness and heroism of our great leaders rather than to psychopathy (Whitbourne 2012).

Cross-References

▶ Aggression
▶ Fearless Dominance
▶ Inhibited and Uninhibited Children
▶ Psychopathic Personality Inventory (PPI)

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Features of Processes

▶ Personality Processes

Feedback Loops

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F

Definition

Feedback refers to an event whereby outputs from one system are fed into a coupled system as inputs, increasing or decreasing subsequent effects and forming a continuous circuit. Often, feedback and self-correction leads to varying adjustments resulting in differences between actual output and desired output, ultimately increasing the change to a given system or reducing change reverting the system to normal functioning (Carver and Scheier 1982).

Introduction

Though traditionally applied to cybernetics, feedback loops are a useful tool in the conceptualization and analysis of human behavior through self-regulation, as explained by Carver and Scheier using control theory (Carver and Scheier 1982).

Types

Positive Feedback

There are two types of feedback: positive feedback and negative feedback. The positive classification refers to accelerating or increasing a process rather than the desirability of the outcome. In a positive feedback loop: A produces more of B which in turn feeds back into the system and produces more of A. Positive feedback causes system instability which results in an amplification of the effect and a divergence from the

equilibrium. The key feature of positive feedback loops is that they are self-reinforcing. A small change gets bigger, and thus the results of a reaction are amplified more quickly. Positive feedback loops often cannot continue with ever-increasing growth; they are typically limited and controlled by a negative feedback loop (De Ruiter et al. 2017).

Winner (1996) wrote about a positive feedback loops in children. Here, gifted children were observed to have positive feedback between outputs of thinking and working memory performance, whereby these outputs are fed to the cerebellum and streamlined. After this, they are subsequently fed back to working memory; this increases the output of working memory, driving learning goals. This streamlining process places a higher burden on the cerebellum causing its expansion, providing the conditions for accelerated working memory (Winner 1996).

Through experimentation, overt examples of visible feedback loops have been recorded and further understood. An example of a particularly visible positive feedback loop is the act of blushing. Blushing is observed to increase when people are in a situation where they expect to blush. In one such example, when they were told that they were starting to blush, participants progressively increased blushing as they completed tasks. Whether honest or not, feedback from others represents a perceived intensity of blushing that in turn influences facial blood flow, subsequently increasing blushing (Drummond et al. 2003). Another example of positive feedback has been demonstrated between spending money on others and happiness. People who spent money on someone else reported feeling happier when asked to recall that purchase, and in turn they are more likely to spend money on someone else in the future, further increasing their happiness (Aknin et al. 2012).

Negative Feedback
Negative feedback refers to slowing down a process by counteracting the results of a change. This can also be referred to as *balancing feedback*. Negative feedback loops are self-correcting. They promote stability, reduce fluctuations, and keep systems at equilibrium (or in biology, homeostasis) (De Ruiter et al. 2017).

Though their responses differ, positive and negative feedback loops are not always mutually exclusive. There are dynamic systems that involve both positive and negative feedback, and in these systems, multiple loops are often active. Our understanding of feedback loops plays an important role in biology, chemistry, and psychology. The interplay between positive and negative loops can be seen at a physiological level. Using the example of circadian rhythmicity, the fundamental unit for generating the circadian rhythm is the cell. Within the cell, the proteins CLOCK and BMAL1 bind together and form a complex that initiates transcription of target clock genes (*period* and *cryptochrome* genes). This forms a positive loop of the mammalian molecular clock which establishes our circadian rhythm. Following the transcription and translation of these genes into proteins, PER and CRY bind together and translocate into the nucleus where they inhibit the CLOCK and BMAL1 complex, acting as negative feedback and repressing their own transcription (Lowrey and Takahashi 2004).

On a larger scale, an example demonstrating the interplay between positive and negative feedback loops is present in the development of self-esteem. Positive feedback loops exist between positive emotional experiences, for example, pride, which triggers a positive action, such as being proactive. Triggered actions, in this case being proactive, amplify the positive action, pride, and result in more positive actions. While positive feedback factors into consequential behavior, negative feedback loops also play a role in developing self-esteem. Since negative feedback loops minimize deviations from the norm, they are necessary for maintaining a stable state. If a negative thought about one's self is introduced, negative feedback loops reduce the effect so that self-esteem does not deviate from the stable state (De Ruiter et al. 2017).

When one's self-concept deviates too much from a stable state, the positive feedback loop can no longer increase self-esteem when positive experiences occur, and a depressive phenotype emerges (Andrews 1989). In this depressive phenotype, there is a shift in the dominance between the positive and the negative feedback loops, a concept known as *loop dominance* (Stapelberg et al. 2018).

Conclusion

Feedback loops are present in many biological, physiological, and psychological systems. Though most systems cannot be easily defined as either fully positive or negative, their multidirectional nature is what drives many homeostatic processes and yields further understanding of learning behavior.

Cross-References

▶ Homeostasis

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F

Feeling

▶ Intuition
▶ Sensitivity

Feeling Hurt

▶ Tender Emotion

Feeling of Knowing

▶ Metacognition

Feeling Sad

▶ Soft Emotions

Feelings Interpretation

▶ Reflection (Therapeutic Behavior)

Feelings of Inadequacy Scale

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Definition

Feelings of inadequacy refers to the concept of decreased self-esteem, more precisely the absence of self-confidence in a variety of life situations. Self-esteem is an indispensable human need for normal and healthy development and a basic emotion about one's overall sense of self-worth or personal value in a specific social context. The concept is commonly assessed using the Revised Janis and Field's Feelings of Inadequacy Scale (JFS), which consists of 36 items (4 items with reversed scoring) measured on a 5-point Likert scale (some researchers have used 7 points). The JFS is not a diagnostic tool and is used for research purposes only.

Introduction

The Feelings of Inadequacy Scale (JFS) was initially developed by Janis and Field (1959) as a 23-item self-reported measure of self-esteem to be used in attitude change research. All 23-items (including two reversed scored items) are measured on a 5-point Likert scale ranging from 1 ("very often") to 5 ("practically never") and reflect negative feelings such as personal worthlessness, social anxiety, and self-awareness. Sample items include: "How often do you feel inferior to most of the people you know?", "How much do you worry about how well you get along with other people?", and "Do you ever feel afraid or anxious when you are going into a room by yourself where other people have already gathered and are taking?". The JFS appears to assess state self-esteem, which remains largely consistent irrespective of mood fluctuations (Heatherton

and Polivy 1991). Despite its content diversity, the scale was originally rated as a unidimensional measure of self-esteem. The appropriateness of this scoring method was challenged by Church et al. (1980), whose research among 450 university students revealed three distinct dimensions of the JFS, including concern about evaluations, self-regard, and interaction anxiety.

Modified Versions of the JFS

Since 1959, the JFS has been applied in personality and social psychology research. However, both its content (additional items to assess situational self-esteem) and response format (the use of a 7- instead of a 5-point Likert scale) have been modified a number of times. The scale was first revised by Eagly (1967), who proposed to reduce the original scale to 20 items and suggested that the newly developed version should refer to both positive and negative feelings about the self. Subsequent modifications of the instrument were more extensive. For example, Fleming and Watts (1980) proposed 28 scale items which tapped onto three scale dimensions/factors: social confidence, self-regard, and school abilities. The first two factors are similar to the "feelings of inadequacy" as defined by Janis and Field (1959), whereas the final factor comprises the newly introduced items and is situation specific. The findings indicated a moderate statistically significant association ($r = 0.36$) between the dimensions of social confidence and self-regard. Associations between school abilities and social confidence ($r = 0.09$) as well as self-regard ($r = 0.14$) were low and statistically nonsignificant. The three dimensions formed some differential associations with external criteria. More specifically, verbal intelligence was positively related to school abilities factor only. Social desirability was correlated positively with social confidence, whereas both social confidence and self-regard associated negatively with locus of control. All three factors were negatively correlated with situational anxiety. The three-dimensional instrument was further revised and extended (36 items) by Fleming and Courtney (1984). Their factor analytic work led to the

replication of three dimensions proposed by Fleming and Watts (1980) and the introduction of two additional subscales: physical appearance and physical abilities. All five dimensions were found to be negatively correlated with anxiety and depression. Blascovich and Tomaka (1991) selected Fleming and Courtney's (1984) modified version of the JFS as one of the best multifaceted measures of self-esteem in psychosocial research. Heatherton and Wyland (2003) recommended it for researchers who want to explore multi-dimensionality of the self-esteem concept.

Reliability and Validity

The original version of the JFS (Janis and Field, 1959) has good split-half reliability (0.83) with a Spearman-Brown coefficient of 0.91. Eagly (1967) reported split-half reliabilities of 0.72 and 0.88 for the 20-item version. O'Brien (1985) reported good JFS convergent validity (correlation coefficient of 0.82 with Rosenberg Self-Esteem Scale). Cronbach's alpha for Fleming and Watts' (1980) version was 0.90 and 0.92 for Fleming and Courtney's (1984) version. The Fleming and Watts's version was moderately correlated with locus of control (Fleming and Watts 1980), whereas the 36-item Fleming and Courtney's (1984) version was strongly correlated with anxiety and depression (the use of this version is recommended).

Related Scales

The work conducted by Janis and Field (1959) led to the development of numerous self-esteem scales, two of which are frequently used by researchers. These are the Rosenberg Self-Esteem Scale (RSES; Rosenberg 1965) and the State Self-Esteem Scale (SSES; Heatherton and Polivy 1991). Additionally, based upon the assumption that self-appraisals are situation dependent, Debowska et al. (2016) developed the Self-Esteem Measure for Prisoners (SEM-P), whose purpose was to capture two dimensions: personal self-esteem (referring to context free self-

evaluations) and prison self-esteem (referring to context-specific self-evaluations).

Conclusion

The feelings of inadequacy (FI) construct is largely synonymous with the concept of decreased self-esteem and can be assessed using the Feelings of Inadequacy Scale (JFS; Janis and Field 1959). Although the JFS was originally proposed to produce a single scale score, a more recent study by Church et al. (1980) found a three-factor solution (including concern about evaluations, self-regard, and interaction anxiety dimensions) to better represent the instrument scores. Since 1959, the JFS has undergone numerous modifications by different authors. Most prominently, Fleming and Courtney (1984) suggested a 36-item measure captured by five dimensions: social confidence, self-regard, school abilities, physical appearance, and physical abilities. The work by Janis and Field (1959) also inspired the development of numerous self-esteem scales, including the Rosenberg Self-Esteem Scale (RSES; Rosenberg 1965), the State Self-Esteem Scale (SSES; Heatherton and Polivy 1991), as well as the Self-Esteem Measure for Prisoners (SEM-P; Debowska et al. 2016) designed specifically for forensic samples.

Cross-References

▶ Predictive Validity
▶ Rosenberg Self-Esteem Scale
▶ Self-Esteem
▶ State Self-Esteem Scale

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Feelings Validation

▶ Reflection (Therapeutic Behavior)

Feigning

▶ Malingering

Female Choice

▶ Female Mate Choice

Female Mate Choice

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Synonyms

Female choice; Intersexual competition; Intersexual selection

Definition

Female mate choice is a form of intersexual selection which occurs because females prefer particular traits in their mates; males lacking these qualities have reduced mating success.

Introduction

Sexual selection is competition over mates that results in differential reproduction. There are two forms of sexual selection: intrasexual selection and intersexual selection. Intrasexual selection involves members of one sex competing with each other over access to members of the opposite sex and frequently involves contests between males over access to females. Intrasexual selection may result in increased size, strength, and weaponry that aids in outcompeting members of the same sex (Andersson 1994). An example of intrasexual selection is the rutting season in deer. During the mating season, male Eastern white-tailed deer (*Odocoileus virginianus*) fight each other using antlers; females do not possess antlers and mate with the winners of the competition.

The second form of sexual selection is intersexual selection, which encompasses female mate choice. In intersexual selection, members of one sex choose members of the opposite sex for mating based on particular features. These features vary widely across species and include extravagant tails (e.g., peacocks, quetzal) and beautiful coloration (e.g., cardinals, mandrills) as well as behaviors such as providing food before mating, which is referred to as giving a "nuptial" gift. These extravagant features are referred to as male ornaments. Sexual ornaments appear to lack a function and occur because females prefer the feature (Andersson 1994). The peacock's tail made Darwin reflect on why some traits may not enhance survival but might still exist. Peacocks grow a new tail every year, which is energetically costly for them. Additionally, their tail is cumbersome and puts them at risk of predation (Cronin 1991). Before developing the idea of sexual selection, Darwin was perplexed by this and is quoted as saying "the sight of a feather in a peacock's tail, whenever I gaze at it makes me sick!" (Darwin as cited in Cronin 1991, p. 113).

Female Mate Choice

Although both intra- and intersexual selection are important in understanding male and female mate choice, historically most of the research on sexual selection has been devoted to female mate choice (Ryan 1997). Some of the most interesting debates within the field of sexual selection center on why female mate choice developed, especially since some traits females prefer may reduce viability in the males possessing them (Cronin 1991; Ryan 1997). Despite this reduction in male viability and survival, male ornaments continue to exist. Some theorists posit that male ornaments can develop if reduced viability is offset by increased mating success. If females prefer to mate with males who possess the extreme trait, males who have the most extreme ornament may also have higher mating success than other males (Cronin 1991).

Types of Sexual Selection Involving Female Mate Choice

There are several mechanisms of female mate choice evolution. The main ones are direct selection, Fisherian sexual selection (sexy sons), indicator sexual selection (good genes or handicap), genetic compatibility, and chase-away sexual selection.

Direct benefits involve female preferences for mates that offer nonheritable benefits, and in some species direct benefits may have led to the evolution of male ornaments (Andersson 1994). Males may aid in parental care, they may defend young, or they may offer food to their mate. When this occurs, a female's choice of mates can have an effect on her reproductive success: mating with males that offer these direct benefits increases her ability to successfully reproduce. When females experience increased fecundity because of male behaviors, there will be strong selection pressure for females to choose males that offer the most nonheritable resources; this leads to strong selection pressure on the male traits females prefer (Ryan 1997).

Another form of female mate choice is referred to as Fisherian sexual selection or sexy sons. In this form of female sexual selection, male ornaments are not associated with higher genetic quality, but instead, females who prefer males with exaggerated traits then have sons with those traits, and these sons have greater mating success; hence the term for this type of selection is often referred to as "sexy sons." In order for Fisherian selection to work, the male ornament must become linked with female preferences for that trait. Males with the trait must also have higher mating success than males who do not possess the trait (Andersson 1994). If there is a "genetic coupling" between female preferences and male traits, this type of selection can become self-reinforcing (Andersson and Simmons 2006, p. 297).

A third mechanism of female mate choice is referred to as indicator selection or good genes sexual selection. In this type of female mate choice, females prefer male traits because it is an

indicator of the underlying genetic quality of the male, and therefore by mating with males possessing the trait, she provides genetic benefits to her offspring (Andersson and Simmons 2006). In other words, a particular trait or ornament indicates the viability of the male. A key component of indicator sexual selection is the handicap principle, which explains why only certain features tend to be good cues of an individual's condition and why certain individuals can display the trait without many costs, while other individuals cannot. Elaborate displays or traits evolve as honest signals about underlying phenotypic and genotypic qualities of their bearers. The cost of the signal is so high that only those with the best genes can "afford" to signal it. Poor quality individuals cannot produce the ornament without diverting valuable resources away from other important things, such as maintaining health (Grafen 1990).

Genetic compatibility mechanisms may also be responsible for other aspects of female choice. In the case of genetic compatibility, females may choose some mates that, due to their compatibility with her, increase the fitness of her offspring (Andersson and Simmons 2006).

Sexually antagonistic coevolution is the idea that what benefits one sex is harmful to the other sex. In other words, there is a mismatch between what is good for one partner and what is good for the other partner. One sex may gain an advantage which results in selection pressure to overcome that advantage by the other sex. What results is the two sexes evolving together through a process of adaptation and counteradaptation. A special case of sexually antagonistic coevolution is chase-away selection. In chase-away selection, because females have a sensory bias that favors a particular trait, selection favors females that choose males that possess this trait. Since females prefer males with this trait, males may take advantage of this to induce females to mate under conditions that are not optimal. For instance, females may prefer a slightly longer tail, and males that possess longer tails may induce females to mate in a poor location. Then, because females who mate with males possessing the trait have lower reproductive success, selection favors females that evolve to resist or dislike the trait. This puts selection pressure on males to produce a more extreme trait to overcome the females increased resistance to it (Holland and Rice 1998).

Female mate choice may work through any of these mechanisms alone or in combination. Some researchers suggest that more than one mechanism can be at work on a single trait, which makes studying them more complex (Andersson and Simmons 2006).

Female Mate Choice in Humans

Research on humans suggests that at least a couple of the different mechanisms of female mate choice may be at work in humans. Below are a few examples of female mate choice in humans:

Major Histocompatibility Complex (MHC). MHC are genes related to the immune system. There are multiple alleles involved in MHC, and being heterozygous may confer an advantage for an individual's ability to respond to a wide array of pathogens. There is evidence that women prefer the scent of men who have heterozygous MHC alleles. This may be advantageous for the offspring of these couples, who may be more likely to be heterozygous and thus be more resistant to pathogens. It is also possible that heterozygous men are healthier and therefore would be more likely to invest in offspring (Thornhill et al. 2003).

Preference for Masculine Faces. Research shows that women prefer masculine faces if they are not using hormonal contraceptives and they are at the high fertility phase of their cycle (Penton-Voak et al. 1999). Researchers believe that female preference for masculine faces evolved because masculine faces were an honest signal of genetic quality. This is because testosterone is an immune suppressor. It is thought that men who can successfully develop masculine features are advertising their good genetic quality. Therefore, masculine faces represent an honest signal of the man's genetic quality.

Symmetry. Research shows that women prefer the scent of symmetrical men when they are in the high fertility phase of their menstrual cycle – if they are not on hormonal contraceptives (Gangestad and Thornhill 1998). It is believed that development may be disturbed by things such as pathogens, mutations, and exposure to

toxins. The ability to withstand this and develop precisely (symmetrically) is believed to be due to genetic factors or "good genes."

Preference for Men's Behavior. In addition to preferring physical characteristics in a partner, women may prefer particular behaviors by men. These behaviors may be more likely to be performed by men who have high genetic quality, so by choosing men with these traits, women may receive genetic benefits for their offspring. Researchers have assessed various women's preference for men who display social presence (how composed the man was) and direct intrasexual competitiveness (putting down potential competitors). High fertility women, but not low fertility women, preferred men showing higher levels of social presence and direct intrasexual competitiveness, but only when assessing them as potential sex partners and not as long-term partners. Women's preference for other traits, such as for kindness, does not change across the menstrual cycle (Gangestad et al. 2004).

Conclusion

It is becoming increasingly clear that female mate choice, as manifested by various mechanisms of intersexual selection, has been important in shaping male behaviors and ornamentation. In humans, research indicates that good genes (indicator) sexual selection has influenced women's preferences for masculine faces, symmetrical male bodies, and male behavioral displays. Genetic compatibility appears to play a role in selecting males with heterozygous MHC alleles, which may increase fitness of offspring.

Cross-References

▶ Personality and Physical Attractiveness

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F

Femaleness

▶ Femininity

Feminine Psychology

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Synonyms

Feminist psychology, Psychology of women

Definition

Feminine psychology is an area of psychology that focuses on the political, economic, and social issues that pervasively confront women (Horney 1967). This can be interpreted as a counteraction to male-dominated theories, an example being Sigmund Freud's perspective of female sexuality. One of feminine psychology's pioneers, Karen Horney, asserted that male realities cannot describe female psychology or define women's gender by virtue of the lack of experiences of voices from girls and women (Miletic 2002). Therefore, theorists contend that this area of psychology is necessary and that women's voices and experiences are crucial to understand their psychology. For instance, they claim that characteristics of feminine psychology emerge to adhere to the social order defined by men rather than because of the nature of their gender defined by themselves (Berger 1994).

Introduction

Feminine psychology was coined by Karen Horney, who was vocal in challenging male-dominated theory, particularly Freud's psychoanalytic theories. One of her critiques of Freud's psychoanalytic theory targets its inability to describe femininity because Freud's theory was informed by male realities and exclusive of female experiences (Horney 1967; Price 1998). Horney specifically argued that Freud's proposed sexual resolutions of penis envy were problematic. According to Freud, penis envy encompasses women's desire for a penis, which symbolizes power (Freud and Strachey 1975). Conversely, Horney holds that penis envy is more appropriately resolved through interpersonal dynamics, such as the prevalent differences in social power rather than sexual desire and power (Horney 1942). To challenge Freud's concept of penis envy, Horney proposes that men more powerfully experience womb envy, wherein men envy women's capability to bear children and therefore attempt to compensate through achievement and success. Based on this critique, both penis envy and womb envy are simply the expression of biological needs

of success and security that are characteristic of both sexes (Warnes and Hill 1974).

In Horney's era, she was a key proponent of deconstructing Freud's psychoanalytic theory and exposing the predominant male focus and acceptance of analyzing women without being informed by women's experiences. As such, Horney not only critiqued Freud's psychoanalytic theory but also intercepted the theory by explicitly suggesting that Freud's psychoanalysis should not only focus on intrapsychic factors but should also account for a more systemic perspective, bridging the macrosystem of the individual's culture and political environment that can be crucial in psychoanalysis (Paris 2000). Therefore, this critique of Freud's psychoanalytic theory established a pedagogical understanding of men and women within psychoanalysis that accounted for not only the intrapsychic component but also other relevant circumstances affecting the person. This pivotal theoretical expansion heavily influenced how current research conceives of men and women; this research considers the intersection of culture, society, and politics to understand men and women more broadly, in a manner that is congruent with current postmodern thinking, the core of feminine psychology, and feminist ideologies that permeate through current societies (Carlson 1972; Crawford and Unger 2004; Hesse-Biber 2011).

The Evolution and Current Development of Feminine Psychology

Based on the many accomplishments of Karen Horney in instilling a broader perspective of understanding women in the context of predominantly male-focused theories such as Freud's, feminist movements and psychology became intertwined as women fought to overcome psychological obstacles to achieve liberation and thereby enable social change. Karen Horney's work explained that the early psychology only offered minimal insights in relation to female psychology and that many women at the time did not combat oppression because of the fact that they did not realize they were suppressed, silenced, and not perceived as equals (Ruck 2015).

When the functionalist movement emerged in the United States, psychology began to examine sex differences, and a prototypic psychology of woman was developed. Early gender research in the 1960s and 1970s in the field of psychology focused predominantly on men, as men refused to be excluded from being the center. Feminine psychology, or the psychology of women, was not described as "feminist" because it states that women are different from men and that women's behavior cannot be understood beyond the context (Crawford and Unger 2004). Many early women who tackled the roots of their oppression relied upon consciousness-raising groups to build their movement to bridge the tensions between the personal and the political (Loss 2011; Ruck 2015).

One important product of the pairing of feminism with psychology was the creation of a vibrant history of women and gender, which has entailed active and ongoing efforts to preserve and disseminate women's contributions and the life narratives of feminist psychology. Therefore, feminine psychology focuses on the mental characteristics or attitudes of women; the pioneering work of Karen Horney created a ripple effect in instigating change that increased the presence of women in the discipline of psychology. In 1960, only 17.5% of all doctoral degrees in psychology in the United States were awarded to women (Ball et al. 2013). By 2004, the proportion of women receiving doctorates in the field had risen to 67.4% (Ball et al. 2013).

Similarly, women were also initially excluded from acquiring employment because this desire was thought to be attributed to being envious of men and consisted of having a masculinity complex. However, between 1970 and 1980, the percentage of women working outside the home had risen from 43% to 51% in the United States (Caplow and Bahr 1994). Women then experienced the unique challenge of juggling the roles of mother and provider or opting not to bear children.

In 1973, the Committee on Women in Psychology was founded to advance psychology as a science and a profession by ensuring that diverse women have the opportunity and are provided the same space in achieving equality within the psychological community and the larger society (Committee on Women in Psychology 2004). Additionally, many journals that focused on women in psychology published research concerning topics such as the mental health of women in the workforce and the experiences of single mothers, which are common topics in feminism.

The creation, development, and maintenance of feminist psychology were contested during the early 1990s by feminist psychologists themselves, who asserted that psychology had successfully resisted critical feminist interventions and that the resulting science of gender had subdued any political project (Rutherford and Pettit 2015). Feminine psychology, therefore, focuses on the social, economic, and political issues that women confront in their lives. Psychological concepts that relate to issues of oppression include microaggression, stereotype threat, and implicit bias, which shape contemporary understandings of gendered prejudice and discrimination. Early psychological theories and practice oppressed women (Chesler 1972), misunderstood women (Weisstein 1993), or neglected to acknowledge women's experiences as worthy of study (Grady 1981). To be inclusive of female experiences and acknowledge the female side of psychological research, new patterns of behavior were discovered by investigating the previously oppressed, unresearched, and silenced community of women. Feminist activists renewed interest in social constructivist accounts of human nature (Rutherford et al. 2010) and were critical in making psychological research progressively more inclusive (Epstein 2007). Feminist psychologists therefore embraced qualitative and critical approaches to ensure that experiences of women and female perspectives were accounted for and that psychological research did not apply a patriarchal framework.

Sex Stereotypes: Balancing the Act of Roles

Feminist psychologists commonly examined the balancing act that women are required to endure;

specifically women must balance the more traditional role of motherhood with the more modern role of a career woman. Balancing the roles entails attempting to satisfy both their need for personal achievement in their careers and their need for emotional security through becoming a mother.

Over time, the roles of mothers and fathers have changed progressively, and both now experience the pressure to balance work and family life; 52% of mothers report that it is moderately or significantly challenging to balance work and family and that is necessitates making sacrifices on either end (St-Amour et al. 2007). The widespread societal perception that the mother's role involves spending more time with their children exacerbates this pressure.

A study by Stuart (2008) demonstrated that a woman's personal history affects how they opt to harmonize the two roles or whether they balance it at all. Stuart asserts that the primary determinant of this is a woman's quality of her relationship with her mother. Women whose mothers fostered feelings of both warm attachment and confident autonomy are more likely to discover methods to enjoy both their children and work; these women are often more likely to modify work and family environments in a manner that favors both (Stuart 2008).

Emotions

Gender differences in emotions are another common topic of research within feminine psychology. Feminist psychologists generally perceive emotion as culturally controlled and contend that gender differences affect the expression of emotions rather than the actual experiences. How a person expresses their emotions is defined by socially enforced display rules which guide the acceptable forms of expression for particular people and feelings (Chaplin 2015).

Stereotypes of emotion perceive women as the more emotional sex. However, feminist psychologists note that women are only perceived as experiencing passive emotions such as sadness, happiness, fear, and surprise more strongly. Conversely, men are perceived as more likely to express emotions of a more dominant nature,

such as anger. Feminist psychologists believe that men and women are influenced within their society and societal expectations to interpret, understand, and express emotions differently (Deng et al. 2016).

Feminist Therapy

Feminist therapy emerged from feminine psychology and adopted an identical perspective regarding examining individuals within their sociocultural context. The primary idea behind this therapy holds that the psychological issues of women and minorities are often a symptom of broader problems not specific to their intrapsyche, but taking into account how their female gender and other associated minority identities intertwine within the social structure they are situated in (Brown 2010). In addition to incorporating feminine psychology, it also incorporates research and techniques from other fields, including developmental research, multicultural awareness, social activism, and cognitive-behavioral techniques (Evans et al. 2011). Feminist therapists align with Karen Horney's critique of Freud's psychoanalytic theory by disputing earlier theories which attributed mental illness and stress levels to women's psychological weakness rather than sexist practices (Cammaert and Larsen 1988). The goal of feminist therapy is to empower the client and to examine lack of power as a major issue which affects the psychology of women and minorities (Brown and Brodsky 1992). Feminist therapy, under feminine psychology, extends beyond the notion that men and women should be treated equally in a therapeutic relationship; it also incorporates social and political values to a greater extent and encourages both social and personal change as a necessity to improve the psychological wellbeing of the client.

This type of therapy is intended to resolve issues with traditional therapies; feminine psychology focuses on overcoming the traditional emphasis on intrapsychic assumptions about the individual, the notion that being male is the baseline and norm, and the presumptions of sex roles (Evans et al. 2011). Traditional therapies fixate primarily on the client's

internal struggles and do not emphasize the interactions the clients have with their surrounding sociopolitical environment. They also assume that male traits are the default and that stereotypically male traits are more valuable (Worell and Remer 1992; Hegarty and Buechel 2006), since psychological theories of female development were developed by men who were uninformed and have silenced and disregarded women's personal life experiences and voices (Kim and Rutherford 2015). Finally, traditional therapies presume that women should adhere to sex roles to be mentally healthy. For example, psychotherapy is a male-dominated practice and supports women's adjustment to stereotypical gender roles rather than women's liberation (Kim and Rutherford 2015).

Conclusion

It is important to note the differences between lesbian and gay (LGBTQ) psychology and feminist psychology since they both strive to combat oppression and to include the voices of marginalized groups. For LGBTQ psychologists, lesbian and gay psychology is not informed by feminist concerns as LGBTQ oppression is investigated and researched without taking into account the patriarchal aspects (Clarke and Peel 2005). Conversely, feminist psychology continues to presume heterosexuality in women and neglects to address lesbian and gay issues. Many scholars currently hope to bridge the gap between LGBTQ psychology and feminist psychology to foster critical dialogue and debates between LGBTQ psychologists and feminist psychologists.

Cross-References

▶ Horney, Karen

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Femininity

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Synonyms

Femaleness; Womanhood; Womanishness; Womanliness

Definition

The term femininity is generally used to refer to a set of socialized psychological traits, qualities, and attributes most closely associated with those whose birth assigned gender category is female. Feminine traits and attributes include passivity, submissiveness, gentleness, warmth, helpfulness, compassion, understanding, dependency, emotional expressiveness, and the presence of maternal instinct. These feminine traits have been described as communal traits or a relational orientation. Consequently, an important component of femininity is connecting with, helping and caring for others. Defined in this way, femininity seems to be a straight forward concept, however, it is far more complicated – and potentially problematic – than it first appears. The complexity of femininity is explored in more detail below.

Although femininity and its antonym masculinity are often linked to birth assigned gender categories, it is important to note that they are distinct from one another. As such, feminine (and masculine) traits, qualities, and attributes are exhibited to different extents by both men and women regardless of whether they were

assigned as female or male at birth (Leszczynski and Strough 2008; Pickard and Strough 2003).

Introduction

Early models of gender, such as Terman and Miles' (1936) Attitude-Interest Analysis Test, conceptualized femininity and masculinity as opposing ends of a bipolar scale (Martin and Finn 2010). Bipolar measurements of gender meant that a person could be feminine or masculine but could not be both simultaneously (Constantinople 1973). In the 1970s, gender researchers and theorists, including Ann Constantinople (1973) and Sandra Bem (1974,) began to question the utility and validity of bipolar gender models, suggesting that these scales failed to account for the possibility that a person could score high on both femininity and masculinity. As such, both Bem and Constantinople proposed that femininity and masculinity be measured as separate dimensions. Measuring femininity and masculinity in this way, Bem argued, would allow for people to be psychologically androgynous, identifying with both feminine and masculine traits. It also allowed femininity and masculinity to be separated from birth assigned gender categories. With this in mind, Bem created one of the most widely used measures of femininity and masculinity today, the Bem Sex Role Inventory, a measure that enabled the assessment of femininity and masculinity as separate dimensions.

Distinctiveness of Femininity and Gender Identity

While many definitions of femininity link femininity to gender identity, we believe that femininity/masculinity and gender identity are distinct constructs. This is illustrated by Wood and Eagly's (2015) work on gender identity that suggests that there are two distinctive traditions of research on gender. The first tradition of research focuses on gender as feminine and masculine traits, qualities, and attributes. This tradition

incorporates research on gender-typed personality traits, as well as research on gender and gender-typed interests and gendered components of "big five" personality inventories. This tradition is the tradition from which conceptualizations such as femininity are drawn. The second tradition of research on gender proposed by Wood and Eagly is gender identity based on self-categorization. This refers to the extent to which a person identifies with and feels a psychological connection to their gender and feels that their gender is a positive and significant component of their identity (Tobin et al. 2010; Wade 2008). This multifaceted approach to gender makes it clear that having (or not having) a psychological connection to a gender – that is feeling a strong sense of gender identity with one gender, multiple genders, or no genders – is separate from endorsing the psychological traits, qualities, and attributes that are associated with femininity. This has been supported by research investigating associations between femininity, gender identity, and sex segregation in friendships (see Mehta and Strough 2009 for an example).

Femininity as a Social Construct

In the preceding paragraphs, we have made the argument that femininity is not biologically based, nor is it connected to gender identity. How then, should we understand femininity as a construct? We assert that femininity is socially constructed rather than biologically determined and that the meaning of the term femininity is shaped by culture, time, and geopolitical space. In her work on femininity and masculinity, Bem highlighted the socially constructed nature of femininity. Specifically, Bem posited that gendered traits, qualities, and attributes are a result of social learning and proposed *gender schema theory* to outline how this learning takes place. Gender schema theory posits that children learn through observation which traits and attributes are appropriate for their birth assigned gender and consequently adopt these traits as their own (Bem 1981). As such, while birth assigned categories of male and female are separate from femininity and

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masculinity, the process of sex typing in western culture creates femininity and masculinity from the birth assigned categories of female and male (Bem 1981). Consequently, the roles and behaviors that are assigned to men and women are a reflection of the practices and attitudes of the culture that assigns them at a particular point in time (Butler 2004). This may explain why, although femininity is not related to gender assigned at birth, research frequently finds that men are more masculine than women and that women are more feminine than men (Leszczynski and Strough 2008; Pickard and Strough 2003).

Value of Femininity and Feminine Traits

When considering femininity and its socialization, it is important to note that in western culture, femininity is valued to a lesser extent than masculinity. This is because femininity is a status characteristic, an individual characteristic around which access to influence, prestige, and power is unequally distributed (Gaughan 2006; Ridgeway et al. 1994). Hegemonic masculinity, a societally ingrained value system that promotes men's dominance and superiority over women (Connell and Messerschmidt 2005), promotes antifemininity (Bosson and Michniewicz 2013; Smiler 2004). Consequently, in order to be masculine, boys and men in the USA are taught to avoid femininity in their traits, qualities, attributes, appearance, and interests (Bosson and Michniewicz 2013; Pleck 1981). If they do not, boys and men risk ridicule and isolation from their peers who may questions their failure to fit into the socially accepted "norm" for their gender (Pleck 1981; Watzlawik 2009). Bosson and Michniewicz suggest that boys begin to distance themselves from femininity at an early age and that this distancing results in beliefs that men are predominantly masculine and women are predominantly feminine (Bosson and Michniewicz 2013). This distancing from femininity in childhood continues into adolescence where it is hypothesized to increase as a result of homophobia present in many US high schools (Pascoe 2005). Girls and women, similarly to men may also distance themselves from

femininity, although to a lesser extent. Specifically, in our work, we have theorized that girls and women, who have less power and authority based on their gender, would are less attached to femininity. Research that suggests women's endorsement of masculine traits is increasing over time (Strough et al. 2007) may partially support this theory. It is important to note that while men and masculine traits are valued over women and feminine traits, which do not consider nurturing and communication as power and necessary to a culture, third was feminists have reclaimed aspects of femininity as powerful, arguing that these characteristics are necessary to ensure societal success.

Stability of Femininity

Another issue that highlights the complexity of femininity as a construct relates to the stability of femininity. Social contextual approaches to gender, which have roots in Bem's early work on androgyny, propose that femininity (and masculinity) should not be viewed as a stable trait but rather as something that is negotiated through a series of ongoing interactions. The social contextual approach posits that femininity is dynamic and context dependent and that femininity reflects the demands of the immediate context rather than personality traits, qualities, and attributes (Deaux and Major 1987; Maccoby 1990). As such, femininity may be better considered as a variable state rather than as stable trait (Mehta 2015). Considering femininity in this way is consistent with socialization theories of gender noted above.

Although few studies have taken a social contextual approach to understanding femininity, there is sufficient evidence across a range of age periods to suggest that gender-typed behaviors are flexible and are elicited by contextual demands. Research investigating variability in femininity and masculinity in children has found that during this stage of the life span, femininity varies based on the gender of peers in a child's social context. For example, Maccoby (1990) found that when girls played with other girls, they displayed very little passivity, an attribute linked to femininity (Bem 1974). However, when girls played with

boys, they displayed more passivity, standing by while boys dominated the toys (Maccoby 1990). This research suggests that even in childhood, components of femininity may be exacerbated or reduced depending on the context.

Research with adolescents and college students has also found variability in reports of femininity. Specifically, both adolescent (Leszczynski and Strough 2008) and emerging adult college students (Pickard and Strough 2003) reported increased endorsement of feminine traits after playing a game of Jenga® with a female partner in comparison to after playing with a male partner. Building on this work, contextual variation in femininity has been assessed using ecological momentary assessment (EMA). In EMA studies, participants are signaled at random points throughout the day and are prompted to complete a short survey. In this way, variables of interest, such as femininity, can be measured over a period of time (days, weeks, or months) in an individual's daily context. Using a shortened version of the Bem Sex Role Inventory, Mehta and Dementieva (2016) used EMA to assess how femininity varied by peer context over a 2-week period in a sample of college students. Consistent with social contextual theory, showed femininity varied based on the sex of peers in college students' social contexts. Specifically, men reported greater femininity when they were with women and lesser femininity when they were with men. (Mehta and Dementieva 2016). This social contextual approach understanding femininity complements research and theory that posit that femininity is performance (Butler 2004) and something that we "do" rather than something that we have (West and Zimmerman 1987). Taken together, these studies illustrate that femininity varies according to the social context, and consequently, conceptualizations of femininity as a combination of stable traits qualities, and attributes may be too simplistic.

Conclusion

In sum, femininity is a complex construct that is socially constructed and influenced by culture, historical period, and other contextual factors.

While many gender researchers view the separation of femininity from birth-assigned gender as consistent with moving beyond a gender binary, it is important to consider whether referring to certain sets of socialized psychological traits, qualities, and attributes as "feminine" and others as "masculine" ties us to a gender binary and beliefs of innate gender differences. As more and more research highlights similarities between men and women in terms of not only traits, qualities, and attributes (Hyde 2005) but also brain structures (Joel et al. 2015), the gender binary and related concepts, such as femininity and masculinity, become irrelevant and thus less fruitful topics of study for psychological researchers (Keener 2015).

Cross-References

▶ Bem Sex-Role Inventory
▶ Gender Schema Theory
▶ Identity

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Feminist Psychology

▶ Feminine Psychology

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Early Life and Educational Background

Allan Fenigstein was born on June 30, 1947, in Frankfurt, Germany. He and his Holocaust-surviving parents immigrated to Brooklyn, NY, in July, 1949. He completed his Bachelor of Science degree in psychology in 1969 at Brooklyn College of the CUNY and earned his Ph.D. in Personality/Social Psychology at the University of Texas-Austin in 1974 under the tutelage of Arnold Buss. His Ph.D. thesis involved the development of the Self-Consciousness Scale as a measure of relatively stable individual differences in private and public self-consciousness.

Professional Career

He began his professional career in 1974 as an assistant professor of psychology at Kenyon College in Gambier, Ohio, where he was tenured in 1980 and became full professor in 1989. He has been a visiting professor at the University of Virginia, the Pacific Medical Center, the University of Miami in Florida, the University of Kent at Canterbury, the Hebrew University of Jerusalem, the University of London, George Mason University in Virginia, the University of Iceland, Charles University in Prague (as a Fulbright Scholar), the University of Queensland in Australia, and the University of Melbourne. He has authored or co-authored over 20 peer-reviewed articles in journals such as the Journal of Personality and Social Psychology, the Journal of Personality, and the Archives of Sexual Behavior, and has published eight book chapters and four encyclopedia entries. He has been awarded research grants by NSF and NIMH, and has presented his research at over 40 professional conferences.

Research Interests

His research interests include self-awareness and self-consciousness, the self-as-target bias, everyday paranoia, displaced aggression, interest in viewing media violence, self-deception, the role of obedience pressures in genocidal behavior, and evolution and gender differences in sexuality.

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FFFS

▶ Fight-Flight-Freeze System

FFM

▶ Big-Five Model

▶ Personality and Dispositional Factors in Relation to Chronic Disease Management and Adherence to Treatment

Fifth Edition (SB5)

▶ Stanford-Binet Intelligence Scale

Fight-Flight System

▶ Fight-Flight-Freeze System

Fight-Flight-Freeze System

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Synonyms

Defensive system; Fear system; FFFS; Fight-flight system

Definition

The Fight-Flight-Freeze system is a neuro-behavioral system postulated to mediate defensive responses to unconditioned and conditioned threat stimuli, and is subjectively associated with the emotion of fear. It is one of the three systems postulated in the Reinforcement Sensitivity Theory (RST) of personality.

Introduction

The fight-flight-freeze system (FFFS) is one of the three affective-motivational systems postulated in revised Reinforcement Sensitivity Theory (r-RST; Gray and McNaughton 2000), a biological account of personality. The FFFS is activated in response to perceived threat, mediates reactions to aversive stimuli, and is subjectively experienced as fear. As a negative feedback system that seeks equilibrium through the reduction of immediate threat, FFFS behavioral responses share the function of moving the organism away from threat (Corr 2008). Specifically, as the defensive distance between an organism and a threatening stimulus decreases, the intensity of the behavioral response increases. More distal threats elicit freezing and escape (i.e., flight) responses, while proximal threats are more likely to elicit defensive aggression (i.e., fight) responses (Blanchard and Blanchard 1989).

In addition to the FFFS, r-RST also hypothesizes a Behavioral Approach System (BAS) responsible for reactions to appetitive stimuli and associated with extraversion and impulsivity; and a Behavioral Inhibition System (BIS) responsible for the resolution of goal conflict and experienced as anxiety. While the distinction between anxiety and fear was not explicit in the original version of reinforcement sensitivity theory (Gray 1970), r-RST clearly distinguishes between the two emotions. Fear is associated with FFFS-activated defensive responses and anxiety stems from BIS-activated risk assessment processes associated with approach (Gray and McNaughton 2000). Together, variations in the three motivational systems of r-RST are hypothesized to explain individual differences in personality and psychopathology.

Biological Underpinnings of the FFFS

Defensive responding characteristic of FFFS activation is mediated by brain structures that include the anterior cingulate, amygdala, medial hippocampus, and periaqueductal gray. These neural structures are hierarchically organized, with the defensive responses associated with each structure corresponding to the degree of defensive distance (McNaughton and Corr 2004). Specifically, in the hierarchical defense system outlined by McNaughton and Corr, the periaqueductal gray represents the lowest neural level and is associated with panic and undirected escape and aggressive responses; at the next level, the medial hypothalamus is associated with directed escape responses; next, the amygdala is responsible for autonomic arousal and active avoidance behaviors; and toward the top of the hierarchy, the anterior cingulate is associated with complex avoidance behaviors in response to more distal threats that require anticipation (2004). As such, while threat detection is the overall input for this system, outputs are determined by an interplay of both

"top-down" cognitive processes and "bottom-up" sensory mechanisms. Space limitations preclude a more detailed discussion of the neural architecture of the FFFS; however the interested reader is referred to McNaughton and Corr (2004) for a thorough review of the subject.

Self-Report Measurement of FFFS and r-RST

Although RST was revised in 2000, the vast majority of studies continue to use measures developed using the original RST framework, including the BIS/BAS Scales (Carver and White 1994), the Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ; Torrubia et al. 2001), and the Gray-Wilson Personality Questionnaire (GWPQ; Wilson et al. 1989). However, given that fear sensitivity is no longer considered a function of the BIS, researchers have suggested these measures may not validly assess r-RST constructs as they conflate fear and anxiety under one BIS subscale (Poythress et al. 2008; Smillie et al. 2006). Heym et al. (2008) attempted to address this problem in the Carver and White BIS/BAS scales by factor analytically demonstrating the BIS scale is best represented as two factors: BIS-anxiety and BIS-fear. While the method of splitting the BIS/BAS scales was an important first step at examining the nomological network surrounding the revised r-RST constructs, the development of psychometrically valid measures of r-RST remained necessary.

Recently, several measures of r-RST have been developed that clearly demarcate FFFS from BIS. The Jackson-5 (Jackson 2009) comprises three primary scales measuring BIS, BAS, and FFFS, with the latter scale further divided into Fight, Flight, and Freeze subscales. The Reinforcement Sensitivity Questionnaire (RSQ; Smederevac et al. 2014) comprises five subscales measuring BIS, BAS, Fight, Flight, and Freeze. Finally, the Reinforcement Sensitivity Theory of Personality Questionnaire (RST-PQ; Corr and Cooper 2016) conforms to a six-factor structure including BIS, FFFS, and four BAS scales.

Overall, recently developed measures of r-RST have differentiated FFFS and BIS, which is of critical importance in the psychometric assessment of r-RST. However, validation studies of each are ongoing and the interested reader is referred to Corr (2016) for a critical review of survey measures in this area.

FFFS and Personality

Revised RST suggests individual differences in the personality dimensions of fearfulness, anxiety, and extraversion/impulsivity are explained by variations in the sensitivities of the three neurobehavioral systems (FFFS, BIS, and BAS, respectively) governing avoidance and approach (Smillie et al. 2006). The three systems are also thought to underpin the two-higher order affective dimensions of positive and negative affect. Increased activation of FFFS and BIS result in negative affective states, whereas increased BAS activation would result in positive affective states. While an extensive review of the literature detailing the association between all r-RST systems and personality dimensions is beyond the scope of this article, a brief analysis of the link between FFFS and personality and affective traits is in order.

FFFS and Trait Models of Personality

The five-factor model (FFM; Costa and McCrae 1992) is a well-validated comprehensive trait model of personality which posits five broad factors: neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience. Using Heym et al.'s (2008) method of splitting Carver and White's (1994) BIS subscale into BIS and FFFS, Keiser and Ross (2011) investigated the relationship between FFFS and the domains and facets of the FFM in a large sample of undergraduate participants. After controlling for BAS and BIS, the domains of neuroticism and conscientiousness emerged as significant positive predictors of FFFS, suggesting an overactive FFFS is associated with an increased propensity to experience psychological distress, as well as a tendency to be organized, diligent, and reliable. In this study, Keiser and Ross further found

agreeableness to be the only FFM variable to distinguish between BIS and FFFS, with agreeableness positively predicting BIS but demonstrating no association with FFFS (2011).

Revised RST has also been examined in relation to Hans Eysenck's hierarchical taxonomy of personality (PEN, Psychoticism-Extraversion-Neuroticism; Eysenck and Eysenck (1976)), a model also rooted in neurobiology. In an undergraduate sample, path analyses between PEN and r-RST constructs revealed paths to FFFS consistent with predictions: neuroticism was positively associated with FFFS, while extraversion and psychoticism were negatively associated with FFFS (Heym et al. 2008). These findings are partially consistent with FFM findings on neuroticism and conscientiousness (considering that psychoticism overlaps with the low pole of conscientiousness), though results diverge with respect to extraversion. This may be due to the somewhat differing specification of lower-order facets in Eysenck's extraversion as compared to the FFM (Costa and McCrae 1995).

Emotion and Its Regulation

In line with evidence that FFFS activity is linked to the personality dimension of neuroticism, a consistent body of research supports the association between elevations in FFFS activity and heightened negative emotionality. Using the Jackson-5 measure of r-RST, Harnett et al. (2013) found the Fight, Flight, and Freeze subscales were each positively associated with dispositional negative affectivity. In this study, Freeze was preferentially negatively associated with a variety of emotional and cognitive measures of well-being, as compared to the subsystems of Fight and Flight. In interpreting these results, the authors suggested that avoidance behaviors stemming from increased FFFS activity may serve as an impediment to life goals, thus maintaining experiences of negative emotionality (Harnett et al. 2013). Consistent with these findings, Tull et al. (2010) identified an association between combined BIS-FFFS (as measured by the Carver and White BIS/BAS Scales) and a multidimensional conceptualization of emotion dysregulation in a community sample. Results

suggest combined BIS-FFFS is positively associated with emotional nonacceptance, difficulties engaging in goal-directed behavior when distressed, impulse control difficulties when distressed, limited access to emotion regulation strategies, and problems with emotional clarity. Taken together, theoretical and empirical evidence suggest high FFFS activity is associated with increased frequency and intensity of negative emotions, as well as difficulties in effectively responding to distress.

FFFS and Psychopathology

An assumption underlying the link between personality and psychopathology is that clinical conditions reflect extremes on the continuum of individual differences in personality (Pickering and Gray 1999). Through the lens of r-RST, extreme variation in FFFS, BAS, and/or BIS is hypothesized to confer vulnerability to the development of psychological disorders. This theoretical account of the personality-psychopathology relationship is consistent with the tripartite model of anxiety and depression (Clark and Watson 1991) and research by Barlow and colleagues on the latent structure of mood and anxiety disorders (Brown et al. 1998). These authors demonstrated that symptoms of mood and anxiety disorders are underpinned by negative affect (anxiety), low positive affect (depression), and autonomic arousal (fear/panic), with fear being preferentially related to panic disorder and phobias. Overall, various forms of psychopathology may be conceptualized as reflecting either heightened or deficient sensitivity to threat stimuli.

There is a large body of literature on the links between psychopathology, punishment sensitivity, and reward sensitivity, although most of these investigations use the original RST framework. As such, variability in the literature may be partially a function of which version of RST is used (Bijttebier et al. 2009). Overall, however, investigations into the relationship between FFFS and internalizing disorders (anxiety disorders in particular) are supportive of its hypothesized etiological role. As an example, using the Jackson-5 measure or r-RST, the Freeze

component of FFFS (along with decreased BAS) significantly predicated membership in a highly socially anxious group of adults (Kramer et al. 2015). Further, in a sample of clinically anxious children and adolescents, FFFS demonstrated moderate to strong correlations with symptoms of generalized anxiety disorder, panic disorder, social phobia, and separation anxiety disorder (Vervoort et al. 2010). Consistent with predictions based on the tripartite model, the correlations with panic disorder and social phobia were largest in magnitude.

In addition to findings related to internalizing disorders, FFFS has been theoretically and empirically linked with pathology on the externalizing spectrum as well. Psychopathy is a heterogeneous personality disorder in which evidence supports the existence of at least two subtypes (primary and secondary variants; Skeem et al. 2007). The primary variant, characterized by emotional and interpersonal deficits, has been posited to etiologically stem from an innately fearless temperament (Lykken 1995). Using the original RST framework, the etiological origins of primary psychopathy were therefore considered to be reflective of a weak BIS. However following RST's revision in 2000, several researchers suggested psychopathy may be more accurately described as low-FFFS as opposed to the weak BIS hypothesis. Following this line of reasoning, it was argued that existing RST measures, which typically conflated fear and anxiety under one scale, were problematic in the examination of psychopathy (Poythress et al. 2008). Under the revised framework however, findings are consistent with predictions based on the low-FFFS hypothesis of psychopathy. In a large sample of undergraduate students, primary psychopathy was negatively related to both BIS and FFFS, and FFFS demonstrated incremental validity in the predication of primary psychopathy after controlling for BIS and BAS (Broerman et al. 2014). Furthermore, in a recent study examining the triarchic conception of psychopathy (Patrick et al. 2009) with Jackson-5 measured r-RST constructs, total psychopathy scores were negatively associated with the r-Flight subscale, positively related to the r-Fight subscale, and

unrelated to r-Freeze, after controlling for BIS and BAS (Donahue and Caraballo 2015). Additionally, the subscales of FFFS exhibited divergent associations with the triarchic dimensions of psychopathy, boldness, meanness, and disinhibition. Together, these results lend support to the low-fear hypothesis of primary psychopathy and provide insight into the role of individual differences in RST constructs in the understanding of this heterogeneous disorder.

Conclusion

Beginning with Jeffrey Gray's research on animal learning and its application to anxiety and impulsivity, Reinforcement Sensitivity Theory (1970) arose as a neurobiological account of affective-motivational systems that may comprise the central processes underlying individual differences in personality (Smillie et al. 2006). While the model initially included two systems (BIS and BAS), a third major system, FFFS, was later specified and now holds a prominent role in r-RST (Gray and McNaughton 2000). Advancements in our understanding of FFFS have revealed functional relationships between defensive responding and both subcortical and cortical neural structures; several self-report measures have been developed to assess individual differences in the cognitive, emotional, and behavioral components thought to underpin FFFS; and multiple lines of research have supported the association between FFFS activation, personality trait dimensions, and both internalizing and externalizing psychopathology.

With these advancements in mind, our understanding of the link between FFFS, personality, and psychopathology within the context of r-RST has also been limited in some ways. While RST was significantly revised in 2000, many researchers have continued to work under the original framework using psychometric tools that fail to adequately discriminate fear and anxiety. Only recently have self-report measures been developed to assess systems outlined in the revised theory, and continued construct validation work is necessary (see Corr 2016). As a function of this, few studies on personality-psychopathology

associations using a r-RST framework have been published (Bijttebier et al. 2009). Furthermore, multiple different mechanisms may explain how sensitivities in affective-motivational systems such as the FFFS exert their influence on the development and maintenance of psychopathology (see Shiner and Caspi 2003), and future studies examining mediational processes are therefore necessary. In sum, developments in reinforcement sensitivity theory have highlighted the critical role of the FFFS in both adaptive and maladaptive behaviors in humans. We are at an interesting point in the evolution of this field of study, as theoretical and methodological progress has opened the door to a deeper understanding of the relationship between the neural architecture of fear, personality, and psychopathology.

Cross-References

▶ Amygdala
▶ BIS/BAS Systems
▶ Harm Avoidance
▶ Higher-Order Structures of Personality
▶ Neuroscience of Personality and Individual Differences
▶ Reinforcement Sensitivity Theory

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File Drawer Problem

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Synonyms

Publication bias; Selective reporting

Definition

The file drawer problem refers to the selective
publication in the scientific literature of research
projects based on whether the results are positive
or significant.

Introduction

Scientific studies that corroborate the research
hypothesis are more likely to be published in
peer-reviewed journals or other academic pub-
lications than studies that fail to corroborate
the research hypothesis. Studies that yield
nonsignificant or negative results are said to
be put in a file drawer instead of being
published. This so-called file drawer problem
creates an overly positive picture of results in
the literature and creates bias in literature
reviews and meta-analyses. Increasing attempts
are made by the research community to ame-
liorate the file drawer problem, for instance,
by assuring that research projects are
published regardless of whether results corrob-
orate the hypothesis.

History

The term file drawer problem was coined by Rosenthal (1979), although the problem of publication bias or selective publication based on significance was discussed earlier by others. Sterling (1959) noted that studies in the psychological literature nearly almost reported significant results, whereas one would expect at least some nonsignificant outcomes to also be published. The file drawer problem has also received considerable interest in the medical literature, where randomized clinical trials that support the efficacy of drugs or medical treatments are more often published than randomized clinical trials that fail to show such positive results (Dickersin et al. 1987).

Severity of the Problem and Implications

Both direct and indirect evidence points at the severity of the file drawer problem in psychology and related fields. It is generally assumed that the percentage of studies showing positive results in the psychological literature (over 90%; Fanelli 2010) hints at missing studies with less desirable results (Sterling 1959). Many research psychologists admit to have failed to publish so-called failed studies (John et al. 2012), and in two major studies about half of finished research projects end up not being published (Cooper et al. 1997; Franco et al. 2014). Moreover, statistical techniques that enable the detection of potentially missing studies often highlight a file drawer problem in meta-analyses (Bakker et al. 2012).

The file drawer problem creates an overly positive picture on the robustness and the strength of experimental or treatment effects or associations in correlational studies (Ioannidis 2005, 2008). The file drawer problem may also create a waste of research resources by impeding the quick correction of false positive findings and by misdirecting research efforts (Chan et al. 2014).

Causes

It is often assumed that peer reviewers and editors at academic journals are less willing to publish nonsignificant or negative results. Moreover, several surveys and studies using registers highlighted that researchers themselves often decide not to submit such results for publication (Cooper et al. 1997; Franco et al. 2014; Shadish et al. 1989).

Detection and Correction

Various statistical methods have been developed to detect the file drawer problem in the context of meta-analysis (Rothstein et al. 2005). Publication bias on the basis of significance can often be gleaned from smaller studies showing stronger effects than larger studies in meta-analyses. Several methods like trim and fill, and p-curve or p-uniform allow estimates of effect size corrected for publication bias (Simonsohn et al. 2014a, b; van Aert et al. 2016; van Assen et al. 2015). For instance, van Aert et al. (2016) used p-uniform to estimate of the effect of carrying a weighted object on assessments of importance in two dozen published studies. Although traditional meta-analysis yielded a medium effect size, p-uniform estimated the effect to be around zero after correction for publication bias.

Solutions

A straightforward solution to the file drawer problem is to publish all successfully completed studies. In the medical sciences, it is increasingly mandated to register clinical trials before they are executed, allowing a later detection of all completed studies (see clinicaltrials.gov). In psychology and related fields, the practice of study preregistration is also increasingly being used. The format of registered reports entails the peer-review of hypothesis and the design of the study before the study is run. Such registered reports are

published regardless of the results, thereby countering the file drawer problem.

Conclusion

The file drawer problem or the selective publication of results based on whether results are positive or significant biases many scientific literatures. Meta-analytical techniques exist to test and correct for publication bias, but the best solution is to assure that all rigorous studies are published regardless of the results.

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F

Finger Ratio

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His interdisciplinary research spans both biology and psychology, with a focus on human social perception and mating behavior. He is best known for his work on facial attractiveness and digit ratio (2D:4D) and, more recently, for his work on the perception of human body movement.

Educational Background

Inspired by *The Adaptive Mind*, which had just been published, Fink studied biology and psychology at the University of Vienna, Austria. He earned his M.S. in Biology (Anthropology) in 2001 and his Ph.D. (with honors) in Natural Sciences in 2003 – both from the University of Vienna, under the mentorship of Karl Grammer.

Professional Career

From 2003 to 2005, Fink worked as a postdoctoral fellow at the University of Vienna, Department of Anthropology, on a project investigating human sexual dimorphism in stature, funded by the Austrian National Bank. In collaboration with John T. Manning, he continued his Ph.-D. work on digit ratio – a biomarker of prenatal and rogenization – in relation to sex-dependent morphology and behavior. Fink moved to the University of Göttingen, Germany, in 2005, where he attracted highly prestigious funds from the German Science Foundation (DFG). From 2008 to 2013, he was principal investigator of an Emmy Noether research group investigating anthropometric and personality correlates of human body movement (dance, gait, running) and the role of visible skin condition in face perception. In 2013, Fink has been awarded a Heisenberg fellowship to expand his work on human social signaling. Fink has authored >120 publications in scientific journals and has given >80 presentations. He presently serves as associate editor of *Evolutionary Psychology* and *Personality and Individual* Differences and as an editorial board member of *Evolutionary Psychological Science*.

Research Interests

Fink's research interest focuses on human adaptations to social perception and mating behavior. He investigates proximate and ultimate aspects of human social interaction. This includes the study of developmental history (e.g., via 2D:4D ratio and fluctuating asymmetry), face/body morphology, skin and hair research, and body movement in relation to personality and social behavior. Most recently, Fink emphasizes the importance of extending these studies to cross-cultural investigation, thus disentangling biological and sociocultural effects. His most recent research includes the study of aggression in Africa and Russia (with M. Butovskaya), dance and gait in Brazil (with B. Ried), and sprint running in Jamaica (with R. Trivers).

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Finn, Stephen E.

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Early Life and Educational Background

Stephen Edward Finn was born on January 8, 1956 in Syracuse, New York, USA.

He was valedictorian of his high school class in Canastota, NY, graduating in 1974. He was awarded a full scholarship to Haverford College, and in 1978, he completed his Bachelor of Arts (magna cum laude) in Psychology, working with Douglas A. Davis and Jeanne Marecek (of Swarthmore College). While at Haverford, Finn studied abroad two times (in Spain and in France) and after graduation, he lived for a year in Germany, helping to teach statistics to psychology students at the University of Göttingen. He returned to the United States in 1979 and entered the graduate program in Clinical Psychology at the University of Minnesota, Twin Cities. There he fell in love with psychological assessment and was greatly influenced by the humanistic assessment approach used by Ada Hegion, Kenneth Hampton, and Zigfrieds Stelmachers at the Hennepin County Medical Center in Minneapolis. Finn completed his doctorate under the supervision of Auke Tellegen in 1984, with a thesis concerning age and cohort differences in personality in a longitudinal study of men.

Professional Career

In 1984, Finn was hired as an Assistant Professor at the University of Texas at Austin, eventually becoming Associate Director of the Clinical Psychology Training Program. There he began to study the potential therapeutic affects of psychological assessment. In 1992, he and Mary Tonsager published a study showing that

outpatient clients who received therapeutic feedback about the results of their scores on the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) reported decreased symptoms and higher self-esteem compared to a control group (Finn and Tonsager 1992). During this period Finn met and became friends with Constance Fischer of Duquesne University and Leonard Handler of University of Tennessee at Knoxville, who had developed their own theories and methods of collaborative assessment. Finn, Fischer, and Handler began to work together and to spell out their overlapping theories and approaches (Finn et al. 2012). In 1993, Finn opened the Center for Therapeutic Assessment in Austin, TX. There he and his colleagues continued to develop and research Therapeutic Assessment (TA), a semi-structured form of collaborative psychological assessment that has been shown to be an effective short-term intervention for many types of clients with diverse problems in living. In 1996–1997, Finn chaired the Psychological Assessment Work Group for the Board of Professional affairs of the American Psychological Association, leading to the publication of a highly cited article on the validity and utility of psychological assessment (Meyer et al. 2001). In 2002–2003, Finn served as President of the Society for Personality Assessment (SPA), and in 2011 he received its highest honor, the Bruno Klopfer Award for Distinguished Contributions to Personality Assessment. In 2017, Finn was cited for Distinguished Contributions to Assessment Psychology by Section IX (Assessment) of Division 12 (Society of Clinical Psychology) of the American Psychological Association. And in 2018, Finn was given the Carl Rogers Award for Outstanding Contributions to Humanistic Psychology from Division 32 (Society for Humanistic Psychology) of the American Psychological Association. Finn is President of the Therapeutic Assessment Institute (TAI), an international organization founded in 2009 that coordinates training and certification in Therapeutic Assessment. In 2010, he helped found the European Center for Therapeutic Assessment at Catholic University of the Sacred Heart, Milan,

Italy. And in 2013, Finn co-founded the Asian-Pacific Center for Therapeutic Assessment in Tokyo, Japan, with Noriko and Shin-ichi Nakamura. Finn continues to lecture and train clinicians in Therapeutic Assessment around the world.

Research and Theoretical Contribution

Finn and his colleagues, Constance Fischer and Leonard Handler, helped bring about a paradigm shift in how psychological assessment is seen in clinical, counseling, and educational psychology. Previously, psychological assessment was viewed almost exclusively as a way to diagnose disorders, measure important traits (such as intelligence), and facilitate placement and/or treatment for individuals with difficult-to-understand characteristics/problems. Because of the work of Finn and his colleagues, psychological assessment is now recognized as a potentially potent intervention that can change lives by helping people revise the central narratives that they have developed about themselves and the world. In addition, Finn has illuminated how principles originally connected to cognitive development and learning psychology (e.g., scaffolding, assimilation, accommodation) can be applied to psychological assessment to facilitate shifts in clients who are otherwise very difficult to help (Kamphuis and Finn 2018). Finn also was among the first to explicate how theories and concepts from interpersonal neurobiology could be applied to psychological assessment (Finn 2012).

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First Scene

First Stage of Erikson's Psychosocial Development

First-Order Emotions

Five Factor Model

Five-Factor Model

Five-Factor Model (FFM)

Five-Factor Model Rating Form

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Definition

The Five-Factor Model Rating Form (FFMRF) is a brief measure that assesses the higher-order dimensions of the Five Factor Model (FFM) and the more specific, lower-order personality facets proposed by Costa and McCrae (1995).

Introduction

The Five-Factor Model Rating Form (Mullins-Sweatt et al. 2006) provides a brief measure of the FFM dimensions. The higher-order FFM dimensions assessed by the FFMRF are described as (1) conscientiousness versus undependability, (2) agreeableness versus antagonism, (3) openness versus closedness to one's own experience, (4) extraversion versus introversion, and (5) neuroticism versus emotional stability. The FFMRF is one of the only brief personality measures that includes assessment of all 30 lower-order personality facets proposed by Costa and McCrae (1995). Overall, research on the FFMRF is limited. This entry will examine the literature on the FFMRF to investigate its factor structure, reliability, and validity.

Five-Factor Model Rating Form

The FFMRF has been used and studied as a self-report measure, but it should be noted that it was originally designed as method for therapists to describe their clients (Samuel and Widiger 2004). As such, the FFMRF is available in a therapist and a self-report version. The FFMRF is a 30-item adjective checklist assessing the domains and facets of the FFM personality model. The 30 personality facets are each assessed by a single item that is anchored at the low and high ends by two to four adjectives. The instructions specify that raters should describe themselves (or their client) on a 1–5 scale on each of the 30 personality traits, where 1 is extremely low (i.e., extremely lower than the average person), 2 is low, 3 is neither high nor low, 4 is high, and 5 is extremely high.

Research Using the Five-Factor Model Rating Form

As noted previously, research on the FFMRF is limited. However, Widiger, Samuel, Mullins-Sweatt, and colleagues have conducted several studies to examine the reliability and validity of

the FFMRF. Mullins-Sweatt et al. (2006) collected data on the FFMRF from five samples of undergraduate students. Their results generally supported the psychometric properties of the FFMRF. The five broad personality dimensions had adequate internal consistency reliability, with conscientiousness exhibiting the highest reliability (average of 0.76) and openness exhibiting the lowest reliability (average of 0.61). Mullins-Sweatt and colleagues presented a wide range of convergent validity evidence for the FFMRF by comparing it to similar instruments, including the NEO-Personality Inventory, the Interpersonal Adjective Scales, Saucier's Mini-Markers, and the OMNI Personality Inventory. They also provided discriminant validity evidence by identifying low correlations between the FFMRF and instruments designed to measure distinct constructs (e.g., personality disorders) including the Personality Diagnostic Questionnaire and the Schedule for Nonadaptive and Adaptive Personality.

Samuel et al. (2013) further investigated the factor structure and convergent and discriminant validity of the FFMRF. They investigated the fit of a five-factor solution with an overall sample of 757 participants that came from three previously published studies. The sample included primarily undergraduates but also a clinical subsample ($n = 83$). The authors found that the FFMRF fit well with a five-factor solution. They also found that FFMRF domain scores had moderate (average 0.58) correlations with corresponding FFM dimensions from the NEO Personality Inventory, thereby providing convergent validity evidence. With one exception (the tendermindedness facet from the FFMRF), the discriminant validity coefficients indicated low correlations with facets from other domains, thereby providing discriminant validity evidence for the FFMRF.

Samuel et al. (2015) investigated the factor structure and gender differences in the FFMRF. This study evaluated the FFMRF in a sample of 699 undergraduate students. The results indicated that men scored lower than women on neuroticism, extraversion, agreeableness, and conscientiousness but slightly higher on openness to

experience. These differences were generally consistent with mean differences found with other personality measures (e.g., Feingold 1994). The authors also found that the FFMRF displayed a five-factor structure and that the personality scores assessed the same latent constructs in men and women.

In Fossati et al. (2017), the self-report version of the FFMRF was translated into Italian by the first author and two other psychologists who were fluent in English. This translated version of the FFMRF was investigated with two samples. In a sample of adolescent high school students, internal consistency reliabilities ranged from 0.56 (openness) to 0.71 (extraversion). In the sample of community dwelling adults, internal consistency reliabilities ranged from 0.64 (neuroticism) to 0.81 (conscientiousness). These results are consistent with internal consistency results from US samples (Mullins-Sweatt et al. 2006). The authors reported that the FFMRF may have potential clinical usefulness, at least in screening for borderline personality pathology and psychopathy in community dwelling adolescents and in community dwelling adults. The research in Fossati et al. (2017) focused on a different culture and different developmental stages (adolescents and adults), but they did not collect data from a clinical population, which could be the subject of future research (discussed below).

Future Research Directions for the Five-Factor Model Rating Form

Reliability The FFMRF would benefit from investigations into how to increase the internal consistency reliability of the personality factor scores, some of which are in the .60s (Mullins-Sweatt et al. 2006). In addition, it would be helpful to investigate the test-retest reliability of the FFMRF. Further, the FFMRF would benefit from investigations into inter-rater reliability. Studies documenting the reliability of the FFMRF would bolster confidence in the measure and could provide evidence that it provided comparable reliability to more widely used and known FFM measures (e.g., NEO-PI).

Validity Additional validity evidence for the FFMRF is needed. First, research that investigates what the FFMRF can predict in terms of non-self-report health outcomes and work outcomes is needed. Second, it is important to extend the data base of studies using the FFMRF (which have predominantly included student samples) to clinical populations and working populations.

Cross-Cultural Considerations Given the FFMRF is relatively new, few studies have investigated non-American samples. Many other FFM measures have been used across cultures, and thus, it would be beneficial if the FFMRF were administered to a wide variety of samples from different cultures to investigate its validity across cultures. The FFMRF has been studied with Italian participants using an Italian translation of the FFMRF (Fossati et al. 2017), but additional non-American samples are needed to bolster the validity and cross-cultural applicability of this instrument.

Conclusion

In summary, the FFMRF is a self-report measure that provides a brief assessment of the higher-order dimensions of the FFM and the more specific, lower-order facets. Overall, research on the FFMRF is limited, but the initial database indicates that the FFMRF has adequate factor structure, reliability, and validity. Additional research is needed to further support the reliability and validity of the FFMRF.

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Five-Factor Narcissism Inventory

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Synonyms

Narcissism; Personality assessment; Self-report

Introduction

The Five-Factor Narcissism Inventory (FFNI; Glover et al. 2012) is a 148-item self-report measure that assesses grandiose and vulnerable narcissism traits, as well as narcissistic personality disorder (NPD), from the perspective of the five-factor model (FFM). The FFNI was created in accordance with a general model of personality disorders (PDs) that suggests that narcissism, like other PDs, can be understood as a combination of maladaptive traits (American Psychiatric Association 2013; Costa and Widiger 1994; Miller et al. 2001). The FFNI was designed to be a comprehensive measure of maladaptive expressions of the FFM facets related to a variety of narcissistic presentations. The full FFNI and its 60-item short form (see

Sherman et al. 2015) contain 15 separate subscales from which two rationally created dimensions commonly found in the narcissism literature – grandiose and vulnerable – can be scored (Glover et al. 2012), as well as three empirically derived factors: antagonism, neuroticism, and agentic extraversion (Miller et al. 2016c).

Theoretical Underpinning, Development, and Format

The theoretical and empirical literatures suggest that narcissism is a heterogeneous construct with grandiose and vulnerable dimensions (Cain et al. 2008; Miller and Campbell 2008) that manifest largely discrepant empirical correlates (Miller et al. 2011). For the creation of the FFNI, surveys of expert opinions and empirical reviews were examined to determine which FFM traits were most relevant to these different narcissism dimensions. This review of existing surveys of clinicians and personality disorder researchers (Lynam and Widiger 2001; Samuel and Widiger 2004; Widiger et al. 2002) and relevant meta-analyses (Campbell and Miller 2013; Samuel and Widiger 2008) suggested that facets from all five domains were relevant to the description of grandiose and vulnerable narcissism as well as NPD: neuroticism (i.e., self-consciousness, angry hostility), extraversion (i.e., assertiveness, excitement seeking, activity), openness to experience (i.e., fantasy), agreeableness (i.e., modesty, altruism, tender-mindedness, trust, compliance, straightforwardness), and conscientiousness (i.e., achievement striving).

Upon review of these sources of data, it was determined that 15 facets were necessary to cover the most common presentations of narcissism from the perspective of the FFM (see Table 1 for a brief description of each facet). Two of the 15 facet scales – thrill seeking and distrust – were already developed and validated as part of the Elemental Psychopathy Inventory (EPA; Lynam et al., 2011). To generate the remaining 13 scales for the FFNI, an initial pool of 390 items (30 items per facet) were developed using a rational approach (Clark and Watson

Five-Factor Narcissism Inventory, Table 1 Brief descriptions of the 15 FFNI scales

Description	
FFNI facet	
Exploitativeness (G)	Disposition to exploit or take advantages of others
Lack of empathy (G)	Poor awareness or appreciation of the feelings of others
Entitlement (G)	Expectations of special and self-serving treatment
Arrogance (G)	Snobbish, conceited, and/or arrogant thoughts and behavior
Manipulativeness (G)	Disposition to manipulate the feelings and/or opinions of others
Reactive anger (V)	Angry hostility in response to criticism or rebuke
Distrust (V)	Low trust concerning the intentions and motivations of others
Thrill seeking (G)	Prone to high-risk behavior for the sake of thrills and excitement
Shame (V)	Self-consciousness in response to criticism or rebuke
Indifference (G)	Lack of self-doubt in response to criticism or rebuke
Need for admiration (V)	Excessive need for the admiration and approbation of others
Acclaim seeking (G)	A preoccupation with achieving acclaim, status, and/or fame
Authoritativeness (G)	Assertiveness for power, status, and/or leadership in social settings
Grandiose fantasies (G)	A preoccupation with fantasies of glory, success, and status
Exhibitionism (G)	An emphasis on being popular and/or the focus of attention
FFNI grandiose	Composite of grandiose facets
FFNI vulnerable	Composite of vulnerable facets

FFNI Five-Factor Narcissism Inventory, *G* grandiose, *V* vulnerable

1995). Each item was correlated with its related FFM facet scale as well as eight measures of narcissism. From this analysis, ten items from each subscale were selected using a criterion keying approach. All items are answered on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Reliability and Construct Validity

Several studies have now demonstrated the reliability and validity of the FFNI scores in a variety of samples (Miller et al. 2013a, b, 2014, 2016c). Individual scale reliabilities regularly fall in the range of 0.75–0.90. The 15 scales show significant convergence with the FFM domains from which they were derived (Glover et al. 2012; Miller et al. 2013b; with the exception of the grandiose fantasies subscale and its link to openness) and account for incremental validity in the prediction of narcissism/NPD scales over and above the general FFM traits from which they were created (Glover et al. 2012), as well as existing measures of narcissism/NPD (Miller et al. 2013a). The value of assessing narcissism at the level of the 15 FFNI facets has been shown via the demonstration of the widely divergent associations found with a number of relevant criterion variables including psychopathy, Machiavellianism, interpersonal processes, internalizing symptoms, externalizing behavior, and pathological attachment styles (Miller et al. 2013b).

Grandiose and Vulnerable Narcissism in the FFNI

One difficulty associated with assessment of narcissism/NPD is the significant heterogeneity of the construct. With increasing awareness of the divergent empirical profiles associated with narcissistic grandiosity and vulnerability (Miller et al. 2011; Miller and Campbell 2008; Pincus and Lukowitsky 2010; Wink 1991) has come an increased emphasis on the importance of assessing both grandiose and vulnerable expressions. The FFNI's grandiose and vulnerable scales, which were rationally created, have demonstrated substantial convergent and incremental validity relative to alternative measures in predicting grandiose and vulnerable narcissism as well as NPD (Miller et al. 2013a). Given ongoing debates about the optimal means of conceptualizing and assessing narcissism (e.g., Miller et al. 2016a, b; Wright 2016), it can be difficult to judge which measures demonstrate sufficient

construct validity. In an attempt to avoid the subjectivity often inherent in these evaluations, the aforementioned expert ratings, as well as others (e.g., Thomas et al. 2012), can be used as a means of evaluating the degree to which various narcissism scales measure their respective constructs in a manner that is consistent with experts' conceptualizations. In analyses comparing multiple commonly used measures of narcissism, the FFNI grandiose and vulnerable domain scores demonstrated the best match with expert ratings of prototypical grandiose and vulnerable profiles (Miller et al. 2014) and avoided the problems found for a frequently used counterpart, the Pathological Narcissism Inventory (Pincus et al. 2009; see Miller et al. 2016b for a review).

Factor Structure: Explanatory Power and Flexibility of a Three-Factor Model of Narcissism

The FFNI's factor structure was established across multiple studies using a combined (e.g., clinical and nonclinical) population (Miller et al. 2016c). Factor analyses suggest that the 15 FFNI subscales yield three higher-order factors (see Table 2 for factor loadings), antagonism,

Five-Factor Narcissism Inventory, Table 2 FFNI facet loadings on empirical factors and FFNI relations with NPD, narcissism, and self-esteem

FFNI facet (domain)	Factor			NPD	GN	VN	SE
	A	N	E	r	r	r	r
Exploitativeness (G)	**0.88**	−0.03	0.02	0.48	0.50	0.36	−0.02
Lack of empathy (G)	**0.87**	−0.18	−0.29	0.39	0.34	0.29	−0.06
Entitlement (G)	**0.84**	0.02	−0.05	0.61	0.56	0.39	0.05
Arrogance (G)	**0.81**	−0.04	0.13	0.67	0.67	0.30	0.18
Manipulativeness (G)	**0.73**	0.00	0.22	0.51	0.60	0.35	0.11
Reactive anger (V)	**0.50**	0.47	0.11	0.36	0.38	0.60	−0.05
Distrust (V)	**0.41**	0.30	−0.07	0.16	0.20	0.58	−0.21
Thrill seeking (G)	**0.40**	−0.02	0.14	0.33	0.28	0.27	0.03
Shame (V)	−0.05	**0.88**	−0.08	0.05	−0.08	0.59	−0.26
Indifference (G)	0.30	**−0.85**	−0.04	−0.03	0.17	−0.48	0.27
Need for admiration (V)	0.21	**0.70**	−0.18	0.27	0.05	0.68	−0.44
Acclaim seeking (G)	−0.15	0.00	**0.80**	0.32	0.40	−0.01	0.30
Authoritativeness (G)	0.04	−0.14	**0.68**	0.33	0.54	−0.10	0.35
Grandiose fantasies (G)	0.24	0.03	**0.65**	0.53	0.55	0.25	0.22
Exhibitionism (G)	0.03	−0.01	**0.60**	0.53	0.43	0.03	0.21
FFNI factor							
Antagonism				0.61	0.55	0.56	0.04
Neuroticism				0.23	0.04	0.57	−0.36
Agentic extraversion				0.39	0.53	0.12	0.35
FFNI grandiose				0.67	0.75	0.23	0.25
FFNI vulnerable				0.25	0.15	0.73	−0.31

FFNI Five-Factor Narcissism Inventory, *A* antagonism, *N* neuroticism, *E* agentic extraversion, *NPD* DSM-5 Narcissistic Personality Disorder Traits, *G* grandiose, *V* vulnerable, *GN* grandiose narcissism, *VN* vulnerable narcissism, *SE* self-esteem (factor loadings are taken from Miller et al. (2016c)). Primary factor loadings for each facet are in bold. Factor scores are calculated as a composite of their respective facet scores (facet and domain-level correlations with NPD are taken from Miller et al. (2013a)). Facet and domain-level correlations with GN and VN are average correlations from Miller et al. (2013a, b). Correlations were transformed using Fisher *z* before being averaged and back transformed to correlations after the averages from the three samples were calculated. Facet and domain-level correlations with self-esteem are unpublished data generated from Miller et al. (2014) sample (All factor-level correlations are taken from Miller et al. (2016c))

neuroticism, and agentic extraversion. These factors are consistent with the FFNI's theoretical underpinnings as each has its strongest FFM correlation with the identified FFM domain. Evaluation of these higher-order factors suggests strong convergent and discriminant validity with alternative narcissism measures and self-esteem (see Table 2; Miller et al. 2016c). This structure demonstrates promise in resolving many of the ongoing questions surrounding narcissism including the overlap between grandiose and vulnerable narcissism, relations with psychopathy and hypomania, and divergent relations to adaptive and maladaptive outcomes and important correlates such as self-esteem (see Miller et al. 2017 for a more comprehensive review).

The recognition of the heterogeneity found in narcissism has been generative and led to important discoveries about the nature of grandiose and vulnerable narcissism. However, even greater clarity about narcissism as a construct can be gleaned by moving from the current two-factor model of grandiose and vulnerable narcissism to the aforementioned three-factor model that allows for a parsing of these multi-dimensional constructs into more fine-grained constructs. In this model, vulnerable narcissism comprises narcissistic neuroticism and antagonism, grandiose narcissism comprises agentic extraversion and antagonism, and (most) measures of NPD comprise high scores on all three components.

Conclusion

The FFNI is a comprehensive self-report assessment of narcissism that yields scores at a range of trait specificities via the use of the 15 facets, three empirically derived factors, two rationally created grandiose and vulnerable dimensions, and a total score. As such, the FFNI provides both a broad and flexible evaluation of narcissism, although we believe that in most cases, the use of the three higher-order factors provides the best balance between parsimony and specificity.

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Five-Factor Personality Inventory-Children

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Definition

PRO-ED published Five-Factor Personality Test for Children, a measure of the Big Five personality dimensions in children aged 9–18 years old. The instrument is a 75-item pencil-paper Likert style scale designed for clinical use.

Introduction

The Five-Factor Personality Inventory-Children (FFPI-C) is a standardized measure normed on 1,284 youth from 18 states (based on 2000 and 2002 census data) produced by PRO-ED aiming to capture normal and clinical meaningful variation in the "Big Five" factors of openness, conscientiousness, extraversion, agreeableness, and emotional regulation (neuroticism) (McGhee et al. 2008). According to the FFPI-C scheme, openness indicates children's aestheticism, imaginative interests, intellectualism, novelty seeking, and openness to different points of view; conscientiousness items indicate tendency toward competence, organizational abilities, dutifulness, and self-discipline; emotional regulation items measure children's anxiety, hostility, depressive tendencies, self-consciousness, impulsivity, and stress vulnerability; agreeableness items indicate children's altruism, compliance, directness, empathy, modesty, and whether they are trusting; extraversion items indicate children's activity,

assertiveness, excitement or sensation seeking, sociability, and positive affectivity and warmth (McGhee et al. 2008). The FFPI-C is normed on children between 9 and 18 years of age and requires a third-grade reading level to complete. It is a 75-item instrument (15 scales per Big Five trait) wherein contrasting statements reflecting Big Five attributes flank five answer choices. In between two sentences, one stated positively and the other negatively, lie the following answer choices: "agree," "somewhat agree", "in between," "somewhat agree," and "agree." The left-hand side of item choices measuring neuroticism, for example, would be a statement indicating that a child finds a particular event pleasurable, and on the right there would be a statement indicating they find the event unpleasant. In this case, a child high in neuroticism would be marked on the leftmost "agree;" a child low in neuroticism would be marked on the rightmost "agree." Although it can be used to capture the Big Five in children for research purposes, the FFPI-C is marketed as a clinical instrument and, according to its manual, requires administration by individuals trained in psychological assessment (McGhee et al. 2008). The FFPI-C manual provides guidance on converting raw scores to T-scores, percentile ranks, and cutoff scores indicating clinical significance (McGhee et al. 2008). The clinical focus makes the FFPI-C a unique instrument in the universe of Big Five measures, many of which are public use and for research purposes only.

Reliability Data

The data on FFPI-C reliability is variable. The publisher, PRO-ED, reports that the FFPI-C scales have good test-retest reliability (range = 0.84–0.88) and acceptable ($a = 0.74$) to good ($a = 0.86$) internal reliability for the subscales (McGhee et al. 2008). However, internal reliability data from independent reports have not always been positive. For example, Arbabi et al. (2015) reported a Cronbach's alpha of 0.73 for conscientiousness, whereas Ditterline (2012) reported a

range for subscales (0.74–0.86) that "generally were lower than those found across the normative sample." Similarly, McGeown et al. (2014) reported a range of scores indicating poor to adequate consistency (0.58–0.82), but 4 of the 5 scales had internal reliabilities less than 0.70. Waller et al. (2013) reported adequate to good internal reliabilities (0.75–0.88). Overall, data emerging from the research literature indicates that initially reported reliability metrics may have been overly optimistic.

Validity

The evidence base for the construct validity of the FFPI-C indicates that scales are generally predictive of expected phenomenon. The authors of the FFPI-C report decent parallel forms (or concurrent) of reliability as evidenced by correlations between the FFPI-C scales and more established personality scales (McGhee et al. 2008). Additionally, the publishers report that the FFPI-C scales correlate with measures of social and emotional functioning in a manner supporting their criterion validity (e.g., agreeableness negatively correlating with aggression). The publishers also report data indicating that the scales discriminate between individuals with emotional and learning disabilities in a manner hypothesized from the literature. Likewise, the FFPI-C scales display modest correlations with cognitive ability and achievement in a manner supporting construct validity. Furthermore, McGhee et al. (2008) reported that conscientiousness scores predicted academic achievement and agreeableness predicated emotional disorder status among youth. Another study by McGhee et al. (2012) found that extraversion, openness, and conscientiousness predicted risk-taking behaviors. A study by McGeown et al. (2014) found that conscientiousness and openness predicted academic motivation. Similarly, Arbabi et al. (2015) found that conscientiousness predicts grades and academic motivation. Waller et al. (2013) found that conscientiousness and agreeableness were correlated with blood sugar monitoring and control.

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Evidence for five-factor models of personality is primarily derived from factor analytic methods. McGhee et al. (2008) report the results of a confirmatory factor analysis purportedly supporting their five-factor structure; however, they do not provide critical statistical information (e.g., factor loadings) or indicate that they compared their structure to competing alternative models. Furthermore, the authors use fit indices (goodness of fit and adjusted goodness of fit index) with well-known problems and are considered suspect (Sharma et al. 2005). While the authors do report Root Mean Square Error of Approximation indices, there cutoff of 0.10 is quite liberal and does not meet current standards (< 0.08 for adequate and < 0.05 for good; Schreiber et al. 2006). Using modern standards none of the scales are judged as "good," and the extraversion scale does not meet criteria at all; however, a single metric should not be used to judge fit, and future research will need to address the adequacy of this measure. To date, no other studies have verified the factor structure using either exploratory or confirmatory methods.

Collectively, evidence for the validity of the FFPI-C is mixed. Several studies indicate that the scales predict phenomenon hypothesized to relate to the five factors. However, the only investigation of the factor structure used suboptimal statistical criteria to judge item-factor fit. More basic validity research is needed, particularly independent studies replicating McGhee et al. with appropriate analyses.

Conclusion

The FFPI-C is a relatively new five-factor measure of personality in children. Initial reports indicate that this proprietary measure has sound psychometric properties; the few extant studies available using this scale support that the scales generally meet lower thresholds for psychometric adequacy, though generally lower than those originally reported. Furthermore, available evidence indicates that the FFPI-C scales are predictive of related phenomenon indicating good predictive validity. The only structural validity data available comes from the publisher and is limited informationally. Future work should seek to better establish the structural validity of the FFPI-C and compare it against other models with more stringent modern criteria. Collectively, the data indicates that the FFPI-C is a promising instrument with sound reported metrics (Klingbeil 2009); however, more independent data is needed to further validate the utility of this instrument. Of particular need are data supporting the reported structural validity of the FFPI-C, as well as basic psychometric replications.

Cross-References

▶ Construct Validity
▶ Criterion Validity
▶ Exploratory Factor Analysis
▶ Interrater Reliability
▶ Test-Retest Reliability

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Fixation

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Synonyms

Fixation; Freudian (classical) psychoanalysis; Neurosis; Perversions; Psychosexual theory (stages); Regression

Definition

"Fixation" is a term originated by Sigmund Freud to signify the persistence of archaic sexual gratifications, early developmental modes, and the effects of trauma on the mind. More descriptive than explanatory, it addresses the common clinical observation that people remain attached, mostly unconsciously, to certain sexual proclivities, behaviors, and relationships with others that are rooted in their past. The specific usage of "fixation" in psychoanalysis has evolved as Freud's thinking developed and as other theorists adapted its meaning to their own perspectives.

Evolution of the Concept of Fixation

Freud used "fixation" at different stages of his theorizing regarding the etiology of neurosis and its origins in the patient's history. Early on Freud (Breuer and Freud 1895/2009) proposed that neurosis is the result of fixation to trauma and specifically to early sexual trauma. In the "seduction theory," Freud posited that the root cause of all neuroses is the premature introduction of sexuality into the experience of the child brought about by sexual seduction (from overstimulation to actual sexual abuse) by an adult, often a parent. The trauma overwhelms the child's capacity to manage the affects it produces, creating a fixation to the painful and unprocessed feelings and memories, which are later revived by the intense feelings during puberty, resulting in neurotic symptoms. Following a series of discoveries in his self-analysis, along with ongoing doubts about the apparent prevalence of sexual abuse in his patients' history, Freud eventually came to the conclusion that what he took for memories of sexual seduction were in fact often memories of infantile wishes to be seduced. In 1897 Freud abandoned the "seduction theory" as the *primary* cause of neurosis in favor of the theory of infantile sexuality. This change constituted a shift in emphasis from the causative impact of trauma and external reality on the mind to conflictual sexual impulses and fantasy and came to be the defining view of classical psychoanalysis.

With the development of the theory of infantile sexuality (1905), Freud used "fixation" to refer to the persistence of early modes of gratification in the context of discussing sexual perversions. He theorized that adult sexuality emerged gradually and was preceded by a pregenital form of sexuality, which he termed "infantile sexuality." Different from its adult expression, infantile sexuality is diffuse, located in erotogenic zones that can give rise to sexual excitation.

Central to infantile sexuality is the notion of sexual instincts (also libido or instinctual drive), a broad range of tensions that arise from different erotogenic zones and demand gratification to bring about discharge of tensions. The sexual instincts are characterized by a *source*, their somatic basis (e.g., the mouth, the anus); an *instinctual aim*, the activity that leads to discharge of tension (e.g., sucking, biting, defecating); and an *object* that provides satisfaction (e.g., the breast, the parent). For example, oral libido originates in the mouth and lips, creates the need for sucking, and attaches itself to the breast (the mother) to achieve satisfaction. Through feeding,

which is required for survival, the child discovers the pleasure of nursing. In other words, the breast becomes a source of libidinal gratification. Freud posited that psychic functioning is dominated by the "pleasure principle," seeking to avoid unpleasure (accumulation of instinctual tension) and to bring about gratification in the form of discharge of tension.

In "normalcy," Freud proposed, over the course of development, "component instincts" – aspects of the sexual instinct as defined by its instinctual source (e.g., the mouth or anus) – become integrated with each other and eventually are subsumed by genital sexuality. In adult sexuality, component instincts find gratification during foreplay and through socially acceptable channels (i.e., sublimation), such as creative expressions.

In contrast, in sexual perversions, as a result of fixation on pregenital aims (e.g., sucking, defecating) or part objects (i.e., objects that component instincts are directed at without reference to the whole person, such as the breast, feces, or food, and their symbolic substitutes, such as money), the integration of component instincts fails to occur, and component instincts gain dominance. That is, activities of earlier stages of sexuality (e.g., biting, looking, inflicting pain), or certain properties of the love object, replace genital sexual gratification and/or become necessary for arousal and orgasm (e.g., voyeurism, sexual sadism, fetishism). Organized around free play of various component instincts, infantile sexuality was viewed by Freud as "polymorphously perverse" by nature. That is, before the consolidation of genital sexuality, the child can derive erotic pleasure from various body parts that later in adulthood are considered perverse. From that perspective, perversions can be seen as a continuation or resurfacing of infantile sexuality.

With the continued development of the psychosexual theory (1905, 1915, 1923), fixation acquired a broader connotation from attachment to a particular instinctual aim or part object to a whole way of being, with normative and pathological manifestations. Freud delineated a series of unfolding psychosexual phases (also called libidinal stages or phases) through which the child passes before reaching the latency phase, during which sexual instincts appear to lie dormant. These include the oral, anal, and phallic phases and are characterized by libidinal excitement around the erotogenic zones of mouth and lips, anus, and genitals, respectively. At each phase one erotogenic zone becomes more prominent and serves as a focal point for the organization of the child's emotional life, determining adult character, object relations (relationships with real and internalized others), and, when present, the nature of pathology.

Fixation at a psychosexual phase means that while the libido continues to progress from one phase to the next, some measure of instinctual investment is left behind and continues to exert an influence on later development. As noted above, perversion reflects the *expression* of pregenital impulses, whereas neurosis is likely to develop if sexual impulses are *repressed*. Similarly, much of adult functioning is constructed around allowing for disguised forms of gratification, defending against infantile desires, or a combination of both. When fixation is strong, its long-term effects are clearly evident (e.g., neurotic symptoms, personality traits). When fixation is mild, it creates vulnerable points to which regression can occur under stress.

Freud viewed fixation as the result of a combination of environmental and constitutional factors. Environmental factors include trauma and parental deprivation or overindulgence of infantile desires. Constitutional factors refer to the predisposition of certain aspects of instincts to be more dominant in their impact or to a libido that more strongly attaches itself to a certain pregenital organization ("adhesiveness of libido"). For example, during the anal phase, pleasure is derived from defecating, smearing, and playing with feces. Freud (1908) hypothesized that people for whom the erotogenicity of the anal zone is exceptionally strong are more susceptible to becoming fixated at this phase. He also acknowledged the role of the environment, especially struggles around toilet training. The child experiences the expelling of feces to be a gift to the mother and a sign of affection and withholding

an expression of aggression or defiance. Fixation at this phase may result in an anal personality, characterized by orderliness, parsimony, and obstinacy, and in adult relationships marked by issues of control (versus compliance) and retentiveness (vs. giving). Abraham (1921) continued to develop this approach to character, creating a typology of adult personality based on the erotogenic zones and examining the distinctive conflicts, component instincts, and object relations of each as seen in adult personality.

In "beyond the pleasure principle" (1920), which constitutes a major turning point in his theorizing, Freud returned to the usage of fixation in the context of *trauma*. In this paper he grappled with the clinical observation that individuals, in contradiction with the pleasure principle, repeat traumatic experiences, often without awareness, as manifested in children's attempts to master painful experiences through play, recurrent posttraumatic dreams, and reliving painful memories in therapy. The fixation to trauma, Freud concluded, cannot be explained by the persistence of certain modes of libidinal satisfactions; it was therefore necessary to go "beyond the pleasure principle." Freud hypothesized the existence of a force that works in opposition to the pleasure principle, in the service of the death instinct, and underlies the compulsion to repeat painful experiences ("the repetition compulsion"). At this point in his thinking, Freud (1939) used trauma broadly to refer to any childhood experience that overwhelmed the immature or constitutionally weak ego. The compulsion to repeat or recreate the trauma results in fixed character traits whose origins remain unconscious.

Conclusion

In summary, over the course of his theorizing, Freud used fixation to refer to persistent attachment to pregenital instinctual aims and early developmental configurations and to the impact of trauma on the mind. Later theorists continued to develop the term, applying it to their specific ideas. For example, Erik Erikson (1950), who built on and broadened Freud's theory of psychosexual stages to include consideration of psychosocial development, distinguished between fixation to a "zone" (e.g., oral, anal) and to a "mode" (e.g., incorporation, retention), shaping personality in various ways. Heinz Kohut (1971) viewed the pathology of the "grandiose self," characterized by pursuit of perfection and continuous need for praise, as a fixation to the grandiose self of childhood, which due to narcissistic trauma persists into adulthood unchanged and seeks to fulfill its primitive aims.

Overall, across its various usages, "fixation" connotes a basic and fundamental tenet of psychoanalysis of the lasting, and mostly unconscious, impact of individuals' life histories on adult character, object relations, and later pathology.

Cross-References

▶ Fixation

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Fixed Mind-Set

Fixed Role Therapy

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Definition

A form of brief, constructivist therapy in which the client enacts a make-believe character drafted by the therapist to portray an alternative identity for a fixed period of time, typically 2 weeks. Rather than teaching specific social skills, the enactment is intended to convey to the client that change in one's outlook and social role is possible at any time, if one is willing to try on an alternative way to approach one's life, including its challenges.

Related Terms

As the original brief psychotherapy, fixed-role therapy (FRT) was pioneered by American psychologist George Kelly in the late 1930s to foster rapid personal growth and resilience in the urgent context of the Great Depression, and it has come to be used in a great range of clinical settings in the decades since. Like personal construct theory (PCT), the overarching theory of personality and clinical psychology of which it was part, this active experimental approach to therapy presumed that people attempt to make sense of the world by devising and revising a system of *personal constructs* that help them interpret, anticipate, and respond to the events in their social world (Kelly 1955). Importantly, this same meaning system shapes their own view of themselves, as their *core role constructs* frame their identity and values and govern how these are expressed in their behavior and life choices. While the resulting life script functions as an indispensable guide to navigating our lives, it can also constrain the range of possibilities and ways of relating that are visible or permissible to the person, sometimes contributing to a sense of being "stuck" in an unsatisfying or conflictual role to which the person can see no alternatives. In such cases, FRT offers one bold and creative way for stepping into an alternative way of life for a fixed period of time in order to view oneself and others through another lens and restore a sense of empowerment to engage life differently.

The fixed-role procedure involves first inviting clients to draft a brief *self-characterization* about themselves, (Neimeyer et al. 2003) typically one or two pages in length, using the following instructions:

> In the space that follows, please write a character sketch of _____, just as if he were the major character in a book, movie, or play. Write it as it might be written by a friend who knew him intimately and sympathetically, perhaps better than anyone really could know him. Be sure to write it in the third person. For example, start out by saying, "_____ is..."

By encouraging the client to adopt a self-distancing but compassionate perspective, the instructions invite expression and exploration of the client's strengths as well as perceived problems, allowing him or her to determine what features of the self and social world are important to emphasize. For example, Jonathan, a young army officer wrestling with religious questions as well as aspects of his relationships with others, drafted a self-characterization that acknowledged his career success, but also the perfectionism and anxiety that

drove his performance, as well as his uncertainty as an African-American man in what he considered a "white world." He further related this sense of insecurity to having grown up without a father, and his lifelong drive to be "a better kind of man." He sought therapy to "get more comfortable with who he was" and to see if he could feel "less uptight," despite his career success.

Analyzing the main themes in Jonathan's self-characterization, the psychologist and a team of three consultants then constructed an *enactment sketch* of approximately two pages for him to read daily and perform for a fixed period of 2 weeks, during which he would meet with the group to discuss his experiences and discoveries while in role. To help Jonathan hold in mind the key characteristics of the make-believe identity, the role was given the humorous name Samson Knight, to underscore his noble characteristics, but also to play on the name of the famous brand of travel luggage. In part, the sketch reads:

> Sampson Knight may have his own "baggage" like the rest of humanity, but he carries it well. Poised as he is on the verge of a career in creative writing that both scares and excites him, he is proud of what he has accomplished and realizes that he has earned the right to kick back, travel and enjoy himself at times. He attributes his success to his own strength, hard work, and the support of his key members of his family, his girlfriend and his religious community—perhaps to a point that he downplays how the random events of life also shape who he has become.

> Raised as he was by two troubled parents, both of whom were too immersed in their own issues to provide much nurturing to him, Sam learned early and well to seek what he needed from others, and he found it in the persons of his two older sisters. Even now, as they move into their own distinctive versions of adulthood, he remains in contact with one or the other of them nearly every day, whether texting a greeting, asking for advice, or simply sharing an experience. Though given to self-reliance in many ways, his life has taught him that the greater form of strength comes from shared vulnerability.

> Though hardly a fashion plate, Sam enjoys selecting and wearing loose fitting, slightly "retro" clothing for comfort and to broadcast to others his laid-back style. Sometimes with his girlfriend and sometimes on his own, he'll spontaneously head to a thrift store just to see what his $5 will buy, and often comes back with a colorful, slightly "tacky"

> Hawaiian or safari shirt, always a size too big. He often chuckles to himself at the raised eyebrows of his friends, who have come to recognize the playful inconsistency in his apparel that conceals a more basic consistency: Sam's reliable tendency not to take himself too seriously, except when others require his rock-solid friendship. This is not to say that Sam is always chivalrous as a knight, however, as he can occasionally be a bit preachy. Mostly, though, who he is corresponds with what he does, and finds expression in a quietly good-humored conviviality built on a genuine affection and respect for others.

> Significantly, Sam takes pride in being a black man. He reads African American literature compulsively, whether it is the work of James Baldwin, Ralph Ellison, or Tracy Smith, the brilliant young poet whose Life on Mars explores cosmological questions that verge on the spiritual. Sometimes he'll even sneak off to an open mike poetry reading at Java Cabana or another funky cafe, sipping an espresso, and perhaps striking up a conversation with other aspiring writers and artists. But most of all, Sam likes to read poetry in the park, taking frequent breaks to watch the dogs and their owners play in a spontaneous, free way that he admires. Without a concern for social roles or masks, they seem to him to be fully capable of being simply what they are, a quality he admires.

> Finally, though he says that he is not a "fitness nut," Sam enjoys a leisurely jog, whether on his own or in the company of friends. More often than not, Sam finishes his run in a peaceful spot in nature where he practices his meditation. In order to connect spiritually and ground himself for the day ahead, he meditates on several mantras: "I am a man," "Life is imperfect" and "Who I am is enough." Sometimes, when he hears these words echoing in the silent corridors of his soul, he feels something stirring deep within him, and senses that it is the voice of God.

Importantly, the enactment sketch offered a somewhat playful alternative way of being that addressed Jonathan's struggles (his perfectionism, anxiety, and difficult childhood) while also respecting his core values (his motivation to succeed, his religious beliefs, and his cultural identity). By integrating these into a reasonably coherent personality who is fallibly human rather than idealized, the sketch encourages the person to live out a different, make-believe role for a fixed period of time, without telling others around him about his experiment with an alternative identity. To assist the client in this, the sketch offers a balance of character traits and motives along with

suggested activities and interests that express these abstract characteristics in concrete behaviors (Neimeyer and Winter 2006). Jonathan laughingly accepted the sketch, and although a little self-conscious at first, "loosened up" his off-duty wardrobe, developed a taste for espresso, and discovered a broad range of African-American writers and poets whose work expanded the action story genre to which he was accustomed. By the end of the 2 weeks, he reported several surprising interactions "with some pretty interesting people" and felt "less uptight" and closer to his sisters than he had in years. He also decided to take a course in meditation, which he described as "not really a religious thing for me, but more spiritual." Although he set aside further performance of the fixed role of Samson Knight in keeping with the therapeutic protocol, Jonathan described feeling "more comfortable with himself," and discovered he had the freedom to make "course corrections" now and then to fulfill his life plan. He closed the last session of therapy by giving the therapist a new book of poetry published by a young African-American poet as a token of his appreciation for the "adventure" they had gone on together.

Since its inception in the work of George Kelly (1995), fixed-role therapy has been used successfully with clients presenting with a variety of problems, ranging from depression (Dalton 2009) and social anxiety (Abe et al. 2011) to substance use (Horley 2006) and marital distress. As a nonjudgmental approach to treatment that draws on client strengths while fostering experimentation with alternative outlooks and behaviors, it appears to facilitate change by increasing clients' flexibility and social intelligence (Neimeyer and Winter 2006). It also seems to mitigate the threat of change by creating a sense of "serious play," encouraging clients to step into an alternative life role for a fixed period of time, to recognize that reconstructing a sense of self is entirely possible.

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Flexhumility

▶ Long-Term Orientation

Flexibility

▶ Integrative Complexity
▶ Phenotypic Plasticity

Flooding

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Synonyms

Imaginal flooding; In vivo flooding; Virtual reality exposure therapy

Definition

An intense exposure therapy technique based on classical conditioning in which patients are taught coping skills before being introduced directly to the fear-inducing stimulus or traumatic memory.

The premise is that with enough exposure to the stimulus, habituation allows for the patient's fear response to be extinguished. This type of therapy is primarily used to treat posttraumatic stress disorder (PTSD) and anxiety disorders, especially specific phobias.

Introduction

Flooding is a technique based on classical conditioning used in behavioral therapy that teaches patients anxiety-reducing coping skills and once those skills have been mastered, integrates them into real-life situations where the patients face their fear-inducing stimulus or traumatic event. This technique has been adapted to be used for patients in a variety of settings and has branched into three main parts; imaginal exposure, virtual reality exposure, and in vivo exposure.

Imaginal exposure therapy (also called prolonged exposure) involves a patient using his or her imagination in order to place themselves in the stress-inducing situation while simultaneously describing the situation out loud to the therapist using the present tense. In addition to the therapy sessions, homework involves either listening to an audio recording of the session or writing out the experiences. This type of flooding is most commonly used as treatment for PTSD where it is impossible to recreate the traumatic event.

Virtual reality exposure is when the client faces the stressful situation in a virtual reality setting using technology such as head-mounted displays. This allows for patients to face fears without the cost of traveling with the therapist. For example, a client that is afraid of heights can use virtual reality therapy to go on top of an elevated cliff.

Finally, in vivo exposure involves the client facing the fear-provoking stimulus in their everyday life. The therapist will introduce the stimulus to the client and as the client spends more time with the stimulus with no adverse effects, the anxiety will slowly decrease until the client feels minimal anxiety while in close proximity to the stimulus.

Effectiveness

The effectiveness of these exposure therapies have largely been evaluated through self-report measures examining the patient's symptom severity or within-sessions distress (Norrholm et al. 2016). Imaginal exposure therapy has been used for decades and has been shown to decrease PTSD symptoms in follow up sessions (Foa et al. 1991). Imaginal exposure therapy has also shown to produce significant decreases in PTSD symptoms when compared to other treatments (Tarrier and Humphreys 2000; Tarrier et al. 1999). Virtual reality exposure therapy is considered to enhance imaginal exposure therapy and allows for patients to become more involved in their therapy by eliciting more patient arousal (Difede et al. 2007; Rizzo et al. 2010; Rothbaum et al. 2001; Robinson-Andrew et al. 2014). Furthermore, virtual reality exposure therapy has been shown to reduce cortisol response to trauma related stimuli (Norrholm et al. 2016; Vermetten et al. 2006). Virtual reality exposure therapy has also been equated to the traditional in vivo exposure therapy. In a study of individuals with a fear of flying, both virtual reality and in vivo exposure therapy were superior to the control group with no significant differences between them. These results continued with more than 70% of respondents flying at the 6 and 12-month follow up (Rothbaum et al. 2006). This supported previous research with similar results in participants with acrophobia (Emmelkamp et al. 2002). In vivo exposure therapy has been shown to be an effective treatment as well. When compared to an integrated approach that included in vivo, rational emotive therapy, and social skills training, in vivo exposure therapy alone was just as effective (Mersch 1995). Additionally, when compared to an augmented reality exposure treatment, participants rated in vivo exposure more useful to their problems (Botella et al. 2016). Furthermore, in participants with a fear of movement or reinjury after chronic back pain, in vivo exposure decreased pain-related fear, pain catastrophizing, and increased physical activity levels as compared to treatment where highly fearful events were not included (Vlaeyen et al. 2002).

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Flooding has been show to have high levels of completion when in randomized controlled trials and highly selective clinician and patient sample (Eftekhari et al. 2013; Tuerk et al. 2013). Yet, when randomized control conditions are not met, completion rate decreases (Najavits 2015). Due its intensity, this therapy has a high drop-out rate, with most dropouts happening after two sessions and less than 10% of veterans with PTSD completing the full program (Mott et al. 2014; Seal et al. 2010).

Comparison

Flooding has often been compared to systematic desensitization, which was also used to treat anxiety disorders. Systematic desensitization differs from flooding by creating a fear hierarchy of events that would cause distress, starting with the least distressing event, and ending with the phobia. Once the client has achieved comfort at one level of the hierarchy, the next is attempted until faced with the most fearful event.

Research comparing flooding with systematic desensitization reports that physiological changes (e.g., heart rate) were greater using flooding yet therapist and clients preferred systematic desensitization (Rudestam and Bedrosian 1977). Furthermore, in vivo flooding was shown to not only help students who suffered from speech anxiety, but was shown to be significantly more effective than systematic desensitization (successive approximation; Kirsch et al. 1975).

Conclusion

Flooding is another common name for exposure therapy that can be adapted into three main domains: imaginal exposure, virtual reality exposure, and in vivo exposure. It has been shown to be effective in follow-up studies when the therapy is fully completed. This type of therapy is rigorous, which forces the patient to face fear-inducing events and stimulus.

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Flourishing

▶ Fully Functioning Person
▶ Happiness
▶ Personal Growth

Foes

▶ Enemies

Foiling

▶ Frustration

Foils

▶ Enemies

Folk Psychology

▶ Theory of Mind

Foresight

▶ Anticipation

Forgiveness

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Synonyms

Pardon; Reconciliation

Definition

Merriam-Webster defines forgiveness as "to cease to have feelings of anger or bitterness toward."

Introduction

Forgiveness is a topic pervasive throughout our species; almost everyone has a story about a time they were forgiven, wished they had been forgiven, forgave someone, or struggled to forgive someone. Forgiveness has been defined as the reduction in motivations to seek revenge and avoid an offender as well as an increase in the motivation to act benevolently toward the offender (McCullough et al. 1998). In other words, forgiveness is a letting go of the negative thoughts, emotions, and behaviors that plague the victim of an offense and replacing them with positive thoughts, emotions, and behaviors. Although words such as pardon and reconciliation are often used as synonyms for forgiveness, most researchers are quite clear that forgiveness is distinct from both pardoning and reconciling as well as excusing, justifying, forgetting, and condoning.

Despite forgiveness permeating the lives of many, two individuals can encounter the same transgression and have very different reactions, suggesting an interplay between one's personality and how one reacts to the situation encountered. In support of this, numerous factors have been found to influence a person's ability and willingness to forgive, such as capability to empathize with the offender, ruminative tendencies, severity of the harm, level of intent behind the harm, whether an apology was received, relationship to the offender, and the victim's personality (McCullough et al. 1998).

Health Benefits

Most studies speak indirectly to the benefits of forgiveness by demonstrating a link between unforgiveness and mental health. For instance, unforgiveness has been linked to greater anger, anxiety, and life dissatisfaction. Other researchers have examined the direct effects of forgiveness on mental health finding that forgiving individuals score lower on scales of depression, anxiety, stress, and anger and higher on scales of optimism, life satisfaction, and positive affect (see Griffin et al. (2015) for a review of the literature on mental health, forgiveness, and unforgiveness).

In addition to the apparent mental health benefits of forgiving, research has begun to establish a plausible relation between forgiveness and physical health benefits. For instance, forgiveness has been linked with lower heart rate, lower blood pressure, and increased immune system (Lawler et al. 2003). Given the potential health advantages of forgiving, understanding the determinants of forgiveness, such as personality, has useful implications for theory, therapy, and even the medical profession.

Personality

Much of the literature examining the role of personality in forgiving has explored the Big Five/five-factor model traits (see Mullet et al. (2005) for a review of the Big Five personality traits and forgiveness). For instance, Agreeableness has been found to be the strongest predictor (positive relationship) of likelihood to forgive (Mullet et al. 2005). Because forgiveness is a prosocial act, that Agreeableness (which includes attributes such as trust, kindness, altruism, and other prosocial behaviors) has been found to be the strongest Big Five predictor of forgiveness is not surprising. For instance, Ross et al. (2004) found that Agreeableness accounted for 29% of the variance in forgiveness of others, especially its facets of trust, compliance, and tender-mindedness. They suggested that people high in Agreeableness may be less likely to assume someone who transgressed against them did so intentionally, which then allows them to forgive with greater ease.

Neuroticism is another Big Five trait related to forgiveness; those high in this trait have been found to be less likely to forgive individuals who have transgressed against them (Mullet et al. 2005). Specifically, the hostility facet of neuroticism seems to be driving this relationship (Ross et al. 2004). Once again, this is not surprising; an individual with high levels of hostility would find difficulty in releasing negative emotions and developing positive emotions toward the offender.

Another trait model that has been explored in relation to forgiveness is the six-factor HEXACO which contains all of the Big Five model traits (differentially organized) as well as a new Honesty-Humility trait. Researchers (Sheppard and Belicki 2008) have found that the HEXACO's Agreeableness is an even stronger predictor of willingness to forgive (positive relationship) than the Big Five Agreeableness trait. The authors suggest that this is because the HEXACO's Agreeableness gained the facets of temperamentalness and irritability associated with the Big Five's Neuroticism and that these facets likely contribute to the emergence and continuity of negative emotions toward the offender, reducing the likelihood of forgiveness.

Although not as strong of a predictor as the Big Five's Neuroticism, the HEXACO's Emotionality trait is negatively related to forgiveness, especially its anxiety facet, which suggests that chronic worrying may lead to excessive rumination about the event, hindering an individual's ability to forgive the offender (Sheppard and Belicki 2008). The HEXACO's Honesty-Humility trait has also been found to be positively related to willingness to forgive which is not surprising given that the facets related to this trait relate to valuing fairness and the nonexploitation of others (Sheppard and Belicki 2008).

Forgiveness-Related Variables

Applying trait theory to the study of forgiveness has also yielded links between personality and forgiveness-related variables. For instance, anxious guilt (fear of punishment) has been found to be positively related to Emotional Stability and Extraversion (Einstein and Lanning 1998), and escape-avoidance coping techniques have been found to be positively related to Emotional Stability and Introversion (Byrd O'Brien and DeLongis 1996). Furthermore, Agreeableness has been positively related to placing high value on harmonious relationships (Byrd O'Brien and DeLongis 1996) as well as empathic guilt (having a need for reparation and insight into others' distress; Einstein and Lanning). In addition,

Agreeableness has been negatively related to enduring resentment and revenge. Neuroticism on the other hand has been found to be positively related with enduring resentment, rumination, and revenge all of which pose as obstacles to forgiving (Mullet et al. 2005).

Narcissism and Gratitude

Research has also linked forgiveness to various traits beyond those found in the aforementioned models (see Griffin et al. 2015 for some examples). For instance, one personality trait that has been linked to unforgiveness (positive relationship) is the Dark Triad's Narcissism. Narcissistic individuals have a high sense of entitlement and tend to seek repayment or revenge when they are harmed. They are concerned with how others view them following a transgression and are keen to save face. As a result, they characterize forgiveness as damaging to their pride and self-image. Not surprisingly, narcissistic individuals are less likely to forgive an offender (Exline et al. 2004).

On the flip side, one personality trait that has been linked to a greater likelihood to forgive is Gratitude (which can also be measured as an emotion and a mood). Someone who is grateful focuses on the positives in life rather than getting consumed by the negatives and may have more resources and better coping styles. Gratitude has been found to be inversely related to negative affect and positively related to empathy and a willingness to forgive (McCullough et al. 2002).

Self-Forgiveness

Trait theory has also been applied to the study of self-forgiveness. The strongest predictor (negative relationship) of self-forgiveness seems to be Neuroticism (Mullet et al. 2005). For instance, Ross et al. (2004) found that Neuroticism accounted for 40% of the variance in self-forgiveness and that although all facets of the trait were related to self-forgiveness, depression and vulnerability were the most predictive. They suggested that individuals high in Neuroticism

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may become overwhelmed by and stuck in their negative emotions such as guilt and worthlessness, and thus forgiveness remains elusive. They also found self-forgiveness to be positively correlated with extraversion (gregariousness, warmth, positive emotions), conscientiousness (competence, achievement, striving, self-discipline), and the trust and modesty facets of agreeableness.

Conclusion

Individual differences are an important component to study in the forgiveness literature as researchers have estimated that personality factors explain up to 35% of the variance in forgiveness of others and forgiveness of the self (Mullet et al. 2005). In addition, many researchers have discussed and studied the disposition to forgive (a tendency to forgive across context and situations), suggesting that forgiveness in and of itself may well be a personality trait. In fact, several scales have been created as measures of the disposition to forgive (see Mullet et al. for a review of the scales). Although not all researchers make the state-trait forgiveness distinction, some have found different results when assessing what they deem to be state vs. trait forgiveness (see Griffin et al. 2015 for some examples). As such, when studying forgiveness, researchers should be cognizant that there may well be varied effects of state vs. trait forgiveness and that the two may be differentially related to personality traits.

Although gaining in popularity, much is left to be discovered in the field of forgiveness research. A continued thorough exploration of forgiveness and its relation to both situational and personality variables will help yield theoretical advancement and has great applicability for clinical treatments.

Cross-References

▶ Agreeableness
▶ Avoidance Coping Strategies
▶ Big-Five Model
▶ Emotion-Focused Coping
▶ Empathy
▶ HEXACO Model
▶ Narcissism
▶ Neuroticism
▶ Positive Psychology
▶ Prosocial Behavior
▶ Rumination
▶ State/Trait Interactions

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Formal Characteristics of Behavior: Temperament Inventory

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Formal Characteristics of Behavior – Temperament Inventory (FCB-TI) was developed to assess temperament, in accordance with Strelau's regulative theory of temperament (RTT). The name of the theory underlines the functional significance of temperament, which is understood as a regulator and codeterminant of behavior, while the name of the inventory refers to the specificity of temperament conceptualization in RTT.

Definition

For a better understanding of the essence of RTT, the definition of *temperament* presented below is a good starting point:

> Temperament refers to basic, relatively stable, personality traits expressed mainly in the formal (energetic and temporal) characteristics of reactions and behavior. These traits are present from early childhood and they have their counterpart in animals. Primarily determined by inborn biological mechanisms, temperament is subject to changes caused by maturation and individual-specific genotype-environment interplay (Strelau 1998, p. 165).

Introduction

Strelau (2008) formulated ten propositions characterizing temperament. They should be considered as an extension of the definition given above; however, the last two propositions underline the role of temperament as a regulator of behavior and its moderating role in reactions to stress as well as in the pathogenesis of mental and somatic disorders. The propositions served as the basis for the development and validation of FCB-TI. It should be stressed that temperament is considered as a structure of traits. According to RTT, the structure comprises traits referring to the stylistic aspect of reactions and behavior ("how"), understood as their formal characteristics (temporal, such as duration, and energetic, such as intensity), as opposed to personality, which refers to the content of behavior. Within the *temporal domain*, RTT distinguishes two traits:

- *Briskness* (BR) defined as a tendency to react quickly, to keep a high tempo in performing activities, and to shift easily in response to changes in the surroundings from one behavior (reaction) to another.
- *Perseveration* (PE) – tendency to continue and to repeat behavior or experience emotions after the cessation of stimuli (situations) which evoked this behavior or emotions.

The *energetic domain* comprises the following four traits:

- *Sensory sensitivity* (SS) defined as an ability to react to sensory stimuli of low stimulative value.
- *Endurance* (EN) – ability to react adequately in situations demanding long-lasting or high stimulating activity and under intensive external stimulation.
- *Emotional reactivity* (ER) – tendency to react intensively to emotion-generating stimuli, expressed in high emotional sensitivity and in low emotional endurance.
- *Activity* (AC) – tendency to undertake behaviors of high stimulating value or to supply by means of behavior strong stimulation from the surroundings (Strelau 2008).

Traits have the status of *dimensions*, which means that individual differences can be characterized by the position a given trait occupies on the continuum from one extreme (strong, high) to the other one (weak, low). These are *quantitative* characteristics. Much attention in RTT is paid to types, considered as secondary phenomena in relation to primary traits. The notion of *type* in

psychology is frequently used to describe interindividual differences in behavior in terms of *qualitative* phenomena (different categories of individuals). As will be demonstrated, temperament types play an important role in explaining individual differences in human adaptation.

According to RTT, the biological basis of temperament comprises physiological mechanisms responsible for processing stimulation into arousal and for the regulation of stimulation in order to maintain the optimal level of arousal. Relatively stable individual differences in the level of arousal, known as *arousability* (trait-arousal), influencing the level of processing stimulation into arousal and its regulation are reflected on the behavioral level by temporal and energetic traits. Sensory sensitivity, endurance, and emotional reactivity are involved in the processing of stimulation, while activity serves as a regulator of stimulation supply, regulating it according to the individual's stimulation processing capacity determined by arousability. Briskness and perseveration reflect the onset and duration of arousal and are involved in the processing and regulation of stimulation. These integrated functions of biological mechanisms make it legitimate to expect several relationships among temperamental traits – for instance, between emotional reactivity and activity (according to RTT, the intensity of activity should be somehow proportional to emotional reactivity). This also means that the most frequent configuration of temperamental traits should be harmonious, which is reflected by two basic structures (types) of temperament. The lack of concordance among traits, especially between those reflecting the capacity for stimulation processing and activity, is characteristic for disharmonious types of temperament (leading to decreased/increased stimulation). Based on RTT, these configurations may be considered *temperamental risk factors* (TRF) for mental and/or somatic disorders.

In general, a TRF refers not only to the configuration of traits, but also to a situation when a person is faced with situations whose stimulating intensity exceeds his/her stimulation processing capacity. In a short-term perspective it leads to strain, which means that temperament

codetermines (moderates) individual reactions to stress. In cases of prolonged stress, it can be considered a risk factor for mental/somatic consequences of stress. A TRF is formally defined as:

> any temperamental trait or configuration of traits that in interaction with other factors acting excessively, persistently or recurrently ... increases the risk of developing behavior disorders or pathology or that favors the shaping of maladjusted personality (Strelau 2008, p. 131).

All of the studies in which FCB-TI was applied were aimed at verifying the theoretical implications of RTT.

Formal Characteristics of Behavior – Temperament Inventory (FCB-TI): History, Construction, and Results

Brief History of FCB-TI

FCB-TI was originally developed to assess temperamental traits in the Polish population. The inventory was constructed in the 1990s on the basis of a theoretical strategy, which comprised the preparation of subscales measuring twelve theoretical components of temperament scales. The exploratory factor analysis, conducted separately on the temporal and energetic components, resulted in the construction of six scales, corresponding to the six RTT traits and comprising a total of 120 items (20 items in each scale) with a "yes/no" response format. The scores on the scales range from 0 to 20 points and indicate the intensity of the temperament traits measured. The Polish version of FCB-TI was used in all studies aimed at verifying the RTT postulates, which served as validation criteria for the scales. From the very beginning, FCB-TI was applied in cross-cultural studies, which led to the development of FCB-TI versions designed for assessing temperament in the populations of several other countries.

Cross-cultural Studies on FCB-TI

The main idea of cross-cultural studies on FCB-TI was based on the assumption that temperamental traits are universal, which means they can be identified regardless of the specificity of the

cultural background. Apart from the Polish samples, the project involved 11 cooperating contributors from seven countries: Germany, Italy, The Netherlands, Russia, South Korea, Ukraine, and the USA. The selected countries strongly differed in terms of socioeconomic and cultural indices. The procedure started with the translation of a pool of 381 items and the adaptation of their contents to the cultural specificity of each country. In samples comprising a total of 3723 subjects, the investigators developed two versions of FCB-TI, reflecting the distinction, known to cross-cultural psychology, between combined etic-emic and derived-etic versions. The term *etic* refers to culture-common aspects of the inventory and *emic* refers to culture-specific ones.

The combined etic-emic versions were developed independently for each culture in accordance with the procedure applied in the Polish study. As a result, for each country the FCB-TI comprises a set of culture-common as well as culture-specific items. These versions were applied in studies on temperament conducted independently in each country. The same procedure was applied in the development of the recently published Finnish, Chinese, and South African versions of FCB-TI, which were constructed aside from the main project.

The derived-etic version of the inventory was developed with the assumption that universal traits should be investigated by means of universal instruments, measuring the culture-common aspects of traits. With some exceptions, not to be discussed here, the procedure was essentially the same as that applied in the case of the combined etic-emic versions. The results obtained in the analysis of the derived-etic version – constructed simultaneously in all eight samples – provided a very valuable argument supporting the cross-cultural universality of temperament.

Cross-cultural and Demographic Universality and Differences in Temperament, Assessed by FCB-TI

The studies on FCB-TI demonstrated the cultural and demographic (gender and age) *universality* of temperament. This finding was obtained in analyses of temperamental types.
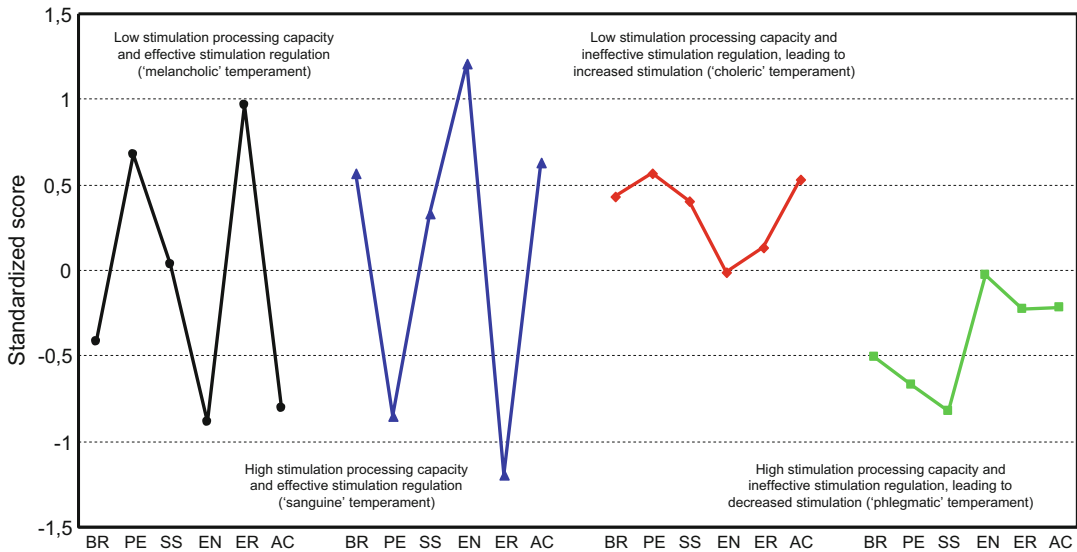
The Basic Types of Temperament

Based on RTT, we expected that it was possible to distinguish four types of temperament by clustering the profiles of FCB-TI scores:

- Temperament with high stimulation processing capacity and a tendency to search for stimulation – harmonious structure, characterized by high briskness, low perseveration, low emotional reactivity, high endurance, and high activity (no predictions were made for sensory sensitivity). This type can be seen as corresponding to the *sanguine temperament* in the ancient Greek typology.
- Temperament with low stimulation processing capacity and a tendency to avoid stimulation – harmonious structure, characterized by low briskness, high perseveration, high emotional reactivity, low endurance, and low activity – *melancholic temperament*.
- Temperament with high stimulation processing capacity but ineffective regulation of stimulation, leading to decreased stimulation – disharmonious structure, characterized by low briskness, low perseveration, low emotional reactivity, high endurance, and low activity – *phlegmatic temperament*.
- Temperament with low stimulation processing capacity and ineffective regulation of stimulation, leading to increased stimulation – disharmonious structure, characterized by high briskness, high perseveration, high emotional reactivity, low endurance, and high activity – *choleric temperament*.

A very consistent classification was obtained in the analysis of data for the whole cross-cultural sample in the derived-etic version of FCB-TI. The standardized profiles of FCB-TI scale scores are depicted in Fig. 1.

All types were identified in each of the investigated samples, which indicates that they are also universal. The distinction of four basic types is especially important due to the expected adaptive role not only of each trait alone, but mainly of the interactions of traits in the processing and regulation of stimulation.

Formal Characteristics of Behavior: Temperament Inventory, Fig. 1 Profiles of temperament traits for basic four types (cross-cultural sample and "derived-etic" FCB-TI version). Note: *BR* briskness, *PE* perseveration, *SS* sensory sensitivity, *EN* endurance, *ER* emotional reactivity, *AC* activity

## Cross-culture and Demographic Differences

The universality of temperament does not imply the lack of differences between cultures, genders, and age groups. The high diversity of scale scores for the derived-etic version of FCB-TI was obtained for cultures. These differences were associated with socioeconomic and cultural indices of eight countries.

Gender-related differences were rather consistent in all samples. Females typically exhibited higher levels of emotional reactivity, sensory sensitivity, and perseveration but lower levels of briskness, endurance, and activity than males. Changes in temperamental traits were also found for age. Differences among age cohorts in the cross-cultural sample are depicted in Fig. 2. Similar age and gender-related differences were found in other several nonclinical and clinical samples.

Behavior Genetic Studies on Temperament Traits Assessed by FCB-TI

The postulate of biological roots of temperamental traits, assessed by FCB-TI, was mainly verified by *behavior genetic (*BG) studies. Their samples comprised family and twins reared together, based on the assumption that there is genetic resemblance among family members. Children share 50% of genes with each parent, which suggests that if genes influence temperament, then there must be a substantial similarity between parents and their offspring. Similar expectations refer to twins. Monozygotic twins (MZ) share 100% of genes, and dizygotic twins (DZ) share 50% (like ordinary siblings). If the similarity in temperament is twice as high in MZ as in DZ twins, this suggests the impact of *additive genetic variance* (the part of genetic endowment that accounts for the resemblance between parent and offspring) shared among family members. If the phenotypic similarity in temperament is more than twice as high, this proportion suggests the role of *nonadditive genetic variance* (dominance and epistasis – they are not transmitted from parent to offspring). On the other hand, identical similarity in temperament between MZ and DZ twins indicates that the resemblance of temperamental traits in twins may be caused by common environmental variance (i.e., the same physical and social environment). Finally, the remaining variance (i.e., individual differences) in temperamental traits is usually attributed to nonshared environmental factors, comprising *variance of measurement error*, which is responsible for the
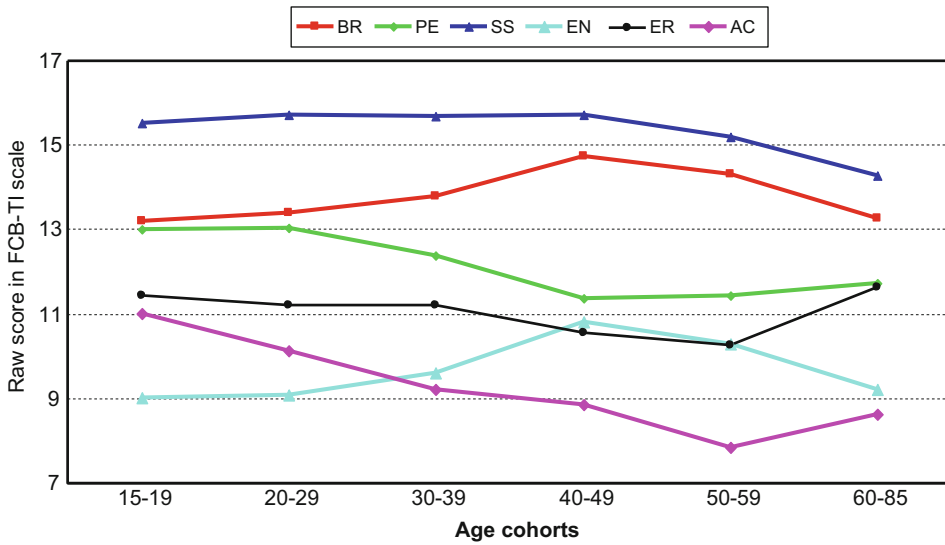
Formal Characteristics of Behavior: Temperament Inventory, Fig. 2 Age related differences (cross-cultural sample and "derived-etic" FCB-TI version). Note: Meaning of abbreviations see Fig. 1

dissimilarity of twins. The advantage of BG quantitative studies is that they make it possible to estimate the proportion of variance in temperamental traits, which may be attributed to genetic or environmental sources or to their combinations. The *heritability index* (h^2), which is based on additive genetic variance, is the most popular measure, indicating the contribution of genes and environment to individual differences in traits (and behavior).

The results of several studies conducted on temperamental traits postulated by RTT indicate a substantial resemblance between parents and offspring as well as between MZ and DZ twins reared together. The most extended study was conducted in the Bielefeld–Warsaw Twin Project (see Strelau 2008). Its sample comprised 1555 pairs of German and 546 of Polish twins reared together, aged 14–80 years. The twins completed the combined etic-emic versions of FCB-TI in the form of self-report and were assessed by two independent peers. Based on self-report, the broad heritability (h^2) of the six RTT temperament traits reached an average score of 46%, with no significant differences between Polish and German samples. The remaining 54% of the variance in temperamental traits was due to nonshared environmental variance (comprising error variance, found to be about 20% for the FCB-TI scales). In joint analysis of both ratings, the heritability increased, on average, to 61% and 66% for common variance in self-report and in averaged peer ratings, respectively. These findings clearly indicate the impact of genetic factors on temperament; they also point to the substantial influence of specific environmental factors (with no effects of common environment). The results of investigations concerning twins and family redirected BG studies on temperamental traits into molecular genetics. The results of some studies revealed association between several polymorphisms in dopamine genes (transmitters or receptors) and some temperamental traits, such as emotional reactivity or sensory sensitivity. These findings based on molecular genetics confirmed the conclusions stemming from studies of twins and family regarding the genetic roots of temperament as defined in RTT and measured by FCB-TI.

Reliability of Assessment of Temperamental Traits by FCB-TI Scales

In psychometrics, *reliability* refers to the extent to which scale scores are biased by measurement error, stemming from inconsistency among instrument indices or assessment occasions. Reliability is estimated by the *reliability coefficient* (one

assessment) or by *intraclass correlation* (ICC; at least two occasions), ranging from 0 to 1 (perfect consistency). In reference to personality/temperament inventories, the minimal value of the reliability coefficient should be 0.70, but the value 0.80 should be considered as a standard. The magnitude of test-retest correlations depends on the length of the scale and its internal consistency, the respondents' age during the first administration of the inventory (estimations are higher for older subjects), and test-retest interval (lower estimations are obtained in the case of longer break). It is suggested that retest studies done within a year estimate reliability, while those conducted after a longer period assess temporal stability. The typical stability estimated by intraclass correlation for personality/temperament scales is about 0.50.

Internal Consistency of FCB-TI Scales

In FCB-TI studies, the investigators applied mostly the Cronbach's *alpha* coefficient (a measure of scale reliability) to estimate *internal consistency*. The results obtained for combined etic-emic versions were, on average, around 0.80, higher than those obtained for derived-etic versions – 0.76. The highest reliability was found for the Endurance scale and the lowest for the Sensory Sensitivity scale. Similar estimations were found in subsequent studies done on several clinical and nonclinical samples (the average estimation was 0.80).

Test-Retest Reliability

Test-retest reliability studies were done mostly using the combined etic-emic approach (Polish and German versions). ICC ranged from 0.68 to 0.85 (with an interval of 2 weeks), from 0.55 to 0.83 (6 months), from 0.60 to 0.72 (1 year), and from 0.58 to 0.63 (2 years) for the six scales in the Polish samples of adolescents and adults (the mean values being 0.80, 0.73, 0.67, and 0.54, respectively). Very impressive results were obtained in a German study in which FCB-TI was administered to a sample of younger (aged 15–30) and older (31–67) twins, measured again 13 years later (Kandler et al. 2013). In the case

of self-report, mean ICC was 0.55 and 0.64, for peer ratings – 0.44 and 0.53 for younger and older samples, respectively. The authors also found that phenotypic temporal consistency was higher in the older sample due to the stronger effect of genetic and environmental continuity (i.e., the continuity of genetic impact and cumulative and stabilizing environmental influences).

Validity Studies on FCB-TI Scales

All studies explaining the origins of the measured traits, investigating their associations with other constructs/instruments, or making predictions based on traits are considered as aimed at estimation of the *validity* of an assessment with a given inventory or other diagnostic instrument. The studies presented above can also, partly, be classified as validity-oriented. In the subsection below, we summarize the studies on the congruence (consistency) between FCB-TI scales and other instruments or personality constructs as well as studies aimed at diagnosing or predicting mental and somatic disorders.

Interrater Agreement and Congruence Between Self-report and Peer Ratings of Temperamental Traits

It is suggested that "observability" is a distinctive criterion of temperament traits, which implies they can be assessed by means of self-report and peer-rating (or parent/teacher ratings in the case of children). The typical level of congruence between self-report and peer ratings is reflected by a correlation of about 0.50 for personality inventories. Correlations close to 0.50 were found in the Bielefeld–Warsaw Twin Project (see Strelau and Zawadzki 2008). The mean congruence between peers was 0.40 for the Polish FCB-TI and 0.37 for the German version, while the mean congruence between self-report and peer-rating was 0.49 and 0.45 for the two versions, respectively (scores were corrected for gender and age). The lowest congruence was found for sensory sensitivity and the highest for activity, which seems to be the most easily "observable" trait.

Temperamental Traits Assessed by FCB-TI and Other Temperament/Personality Inventories

During 25 years, scholars have examined the relations between the temperamental traits assessed by FCB-TI and several other constructs, such as time perspective, social competences, synesthesia, morningness-eveningness, positive and negative affect, intelligence, working memory. The most extended studies were focused on relationships among traits assessed by FCB-TI and other temperament/personality dimensions.

Reviewing models of temperament, Strelau (1998) suggested several similarities in the biological mechanisms and behavioral content covered by different temperament dimensions. Studies in which FCB-TI scales were correlated with other instruments confirmed this idea. In studies referring – apart from FCB-TI – to the Pavlovian Temperament Survey, the Revised Dimensions of Temperament Survey, the EAS Temperament Survey, the Eysenck Personality Questionnaire-Revised, or the NEO-Five Factor Inventory (the whole set amounting to a total of 33 scales), exploratory factor analyses revealed five factors, corresponding to the so-called Big Five factors of personality (Extraversion, Neuroticism, Openness, Conscientiousness, and Agreeableness). These factors were identified as: Neuroticism/Emotionality, Extraversion/activity, Agreeableness/Psychoticism, Conscientiousness/Task Orientation, and Openness/Rhythmicity. FCB-TI scales were located mainly in two "arousability" factors: Neuroticism/Emotionality (emotional reactivity, endurance, perseveration, and briskness) and Extraversion/Activity (activity and, to smaller extent, briskness), with secondary loadings of briskness and endurance on the Conscientiousness/Task Orientation factor. Sensory sensitivity showed only minor loadings on the Agreeableness/Psychoticism and Openness/Rhythmicity factors, since it reflects a specific behavioral phenomenon, only partly covered by other temperamental/personality dimensions (see Zawadzki and Strelau 2010). These results suggest that temperament essentially refers only to the part of personality that is influenced by biological factors, which was confirmed by a German behavior genetic study of genetic and environmental covariances between the Big Five personality dimensions and RTT traits (Kandler et al. 2012).

The Relations Between Temperamental Traits Assessed by FCB-TI and Reactions to Stress as Well as Somatic and Mental Disorders

RTT assumes that temperament moderates behavior in everyday life situations. However, the main stream of studies focused on the role temperamental traits as moderators of stress and viewed behavioral/somatic problems as consequences of interactions between stressors and temperament.

Temperamental Traits Assessed by FCB-TI and Mental Disorders

Several studies assessed associations between temperamental traits and mental disorders. They present comparisons of clinical and nonclinical groups as well as correlational studies of FCB-TI and instruments diagnosing mental disorders in mixed groups comprising healthy subjects and persons with symptoms of mental disturbances. The studies were mainly focused on anxiety and mood disorders, and they were replicated in a study in which temperamental traits were correlated with symptoms of the whole spectrum of mental disorders distinguished in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) and in the *International Statistical Classification of Diseases and Related Health Problems* (ICD-10). The results showed that the patterns of correlations of FCB-TI traits with symptoms of schizophrenia, depression, dysthymia, acute anxiety, panic attacks, phobias, generalized anxiety disorder, obsessive-compulsive disorder, and eating disorders are very similar (Strelau and Zawadzki 2012). All disorders were characterized by high emotional reactivity and perseveration and by low levels of activity, endurance, briskness, and sensory sensitivity; they reflected a temperament with low stimulation processing capacity and a tendency to avoid stimulation. The manic-hypomanic syndrome was associated with the opposite pattern, with the highest positive correlation in the case of activity

and briskness, but also negative correlation in the case of endurance (a temperament with high stimulation processing capacity combined with ineffective regulation of stimulation, leading to increased stimulation). A longitudinal study conducted in Finland (Hintsa et al. 2016) showed that temperamental traits (high perseveration, high emotional reactivity, and low endurance) predict the intensity of depressive symptoms.

Another study related temperamental traits to personality disorders, described on Axis II of the DSM-IV classification. The correlations of FCB-TI scales were averaged across three instruments diagnosing personality disorders: the Structured Clinical Interview for DSM-IV Axis II Disorders (SCID-II), the Personality Beliefs Questionnaire, and TALEIA-400A, applied in samples comprising a total of about 2000 subjects. The correlations of temperamental scales with measures of symptoms of ten personality disorders are depicted in Fig. 3.

Although the multiple correlations were different for particular disorders (the highest for avoidant, dependent, or borderline disorders and the lowest for obsessive-compulsive personality disorder), the disorders were clearly classified into two clusters (indicated by black vs. red lines in Fig. 3). The first cluster, consisting of paranoid, schizoid, schizotypal, avoidant, dependent,

obsessive-compulsive, and borderline personality disorders, showed high similarity with the configuration of FCB-TI traits typical for low stimulation processing capacity and a tendency to avoid stimulation. The second cluster comprised antisocial, histrionic, and narcissistic personality disorders and was classified into one category with the temperament characterized by a high stimulation processing capacity combined with ineffective regulation of stimulation, leading to increased stimulation (see also Fig. 1). Both clusters refer to the distinction between internalizing and externalizing disorders in DSM-IV. They also indicate that temperament does not allow for distinguishing particular disorders but only constitutes the basis for the development of major classes of personality disorders.

Temperamental Traits and Stress

Several studies conducted in Strelau's laboratory demonstrated that temperament codetermines the level of performance as well as emotional reactions to job- or school-related stressful situations. A study conducted in Finland has demonstrated that higher emotional reactivity and perseveration and lower briskness, endurance, and activity lead to higher long term job strain, higher job demands, and lower job controls (Hintsa et al.
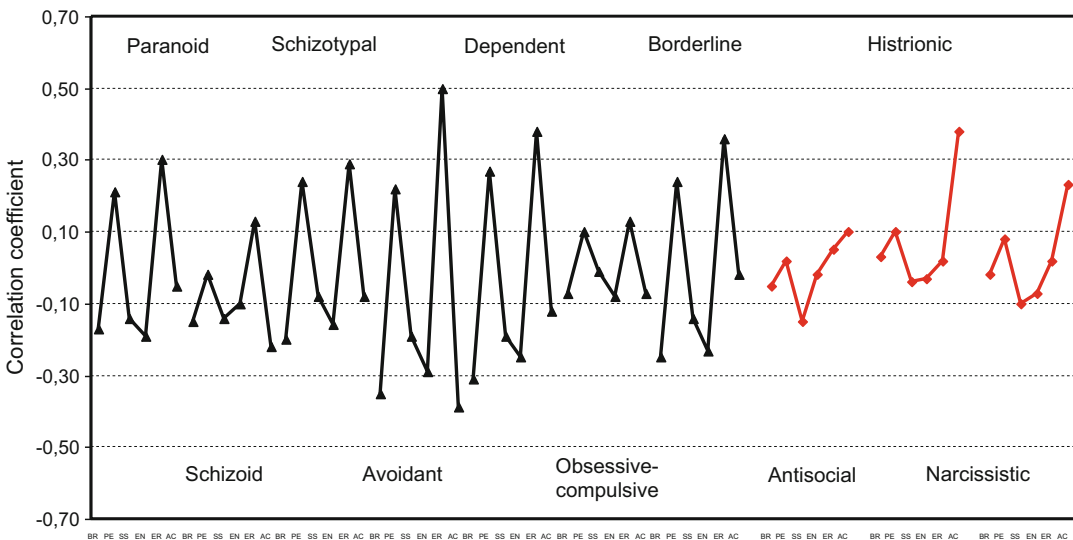
Formal Characteristics of Behavior: Temperament Inventory, Fig. 3 Profiles of correlations between FCB-TI scales and personality disorders. Note: Meaning of abbreviations see Fig. 1

2013). The largest number of studies on FCB-TI concerned extreme stress resulting from threat to life, injuries, and strong negative emotions – that is, traumatic events (see Strelau 2008). A recent meta-analysis of findings obtained in several studies of people who had experienced trauma such as flood, home fire, or motor vehicle accident (MVA), people suffering from serious diseases (AIDS), and people exposed to job-related traumas (firefighters, soldiers) showed that the intensity of symptoms of posttraumatic stress disorder (PTSD) is the most strongly associated with emotional reactivity (estimated overall correlation: 0.33) and that it is associated with other traits as well: endurance (-0.25), briskness (-0.25), perseveration (0.20), activity (-0.17), and sensory sensitivity (-0.16). The results of particular studies also indicate that emotional reactivity in interaction with exposure to trauma (a complex index comprising threat to life, peritraumatic emotions, etc.) is not only related to a higher level of PTSD symptoms, but also predicts change in the intensity of symptoms over time (with interaction in posttraumatic MVA-related stressors; see Zawadzki and Popiel 2012). The study showed also that briskness predicts change in PTSD symptoms, while another investigation demonstrated that this trait is the main predictor of the effectiveness of psychotherapy in the treatment of PTSD. These studies applied a cross-sectional or longitudinal design with the assessment of all variables in the posttraumatic period. Two studies, conducted on battalions of soldiers participating in Operation Iraqi Freedom and NATO mission in Afghanistan, helped overcome this limitation – the highest predictions were obtained for emotional reactivity (from 0.20 to 0.30) and endurance (-0.40 to -0.30), assessed before and the PTSD symptoms measured after the completion of both missions.

Conclusion

FCB-TI studies conducted during the past 25 years revealed satisfactory reliability and validity properties of scales of this inventory, in line with theoretical expectations and standards for personality measures. Assessments based on the FCB-TI helped to explain many psychological phenomena and to reformulate some RTT assumptions. Many questions still need to be answered; one of them concerns the adaptive significance of the "mysterious" type of temperament with high stimulation processing capacity but ineffective regulation of stimulation. The studies also disclosed some theoretical and psychometric defects of the FCB-TI scales, which were corrected in a revised version of this inventory. For over two decades, FCB-TI served as a valuable tool in the assessment of temperament traits. One may expect that FCB-TI(R) will contribute to temperament studies as well as FCB-TI did. As in Freddie Mercury's song: *Show must go on. . . .*

Cross-References

▶ Arousability
▶ Behavioral Genetics
▶ Big-Five Model
▶ Cross-Cultural Research
▶ EASI Temperament Survey
▶ Exploratory Factor Analysis
▶ Externalizing Behavior
▶ Eysenck Personality Profiler
▶ General Factor of Personality
▶ Heritability of Personality Traits
▶ Internalizing Behaviors
▶ NEO Inventories
▶ Pavlovian Temperament Survey
▶ Personality Disorder
▶ Post-Traumatic Stress Disorder
▶ Temperament
▶ Twin Studies

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Forthright

▶ Assertiveness

Foster, Joshua D.

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Joshua D. Foster is a faculty member at the University of South Alabama in Mobile, Alabama. He is a social-personality psychologist who conducts research primarily on narcissistic personality.

Early Life and Educational Background

Foster was born on August 19, 1973, in Washington, D.C. He earned his B.S. in psychology from the Old Dominion University in 1996 and his M.A. in experimental psychology from Towson University in 2000. He earned his Ph.D. in social psychology from the University of Georgia in 2005 under the direction of W. Keith Campbell.

Professional Career

Foster has taught in the Psychology Department at the University of South Alabama since 2005. He has also taught as a visiting professor of nursing at the Louisiana State University. He has authored dozens of publications during his career which have appeared in outlets such as *Science*, *Psychological Science*, *Journal of Personality*, and *Personality and Social Psychology Bulletin*. His research has been cited several thousands of times in the scholarly literature. He serves on the editorial board of the *Journal of Personality*.

Research Interests

Foster's primary line of research focuses on narcissistic personality. His research has attempted to answer the following questions: What is narcissism and how should narcissism be measured? Who is more or less narcissistic and has our society become more narcissistic over time? What are the benefits and costs of narcissism, both to the self and others? What are the motivational underpinnings of narcissism?

Foster was the first to empirically demonstrate a negative association between narcissism and age. This finding has been replicated in numerous independent samples, including cross-cultural samples collected in the United States and New Zealand. This negative association between narcissism and age can be explained by two different

mechanisms: (1) as people grow older, they become less narcissistic, and/or (2) people born in earlier years are less narcissistic than people born more recently. The first (developmental) explanation requires longitudinal methods and has not been tested to date. The second (generational) explanation was tested in what has become Foster's most highly cited research.

Working in collaboration with Jean Twenge, Sara Konrath, Keith Campbell, and Brad Bushman, Foster and colleagues conducted a cross-temporal meta-analysis on the most widely used measure of narcissism, the Narcissistic Personality Inventory (NPI). This methodology took advantage of two limitations of the narcissism empirical literature: almost all studies on narcissism (1) use the NPI as the primary and oftentimes only measure of narcissism and (2) sample American undergraduate college students. Therefore, it was possible to analyze the average NPI scores from narcissism studies to estimate how NPI scores changed over the years in American college students. The results of this analysis demonstrated a significant increase in NPI scores among American college students between the years 1979 and 2006. This research garnered widespread attention in both the scholarly and popular media. The results of this research were questioned by some researchers, most notably, Kali Trzesniewski and Brent Donnellan. A lively and at times contentious debate ensued that produced several highly cited papers on the topic.

Foster is also known for his theoretical model of narcissism and motivation called the unmitigated approach model (UAM). According to the UAM, narcissists are strongly motivated to attain rewards (strong approach motivation) and only weakly motivated to avoid punishments (weak avoidance motivation). The basic tenets of this model have been replicated numerous times, although more recent research suggests that the link between narcissism and approach motivation is stronger than that between narcissism and avoidance motivation. Several studies have used the UAM to explain thoughts and behaviors associated with narcissism. Most of these studies incorporate mediational analyses that position approach and avoidance motivation as mediators between narcissism and the outcome in question. These studies show, for

example, that narcissists appear to engage in risk-taking behavior not because they are unaware of the potential costs of taking risks but rather because they find the potential benefits stemming from risk-taking to be irresistible.

In addition to Foster's research on narcissistic personality, he has also been actively involved in a large-scale collaborative effort to improve the quality of research conducted in psychology. His work with the Open Science Collaboration (OSC) resulted in the largest ever study conducted on the replicability of psychological science. The results of this research, published in the journal *Science*, revealed that less than half of the 100 studies targeted by the OSC, all published in very high-impact journals, were successfully replicated. This research has had an enormous impact on the discipline of psychology and has led to widespread changes in terms of journal policies (e.g., more journals are publishing replication studies) and research practices (e.g., researchers are more aware of how seemingly innocuous research decisions, such as when to stop data collection, can impact study outcomes and future replicability). The paper was a runner-up for Breakthrough of the Year by *Science Magazine* and ranked no. 8 of Top 100 Stories of 2015 by *Discover Magazine*.

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Four-Factor Theory of Personality, A

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Introduction

Aelius Galenus (129–200/216 AD), commonly referred as Galen of Pergamon or simply as Galen, was a Greek physician and philosopher in the Roman Empire. Earlier, Hippocrates (460–370 BC) had proposed that there were four bodily humors (blood, yellow bile, black bile, and phlegm), and imbalances in these humors result in human moods. Galen associated each of these four humors with a personality type: sanguine (blood), phlegmatic (phlegm), choleric (yellow bile), and melancholic (black bile).

Modern psychologists have rejected the connection between the four temperaments and the bodily humors, but they have accepted that people may be characterized by the four temperaments proposed by Galen. They have also sought to understand them in modern terms. For example, Wundt (1903) used the two dimensions of changeability/unchangeability and emotional/unemotional to produce the four types:

Choleric	Changeable and emotional
Melancholic	Unchangeable and emotional
Sanguine	Changeable and unemotional
Phlegmatic	Unchangeable and unemotional

Allport (1937) proposed two twofold dichotomies: (a) pleasant versus unpleasant emotions and excited versus calm and (b) deep versus shallow emotions and broad (reacts to a broad range of objects and situations) versus narrow emotions.

Choleric	Unpleasant and excited	Deep and broad
Melancholic	Unpleasant and calm	Deep and narrow
Sanguine	Pleasant and excited	Shallow and broad
Phlegmatic	Pleasant and calm	Shallow and narrow

Other psychologists have proposed their own typology of personality types and, subsequently, sought to match them with Galen's four temperaments. For example, the German psychologists, Heymans and Wiersma (1909), proposed three basic dimensions of behavior: emotional or nonemotional, active or passive, and primary or secondary functioning, a dimension referring to reactivity to external stimuli (McCurdy 1961). These three basic dimensions give us eight personality types, rather than Galen's four, but Heymans (1908) identified three of them with Galen's types:

Choleric	Emotional, active, primary
Phlegmatic	Nonemotional, active, secondary
Sanguine	Nonemotional, active, primary
Impassioned	Emotional, active, secondary

Impassioned would then match Galen's melancholic type.

Eysenck (1967) proposed three dimensions of personality (extraversion/introversion, neuroticism-stability, and psychoticism), but he saw the first two of his dimensions as matching Galen's four types.

Choleric	Extraverted and neurotic
Phlegmatic	Introverted and stable
Sanguine	Extraverted and stable
Melancholic	Introverted and neurotic

Pavlov (1928) discovered that dogs differed greatly in their classical conditioning behavior. He proposed two types of nervous systems to account for these differences (excitatory and inhibitory) and two modes (steadily quiet and docile vs. alternation between excitatory states and inhibitory states), and he identified these four types with Galen's temperaments:

Choleric	Excitatory
Phlegmatic	Inhibitory
Sanguine	Alternating
Melancholic	Steady

Adler (cited in Ansbacher and Ansbacher 1956) described four types of people: ruling-dominant, getting-leaning, avoiding, and socially useful. Ansbacher and Ansbacher (1956) categorized these four types using two dimensions, social interest and activity, and matched them to Galen's typology:

Choleric	Low social interest and high activity
Melancholic	Lowest social interest and lowest activity
Phlegmatic	Low social interest and low activity
Sanguine	High social interest and high activity

Ansbacher and Ansbacher noted that there was no Adlerian type for high social interest/low activity.

Stagner (1948) proposed two basic dimensions of behavior: excitement-depression and withdrawal-approach. Diamond (1975) matched these to Galen's types as follows:

Choleric	Withdrawal and excitement
Melancholic	Withdrawal and depression
Phlegmatic	Approach and depression
Sanguine	Approach and excitement

Jung (1923) proposed two attitudes (extraversion/introversion) and four functions (sensing/intuiting and thinking/feeling) to describe individual differences in functioning, and Myers (1962) added two more functions (judging/perceiving) in her type indicator. This leads to 16 personality types. Keirsey and Bates (1978) matched four of these types to Galen's temperaments:

Choleric	Intuiting and feeling
Melancholic	Sensing and judging
Phlegmatic	Intuiting and thinking
Sanguine	Sensing and perceiving

Conclusion

It is interesting that a classification of personality proposed some 2000 years ago has been accepted by modern psychologists. Even when they propose different typologies, they have often endeavored to match their typologies to that proposed by Galen. (There are, of course, proposals for personality traits that have more than two dimensions, for example, the Big Five (Costa and McRae 1992), but these generate too many types to fit into Galen's model. The Big Five would generate 2^5 types (32 types).)

Cross-References

▶ Big-Five Model

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Early Life and Educational Background

Marc A. Fournier was born on April 7, 1973, in Montreal, Quebec, Canada. Marc completed his Bachelor of Arts degree with first class honors in psychology at McGill University in 1995. His senior undergraduate thesis was supervised by Richard Koestner. Marc then completed his Ph.D. in clinical psychology at McGill University in 2002 under the supervision of Debbie Moskowitz. His doctoral thesis, which concerned the agentic and communal dimensions of socio-emotional functioning, was awarded both the Governor General's Gold Medal from McGill University and the J. S. Tanaka Dissertation Award from the Association for Research in Personality (ARP).

Professional Career

Marc A. Fournier was hired as an assistant professor in the Department of Psychology at the University of Toronto Scarborough in 2003, where he was awarded tenure and promoted to the rank of associate professor in 2008. Marc has authored or co-authored 30 peer-reviewed articles, 7 book chapters, and 70 conference presentations. His work has appeared in such journals as the *Journal of Personality and Social Psychology*, the *Personality and Social Psychology Bulletin*, and the *Journal of Social and Clinical Psychology*. Marc currently serves on the editorial boards for the *Journal of Personality and Social Psychology* and the *Review of General Psychology* and previously served as President of the Society for Interpersonal Theory and Research (SITAR).

Research Interests

Marc A. Fournier's interests include personality integration, person × situation interactions, and interpersonal processes and dynamics. Marc is principally interested in the integrative processes through which people enact a unified sense of self and the patterns of interpersonal interaction that support these integrative processes. Marc uses a range of methods as part of this research, including the intensive repeated measurement of individuals in their naturalistic settings.

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Fragile Self-Esteem

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Synonyms

Contingent self-esteem; Defensive self-esteem; Unstable self-esteem

Definition

Fragile self-esteem refers to feelings of self-worth that are uncertain or unstable and based on unrealistically positive self-views that are easily challenged. People with fragile self-esteem may seek frequent validation or reassurance of their positive self-views. They may be preoccupied with protecting and enhancing their self-esteem, often at the expense of other people. Fragile self-esteem contrasts with secure self-esteem, which refers to feelings of self-worth that are confidently held and based on more realistic self-views. Individuals with secure self-esteem recognize their shortcomings and are disappointed by failure, but still feel positively toward themselves.

Introduction

Researchers and the lay public alike have a longstanding interest in self-esteem. Self-esteem – the overall positivity of self-feelings or one's evaluation of the self – is one of the most commonly studied topics in all of psychology and is prominently featured in self-help books and popular websites. This interest stems in part from the belief that high self-esteem is fundamental to well-being, happiness, and productivity. High self-esteem is indeed associated with greater psychological well-being and persistence in the face of challenges (though perhaps not other important outcomes, such as academic performance or career success; Baumeister et al. 2003). Yet high self-esteem has also been implicated in a variety of negative outcomes, such as aggression and violence, prejudice, and self-serving biases (see Jordan and Zeigler-Hill 2013). These somewhat contradictory correlates of self-esteem have contributed to growing interest in how self-esteem may assume different forms with different psychological implications. Moving beyond a strict focus on self-esteem level (i.e., whether it is high or low), researchers have explored how high self-esteem can assume relatively *fragile* or *secure* forms (Jordan and Zeigler-Hill 2013; Kernis 2003). There is increasing evidence and recognition that high self-esteem is heterogeneous and that not all people with high self-esteem are psychologically equivalent.

Although research interest in this distinction has flourished during the last two decades, the basic idea has its origins in earlier psychological theories. Humanistic psychologists such as Carl Rogers (1961) described a subset high self-esteem individuals who have especially secure self-views, because their feelings of self-worth are based on unconditional acceptance, rather than the internalization of conditional standards imposed by significant others. Some parents, for example, may impose (perhaps inadvertently) conditions of acceptance on children through actions such as withholding love or affection if these conditions are unmet. When the child internalizes these expectations for acceptance, they

may feel self-worth only when they meet self-imposed standards of performance or approval. Several other theorists described a subset of high self-esteem individuals who profess high self-esteem and positive self-images that mask underlying self-doubts and insecurities (see Bosson et al. 2008). These threads of theory and research were gathered together by Kernis (2003) who outlines differences between secure and fragile forms of high self-esteem in detail, summarizing approaches to distinguish them empirically.

Empirically, to distinguish fragile and secure self-esteem requires moving beyond traditional self-reports of self-esteem level. Self-report measures of self-esteem typically ask respondents to indicate the extent of their agreement with statements such as, "I feel that I'm a person of worth, at least on an equal plane with others" (Rosenberg 1965). Such measures are good at assessing one's level of self-esteem, but poor at distinguishing between the secure and fragile forms of self-esteem. Individuals with both secure and fragile high self-esteem score similarly on such measures, because they both have high self-esteem. Consequently, researchers have focused on additional aspects of self-esteem in order to distinguish its fragile and secure forms. Specifically, research has focused on three major indicators of the fragility of self-esteem: (1) whether self-esteem is unstable, (2) whether it is contingent, and (3) whether it accompanied by low implicit self-esteem – more automatic, less controllable self-evaluations (Kernis 2003; Jordan and Zeigler-Hill 2013).

Contingent Self-Esteem

Consistent with Rogers' (1961) humanistic theorizing about conditional and unconditional bases of self-worth, one approach to distinguishing fragile and secure self-esteem focuses on whether self-esteem is contingent or not (Kernis 2003). Although people have characteristic levels of self-esteem that remain fairly stable across time (i.e., trait self-esteem), they also experience fluctuations in momentary self-esteem (i.e., state self-

esteem). One may feel higher self-esteem after succeeding at a difficult task, for example, or lower self-esteem after failing. People differ, however, in the extent to which their self-esteem fluctuates in response to events in their lives. Self-esteem is contingent to the extent that it depends on meeting self-imposed standards of performance, acceptance, or approval in order to be maintained. If these standards go unmet, self-esteem suffers. Because of this dynamic, contingent self-esteem is considered to be a fragile form of self-esteem.

Contingent self-esteem can be conceptualized globally, such that some individuals have more contingent self-esteem than others (Kernis 2003). Contingent self-esteem can also be conceptualized as being domain-specific, such that people may differ in terms of the domains on which they base their self-esteem. Crocker and Wolfe (2001) examined a variety of domains that people may stake their self-esteem on, including academics, appearance, social approval, religious faith, behaving virtuously, and family support. Students who base their self-esteem on academics, for example, display more significant ups and downs in their state self-esteem based on the grades they receive for exams and term papers (Crocker et al. 2003).

Unstable Self-Esteem

A somewhat different, though complementary, approach to identifying fragile self-esteem is to assess the extent to which one's self-esteem fluctuates across time (Kernis 2003; Kernis et al. 1989). Some people's state self-esteem fluctuates markedly, whereas others display little variation in state self-esteem. Self-esteem level is typically assessed by administering a self-esteem scale at a single point in time, asking respondents how they feel about themselves "in general." In contrast, self-esteem stability is assessed by administering multiple state self-esteem scales, assessing how people feel about themselves "right now" or "at this moment," across multiple occasions (often once a day for 1 or 2 weeks). The extent to which an individual's state self-esteem varies

during this period (indexed by their within-person standard deviation) is taken as a measure of their characteristic self-esteem stability. Unstable high self-esteem reflects a form of fragile self-esteem, whereas stable high self-esteem reflects a form of secure self-esteem. Notably, contingent self-esteem may contribute to instability in self-esteem. Standards in some domains of contingency, moreover, may be relatively difficult to consistently meet (e.g., academics, others' approval, appearance), causing greater instability in self-esteem than standards that can be more consistently met (e.g., God's love, family support, virtuous behavior; Crocker et al. 2003). As a result, there is some conceptual and empirical overlap between unstable and contingent self-esteem.

Low Implicit Self-Esteem

The third major approach to distinguishing secure and fragile high self-esteem is to examine whether individuals who report having high self-esteem also demonstrate high or low implicit self-esteem (Kernis 2003). A number of early theories suggest that some people espouse highly positive self-views as a defensive reaction to conceal underlying insecurities and negative self-feelings (see Jordan and Zeigler-Hill 2013). More recently, researchers have begun to study implicit self-esteem, which was initially viewed as highly efficient self-evaluations that exist largely outside of awareness. It may be most accurate to say, however, that implicit self-esteem represents the strength of cognitive associations between the self-concept and positive or negative affect. Thoughts or reminders of the self may elicit relatively automatic positive or negative affective reactions. Implicit self-esteem is typically measured indirectly, by measures that are not obviously related to self-evaluations or require responses that are difficult to control. This contrasts with measures of *explicit* self-esteem, which is normally measured by self-report scales. Explicit self-esteem is more deliberative and consciously reflective; this is the self-esteem people report when asked directly about their self-

feelings. Notably, measures of implicit and explicit self-esteem are typically uncorrelated (or only very slightly correlated), so an individual who reports having high self-esteem (i.e., has high explicit self-esteem) may display relatively high or low implicit self-esteem on more indirect measures. The combination of high explicit with low implicit self-esteem has been studied as a form of fragile self-esteem (Kernis 2003; Jordan and Zeigler-Hill 2013).

Defensiveness and Self-Enhancement

Many prominent theories in psychology posit that people are generally motivated to achieve and maintain high self-esteem. Consequently, they may react defensively to information that challenges their positive self-views, by denying or distorting such information (e.g., Kernis et al. 2008). Some people, however, may be more prone to such defensive reactions than others, and a propensity for defensiveness and self-enhancement is thought to be a hallmark of fragile self-esteem. Indeed, each of the three indicators of fragile self-esteem – contingent self-esteem, unstable self-esteem, and low implicit self-esteem – have been associated with defensive tendencies (Kernis 2003; Jordan and Zeigler-Hill 2013). Participants in one study, for example, completed a structured interview designed to assess verbal defensiveness in the form of denial and distortion of negative information (Kernis et al. 2008). Participants responded to a series of personally sensitive questions, such as recounting a time when they disappointed their parents. Their responses were coded for evidence of defensiveness, such as avoiding negative emotion, rationalizing negative behaviors, blaming others, or distancing oneself from negative events. The study demonstrated that participants who reported having high self-esteem displayed more verbal defensiveness to the extent that they also had more contingent self-esteem, more unstable self-esteem, or lower implicit self-esteem. Notably the study also demonstrated significant correlations between these indicators of fragile self-esteem, suggesting that they may all distinguish the same

underlying forms of secure and fragile self-esteem.

Relationship with Narcissism

Fragile self-esteem and narcissism are conceptually similar. Both are associated with unrealistically positive self-views, defensiveness, self-enhancement, hostility and aggression, and self-serving tendencies (Jordan and Zeigler-Hill 2013). Nevertheless, the empirical links between narcissism and fragile self-esteem are not strong. Although some studies have observed significant relationships between narcissism and unstable self-esteem, contingent self-esteem or low implicit self-esteem, other studies have failed to observe any relationship between them. Meta-analyses of these relations, moreover, failed to find significant associations between narcissism and indicators of fragile self-esteem (Bosson et al. 2008). Thus, narcissism and fragile self-esteem appear to reflect similar, but distinct, dispositions. It is not necessarily the case that someone high in narcissism will have fragile self-esteem (in the sense described here), nor that someone with fragile high self-esteem will be highly narcissistic.

Conclusion

There is increasing evidence that individuals with high self-esteem are not all psychologically equivalent. Whereas some may have positive self-views that are well anchored and secure, others have positive self-views that are fragile and vulnerable to threat. There have been three dominant approaches to empirically distinguishing fragile from secure self-esteem: whether high self-esteem is (1) contingent, (2) unstable, or (3) accompanied by low implicit self-esteem. Each of these approaches has identified subsets of high self-esteem individuals who appear to be especially defensive, self-enhancing, and aggressive. The three indicators of fragile self-esteem are also associated with each other, suggesting that they converge on a common

disposition of fragile self-esteem. Although conceptually similar to narcissism, fragile self-esteem is empirically distinct from it and may differ from it in important ways.

Cross-References

▶ Contingencies of Self-Worth (CSW) Scale
▶ Contingent Self-Esteem
▶ Implicit Self-Esteem
▶ Narcissism
▶ Self-Esteem
▶ Self-Esteem Instability

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Fraternal Twins

Free Association

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Definition

Free Association is the term given to the clinical manifestation of the Fundamental Rule of Psychoanalysis. The Fundamental Rule was stated by Freud (1913) in his paper "On Beginning the Treatment" (Further Recommendations on the Technique of Psychoanalysis). The rule states that the patient should as far as is possible report every thought, feeling, and impulse that occurs to him/her as it occurs and, most importantly, without censorship. Free Association is the term for the narrative produced by the patient when trying to obey this rule.

A Combination of Theory with Technique

Free Association is an excellent example of a technique which developed in psychoanalysis through the convergence of psychoanalytic theory and developments in technique. As such, there is no specific date on which it was formally adopted, but it is generally accepted that by 1898 this was the dominant method through which treatment occurred.

The theoretical origins for the technique of Free Association lie in the development of psychoanalytic theory from hysteria (Freud 1895), to the theory of dreams (Freud 1900) and the development of the topographical model of the mind (1915).

Through his work with Charcot and Breuer, Freud concluded that the underlying cause of hysteria was a wish that was usually sexual in nature, but considered forbidden and was thus out of awareness or "unconscious." Enabling the patient to uncover and consciously know this wish resulted in the hysterical symptom diminishing.

Freud's interest in the interior of the mind took a significant step forward with his discovery of the significance of dreams (Freud 1900). Through examining his dream regarding Irma's Injection Freud was able to identify the dream as the protector of sleep through it allowing the fulfilment of an unconscious wish. In doing so, Freud was able to postulate the important mechanisms of Condensation, Displacement, and Secondary Revision as part of the overall Dream Work of the mind. Possibly influenced by his work on intersecting neurones, Freud defined Condensation as a mechanism in the system Unconscious by which one image or word simultaneously represents several others and therefore carries a particular emphasis. It is as if the particular word or image lies at the intersection of a number of chains of associations and therefore represents them all. However, this emphasis itself can then be moved in the Unconscious to a further more innocuous association by a process of Displacement. This is a further process of defense or disguise by which the wish in the dream is made more palatable to the system Conscious. Finally, all the elements in the dream are rearranged in order to be intelligible to the System Conscious. This process of Secondary Revision finally results in the dream taking the form the dreamer experiences, embedded within which is the initially unacceptable wish.

Freud's capacity as an observer led him to noticing how the dream itself and the recollection and thinking about it, drew upon both recent and distant memories with equal and immediate ease. His theory of dream functioning thus conceptualized memory traces as being linked through being associated with each other and the excitation of one by libidinal energy leading to the excitation of the other. This may have been influenced by his previous training as a physician which included making highly detailed drawings of networks of neurones. This part of his theory was also

undoubtedly influenced by the work of the Zurich school of psychology which examined reaction times as a function of each subjects' unique state of mind in relation to the stimuli word. The unique nature of the reaction time for each subject to a specified event emphasized the importance of subjective meaning and led to Jung to coin the term "complex." Freud undoubtedly used these findings as scientific support for his own arguments.

Following on from his theory of dream function, Freud (1915) put forward his first model of the mind known as the Topographical Model. This model specified three distinct areas, the System Unconscious, system Preconscious, and system Conscious. The system Unconscious is the largest, is nonverbal, functions according to Primary Process and is the seat of the instinctual drives. It contains traces of all precepts and experiences. This is contrast to the system Conscious which functions according to Secondary Process and, as the name suggests, is the state of awareness easily identified by each person. Between the systems are boundaries of censorship, the most powerful being between the Unconscious and Preconscious, and the second between the Preconscious and Conscious. It is this latter barrier that is relaxed in a state of sleep and thus allows for dreams to occur and be recalled. Dreams were therefore rightly considered as the Royal Road to the Unconscious (Freud 1900). The patient's attempt at Free Association is thus an attempt to relax this second censorship and allow both patient and analyst to see the derivatives of the system Unconscious as they appear in the Preconscious. Given the theoretical origins, each individual's free associations will be unique to that individual and different from any other person's. Observation of a chain of associations thus produced, and similarly to an account of a dream, allows for the development of a hypothesis as to unconscious functioning which is then confirmed or disconfirmed through the patient's response to an interpretation.

The developments in psychoanalytic theory went hand in hand with developments in psychoanalytic technique. Freud initially used hypnosis accompanied by questioning and suggestion in treating patients with hysteria. This gave way to asking the patient to concentrate on a given idea and respond to Freud's questions.

In beginning his own self-analysis, including his analysis of the dream of Irma's Injection, Freud essentially had to adopt the method of allowing his thoughts to run freely rather than attempt to direct himself in one direction or the other. Without using the term, he was in fact free associating.

Freud's work with hysterical patients also allowed him to observe his patient's own spontaneous utterances and the centrality of these to understanding the patient's difficulties. Freud (1895) reported on the case of Frau Emmy von N, an intelligent woman of 40 years who spoke coherently apart from contorting her face every two to 3 min, looking in horror and stretching out her arms saying "Keep still! Don't say anything! Don't touch me!" In the process of treating her, Freud noticed that her unchallenged free speech not only reproduced important memories and recollections of their work, but on more than one occasion she refused to be interrupted by Freud, wishing to continue with her own train of thought, and usefully so. Freud recognized that Frau Emmy von N had in effect adopted the method that he had come to use with himself. His paper on her case contains the first recorded use of the term Free Association.

Conclusion

Free association thus developed through the evolution of both psychoanalytic theory and technique. While psychoanalytic theory has developed into a number of different schools, the technique of free association itself has remained the hallmark of psychoanalysis, only second perhaps to the use of the analytic couch.

Cross-References

▶ Psychoanalytic Theory
▶ Sigmund Freud
▶ Topographical Model

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Free Will

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Synonyms

Agency; Volition

Definition

Free will is generally understood as the capacity of rational agents that allows them to choose a course of action from a set of open possibilities.

Introduction

It is typically assumed that humans have a unique volitional capacity as rational agents to choose our actions from a range of open possibilities. But just what this capacity for free will amounts to, and how it can be consistent with our best scientific understanding of the world, has proven to be extremely difficult to articulate. Since our capacity for free will is widely thought to be connected to our conception of moral responsibility, and thus the social practices involved in praising, blaming, rewarding, and punishing, the debate over free will has implications for many of the institutions that make social life possible.

Free Will

Philosophers have debated whether and to what extent humans have free will for over two millennia. Nearly every aspect of the debate is a serious point of serious contention, including how to articulate what free will involves. One traditional conception of free will involves a unique human capacity for self-origination that has roots in the Judeo-Christian view of an immaterial soul (Descartes 1998). On this view, agents have a unique capacity to start a new chain of events that is not an inevitable outcome of the immediate past. The self-origination view has largely fallen out of favor, due to concerns about determinism discussed below. That trend has generated some confusion that philosophers have largely concluded that free will is an illusion, but that is not a widely held view. Most contemporary philosophers support the existence of free will, properly construed, which is usually in terms of some requisite form of reason-responsiveness, or as involving a particular structured hierarchy of desires (as described below).

If most philosophers hold that rational agents have free will, it is largely because they also believe that we can be morally responsible for our actions, and it is hard to see how that could be possible if we were not also capable of acting freely. It would seem to be patently unfair to hold individuals accountable, let alone punish them, for actions that they were not free to choose. So despite major disagreements over definitions of free will, nearly everyone agrees that the stakes of the debate are very high, since the capacity to freely select our own actions would seem to be a precondition for holding individuals morally accountable for their actions and thus intervening in ways that motivate the behaviors that support social life.

Nonetheless, skepticism about the existence of free will has ancient roots. Theological considerations about the implications of divine foreknowledge led thinkers to question whether individuals could be genuinely free to generate their own futures if God already knows the outcome. But the most significant threat to free will emerged in the eighteenth century as the prominence of the

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physical sciences increasingly painted a picture of a deterministic universe governed by a set of universal principles that unfold in highly predictable ways (see entry on determinism). Coupled with the growing secular perspective that saw humans as continuous with other organisms, the emerging scientific worldview suggested that the outcome of human action, like the outcome of a computational system, must also be determined by its causal history. If our universe is indeed one in which events are determined by a causal chain that unfolds predictably and inevitably under scientific laws, it is hard to explain how humans could be genuinely free to choose among open possibilities. Since free will seems to motivate and justify our desert-based practices and emotions (e.g., retributive justice, righteous anger, pride, etc.), determinism threatens to undermine many of the motives and attitudes that grease the wheels of social life. Some philosophers have resisted this worry, however, by speculating that the "reactive attitudes" described above are simply too psychologically entrenched to ever be overturned by philosophical theorizing (Strawson 2008).

One common response to the above worries involves rejecting determinism about the universe, in general, or about the mind, in particular. Indeed, whether determinism is true of our universe is an extremely controversial point of debate within metaphysics and theoretical physics, one which turns on fundamental disagreements about the stochastic nature of quantum phenomena. It is, however, harder to deny that the brain, in particular, operates like a deterministic system. Whatever indeterminacies that may exist at the quantum level are largely stochastically "washed out" at the scale of brain molecules, such that neurons typically behave like the deterministic entities described by classical physics. This is generally a tacit assumption in contemporary neuroscience, where the aim is to find universal principles that explain and predict human behavior.

Notably, the predictability of human choices has been supported by a range of empirical studies since the 1980s. In a variety of experiments, researchers have been able to reliably predict the outcome of simple human choices (such as which finger to move) up to several seconds before

individuals become consciously aware of having the intention to act (Libet et al. 1983). However, these studies remain disputed since they rely on the controversial method of using self-reports of conscious willing. Nonetheless, the seeming predictability of certain conscious choices in laboratory settings underscores the challenge that determinism poses to the traditional conception of free will as involving self-origination, since it suggests that the outcome of our choices could not be otherwise. Other experiments have raised skepticism about the traditional conception of free will by probing the extent to which our first-personal perceptions of conscious willing can be easily manipulated in a variety of ways (Wegner 2002).

The problem of determinism cuts the contemporary debate on free will into two basic camps: compatibilism and incompatibilism. The former camp holds that the capacity for free will is ultimately compatible with determinism, while the latter camp denies the charge. Most contemporary philosophers are compatibilists, and they have spawned a vast literature attempting to square human agency with a causal view of human action that does not rely on self-origination or an immaterial soul. The general approach has been to highlight certain capacities of cognitive control that might support a conception of moral responsibility. As noted earlier, one popular approach is to conceptualize our freedom as a particular type of reason-responsiveness, where an agent has free will insofar as she is responsive to the appropriate rational considerations that govern her action or would govern her action if she were aware of them (Fischer and Ravizza 1998). Alternatively, some philosophers conceive free will as a particular kind of structured hierarchy in cognition involving first-order and second-order desires (Frankfurt 1988). For example, an individual may have a first-order desire to eat cake, but a second-order desire to avoid eating cake. Loosely, an individual is free on this view insofar as one's actions stem from a type of second-order desire called a "second-order volition," which is a desire for a desire to become one's will. In effect, free will consists in having the kind of will one desires. Whether these compatibilist views of free will are

successful in giving sufficient support to the attitudes and practices related to moral responsibility is a matter of considerable debate.

In recent years, psychologists have turned attention to whether a belief in free will has social benefits. In a series of recent experiments, researchers found that deterministic worldviews undermined prosocial behavior, making individuals less helpful and more aggressive (Vohs and Schooler 2008; Baumeister et al. 2009). These findings add to earlier studies that explored the personal and social consequences of "locus of control," the sense in which we see our actions as caused by internal versus external forces. Individuals with a more external locus of control are known to do better on a wide variety of welfare indicators (e.g., achievement, self-control, happiness) (cf. (Seligman 2011). So whether free will is an illusion or not, there may be some benefits to believing in it.

On the other hand, some thinkers have pointed to the potential psychological benefits of rejecting free will and, with it, the desert-based practices that it motivates (Pereboom 2006). On this view, a denial of free will would entail rejecting many of the retributive practices that make sectors of the US prison system troubling to many observers. Moreover, there is some reason to think that deterministic views of human behavior may incline us to more measured and compassionate responses to seemingly aberrant behavior. Arguably, the less we have conceived homosexuality or the behaviors involved in mental illness as the product of free will over the last several decades, the more compassionate and less retributive some of our relevant social practices have become.

Conclusion

Largely because of the close relationship between moral responsibility and free will, the nature and extent of human volition has been an active area of debate since antiquity. Despite the near universal intuition that humans have free will, it has been notoriously difficult to pinpoint what this capacity amounts to and how it can be squared with contemporary science. Moreover, it remains to be seen whether particular conceptions of free will are important for motivating certain social behaviors or whether, on whole, we would better served by drawing attention to the limitations of our freedom and then recalibrating our social practices and moral attitudes as necessary.

Cross-References

▶ Determinism
▶ Morality
▶ Personal Responsibility
▶ Responsibility

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Freedom

▶ Need for Autonomy, The

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Freud, Sigmund

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Introduction

Such is the magnitude of Freud's offerings to
the nascent disciplines of twentieth century neu-
rology, psychology and psychiatry, rather than a
truncated chronology, I have chosen, in this short
biography, to present illuminating vignettes of
his early life, education and professional career,
research interests, and legacy sufficient to stimu-
late the neophyte's appetite for further exploration
of one of the greatest minds of the twentieth
century.

Early life

> Jung said that psychological theories are disguised
> forms of autobiography. Unconscious forces influ-
> ence our conscious thoughts – we need to under-
> stand imaginative leaps in great scientists in the
> light of their developmental history... (Holmes, in
> Kenny 2014, pp. 144–145)

Details of Freud's biography might be instructive
to our understanding of the development of
Freud's theory of infant sexuality, particularly
the Oedipus complex. When Sigmund's father,
Jacob, was 40 years old, he married the third of
his three wives, Amalia Nathanson, who was
20 years of age. Freud had two half-brothers
from Jacob's first marriage who were about
the same age as Amalia. This apparently confused
the young Sigmund, who imagined himself
the son of Amalia and one of his half-brothers,
believing his father to be too old to occupy
that role (Quinodoz 2005). The eldest of eight
children, Sigmund was clearly his mother's
favourite and he grew up believing, as she did,
that he was destined for greatness.

Although Freud did not specifically identify
his childhood as comprised of a series of traumatic

losses, in fact, it was just that. When he was
2 years old, his mother, pregnant with her second
child, was mourning the loss of her brother,
Julius, who died at the age of 20 years from
tuberculosis. She named her second son Julius in
honour of her dead brother, but he too succumbed
to illness and died in infancy. At about the
same time, Freud lost his nanny, his father
lost his business, and his family was forced to
relocate from Freiberg to Vienna. Amalia subse-
quently gave birth to six more children before
Sigmund reached his tenth birthday (Marrone
and Cortina 2003).

Perhaps these developmental experiences
influenced how Freud understood the dynamics
of what he later called the Oedipus complex
through his own self-analysis, which included
the analysis of his dreams. Through this
process, he became aware of feelings of love for
his mother and jealousy towards his father
which, unfortunately, led him to conclude that
this phenomenon was a universal of childhood
(Quinodoz 2005). The fully developed theory was
presented in *The Ego and the Id* (Freud 1923b).

Subsequent Freud scholarship has offered pos-
sible explanations as to why Freud erroneously
conflated two separate motivational systems – the
affectional drives of the attachment system and
erotic feelings from the sexual system – in his
theory of the Oedipus complex. For example,
Stolorow et al. (1978) argued that much of Freud's
psychology was directed towards defensively pre-
serving his idealized image of his mother and
protecting this image from his intense, uncon-
scious rage at his mother's betrayal of him by
her repeated production of additional children.
Freud possibly split off, repressed and displaced
his omnipotently destructive rage and disappoint-
ment in his mother, in order that he not experience
and express these emotions towards her and
thereby risk losing her.

Professional Career and Research
Interests

Freud was a true polymath and had many
incarnations. He was a man of letters, a literary

critic, a scholar of the history of religion, a scientist, a physician and neurologist, a clinician (psychoanalyst), and a teacher and mentor.

Science, Medicine and Neurology

Freud valued science and reason above religion and superstition and located his work within the determinist-scientific tradition of Copernicus, Galileo, Kepler, Newton, and Darwin (Palmer 1997), which viewed science and religion as radically incompatible. Freud's position on the relationship between science and religion is elaborated in *The Question of a Weltanschauung* (Worldview) (1933b).

Freud believed that there was a developmental progression over the course of history – from animistic and magical, to religious, and then to scientific explanations – in the way in which we view and explain our universe. Each explanation becomes progressively less omnipotent and egocentric, ending in the scientific view that we are mortal, finite, small in a vast universe, and helpless against the forces of nature (Kenny 2015).

Although at first determined to study law and enter politics, and then to pursue a career as a natural scientist, Freud eventually enrolled in medicine at the University of Vienna, but spent much time studying the humanities, including philosophy, and subsequently took 8 years instead of the usual five to qualify for his degree, which he did in 1881 at the age of 25. A passion for medical research led him to the laboratory of Ernst Brükce, where he formed the view that the nature of the mind would one day be explicable in physiological terms [see *Project for a scientific psychology* (1895a)]. It was here that he met Josef Breuer, whom Freud credited with bringing psychoanalysis into being. The two men enjoyed a deep friendship and mutual professional admiration for over 15 years.

In 1882, he abandoned laboratory-based research and went to work at the General Hospital, where he gained experience in surgery, internal medicine, psychiatry, dermatology, and nervous diseases, until he settled on the discipline of neurology in 1885. In this capacity, he wrote highly praised works on aphasia and cerebral paralysis in children before shifting his gaze to the mental causes of physical illness. He became interested in the effects of cocaine and experimented on himself, writing to Martha Bernays that he found the drug "magical" and able to lift him out of a severe depression. He published a paper on the subject in 1884.

In 1885, Freud spent some time with the famous and revered Jean-Martin Charcot, a French neurologist, at the Saltpêtrière, Europe's centre for neurological research, where his ideas about the relationship between body and mind crystallized further. He developed a keen interest in hysteria, a phenomenon that was prevalent among young women in nineteenth and twentieth century Vienna, where Freud's clinical practice was located. Hysteria was understood to be, to some extent, psychological product of a social and cultural era in which intelligent women were repressed and unfulfilled. Charcot's demonstrations of implanting the symptoms of hysterics into the minds of "normal" people convinced Freud of the link between mental cause and physical effect, a principle that directed his life's work. His psychoanalytic theory was then iteratively built, revised, and reconceptualized over the next 60 years until his death in 1939.

Literature

Freud was an intellectual and a man of history, letters, and the world. He offered insights into the human condition which have been accepted into popular culture and expressed in books, songs, movies, and poems. Freud wrote texts on literature and art, and analysed works of literature. His first such work, *Delusions and dreams in Jensen's "Gradiva"* (1907a) was published in 1907. He ignited the feminist critique of his work with his notion of penis envy that rages scarcely unabated today. Freud the scientist developed psychoanalysis as a theory and a method of treatment and was somewhat of a celebrity healer of psychological ills in nineteenth and twentieth century Vienna. The two Freuds converge in the creative literary imagination that constructed many of the analogies and metaphors that constitute the psychoanalytic project,

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nowhere more vividly drawn than in the imagining of the Oedipus complex.

Religion

Freud (1935/1925) explained in the *Postscript to his Autobiographical Study* that he had retained an abiding interest in the question of religion and "cultural problems" for the whole of his life, which, he said, "had fascinated me. . .when I was a youth scarcely old enough for thinking" (p. 72).

Freud's father was a nonobservant Jew who celebrated Christian holy days, such as Easter and Christmas, rather than Jewish feast days. However, his mother was a devout Orthodox Jew and he was well instructed in the Jewish faith. *Obsessive Actions and Religious Practices* (Freud 1907b) represented Freud's first attempt to codify his thoughts on culture and religion. This was followed by *Totem and Taboo* (Freud 1913) and *Future of an Illusion* (Freud 1927c). The opening paragraphs of this work presage *Civilization and its Discontents* (Freud 1930). Then followed *The Question of a Weltanschauung in New Introductory Lectures* (Freud 1933a); *Why War*? (Freud 1933b); and *Moses and Monotheism* (Freud 1939a), a work devoted to tracing the origin of the Jewish religion and an erudite examination of the origins of belief in a singular deity. In these works, Freud tackled the vexed question about why religious beliefs are embraced by millions and concludes that religion, just like other political and cultural products, serves a vital function that maintains the social fabric of civilization – the renunciation or suppression of instinctual urges, without which social structures would crumble into anarchy and annihilation.

Freud's work is distinctive, if not unique, in his attempts to integrate religious belief with our innate human nature (comprising our temperament and instinctual drives) and developmental histories that have unfolded in the context of our socialization and cultural experiences (Beit-Hallahmi and Argyle 1997). Freud stated that religion is so compelling because it appears to "solve" all the problems of our existence. According to Freud, religious belief is an edifice comprising our own fantasies that originated from feelings of helplessness in infancy and early childhood and which transmute into adulthood as a belief in a beneficent deity, a remnant of the father-god of childhood. Freud believed that one's God-concept represents and expresses one's internal psychic reality.

Freud (1935) concluded that the ". . .the events of human history, the interactions between human nature, cultural development and the precipitates of primeval experiences (the most prominent example of which is religion) are no more than a reflection of the dynamic conflicts between the ego, the id and the super-ego. . . (p. 72), and that the best hope for mankind is intellect as opposed to "religion's prohibition against thought" (Freud 1933a, p. 171).

In his final analysis, Freud viewed religious precepts and edifices as nothing more than "neurotic relics" (p. 44) arguing that believers' acceptance of a universal neurosis "spares them the task of constructing a personal one" (p. 44). After all, religion is a warmer and more comforting blanket than reason, which demands that we "admit to ourselves the full extent of [our] helplessness and insignificance in the machinery of the universe" (p. 49). Rather than adhere to "the mythical structures of religion" (Freud 1939a, p. 45), Freud urges us to ". . .concentrate all [our] liberated energies into [our] life on earth. . ." (Freud 1927c, p. 50).

In 1929, Arnold Zweig published an essay entitled *Freud and Humankind* in which he acknowledges Freud's efforts to liberate us from religious terror. Just as language is believed to be an evolved innate structure waiting to be potentiated, so too humans have a deep need to discover the meaning of their lives, and to search for a numinous experience that will satisfy an eternal longing that Freud argued derived from infant helplessness (Kenny 2015).

Psychoanalysis

> . . .much will be gained if we succeed in transforming your hysterical misery into common unhappiness. (Breuer and Freud 1893a, p. 305)

The theory, development, and structure of psychoanalysis have been presented in Kenny,

D.T. "Psychoanalysis" (this encyclopedia), so this biographical entry on Freud needs to be read in conjunction with that entry.

Much of Freud's psychoanalytic thinking had its origins in his study of religion and primitive cultures. For example, Freud noted that both taboos and conscience developed in response to emotional ambivalence and the awareness of the guilt we experience for enacting a forbidden wish. Analysis of the prohibition taboos in primitive societies indicates that the strongest temptations were to kill their priests and kings, to commit incest, and to mistreat the dead. Since many of these taboos create emotional ambivalence through the experiencing of simultaneous but conflicting impulses of love and hate, desire and repulsion, we can discern how taboo, neurosis, and conscience are associated, both in their origin and in their "rituals," which display "magical" thinking, reliance on charms, relics and icons, make illogical associations between events, and accept that external forces will protect believers from adversity. The ambivalent attitude of the living towards the dead has also given rise to "opposed psychical structures: on the one hand fear of demons and ghosts and on the other hand, veneration of ancestors" (Freud 1913, p. 64). The aspects of human nature upon which each of these phenomena are built have remained constant across centuries and between different civilizations.

Freud (1930a) identified three basic instincts: (i) sex (libido); (ii) aggression (destructive) instincts including hate, cruelty, and sadism that had their origins in early object relations with love-hate bipolarity); and (iii) self-preservation. He also identified three major sources of suffering: (i) our bodies, which are "doomed to decay and dissolution"; (ii) the external world, "which may rage against us with overwhelming and merciless forces of destruction"; (iii) and our relationships, against which we may protect ourselves through "voluntary isolation" thereby achieving the "happiness of quietness" or by becoming a better member of our human community (p. 77).

Freud enumerated 11 ways to assuage or transmute our suffering: (i) use of palliative measures or "substitutive satisfactions" such as "powerful deflections" that make light of our misery; (ii) intoxication; (iii) renounciation of instinctual pressures through Eastern practices such as yoga; (iv) satisfaction of wild instinctual impulses; (v) displacement of libido through the defence of sublimation into artistic or cultural pursuits and the enjoyment of beauty; (vi) indulgence in the life of the imagination, which is "exempted from the demands of reality testing" (p. 80); (vii) regarding reality as the enemy and the "source of all suffering" such that one must break contact with reality and retreat into reclusion, neurotic illness, delusion or madness; (viii) "delusional remoulding of reality" (p. 81) which can occur on a grand scale and become a mass-delusion, as happens in the various religions of the world, and in totalitarian states such Hitler's Nazi Germany, Stalin's Russia, or Mao's China; and (ix) adoption of a way of life that makes love the centre of life, which looks for all satisfaction in loving and being loved, including sexual love (p. 82).

Freud wished to protect analysts from physicians and priests. "I want to trust it [psychoanalysis] to a profession that doesn't yet exist, a profession of secular ministers of souls, who don't have to be physicians and must not be priests" (Kovel 1990, p. 82). It is not difficult to understand why Freud felt so protective of his method against corrupting misinterpretations and self-interested applications.

Freud founded the International Psychoanalytical Association in 1910, established the International Psychoanalytical Press in 1919 and the English language journal *International Journal of Psychoanalysis* in 1920.

Critiques

Critiques and biographies of Freud range from the hagiographic [e.g., Ernst Jones (1957). *Sigmund Freud life and work*; Gay, P. (1988). *Freud: A life of our time*)] to the demonizing [e.g., Dolnick, E. (1998). *Madness on the couch*; Crews, F.C. (1998). *Unauthorized Freud: Doubters confront a legend*] and of course, the reality lies somewhere between these two poles. Freud was

a master theorist, but as a practising clinician, he was less illustrious. He himself stated that he was less interested in treating patients than in divining the workings of the mind. He recorded very few cases e.g., Dora, Little Hans, a lesbian, the Wolf man, and the Rat man – of whom the Rat man was the most successfully treated.

Freud often fell out with his acolytes. There were four main reasons for the schisms: (i) There was disagreement about the primacy that Freud afforded to sexuality and a shift in emphasis from sexual to social causes of psychopathology; (ii) There were disagreements about technique and the locus of therapeutic action; (iii) Interpersonal processes came to the fore in contrast to the purportedly intrapsychic focus of the original theory; and (iv) There was a change in focus from pathological development to normal developmental processes (Kenny 2014).

For example, Freud described his erstwhile protégés' (Carl Jung and Alfred Adler) contributions to psychoanalysis as "twisted re-interpretations" of his own theories (Freud 1918b, p. 7). His quarrel with Alfred Adler centred around his view that the search for power, not for sex, was the core conflict that gave rise to the inferiority complex rather than the Oedipus complex. On Jung's position with regard to archetypes, Freud had this to say:

> I fully agree with Jung in recognizing the existence of this phylogenetic heritage; but I regard it as a methodological error to seize on a phylogenetic explanation before the ontogenetic possibilities have been exhausted. I cannot see any reason for obstinately disputing the importance of infantile prehistory while at the same time freely acknowledging the importance of ancestral prehistory. (Freud 1918b, p. 97)

A criticism of Freud's later theorizing, which is not evident in the early studies on hysteria, was that he paid inadequate attention to actual events in the lives of his patients and focused primarily on their "psychic reality" (Ross 2007). However, perusal of his earliest writing shows that Freud acknowledged the "provoking causes" of hysteria – indicating his recognition of environmental impingement in the development of psychopathology. See, for example, this passage from Breuer and Freud (1893a):

> . . .external events determine the pathology of hysteria to an extent far greater than is known and recognized. . . The disproportion between the many years' duration of the hysterical symptom and the single occurrence which provoked it is what we are accustomed invariably to find in traumatic neuroses. Quite frequently it is some event in childhood that sets up a more or less severe symptom which persists during the years that follow (p. 4). . . In the case of common hysteria it not infrequently happens that, instead of a single, major trauma, we find a number of partial traumas forming a group of provoking causes (p. 6)

This excerpt also shows an early understanding of later conceptualizations of different types of trauma – large "T" trauma and cumulative small "t" trauma – which have become important constructs in attachment theory and self-psychology that focus on the central importance of failures in parental empathy and parental misattunement (Beebe 2000) in the aetiology of psychological disorders. The same awareness is evident in the case of "little Hans" whom he speculated was adversely affected by the birth of his sister and the behaviour of his parents. Further, Freud's affect-trauma model appears more consistent in some respects with current psychoanalytic practice than his later theorizing, which gave primacy to the instincts and the "structures of the mind" that tended to encumber rather than clarify our understanding of the infant's developing sense of self (Stern 1985).

Freud's erroneous conflation of two separate motivational systems – the affectional drives of the attachment system and erotic feelings from the sexual system – in his theory of the Oedipus complex was subsequently corrected by Ferenczi (1933) who called Freud's confusion a "conflation of tongues." Later, Bowlby explicitly separated the two motivational systems in his attachment theory account (1940, 1958), while Marrone and Cortina (2003) dubbed it a "cover story" (p. 11) designed to protect Freud from reexperiencing the traumatic losses of his early childhood. By sexualizing attachment longing, Freud could remain defended against his intense feelings of dependence and vulnerability in relation to an increasingly unavailable mother. For a detailed critique of Freud's developmental theory, see Kenny (2013).

Another major criticism of Freud's oeuvre is that much of it was based on faulty data collection methods – the retrospective clinical case study and his own self-analysis. The question regarding how psychoanalytic interpretations might be verified as correct has arisen in much post-Freudian scholarship (Frosch 2006). We accept today that it is not possible to discern what is genuinely "within" the patient and what is co-constructed between the analytic dyad in the analytic process. Contemporary analysts argue that objective truth claims are not as relevant to the psychoanalytic process as critics maintain. What is important is the analytic relationship and the patient's response to interpretation – it is a "successful" interpretation if it deepens the relationship or produces new material that can be worked with to achieve greater self-understanding (Kernberg 1994).

Notwithstanding, some of Freud's eminent contemporaries recognized the enormity of Freud's contribution. For example, G. Stanley Hall, President of the American Psychological Association, gave this assessment of Feud's contribution to knowledge in the Preface to Freud's (1920a) *General Introduction to Psychoanalysis*:

> Few, especially in this country, realise that while Freudian themes have rarely found a place on the programs of the American Psychological Association, they have attracted great and growing attention and found frequent elaboration by students of literature, history, biography, sociology, morals and aesthetics, anthropology, education, and religion. They have given the world a new conception of both infancy and adolescence, and shed much new light upon characterology; given us a new and clearer view of sleep, dreams, reveries, and revealed hitherto unknown mental mechanisms common to normal and pathological states and processes, showing that the law of causation extends to the most incoherent acts and even . . . insanity; gone far to clear up the terra incognita of hysteria; taught us to recognize morbid symptoms, often neurotic and psychotic in their germ; revealed the operations of the primitive mind so overlaid and repressed that we had almost lost sight of them; fashioned and used the key of symbolism to unlock many mysticisms of the past; and in addition to all this, affected thousands of cures, established a new prophylaxis, and suggested new tests for character, disposition, and ability, in all combining the practical and theoretic to a degree salutary as it is rare (pp. vi–vii)

Hall also offers an explanation as to why Freud and his theories gained so little traction in America.

> The impartial student of Sigmund Freud need not agree with all his conclusions, and indeed. . . may be unable to make sex so all-dominating a factor in the psychic life of the past and present as Freud deems it to be, to recognize the fact that he is the most original and creative mind in psychology of our generation. Despite the frightful handicap of the *odium sexicum*, far more formidable today than the *odium theologicum*, involving as it has done for him a lack of academic recognition and even more or less social ostracism. . .

With the rise of the Nazis in the 1930s, Freud's work, along with the work of other brilliant minds including Albert Einstein, H.G. Wells, Thomas Mann, and Marcel Proust, was burnt in public bonfires for the "their soul-disintegrating exaggeration of the instinctual life" (Lemma and Patrick 2010, p. 3). Freud and Darwin were also charged with "subverting the high values of fair-skinned races (p. 3)." Freud complained that, just as the Jews wandered in the wilderness with no home, psychoanalysis, while enjoying a universal diaspora, never found a proper home in the city of its birth (Freud 1939a).

Conclusion

While it is easy to criticise the work of our predecessors, it is important to balance critique with a recognition of the profound and enduring contributions made by Freud's psychoanalytic theory that are not only still current but that have received empirical confirmation from developmental, health, cognitive and social psychology, and neuroscience (Debiec et al. 2010; LeDoux 1998).

Freud once quipped that wherever he had been in his exploration of the human psyche, a poet had been there before him. The same might be said of Freud himself. I am hard pressed to find a "new" idea about the human psyche for which I cannot find a similar or related idea by Freud. Freud offered theoretical insights into the human condition, particularly the historically new view that man is primarily an animal driven by

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instincts (Freud 1915c, 1920g), in opposition to the prevailing view of his time that man was God's highest creation. Freud (1908c) challenged the cherished belief that man is a rational being primarily governed by reason, replacing it with the disturbing notion that man is in fact driven by unacceptable and hence repressed aggressive and sexual impulses that are constantly at war with the "civilized" self. Indeed, at one point, the goal of psychoanalysis was stated thus: "Where id was, there ego shall be" (Freud 1937c, p. 214). A corollary of this belief is the identification of the Unconscious and the proposition that complex mental activity that occurs outside our conscious awareness has a profound impact on our behaviour and psychological wellbeing. Unconscious processes, now called implicit processing, has received substantial scientific validation in cognitive and social psychology.

Freud's psychoanalytic developmental theory formed the basis of all subsequent developmental theories, particularly his proposition regarding the importance of the relationship between the mother and her infant which provides the basis for secure attachment in infancy and beyond. This is a boundless legacy. However, it was a first pass at a very complex enterprise and subsequent iterations and the advent of neuroscience have resulted in major new advances in the field (Kenny 2013).

Close examination of therapeutic successors to classical psychoanalysis (e.g., object relations, attachment-informed psychotherapy, relational/intersubjective psychotherapy and short-term intensive dynamic psychotherapy show that they are all founded on a similar set of underlying theoretical (Freudian) precepts (Kenny 2014). These include the nature of the therapist-patient relationship (i.e., the two person psychology), the importance of the transference (and countertransference), the therapeutic stance of listening with a third ear for the symbolic/metaphoric communications of meaning in the patient's utterances (i.e., unconscious communications), and the efforts they each make to encourage the patient to be fully present in the room (i.e., experience-near in phenomenological terms).

One of Freud's great attributes, and a characteristic of all great scientists, was his willingness to modify his theories in the face of new evidence or stronger argument. This was the case with his theories of infant sexuality, his seduction theory, the place and timing of sexuality in human development, the use of hypnosis, the aetiology of "hysteria," the nature of the bond between mother and infant, the nature of memory (e.g., infantile amnesia), and the balance between "objective" and "psychic reality" inter alia.

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Freud's Theory of Humor

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Synonyms

Freud's theory of jokes; Freud's theory of joke-work; Psychoanalytic theory of humor; Psychoanalytic theory of humor; Psychoanalytic theory of jokes

Definition

The following entry describes Freud's (1900, 1905, 1928) psychoanalytic theory of jokes, humor, and their relation to unconscious processes.

Introduction

In *The Interpretation of Dreams* (1900) Sigmund Freud made many preliminary connections

between the psychic processes found in the production of dreams and with the production of humor. Encouraged by a correspondence with his friend Wilhelm Fliess, Freud went on to write a book entirely devoted to an examination of the comic, humor, and jokes, entitled *Jokes and their Relation to the Unconscious* (1905). Freud later reflected that this work "considered humor really from the economic view alone," and remedied this with the short paper *Humour* (1928), which included a view of humor from his revised structural model of the psyche (p. 1). Freud's structural model was largely developed in *The Ego and the Id* (1923/1961) and can be reviewed there. The main text of this entry summarizes Freud's contributions made to the psychoanalytic theory of humor. Later psychoanalytic developments are brought to bear on Freud's theory on humor.

Dream-Work/Joke-Work

In his 1905 text, Freud states that the unconscious processes involved in the development of jokes are nearly identical to those involved in dreaming. In dreaming, preconscious "day residue," including desires and impulses repressed from consciousness, are filtered through the dynamic unconscious portion of the psyche (p. 160). These desires and impulses have been defensively denied due to their lack of accordance with learned societal restrictions upon acceptable behavior and expression. In order for the sleeper to stay asleep, instead of being disturbed by the processing of such material, the unconscious disguises it, giving it a revised form, which is no longer threatening, and makes this material accessible to consciousness. This entire process is called dream-work. Joke-work, the waking correlate of dream-work, has many similarities. Jokes seem to come to their creator complete, in a momentary period of blankness, signaling their emergence from the unconscious mind, similar to the current bottom-up processing theory of cognitive psychology (Rauss and Pourtois 2013). More importantly, the joke-work transforms unacceptable impulses and emotions into pleasurable

ones, by means of replacing obscenity, aggression, cynicism, and deep skepticism with laughter. The dream-work and joke-work alike make use of the following psychic tools to complete these transformations: condensation, displacement, and indirect representation. Condensation makes use of the multiple meanings of words, for example in the joke, "The man walked into the bar and said, 'Ouch.'" Displacement, or modification, refers to slight differences in words or word usage, or the formation of composite words, which leads to humorous formulations. Freud (1905) gives this example: "A horse-dealer was recommending a saddle-horse to a customer. 'If you take this horse and get on it at four in the morning you'll be at Pressburg by half-past six.' – 'What should I be doing in Pressburg at half-past six in the morning?'" (p. 54). Indirect representation includes such joke-techniques as absurdity, faulty reasoning, and analogies. Freud (1905) gives an example: "Everyone has his moral backside, which he does not show except in case of need and which he covers as long as possible with the breeches of respectability," (p. 84). Whereas dream-work seeks to minimize displeasure, joke-work seeks to maximize pleasure. Freud (1905) adds, "all our mental activities converge in these two aims," (p. 180).

Economy of Joking

In order to describe this economic convergence of the two aims of minimizing displeasure and maximizing pleasure, Freud asked why the person who thought of the joke feels it needs to be told, and what psychic processes take place in the listener, versus the teller. In the teller of the joke, psychic energy is occupied in repressing from consciousness, for example, feelings of aggression towards another person. Through unconscious joke-work, the energy formerly occupied by repression is released, and the aggression becomes expressible, in a now innocuous form, a joke. However, the first person uses psychic energy in the unconscious processes of creating the joke. In telling the joke to a third person, and making this third person laugh, the first person is

able to observe the laughter of the third person, and share in a further release of energy through mutual laughter. For the listener, the repressed impulse is presented and released in quick succession, allowing for a rapid and intense experience of pleasure. For both the teller and the hearer of the joke, empathy and a placing of oneself into the thought processes of the other are essential for this procedure to be successful. The thinking of one mind into another described by Freud resembles the subsequent theory of mind proposed by Premack and Woodruff (1978). However, Freud (1905) goes beyond reliance on empathy alone and suggests a form of "ideational mimetics," (p. 192) quite similar to recent research into the function of mirror neurons (Rizzolatti and Craighero, 2004), in which the listener unconsciously imagines themselves in the place of the teller. The complex exchange between teller and listener in the joking process described by Freud (1905) also foreshadows the later object relations concept of projective identification described by Klein (1975), Bion (1983), and Bollas (1987), in which psychic energies are constantly being exchanged in the course of normal and psychotherapeutic interactions, and in which the inner psychic economy is intimately tied to the psychic processes within others. In this mutual exchange, laughter is "a relaxation of tension," and "a release from constraint," for both parties (Freud 1905, p. 147).

The Highest of Defensive Processes

In conclusion to his 1905 book, Freud declares that humor, like repression, is a defensive process. Although he noted that, "We get an impression that the subjective determinants of the joke-work are often not far removed from those of neurotic illness," and "the joker is a disunited personality, disposed to neurotic disorders," he quickly dismissed any inherent connection between humor and neurosis (Freud 1905, p. 142). Instead, he concluded that humorous displacement, unlike other defense mechanisms, directly faces the perceived psychic threat. Humor acknowledges the existence of the threatening affect and transforms it through the mechanisms described above into pleasurable affect. In his 1928 paper, Freud amends that this healthy defensive maneuver is made possible through the *I*'s alignment with the *Above-I*, the internalized voices of our parents as they encouraged us to be brave, to "adopt a humorous attitude to ward off suffering," to buck up, and persevere (Freud 1928, p. 3). In this way, it can still help us to adapt to life's challenges. In Freud's (1928) words, "Humor is not resigned; it is rebellious. It signifies the triumph not only of the ego, but also of the pleasure-principle, which is strong enough to assert itself here in the face the adverse real circumstances," (p. 2).

Conclusion

In conclusion, this entry reviewed Freud's (1905) comparison of dream-work and joke-work, presented a summation of the economic model of jokes including internal psychic processes taking place in both the teller and the listener, and summarized Freud's (1928) additions to his theory of humor.

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Freud's Theory of Jokes

▶ Freud's Theory of Humor

Freud's Theory of Joke-Work

▶ Freud's Theory of Humor

Freudian (classical) Psychoanalysis

▶ Fixation

Freudian Catharsis

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Synonyms

Cleansing; Purification

Definition

Catharsis was a concept conceived during the nineteenth century, used by many different therapists interested in the idea of emotional discharge. Catharsis is the action of an individual getting rid of or discharging repressed emotional energy, of which such energy is the precursor to psychological trauma (Bushman 2002). Specifically, Freud conceptualized this term as an emotional release of paralyzing affects associated with negative, traumatic memories. This conceptualization was influenced by his colleague and mentor's work, Josef Breuer, and his treatment of Anna O., who was the first patient that both Breuer and Freud had attempted to help with her hysteria (Bushman 2002; Turri 2014).

Introduction

Often, catharsis is an important component of therapy to address unconscious, repressed memories through the use of hypnosis. Catharsis is a very familiar concept in the field of psychoanalysis. It revolves around the emotions an individual feels that is associated with traumatic events, and catharsis is where such emotions and associated traumatic events come to consciousness. The origin of the term catharsis comes from acts of purging or cleansing (Bushman 2002). Consequently, catharsis evolved and became a concept about the elimination of negative emotions, behaviors, or affect that is associated with an unconscious trauma (by bringing it into consciousness). In the past, when psychoanalysis was still popular, mental health practitioners who practiced psychoanalysis would use catharsis to treat symptoms associated with hysteria. Hysteria is a term that is no longer used but was used in the Freudian ages, describing a psychological disorder with symptoms where psychological distress would manifest itself into physical symptoms, such as amnesia, being over-dramatic and exaggerative, and possessing attention-seeking behavior (Bushman 2002). Note that this term has been abandoned, replaced with more defined categories, such as somatization disorder, for example.

History and Evolution of Freudian Catharsis

Many researchers define catharsis in various ways but have always emphasized two essential components within catharsis: the cognitive aspect

discussing a person's thought processes, epiphanies, and unconscious memories surfacing into the conscious, which is known as positive change. The other component, emotional aspect, revolves around emotional processing, and expression (Littrel 1998). Prior to Breuer and Freud popularizing catharsis, Aristotle initially defined catharsis as "purging of the spirit of morbid and base ideas or emotions by witnessing the playing out of such emotions or ideas on stage" (Turri 2014). As Breuer and Freud came to conceptualize catharsis for use of their treatments, they defined catharsis as an "instinctive, involuntary body process, such as crying" (Turri 2014). Definitions of catharsis continued to change from researcher to researcher. Scheff (2007) defined the essential components of catharsis, one being cognitive awareness which he called "distancing," and the other, emotional-somatic discharge. In Scheff's definition, distancing is when the person who is experiencing catharsis is being an observer of their traumatic events, and creating a sense of control and being fully alert of their immediate environment (Scheff 2007). It is important to remember the two aspects of catharsis, both as the emotional discharge, equivalent to the behavior of strong emotional expression, and as the cognitive component which emphasizes the new-found awareness that emerges after reexperiencing their traumatic events. Scheff (2007) concluded that for more major repressed, traumatic events, just bringing up the trauma from unconscious to consciousness is insufficient for creating positive change. The repeated emotional expression associated with the trauma, in a supportive environment with appropriate distancing is required for success (Scheff 2007). Greenberg and Pascual-Leone (2006), specific to catharsis in the use of therapy, emphasized the importance and the core of such therapy is inducing emotional arousal and processing where the therapeutic relationship is supportive, which is required for positive change. His focus is on the processing of such events, the cognitive aspect, and the necessity to understand the emotions. By focusing on the emotions, such an approach seems to address the cognitive component of catharsis, creating techniques to help clients recognize and validate their emotions, with

the therapist coaching and supporting their clients (Greenberg and Pascual-Leone 2006). This is a further take on simply undergoing catharsis. Such emotion-focused therapy is taking the cognitive aspects of catharsis and breaking the memories down to understand the associated emotions. Greenberg et al. (2008) conducted a study showing that emotion-focused therapy using this empty chair technique was more effective than simply letting go of the emotions through facilitating forgiveness. The empty chair technique is when the individual would "leave" their traumatic experience or memory and sit from a third person's perspective and speak to the empty chair as if the person in the empty chair is the "person" reexperiencing that memory. Thus, distance is created between the client and their memory (Paivio and Greenberg 1995). Using the empty chair technique is a useful technique to facilitate catharsis as well as allow the individuals to easily distance themselves, by having them sit in a third chair and assume the role of an observer to their own past events, creating a space that is safe enough for catharsis to be successful.

Coming back to Freud's period, he was influenced by his uncle, Jacob Bernay, and his Aristotelian views regarding the "purging" in catharsis, as well as his mentor and coworker, Josef Breuer (Turri 2014). It was Freud and Breuer who officially brought into modern psychology the "cathartic therapy" as a type of therapeutic method (Gentile 2013). Freud regards this discharge as being induced by a psychoanalytic technique known as abreaction, which is the expression and release of repressed emotion, through reliving the associated experience, typically under suggestion or hypnosis (Littrell 1998; Turri 2014). This therapy theorized that the symptoms that individuals were experiencing were caused by their unconscious, repressed emotions (Turri 2014). This was based on the evidence that each "hysterical" symptom immediately disappeared when they had successfully brought to conscious the associated event linked with such emotions (Turri 2014). Freud later lost confidence with using catharsis in therapy. He regarded catharsis more as a symptomatic treatment rather

than an actual analysis of the central issue within the individual.

Subsequently, Freud used catharsis to bring the unconscious memories into consciousness. Freud used this to psychoanalyze the resistance in the transference of such memories, and working through these memories, rather than solely relying on the purging of emotions while reliving through such traumatic, past events (Turri 2014). Despite researchers losing confidence with catharsis, as it only deals with the symptoms, catharsis continues to be integrated within psychodynamic approaches.

Concepts of catharsis have been further clarified and specified by Van der Hart and Brown (1992). For them, catharsis is one of the three integral therapeutic processes: remembering (memories and trauma), emotional release (associated with the trauma), and reintegration. The final treatment process emphasizes more of a humanistic approach such as primal screaming (Karle et al. 1973). Janov, in the early 1970s, elaborated on Freud's concepts of catharsis and claims of emotional expression such as crying. His claim was similar on the lines of the emotional expression and if infants and children were not able to process these painful experiences fully in an environment that is supportive, their consciousness "splits," where pain gets suppressed to the unconsciousness and reappears in a somatic form of neurotic symptoms and disorders. He claimed that the cathartic emotional processing of painful early life experiences and the association with remembering the original event could possibly free the clients from neurotic symptoms. He argued that simply cognitively remembering the unconscious, traumatic events was not enough to "heal" and move on. This was when primal therapy was practiced often and focused on emotional discharge (Karle et al. 1973), but not being in a supportive, safe environment and without adequate distancing. On the other hand, more modern analytically oriented approaches favor more controlled versions of cathartic release. Some therapists have warned about the risks when individuals reexperience their trauma and relive their emotions in an unrestrained environment. There

could be a potential of triple retraumatization: from the trauma itself, from reexperiencing the symptoms, and from recovering from the therapy. As such, most contemporary approaches encourage more controlled emotional release rather than an uncontrolled catharsis.

Besides the portrayal of catharsis in psychotherapy, it has also been portrayed in other fields including literature, religion, cultural rituals, theater, medicine, and psychology. The essence of catharsis remains the same in every field: the conclusion is that it is regarded as a release of some sort of burden (either mental or physical) and undergoes relief through its discharge.

Conclusion

Freudian catharsis has long gone through several transformations as different researchers emphasize different components of catharsis, and the requirements for the environment the individual must be in for catharsis to be successfully used in therapy. It should be noted that effectively using catharsis in psychotherapy is not simply utilizing emotional discharge techniques, such as screaming or venting anger (Bushman 2002; Turri 2014). Rather, catharsis refers to the whole experience of reliving, either fully or partially, the individual's traumatic, repressed events in the past, that have not been appropriately processed emotionally, and thus surfaces as either physical, emotional, or relational problems in their lives (Scheff 2007; Turri 2014). The effectiveness of catharsis embedded in therapeutic techniques should be further researched and interpreted among other important factors related to therapy, such as a safe therapeutic alliance between therapists and clients, building the client's strength in processing, both emotionally and cognitively, their unconscious, and repressed events. In modern days, most psychoanalysis theories have become outdated, and thus catharsis has been less and less used (as a whole), but different types of therapy may use components of catharsis, especially the cognitive aspect of breaking down memories and their associated emotions to understand more clearly what the client is

feeling. Typically, in therapy, addressing emotions is often one of the goals.

Cross-References

- ▶ Catharsis
- ▶ Cognitive Theory of Emotion
- ▶ Emotion Regulation
- ▶ Emotional Expressiveness
- ▶ Emotion-Focused Coping
- ▶ Neo-Freudians

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Freudian Dream Interpretation

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Definition

The psychoanalyst's and the dreaming person's cooperative work of interpreting the dream leads to wishes and to infantile sources of dream-construction. During the dream, the transformational and disguising "dream-work" takes place. In order to decipher the dream, it is necessary to link the report of the dream (the "manifest dream") to its hallucinatory wish-fulfillment (the "latent content of the dream").

Introduction

The dream updates and elaborates memories containing impressions of the recent past, so-called day residues, and links them to unconscious wishes, fears, and defense strategies, which can be traced back to early childhood. During sleep, memory traces are reorganized with respect to wish-fulfillment. The dream is constructed akin to a hallucinatory series of visual, auditory, and – more rarely – other kinds of sensory impressions. The hallucinatory nature of the dream is the result of a retrogressive course, which transforms mental processes into sensory impressions during sleep with the help of accessible memory contents (Freud 1900, pp. 425–430).

Dreams are mental activities directed towards regression. They operate as a psychophysiological counterbalance. The subjects of dream reports are hallucinatory events, occurring in a state of mental and physical regression and under the suspension

of orientation functions. Nightly dreaming fulfills functions in the regressive state of sleep. There is an ongoing debate about how these regulatory functions must be understood (Kramer 2007). The controversial discussion ranges from the wish-fulfilling regulation of well-being (Solms 2000a, b), across prospective problem-solving and exercise functions (Fiss 1993; Greenberg and Pearlman 1993; Revonsuo 2000) and the critical position of Domhoff (2003), up to mental reorganization (Coutts 2008) or brain reorganization (Hobson 2005). Following Koukkou and Lehmann (1983), dreaming can be conceptualized as a manifestation of mental activity both regressive and targeted at regression. Solms (2000b) provides the neuroscientific basis for the Freudian claim (1900) that this regression-targeted mental activity benefits sleep continuity. According to Freud, the hallucinatory impressions during sleep are a product of psychodynamic compromise and defense mechanisms. En route to being remembered, this product is subject to additional psychodynamically motivated modifications; furthermore, the oral or written representation of a dream is irreducibly interwoven with processes of articulation, which Freud calls "secondary revision" (Jacobs 2002).

Wish-Fulfillment

Refining his concept of wish-fulfillment, Freud identified it as the ability to temporarily reduce physiological and psychophysiological distress by countering unpleasant tensions on the mental level, or in other words, by evoking a positive, opposing, mental act, representing a state in which the wish is fulfilled. However, this solution is merely short-term and transitory. The regulative function, which allows for the discharge of unpleasant drive tension through hallucinatory wish-fulfillment also occurs when a state of excitation threatens to disturb sleep. Wish-fulfilling imagining leads to transitory relaxation and thus enables the dream to become effective as the guardian of sleep (Boothe and Stojkovic 2013). From a psychoanalytical view, wish-fulfilling imaginings chiefly occur in the context of

imposed passivity, such as in dreams. But they may also promote the tendency to escape from everyday life, to remain passive when facing its demands, for example, if extensive day-dreaming results in an impairment of the individual's disposition to act, as well as of his relation to reality.

Wish-fulfilling imaginings may operate on an unconscious level and may not necessarily reach consciousness. The concept of distortion of wish-fulfilling imaginings by way of repression is one of the postulates of psychoanalysis that plays an important role in dreams and their interpretation. Freud also pointed out exceptions from his rule, specifically emphasizing "traumatic dreams" (Freud 1920): Dreams repetitively reproducing traumatic experiences occur under the influence of an impairment of ego integration. Dreams promoted by unconscious guilt feelings have a powerful tendency to become repetitive, as well, putting the dream-ego at risk of disintegration. In this case, the wish-fulfilling tendency has failed or, to put it differently: According to Freud's revised theory of dreaming (1920) – and as in the case of traumatic dreams – an older mental function, namely, the repetition compulsion, becomes effective.

Dream Interpretation

Proceeding to interpret dreams, Freud sets out by asking the dreaming person to report what spontaneously comes to mind with respect to day residues, that is, what is linked to occurrences of the previous day, as well as inviting him or her to free associate to the elements of the dream. The psychoanalyst's and the dreaming person's cooperative work of interpreting the dream leads to the psychodynamics of the latter, to wishes, and to infantile sources of dream-construction. It is necessary to distinguish between the actual dream and its report. What occurred during sleep must be understood as the psychophysiological regulation of tension, while what the dreaming person reports is the result of the dream's subsequent verbal shaping. Dream reports concern static, often elusive impressions or story-like sequences. Upon waking, individuals frequently remember

what appear to be fragments or offcuts of a longer dream. The relater tends to employ subsequent sequencing and narrativization, thus creating a narrative construction site – a collage of reminiscences.

Superficially seen, the majority of dream reports are not recognizable as depictions of wish-fulfillment. Only after having taken into account the associations, such as day-residues and the psychological exploration of the dream material, it becomes possible to deduce the actual motives of wish-fulfillment, as well as anxiety-evoking ideas and conflicts.

During the dream, the transformational and disguising "dream-work," that is, "condensation," "displacement," "regard for representability," and "secondary revision," takes place (Freud, 1900); in other words, operations which, in contrast to the subject- and fact-related reasoning of the "secondary revision," form a part of the "primary revision." In order to decipher the dream, it is necessary to link the report of the dream (the "manifest dream") to its hallucinatory wish-fulfillment, the "latent content of the dream").

While attempting to disclose the motive for the dream, we are faced with resistances resulting from (a) communication-related and (b) self-related interests. Communication-related interests concern the relationship between the psychoanalyst and the analysand, allowing for the analysand's willingness and ability to deal with the suggested self-disclosure. The self-related interest is linked to the quality, the extent, and the intensity of the analysand's willingness to affirm, to stand in for, and to deal with self-disclosure. The process of deciphering has a crucial goal: Based on the ego-dystonic (ego alien) dream report, in which the dream is represented as phenomenon, the psychoanalyst and his analysand must reach an understanding aimed at reversing the ego-dystonic nature of the dream. What is meant by ego-dystonic (ego alien)? As reporters of their own dreams, dream tellers create emotional distance, the distance of astonishment. People take on an attitude of naïve distance when they report their dreams. The speaker refrains from taking a position of understanding. He simply shows the dream, as it were. What is first experienced as something strange must give way to a feeling of familiarity, thus replacing indifference with involvement.

Reporting a Dream

The way in which persons report their dreams clearly signifies how they understand the phenomenon of the dream and how they conceive of the dream event (Boothe and Stojkovic 2015).

Claim of privacy: In reporting a dream, the person makes clear that the dream is a private experience, representing an event in his or her inner life, and not an experience that can be shared intersubjectively.

Privacy in a passive-receptive mode: In reporting a dream, the person makes clear that s/he is the recipient, and not the stage director, of the emerging event.

Passive-receptive mode and naïve ignorance: In reporting a dream, the person makes clear that it concerns events that, so far, defy understanding and categorization. The dreaming person imparts this quite innocently, as from an amazed distance; this seems to be an important distinction from accounts of psychotic experiences.

Privacy and the inadequacy of remembering: In reporting a dream, the person makes clear that the event in the dream originates from his or her inner life, has occurred in the past thus can only be grasped retrospectively – and with limited conviction.

Claim of privacy due to being affected: The reporters of dreams profess marvel-stricken amazement; thus, the person makes clear that the dream has become subjectively relevant and has left an impression.

Claim of privacy due to the difficulties of reporting: In reporting a dream, the person makes clear that it contains elements from his or her inner life, which are difficult to report (Gülich 2005). Reporting a dream is difficult because (a) it is a representation of experiences that cannot be shared intersubjectively, for which a common basis of understanding does

not exist (privacy problem); (b) because the dream promptly evaporates from memory (elusiveness); (c) because remembering cannot be validated (validation problem); and (d) because the event itself is enigmatic, that is, its meaning cannot be immediately grasped and categorized (need for interpretation). Psychotic experiences, on the other hand, are (known to be) articulated in a convinced – that is, delusional – manner, and do not represent difficulties of reporting.

Request for interpretation: In reporting a dream, the person emphasizes the obscure, puzzling nature of the experience and indicates that the message of the dream is not, in and on itself, sufficient but requires supplementing. This implies a request for interpretation that gives reason to and contextualizes the occurrences, in order to derive a benefit for everyday life practice.

Dream communication is a special case of reporting: The subject of the dream report is elusive, fragile, enigmatic, and inaccessible to others. Reporters of a dream may say: "I had such a bizarre dream" or "that was a frightening dream," or – as one female dreamer once announced: "I dreamt such magnificent crap last night" (Boothe 2006).

One of the most interesting features of dream reports concerns their oscillation between distance and appropriation. The dream report, as a specific and noninterchangeable form of communication, possesses a rhetorical repertoire, which allows for the articulation of irreducible uncertainty, the fragmentary nature and the enigmaticity of its subject. Reporting a dream means using "unsaturated speech": The dream report is not self-sufficient; rather, it is part of a competitive commenting process. Dream discourse is a dialogical journey from self-alienation to selective self-appropriation. The oscillation between distance and appropriation, the back and forth between points of reference outside the individual psyche, as well as strategies of mental processing (primary and secondary process) are central elements of dream communication.

In sleep, these hallucinated impressions are experienced as real. They transform reality. The strategy of dream analysis, as suggested in Freud's (1900) pioneering discoveries, is based on precisely this tension between transformation of the world as motivated appropriation and the reporting of observations and impressions. The material of nightly dreams consists of impressions from waking life. Going along with the idea that dream work is the work of mental appropriation, these impressions are subjected to a regime of self-centered wish regulation, thus made suitable for the presentation of a wish-fear-defense-scenario.

Wish-Fulfillment: The Cornerstone of Dream-Production

The ability to develop wish-fulfilling imaginings functions as a hedonic counterbalance with regard to self-calming and relaxation. Freud (1900, p. 571) conceived the competence of imaginative wish-fulfillment as a mental surrogate with respect to voluntary and involuntary deferral of satisfaction. If the condition of deficiency is not too severe and not exceedingly chronic, the mental surrogate may provide a genuinely satisfying experience (in the case of the infant, we might be dealing with the evocation of appetitive sensory stimuli); from a psychoanalytic perspective, it might provide a hedonic counterbalance, because it facilitates tolerating deferral and tension. According to this comprehension, wish-fulfilling imaginings are functional where effective activity stands no chance; they are dysfunctional where effective activity might prove to be successful, but is replaced by withdrawal into a passive state of daydreaming. During all their life, individuals must rely on their ability to temporary eliminate or alleviate negative excitation and unpleasurable tension by hedonic cross-fading.

For Freud, the cross-fading technique involved in what he called hallucinatory wish-fulfillment was the cornerstone of dream production. The slackening of muscular tension and the loss of orientation occurring in the state of sleep

temporarily deprives us of the efficient techniques we have learned to use in dealing with internal and external disruptive stimuli. Thus, while sleeping, we cross-fade disruptive stimuli by evoking a hedonic state, in other words, by what appears to be real gratification, satiation, and well-being. However, the manner in which this occurs is concealed and thus, in recalling the dream, s/he remains oblivious to its wish-fulfilling characteristics. Nevertheless, the wish-fulfilling nature of dreams is not always concealed. In this case, Freud (1900, pp. 136–137) speaks of dreams of convenience, in which a bodily urge is satisfied (such as thirst being quenched with a pleasing drink), thus that the dreamer does not awake for a short span of time. Often, children's dreams are overtly wish-fulfilling as well. Individuals, experiencing deprivation or facing situations without reasonable chances, compensate for their misery by dreaming; for this, Freud provided evidence on the basis of dream reports from members of an Antarctic expedition (see Köhler 2007, p. 36). Weiss (1993, p. 154) points out how American soldiers who were held captive in Japanese prisoner-of-war camps reported "blissful dreams," notably under circumstances in which they had no prospect whatsoever of altering their predicament. The soldiers resigned themselves to their fate and tried not to lose all hope. Some reported the consolation derived from dreaming: "The power of these dreams to help the dreamer derives from their having the quality of real experience. For example, the captured soldiers who dreamed that they were powerful and gratified reacted to the dreams as though they were in fact powerful and gratified. After such dreams, they felt less helpless and more hopeful. Before producing the blissful dreams, the soldiers had tried to cheer themselves up in waking life by telling themselves that someday they would be free to gratify themselves, but they derived little comfort from the waking, wishful thoughts compared to the comfort they derived from the dreams." Vividness, intensity, and powerful imagery rendered the dreams especially valuable. The universal validity of dream theory based on the dynamics of the wish has been controversial from the outset.

From Distanced Dream Reporting to Personal Appropriation

Freud's interpretation of dreams involves revealing the strategies of transformational imagining as a response to the facts of life. Finding our way from distanced dream reporting to personal appropriation implies the following:

– Establishing a link to the reporting individual,
– Retrospectively sounding out the dream report with respect to the reporting person's system of relevance and preference,
– Creating a motivational connection, that is, contextualizing the dream from the perspective of the life conditions or the therapeutic relationship.

The following dream analysis, the "Uncle dream," taken from Freud's "*Interpretation of Dreams*," provides us with an illustration of the strategies mentioned above. This dream is especially interesting because Freud first wanted to discard it as "nonsensical," and because the path from the manifest dream image to the latent dream thought, which Freud shares with his readers, is particularly artful. The fashion in which dream-work rearranges and applies the dreaming person's recollection and transforms and alienates his or her experience is impressive. Dream reporters may articulate emphatically the process of retroactive remembering elusive dream fragments. Emphatically accentuated affectionateness can be added to dream impressions and nevertheless remain distant and enigmatic. The search process can become especially apparent when dreams are commented upon with regard to their clarity, strangeness, or continuity. Grammatical particles such as "somewhat" or "somehow" are very common. The frequently used term "suddenly" marks the abruptness of transition. The comparative "as though" creates the impression of an event which is hard to grasp. The above-mentioned articulation of the search process further emphasizes the enigmatic distance. In this case, the reporting person comments on the representation of dream events with respect to their level of

clarity/opacity, familiarity/strangeness, and continuity/discontinuity.

Memories can be shaped by emphasis, insistence, and emotional charging, as in the "Uncle Dream." The dream reads as follows:

> (1) . . . My friend R. was my uncle. – I had a great feeling of affection for him. (2) I saw before me his face, somewhat changed. It was as though it had been drawn out lengthwise. A yellow beard that surrounded it stood out especially clearly (Freud 1900, p. 137).

This example illustrates the process of remembering from the point of view of the recipient, who, at first, remains unable to make sense of the message presented to him. "As the dream occurred to me in the course of the forenoon, I laughed outright and said: 'The dream is nonsense.' But I could not get it out of my mind, and the whole day it pursued me, until, at last, in the evening I reproached myself with the words: 'If in the course of dream interpretation one of your patients had nothing better to say than 'That is nonsense', you would reprove him, and would suspect that behind the dream there was hidden some disagreeable affair, the exposure of which he wanted to spare himself. Apply the same thing in your own case; your opinion that the dream is nonsense probably signifies merely an inner resistance to its interpretation. Do not let yourself be deterred.' I then proceeded to the interpretation" (Freud 1900, 1913, section 14).

With the example of the "Uncle Dream," Freud demonstrates (1) that this concerns a dream in which precarious realities of life are corrected by transforming them into something desirable, (2) that the dream intentionally captures a disturbing daytime occurrence and elaborates it, (3) that the dream applies strategies of disguising and distorting.

Ad (1) *Correction of disagreeable experiential contents by transforming them into something desirable*: The reporter of the dream first mentions emotional stirrings concerning a dream figure, the "friend" in the guise of the uncle, which are followed by the image: "I saw before me his face, somewhat changed." Initially, the dreaming person cannot make sense of this dream recall, until proceeding to pursue what occurs to him

with regard to the various elements of the dream – his free associations – and links them with the details of the dream image. He then combines as follows: The figure in the dream is (in fact) a colleague and a long-standing friend. The altered face is a condensation in which the colleague's facial features are merged with the uncle's, creating a new physiognomy from both person's features. Thus, the dream equalizes the colleague and the uncle. When Freud was a child, this very uncle had committed a crime and had gone to prison, causing great grief to Freud's father. "My father, who thereupon became grey from grief in a few days, always used to say that Uncle Joseph was never a wicked man, but that indeed he was a simpleton; so he expressed himself. If, then, friend R. is my uncle Joseph, that is equivalent to saying: 'R. is a simpleton'" (Freud 1900, 1913, section 15). According to the author, the fact that the uncle and the friend are made equal in the dream implies that this friend is a simpleton. This equalization also applies to another colleague with whom Freud is on friendly terms, and he associates this with his wishful thought that in fact he is a criminal.

In real life, the relationship between Freud and both colleagues is amicable and respectful, and Freud by no means has ulterior motives. The depiction of these two friends as a simpleton or, respectively, a criminal, is motivated by a wish. The dream succeeds in fulfilling this wish by equalizing to persons "my friend is my uncle" and by depicting a composite figure (the physiognomy accommodates several traits simultaneously).

Ad (2) *The dream responds to a specific/particular disturbance*: If it is articulated, the hedonic corrective of undesirable facts of life becomes intelligible. In this case, we are dealing with a specific situation of rejected promotion. Freud had heard from an initiative of two university professors suggesting his promotion to Professor Extraordinarius. While rejoicing over this, he nevertheless felt strongly admonished to remain resignedly skeptical, on the one hand because of his experience from years back, on the other hand because of recent encounters with the above-mentioned colleagues and friends who played a role in his dream. This fact became determinative

for the reification of the dream images. Both colleagues – like Freud – were still waiting for their promotion to tenured professorship, both were Jews – again like Freud – and both had up to now been waiting in vain. The "simpleton" had told Freud about a visit to the Ministry upon which he had been informed that at present, Jews were not likely to be promoted; the second had impacted a legal complaint by a woman, which, though it was subsequently withdrawn, nevertheless proved to be impedimental with respect to promotion, because the shadow of doubt concerning his irreproachability could easily mask an anti-Semitic attitude.

Both conversations, which had taken place recently, made clear to Freud that the anti-Jewish stance and its masking strategies would destroy any prospect of building their career. Being disregarded was a hurtful experience. Preoccupation with such an injury threatened to disturb sleep. In the dream, this was countered by a hedonic corrective, that is, by having one colleague to come out a simpleton and the other a criminal. Hence, all would be well. Freud was different from the first because he was the opposite of a simpleton; he was different from the second because he had never been guilty of serious misconduct. If – according to the diktat of the wish – X was a simpleton and Y a criminal, then, of course, they could not be nominated for tenure. Their promotion would fail to materialize because of lack of intellectual and moral merits, and not because they were Jews like Freud.

Ad (3) The dream makes use of strategies of disguising and distortion, and its text does not refer to promotions, disregard, anti-Semitic policy, and collegial exchange. This fact is based on the art of censorship.

The unrecognizability of the dream as a wish fulfillment is essentially due to the workings of censorship. According to Freud, censorship is the entirety of measures employed in order to disguise what is obnoxious. In the example of the uncle dream, it is obnoxious to forfeit two highly estimated colleagues.

Let us hold on to the following: Though abandoning oneself to the evocation of a wish-fulfilling mental creation may be pleasant, it does not benefit vanity and self-love. On the one hand, censorship succeeds in safeguarding relaxation, but on the other hand, it facilitates the activation of maneuvers of distortion with regard to self-respect, thus preventing the manifestation of what is obnoxious in the memory of the dream. In the above-mentioned example, it is obnoxious to bring two estimated colleagues and friends in contempt in order to revel in notions of success. What is obnoxious is disguised by the next part of the dream: "I had a great feeling of affection for him." The act of devaluating his friend by following the wish's compelling him to be a "simpleton" is disguised by the displacement of what is emotional, which in this case is asserted by emphasized affection.

Conclusion

In conclusion, psychoanalysis laid the foundation for a theory of memory-work employed by the dreamer in order to transform everyday life into dream reality, against the background of a wish-driven mentality. Freud's "*The Interpretation of Dreams*," down to the present day, has encouraged multifaceted practices of dream interpretation (Hill 2004). Freud's ingenious study of the language of the dream report and the linguistic strategies of representation of the remembered finds did not only enrich the practice of dream interpretation – it proved to be prolific for text- and literary sciences as well (Kilroe 2000). The dream narrative is the prototypical form of unreliable communication in everyday life (Boothe and Stojkovic 2015). First of all, its referentiality is unreliable; secondly, the report is rarely transparent and hardly comprehensible; third, the articulation of the dream is not self-sufficient, rather it is a form of unsaturated speech: Dream reports require commenting. Dialogical dream communication is the enactment of an everyday crisis of self-reference: Communicating one's dream means emphasizing the fact that one is not "master in one's own house" and means stressing one's reliance on the responsive and commenting other in terms of obtaining self-knowledge. Reporting a dream is a procedure of

articulation on the unstable terrain of a fleeting memory, thus communicating the limits of understanding.

The universal validity of a wish-dynamic dream theory was controversial from the outset. Neuroscientific dream research remained successful for decades by assuming the motivational-neutral nature of dreams, under the prominent leadership of Hobson and McCarley (1977) and Crick and Mitchison (1983, 1995). One might favor an integrative view: The dream is an event that occurs in a state of mental and bodily regression, when human orientation-functions are suspended.

According to Koukkou and Lehmann (1983), it is possible to conceive dream events as expressions of regressive mental activity and its orientation towards regression. Following Solms (2000), we can further assume that mental activity aimed at regression promotes the continuity of sleep. This assumption alludes to everyday psychology, handed down through the ages, to which Freud (1900) refers by characterizing the dream as the guardian of sleep.

"*The Interpretation of Dreams*" is among the most outstanding of Freud's works. The relevance of this Opus magnum is attributable both to its theoretical, clinical, and interpretative literary innovation and its cultural aspect: Dream-work is conceived of as an experimental stage for anarchic thinking in accordance with the diktat of the pleasure principle. The unity of the person disintegrates, the dynamic unconscious remains operative during life-time, thinking is more than rationality. Nevertheless, as conveyed by the "*Interpretation of Dreams*," elucidating comprehension is possible. While sleeping, a person believes in the reality of his/her dream world. Upon waking up, this unequivocal connection disintegrates. The work of reconstruction and exploration takes place in a relationship, which values the dream and deepens self-knowledge.

In this sense, the dialogue of the dream is truly a "via regia":

– By way of personalization, because the analysis of the dream does not schematize; rather, it is made to suit the patient's individuality

– By way of remaining receptive to difference, because the enigmatic nature of the dreams requires acceptance of difference, as well as willingness to appreciate and to render fruitful what is neither evident nor familiar in a person's biography

– By way of historicization, because for the parties involved the relationship is irreproducible and thus is remembered and acknowledged as a historical event, thus allowing the dream events to become part of a historical series

– By being future-oriented, because the relationship is comprised both of a history and a dimension of development and transformation; this also applies to the dimension of development and transformation of dreams

– By tolerating opacity, because working with dreams is an ideal challenge regarding the approval of inscrutable aspects of human means of expression and depiction.

Cross-References

▶ Dreams
▶ Latent Dream Content
▶ Manifest Dream Content
▶ Pleasure Principle
▶ Psychoanalysis
▶ Psychodynamic Perspective
▶ Psychodynamic Processes
▶ Unconscious

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Freudian Slip (Parapraxis)

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Definition

Freudian slips (or parapraxes) are temporary dysfunctions of the memory apparatus that arise due to unconscious intentions interfering with conscious ones and which manifest as slips of the tongue or pen or bungled actions.

Introduction

If memory is defined as an ego function like cognition, perception, reality testing, etc., then parapraxis could be thought of as a temporary

dysfunction of the memory apparatus, which can manifest itself as slips of the tongue or pen, bungled actions, or déjà phenomena, to name a few. No one considers these minor temporary dysfunctions as evidence of mental disease, and that intrigued Freud, whose abiding scientific desire throughout his life was to construct a general psychology that could explain all psychic phenomena in mental health and disease (Freud 1901). There was no precise German or English word for such uncanny phenomena, so Freud coined the word *fehlleistung* (mistake or faulty functioning), which Strachey translated in English as parapraxis. But the truly revolutionary idea embedded in the concept of such psychopathologies of everyday life was the daring introduction of the notion that normality had a touch of pathology in it! The corollary was equally revolutionary: pathology had some normality in it. Freud was continuing the work of Philippe Pinel who had removed the chains from the mentally ill a hundred years earlier. By discovering the unconscious forces that caused serious pathology as well as the minor mistakes of psychological functioning, Freud was removing the chains from faulty reasoning, insisting that the mentally ill and the mentally healthy shared a common humanity, a common unconscious resonance with each other despite their significant differences. In a most ecumenical, democratic fashion, it argues that we are all more alike than we are different.

Freud was fascinated by the unconscious dynamic engine he sensed must exist at the root of a parapraxis. When the wrong word was spoken rather than the intended word, Freud was intrigued with the unconscious mischief that could instigate such a "mistake," beyond the control of consciousness to do anything about it. James Joyce was onto something similar in *Ulysses* when he wrote "the man of genius makes no mistakes: his errors are volitional and are the portals of discovery." Freud would agree with Joyce, I believe, even though he might insist that there is a significant distinction to be made between conscious and unconscious volition.

The Psychopathology of Everyday Life

One of the examples Freud cites in *The Psychopathology of Everyday Life* will bring this intriguing topic to life (Freud 1901). It is an example from Freud's own experience with the tricks his own mind could play on him. One day he could not remember the name of the Italian painter Signorelli. He could see the face of the painter clearly in his mind with an almost ultra-clarity as if the force that hid the *name* of the painter from consciousness was accentuating the luminosity of the painter's *face* in some uncanny, compensatory manner. Other names began to fill the vacant space the parapraxis had created. Instead of Signorelli, Freud remembered Botticelli and Boltraffio. Trying to locate the troublesome sexual or aggressive ideas that he felt obliged to repress, Freud realized that the repression was dragging the name *Signorelli* along with it into temporary amnesia. He knew he must locate the sexual, aggressive motifs if he were to find the contextual clues that dragged the innocent Signorelli out of consciousness. It was in Herzegovina that the parapraxis occurred when Freud asked his traveling companion if he had ever seen the famous frescoes in Orvieto, The Four Last Things (Death, Judgment, Hell, and Heaven), painted by the artist (Signorelli) whose name Freud suddenly could not remember. It was the content of their conversation that had created conflicted ideas about sexuality and death. The Turks living in Bosnia and Herzegovina had a great confidence in their doctors and a great resignation to fate. When confronted with terminal illness, they would say to the doctor: "Herr (Sir or Signor) what is there to be said. If he could be saved I know you would have saved him." The Turks who show such resignation in the face of death are thrown into despair when their sexual agency is impaired, such is the value they place on robust sexual functioning. Freud recognizes that Bosnia, Herzegovina, and Herr "can be inserted into an associative series between Signorelli and Botticelli-Boltraffio." The plot thickens when Freud realizes that it was in Trafoi, a hamlet in the Tyrol, that he had learned of a patient of his

who had suicided. Freud becomes aware that his unconscious associations to sex, death, and suicide have unconscious links to Bosnia, Herzegovina, Trafoi, Signorelli, Botticelli, and Boltraffio as well and that when one motif is being repressed, it can drag other bits and pieces of place names and personal names with it into amnesia. So the Signor or Herr (of Signorelli) gets repressed leaving the "-elli" behind that can be used in Boticelli, and the Trafoi gets repressed but maintains an acoustic resonance in the remembered Boltraffio. To the extent that the Signorelli frescoes deal with death and mortality, the name Signorelli must be forgotten even though it leaves a residue of itself in the Herr of Herzegovina. Through this microanalysis of syllables and associative pathways, Freud offers us a glimpse into the dynamics of the unconscious mind and the act of repression itself, which is less precise and more indiscriminate than perhaps necessary as it creates its pockets of amnesia.

Freud had an abiding, scientific wish that all psychopathology could be deconstructed, all its dynamic components laid bare for scientific investigation. The topic of parapraxis, which fascinated him in 1898, would continue to intrigue him throughout life. He would often use it in his lectures as the best way to explain complex psychodynamic phenomena to a lay audience. In 1935, a brief paper entitled "The Subtleties of a Faulty Action" was written by him (Freud 1935).

Recent Work on Parapraxes: The Case of Hamlet

I now want to turn to more recent work on the topic. While it is true that Freud had to invent a new word to describe the phenomena, parapraxes did exist prior to Freud's time even if there was no precise word for them. I discovered a parapraxis in Hamlet in 1998 (Mahon 1998). In 2000 I described more examples in Hamlet and several more parapraxes scattered throughout the other plays. I argued that Shakespeare included these parapraxes as a way of putting the unconscious mind on the stage so to speak. The presence of the

parapraxes in the plays does create an additional realm of complexity in what a character is saying, without fully realizing it. One example from Hamlet will illustrate this point: In Act 1, Scene 2, Hamlet makes a slip in his first soliloquy, which he immediately corrects, but not without alerting an attentive audience to the sudden entrance of the unconscious mind on the Elizabethan stage. In his first soliloquy, Hamlet is grieving, a grief that's complicated by his mother's "o'er hasty marriage" to Hamlet's Uncle Claudius. Hamlet begins with depressive suicidal ideas: The world seems like "an unweeded garden that grows to seed. Things rank and gross in Nature possess it merely." In the next sentence, there is a slip. It is so subtle it is easy to miss. Thinking of his dead father, Hamlet says: "But two months dead. Nay, not so much, not two." At first Hamlet thinks his father has been dead for 2 months but then corrects himself. He has noticed the slip: his father did not die 2 months ago. Less time than that has elapsed. How are we to understand this little drama that Shakespeare is highlighting very briefly and then moving on? I argued that the slip suggests that Hamlet might have been thinking about his father's death even before it happened, an oedipal line of thinking that could induce a lot of guilt especially when the father actually dies not long after such an unconscious current of thought. Lest the unconscious import of this introduction of the parapraxis in Act 1, Scene 2, be not registered sufficiently in the mind of the audience, Shakespeare returns to it again in a most mischievous reenactment of it in Act 3, Scene 2. Hamlet is about to set the play in motion that will expose the guilt of his uncle. He notices his mother's merriment and says to Ophelia: "What should a man do but be merry? For, look you, how cheerfully my mother looks, and my father died within these two hours." Ophelia has been set up, and she falls into the trap. When she says "Nay, 'tis twice two months, my lord," Hamlet pounces, crying out: "Die two months ago and not forgotten yet." This is the bitterest sarcasm, but the only point I wish to stress is that it is a continuation of the theme first introduced in the parapraxis in Act 1, Scene 2. The concept of

forgetting is being mocked as Hamlet rails against his mother's merriment despite the loss of her husband not so long ago. The dynamic unconscious mind is being exploited here by Shakespeare, 300 years before Freud "invented" it. Memory, forgetfulness, grief, and death are all being mocked here by a master dramatist, who invites the unconscious minds of the audience to participate in the dynamic complexity he is creating. If a parapraxis is thought of as a usurpation of consciousness by dynamic unconscious forces, it becomes clear that a play about the usurpation of a man's life and throne and wife by a villainous brother can exploit these subtle usurpations that parapraxes represent to make the whole tragedy more psychologically complex and multilayered than ever. There is much more that could be said about parapraxes in Shakespeare's plays, but space does not permit such an exegesis (see Mahon 2000).

Parapraxes and Dreams

There is one other facet of our subject matter that warrants attention. When a parapraxis makes an appearance in a dream, what is a psychoanalyst to do with such a phenomenon? In 2005 I argued, using one of Freud's dreams and a few from my own clinical practice, that parapraxes in dreams are as cleverly orchestrated by the dreamwork as are the parapraxes Shakespeare "planted" in his plays (Mahon 2005). In other words, in either case it is not correct to view them as "mistakes" at all but rather as willful inclusions, embedded in the text of a dream or a play for complex psychodynamic reasons. An example from one of Freud's dreams will illustrate this point. Freud dreamt about a friend identified only as P in the dream. He also had the feeling in the dream that "I had often seen this district before in dreams." In other words there was a parapraxis in Freud's dream, a sense of déjà vu. On awakening Freud was at first seduced by the *manifest* satisfaction he felt at the prospect that he was about to discover the meaning of parapraxes in dreams. Subjecting the dream to a less superficial examination, he realized that the unobjectionable *manifest* satisfaction was in fact covering up a much more objectionable *latent* satisfaction that the dreamwork was eager to keep repressed. The latent satisfaction had to do with Freud's competitive feelings toward his friend P whose achievements in some ways had surpassed Freud's own. But not in one most significant way: Freud had sired children, while P was childless. It was this triumphant satisfaction in the sexual sphere that was being disguised by focusing on Freud's imagined triumph at discovering the meaning of parapraxes in dreams. The parapraxis was planted in manifest dream content by the dreamwork so as to deflect attention away from the sexual latent content. In that sense one could argue perhaps that parapraxes are not mistakes at all, as Joyce argued, but clever demonstrations of unconscious artistry, not just of men of genius, as Joyce immodestly proclaimed, but of all of us.

Conclusion

As a brief summation of this entry, it could be said that parapraxes, whether they appear in the traffic of everyday conscious life, or in aesthetic works of art such as Shakespeare's plays, or in the convoluted drama of dreams, are manifestations of latent unconscious meanings that deepen our understanding of psychological complexity when we investigate them rigorously.

Cross-References

▶ Conscious, Preconscious, and Unconscious
▶ Consciousness
▶ Defense Mechanisms
▶ Freudian Dream Interpretation
▶ Latent Dream Content
▶ Manifest Dream Content
▶ Neo-Freudians
▶ Oedipus Complex
▶ Psychoanalysis
▶ Repression
▶ Sigmund Freud

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Frick, Paul J.

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Early Life and Educational Background

Paul Joseph Frick was born on May 18, 1963, to his parents, John and Jane Frick, in New Orleans, Louisiana, USA. He was raised in New Orleans, where he attended Immaculate Heart of Mary elementary school and St. John Vianney high school.

Paul left New Orleans to attend Louisiana State University (LSU) in Baton Rouge, Louisiana, where he met his wife, Vicki Frick, who is the mother of his three sons: Joshua, Jordan, and Jacob. He obtained his B.A. (1984) in Psychology from LSU, where he worked in the research lab of Dr. Mary Lou Kelly. He received both his M.S. (1987) and Ph.D. (1990) degrees in Clinical Psychology from the University of Georgia, where he worked under the mentorship of Benjamin B. Lahey. His masters thesis title was "Emotional Disturbance in Parents of Children with Anxiety Disorders" and his dissertation title was "Patterns of Parent and Family Characteristics Associated with Oppositional Defiant Disorder and Conduct Disorder in Boys." Paul completed an APA-accredited internship in clinical psychology at the Children's National Medical Center in Washington, DC.

Professional Career

Paul's first academic job was at the University of Alabama, where he was a faculty member in the American Psychological Association's (APA)-accredited doctoral program in Clinical Psychology from 1990 to 1999, first as assistant professor (1990–1994) and then as associate professor from (1994–1999). In 8/1999, Paul moved to the University of New Orleans where he was professor and director of the doctoral program in Applied Developmental Psychology. In 2001 he became the graduate coordinator for the department and eventually chair from 2007–2015. In 2002, he was named University Research Professor and in 2011, he was name University Distinguished Professor at the University of New Orleans. In 2015, Paul returned to his alma mater at Louisiana State University where we was named the Roy Crumpler Memorial Chair in the Department of Psychology.

Paul has published over 200 manuscripts peer reviewed journals, over 55 chapters in edited books, and six books or test manuals. These papers have largely been published in collaboration with the amazing and talented students and colleagues with whom he has worked at all three universities. His research has been highly cited, with his name being listed on Webometrics Ranking of World Universities' list of the most highly cited researchers (h-index larger than 100) according to their public profiles on the Google Scholar Citations database. His work has been funded by the National Institute of Mental Health, Office of Juvenile Justice and Delinquency Prevention, John T. and Catherine D. MacArthur Foundation, W.T., Grant Foundation, Movember Foundation, and National Medical Research Council of Australia. In 2004, Paul was awarded an Honorary Doctorate from Orebro University in

Orebro, Sweden in recognition of his research contributions in psychology. In 2008, he received the MacArthur Foundation's Champion for Change in Juvenile Justice Award for the state of Louisiana. Dr. Frick was awarded the 2015 Robert D. Hare Lifetime Achievement Award from the Society for the Scientific Study of Psychopathy.

Paul has been the President of the Society for the Scientific Study of Psychopathy (2009–2011). He was associate editor (2002–2006) and then editor (2007–2011) for the *Journal of Clinical Child and Adolescent Psychology*, the official journal of Division 53 of the American Psychological Association which is the Society of Clinical Child and Adolescent Psychology. He is currently the editor for the *Journal of Abnormal Child Psychology,* the official journal of the International Society for Research on Child and Adolescent Psychopathology.

Research Interests

Paul has had two primary programmatic areas of research focus. The first line of research aims to advance knowledge on the causes of antisocial, aggressive, and delinquent behavior in children and adolescents and to use this research to develop improved methods for preventing serious behavior problems, including violent and criminal behavior. His research has systematically investigated the complex and interacting factors, both biological and social, that can place a child at risk for acting aggressively and violently and has integrated this work with research on how children normally develop emotional and behavioral regulation. His research has identified several distinct groups of children and adolescents who all show severe and developmentally inappropriate levels of behavior problems but who differ on the causal factors leading to their problem behavior and who seem to respond to different approaches for prevention and treatment. His work on children who show a callous and unemotional interpersonal style (i.e., CU traits) has led to changes in the major classification systems for diagnosing behavior problems in children and adolescents. Specifically, the most recent editions of both the Diagnostic and Statistical Manual of Mental Disorders (DSM-5)

published by the American Psychiatric Association and International Classification of Diseases (ICD-11) published by the World Health Organization have for the first time included CU traits as a specifier (i.e., with Limited Prosocial Emotions) to distinguish important subgroups within the diagnosis of Conduct Disorder.

Paul's second line of research has focused on improving the methods used to assess behavioral and emotional disorders in children and adolescents. In 1999, he chaired a task force, commissioned by the American Psychological Association, Division 12 (Clinical Psychology), on upgrading the science and technology of assessment and diagnosis for childhood psychopathology. From 2007 to 2012, Paul was member of the ADHD and Disruptive Behavior Disorders Work Group for the American Psychiatric Association's Diagnostic and Statistical Manual 5th Edition Task Force. This work group consisted of 8 international members charged with making recommendations for improving the criteria used to diagnose people with disorders of conduct. Paul also has published three editions of a textbook with Randy Kamphaus of the University of Oregon and Chris Barry of Washington State University that can be used to train psychologists working with children and adolescents on an evidence-based approach to clinical assessment. Finally, Paul has developed a number of assessment tools to help translate findings from research to practice. A scale he developed to assess parenting practices that research has indicated are important for child development, the Alabama Parenting Questionnaire, has been used in over 200 published studies and translated into 17 languages. Another scale developed by Paul to assess CU traits, the Inventory of Callous-Unemotional traits, has been used in over 150 published studies and translated into 25 languages.

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Froh, Jeffrey

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Jeffrey Froh is a faculty member at Hofstra University in Hempstead, New York. He is a school psychologist who conducts research concerning (1) gratitude in children and adolescents and (2) positive education.

Early Life and Educational Background

Froh was born on April 25, 1977 in Port Jefferson, New York. He received his B.A. in Psychology from St. Joseph's College in 1999 and his M.S. in School Psychology from St. John's University in 2002. He earned his Psy.D. in School Psychology with a concentration in Psychotherapy from St. John's University in 2004 under the direction of Raymond DiGiuseppe.

Professional Career

Froh is a New York State-certified school psychologist, New York State-licensed psychologist, Associate Fellow of the Albert Ellis Institute, and Associate Editor for *The Journal of Positive Psychology*. Before joining the Hofstra faculty, he taught at various colleges and practiced as a school psychologist in several school districts on Long Island in New York. Froh is the coeditor of the book *Activities for Teaching Positive Psychology: A Guide for Instructors* (2013, American Psychological Association) and co-author of *Making Grateful Kids: The Science of Building Character* (2014, Templeton Press), which is now translated into three other languages. In 2011 he received a 3-year $1 million grant from The John Templeton Foundation to study gratitude in youth. He has over 50 publications on positive psychology in general and gratitude in youth more specifically in top-tier journals and scholarly volumes, and he has given over 100 presentations on gratitude and happiness.

Research Interests

For the past decade, Froh's primary research interest has been the assessment, development, and enhancement of gratitude in children and adolescents. Because gratitude seems to solidify around 7 years old and is stable by around 10 years old, Froh has been focused on creating a new parent-report scale for measuring gratitude in children, as well as validating the current adult gratitude scales for use with early and late adolescents. The bulk of his research is aimed at creating school-based gratitude interventions for youth. He is the first person to empirically test the effects of adolescents keeping a gratitude journal, as well as youth writing a gratitude letter to a benefactor and reading it to them in person (i.e., going in a "gratitude visit"). Froh also leads his team in creating a school-based gratitude curriculum that teaches children how to think gratefully. He is now examining the relation between gratitude growth over a 4-year period with increases in prosocial behavior and decreases in antisocial behavior in adolescents. His current work is moving beyond gratitude specifically and focuses on positive education, which uses a school-wide approach to helping children and adolescents build a life full of positive emotions, engagement, positive relationships, meaning, achievement, and positive health.

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Fromm, Erich

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Life and Educational Background

Erich Fromm was born March 23, 1900, in Frankfurt, Germany, and he lived until his death on March 18, 1980, in Locarno, Switzerland (Funk 2000). He was an only child of Orthodox Jewish parents. From his first breath, Fromm was thrust into an environment rich in theology, social factors, and science. He received early training in jurisprudence and sociology at the University of Heidelberg, where he received his doctorate degree in sociology in 1922. In the mid-1920s, Fromm obtained training as a psychoanalyst under Frieda Reichmann's sanatorium at Heidelberg. He married Reichmann in 1926.

In 1930 Fromm completed his training in psychoanalysis at the Frankfurt Institute for Social Research and then fled Germany to Geneva, ultimately landing in the USA in 1934, due to the Nazi uprising in Germany and Europe. In 1942 Fromm and Reichmann divorced after being separated for a long time. In 1944 Fromm married Henny Gurland who witnessed Walter Benjamin commit suicide at the eminent threat of being captured by the Nazis. The two remained married until Gurland's death in 1952 from a mysterious

illness. Her health problems resulted in the couple relocating to Mexico in 1950 (Funk 2000). After suffering the loss of his wife, Fromm became social again and met Annis Freeman. The two married in 1953 and remained married until his death. It was this final relationship that Fromm was inspired to pen *The Art of Loving* (1956).

Professional Career

Fromm started his own clinic in 1927 and joined the Frankfurt Institute for Social Research in 1930. When arriving in the USA in 1934, he started working at Columbia University with Karen Horney and Harry Sullivan. In 1943, after parting ways with Columbia University, Fromm started the Washington School of Psychiatry in New York and in 1946 co-founded the William Alanson White Institute of Psychiatry, Psychoanalysis, and Psychology. Fromm held teaching positions at Bennington College from 1941 to 1949, New School for Social Research from 1941 to 1959, National Autonomous University of Mexico from 1949 to 1965, Michigan State University from 1957 to 1961, and New York University from 1962 to 1965 (Funk 2000). Throughout his career he maintained a private practice and published more than 25 books.

Needs of People and Humanism

Fromm began to apply his liberal interpretation of the Talmud to his theory of the human condition. Fromm (1959) outlined a view of the human which places the individual in a complex mix of political factors, retrieval tendencies, and ideological forces. For Fromm, the fall from grace in Genesis is less a depiction of sin than a convergence of biological evolution and dawning awareness, providing the newly conscious primitive the ability to self-determine and actively choose courses of action. A key term in Fromm's approach is freedom, which, when embraced, would invite healthy growth but, when escaped, would invite pathology.

Fromm argued for eight basic needs including transcendence (creativity), rootedness (belonging), sense of identity (individual uniqueness), frame of orientation (understanding of the world), excitation and stimulation (goal striving), unity (between individual and nature), relatedness (social connection), and effectiveness (accomplishment). Fromm believed that there was a healthy approach to supporting these needs, which he thought would be living in a way that supports the individual's growth and achievement. Fromm gave the following explanation and warning:

> There is only one possible, productive solution for the relationship of the individualized man with the world: his active solidarity with all men and his spontaneous activity, love and work, which unite him again with the world, not by primary ties but as a free and independent individual. However, is the economic, social, and political conditions on which the whole process of human individualization depends, do not offer a basis for the realization of individuality in the sense just mentioned, while at the same time people have lost those ties which gave them security, this lag makes freedom an unbearable burden. It then becomes identical with doubt, with a kind of life which lacks meaning and direction. Powerful tendencies arise to escape from this kind of freedom into submission or some kind of relationship to man and the world which promises relief from uncertainty, even if it deprives the individual of his freedom. (1959, 36–37)

Orientation of Character

Fromm argued that character orientation, a "relatively permanent system of all noninstinctual strivings through which man relates himself to both the human and natural world," can take productive and nonproductive forms (1973, 226). He maintained the process of relating had two primary avenues: to assimilate or to socialize, with the former involving the use of things and the latter involving relating to the self and/or others (Fromm 1967). A productive orientation involves work as a creative self-expression and love as a process involving care, responsibility, respect, and knowledge. Additionally, a productive orientation always involves biophilia, a passionate and sustained love of all living things. Fromm maintained that an individual was never just one

orientation nor stayed in one orientation over the span of zir life.

Unproductive orientations, in contrast, reflect the positive desire to engage the world of self and others but elaborate in negative ways. Fromm listed four primary unproductive orientations, including the receptive, the exploitative, the hoarding, and the marketing orientations. The receptive orientation is one that demands constant gifts but doesn't respond in kind. The exploitative orientation is one that views all good as outside the self and therefore takes everything it can in order to feel good. The hoarding orientation holds on to what it loves, be it people or things. Finally, the marketing orientation views the self as a commodity and attempts to become whatever others want.

Personality Disorders

Fromm identified three severe pathologies, all extreme in that they become core features of a person's personality (1973). The necrophiliac personality is one that is overly obsessed with death and shows unnatural interest in morbid themes and stimuli. The malignant narcissistic personality is one that shows both physical and moral hypochondriasis. Finally, the incestuous symbiosis personality is one that shows excessive dependence on the mother and on mother figures. All three personalities begin with a healthy impulse, whether a celebration of life, self-love, or healthy parental relations, yet each fails to go beyond the challenge of growth and instead becomes a caricature of a person.

Civilization

Regarding civilization, Fromm (2005) wrote:

I have spoken of the birth process of new societies. I would almost like to say that twentieth century man is a miscarriage. What has happened so that everything has seemed to break down at the moment when man appeared to stand at the crowning pinnacle of his historical endeavors? What began in the nineteenth century continued in the twentieth with ever-increasing intensity and speed: the growth of the modern industrial system, which led to more and more production and to increased consumer orientation. Man became a collector and a user. More and more the central experience of his life became I have and I use, and less and less I am. (p. 21)

Fromm illustrated how humans have evolved, primarily in their spirituality and their sense of self, identifying where and how things went wrong. The first stage is in humanity's shift which is from idolatry to humanistic religion. Fromm characterized idolatry as "that form of man's search for unity in which he returns to nature, to his own animalness, submitting himself. He submits himself to nature, to the work of his own hands or he submits to other people" (2005, 17). It's supposed to be through these developments that humans arrive at a more humanistic approach to religion, wherein their focus is less on the theocracy of gods and magic of idols and more on the salvation of humans and finding a new unity through the development of themselves with the world.

Fromm's second stage was characterized by the move to prophetic messianism, or the historic redemption, instead of the personal or the individual redemption. Loosely put, prophetic messianism puts forth the idea that before humans were cast from paradise, they were at harmony with nature but, as animals do, they lacked a sense of self. Upon disobeying God's commandment and being banished from paradise, humans gained their sense of self but lost their harmony with nature. This was the first act of humans making history, and upon losing their harmony with nature, humans began to work toward a new harmony, one that developed their higher senses of reasoning and love and, in a broader sense, their own humanity, the very humanity that so clearly divides humans from the animals and nature that they were previously so closely entwined with. This idea that prophetic messianism puts forth also sets an idea of reconciliation (2005) or a history where humans work solely toward fully and completely realizing their humanity. Upon fully realizing their humanity, humans would find

themselves to be a full human beings of love, reasoning, and self-awareness capable of being individuals and being one with the world, finding unity with both.

The third stage of humanity's development begins with the Christianic idea of reconciliation as a continuation of the idea that prophetic messianism puts forth. However, in this development Christian reconciliation is not a salvation of the self but more so a salvation of the collective, the whole of humanity instead of the individual. Humans move to, instead of seeking reconciliation in the world they have already created and continue to create for themselves, seeking reconciliation in a world that transcends their own world as it is known.

The fourth and fifth stages of humanity's development are where, in the fourth, there is a historic marriage of prophetic messianism and Greek thought in the Catholic church which then produces something that leads people into modern society: the Renaissance. In the fifth stage, the Renaissance is what leads humanity into modern society. The renaissance is characterized by much: new forms of art and music, a relearning of Greek and Roman thought, and a newfound fascination and dedication to it. It is the virtual rebirth of humanity into something that strives toward a betterment of every facet of itself. It's in this thinking that humanity finds itself faced with a new form of its previous beliefs in the values of prophetic messianism. Instead of a perfect, humane society content on Earth, the Renaissance birthed a good society (2005) in the farthest reaches of Earth, of space even, in the form of a utopia. It's here in the Renaissance that humans discover their passion for the new science and technology of the age. Instead of finding harmony with the world and themselves, creating a unity between the two, they center on the domination of nature. It is through this that people find the pinnacle of their humanness, finding themselves and focusing solely on that and the development of humanity even further than previous stages. Here humans truly began to push themselves and humanity to the furthest it could go as they

began to develop further and further in technology and science.

In the nineteenth century is when humanity seemingly makes all its great strides; it began to really reach the pinnacle of achievement, its fulfillment. This age meant to "create a man who dominated nature, would eradicate war, and would produce – as a means to humanity's development – material affluence" (2005, 20). So, what happened in the years between then and the twentieth century that caused humans to lose their footing in these noble endeavors, two world wars, the inhumaneness of Hitler's rule and Stalin, and the damage that has lingered long, long after and human threat to itself through complete nuclear annihilation?

It is clear that along this path humans became more and more infatuated with their achievements in the industrial aspect of life. They created for themselves a culture built around consumption, centered their worth and themselves on what they have instead of what they are. Where before people's spirituality and their search for reconciliation, for salvation, resided in themselves, their individuality, and the quest for a better life, it now sits within their need for consumption and their complacency with a faceless authority. In the twentieth century, Fromm asserted that people has lost their bonds with family and community and failed to find new ones to replace them. Instead people became obsessed first with their own aloneness, which caused them to lose grasp of the polarizing ideals that characterized the nineteenth century, those being either the need to completely submit to authority or rebel against it entirely. It was through these dichotomizing ideas that people discovered their desire to, above all, preserve and birthed their need for capital. Fromm (2010) identified that socialism is humanistic and therefore stands for freedom. Upon losing grasp of these ideals entirely in the twentieth century, thus becoming ensnared in their own aloneness, they open themselves up for that faceless authority to mold them and humanity into a well-oiled machine which then becomes an entirely new enterprise of its own. As any corporation cannot function without the complacency and

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willingness of all its participants, this authority relies heavily on human desire that developed through his consumerism to be useful as part of a whole instead of as an individual with humans dreading losing their place in the machine, dreading their own solitude, so much that they are warped into believing they are free.

All this is to say that observations could be made upon the current society, through this line of thinking. While things have certainly gone downhill further since the twentieth century, it could also be said that within recent years evidence could be found that humanity is in more of an in-between place than it was previously, where it seems to be driving toward a better approach and a better place for humanity and yet have equal possibilities of slipping and falling even further. In the vein of Fromm's comments on humanity losing its connections with family and with community and not creating new ones, humanity has, in recent years, begun to reestablish those connections. More and more of humanity is finding its unity once more with the world and with itself, particularly in groups of marginalized peoples. Where before, they found their own people, others with shared experiences and cultures, and they kept to those small communities, it can now be seen that communities are linking with one another in a chain reaction of support and love also, through this, finding renewed strength of self and self-support. While, especially in these sects of humanity, there is renewed fight and effort toward equal footing for all, there is also a renewed commitment to dismantling the aforementioned machine created by the authority. These groups now striving for true equality across all planes of existence and experience are also putting a renewed premium on true individualism and freedom, that is, the freedom to better oneself and one's talents as far as possible and, through this, better humanity as well. Instead of becoming discouraged by divisiveness, they are celebrating the differences between individuals and using them to further strengthen the bonds their similarities created.

This group of humans is only getting stronger, creating more and more of what is commonly referred to as a found family and drawing on that innately human ability of love and of empathy, which is at the core of all human kindness and the better possible future of humanity itself.

Equally, however, there is just as much chance for this to go further downhill as it is up. Fromm stated that humans can never be satisfied, will never be satisfied, so long as they rely on the corporation or the state and fails to develop their possibilities as a person (2005). In this sense people can never truly be happy, for to failing to develop one's self is also to fail one entirely. Fromm would likely see people sacrificing their true opportunities to the authority and reality of the well-oiled machine working only for the betterment of the 1% in the isolation of cubicle villages as destruction. Fromm would likely deduct that the current western society, with its creeping feelings of aloneness, is the cause for the current state of mental suffering and common use of psychotropic drugs.

Fromm identified that capitalism poses a threat to the growth and development of the individual. He stated that he aligned and supported Marx's identification of alienation, in that an individual feels alienated because that person loses zirself as the center of zir activities (2005). It's then illustrated that this alienation aligns perfectly with twentieth-century man's obsession with product – with things – and how with this infatuation man initially intended to dominate them but instead ended up dominated by them. Fromm (2002) said that people only step away from the assembly lines long enough to eat, procreate, and have interrupted sleep in order to purchase things that they will not have the time to use. In short, the problem with capitalism in civilization is that it aids people in reducing human beings into things or commodities. Fromm would share Benjamin's (1999) view that humans surround themselves with manipulations in order to cope with their alienation, manipulations of being consumed like entertainment, consumerism, eating, etc.

Entertainment makes it easier to reduce life to commodity (Benjamin 1999).

Interpersonal Relationships

Fromm extended his concept of reducing people to commodities or "thinging" them to the most intimate relationships human beings will ever engage in, relationships of love. Fromm remorsefully wrote that, "in spite of the deep-seated craving for love, almost everything else is considered to be more important than love: success, prestige, money, power – almost all our energy is used for the learning of how to achieve these aims, almost none to learn the art of loving" (1956, 6). Fromm addressed how love in the family and romantic love are both impacted similarly in respect of a failure to truly recognize the autonomy of the individual being considered. People go as far as to attempt to possess that person. As an example, consider parents that refuse to see the autonomy of their child. Parents who are shocked by their children because they refused see the child and zir interests. The child in that family is not free; he is dominated and will struggle with a number of facets of living (1956). Fromm revealed a dissatisfaction with individuals possessing the people they are supposed to love, which is exemplified in referencing loved ones as extension of the individual such as "my child" or "my partner." For Fromm, even this subtle referencing was an indication that one's feelings in the relationship really had more to do with self-love than love of another. He found this rather toxic and a holdover of patriarchal societies (Fromm 1956). For Fromm, if an individual loves someone else, then that loved person's happiness should be at the forefront of how the individual considers and interacts with the person ze loves.

Conclusion

Erich Fromm doesn't resist classification in so much as he garners multiple classifications ranging from psychoanalyst to social psychologist to theologian, which might identify why he is the inspiration of humanistic psychology. Friedman (2013) identified that Maslow based a great deal of his humanistic psychology on the works of Fromm, including Maslow's hierarchy of needs. Because Fromm integrated analysis with social factors and religion into a complex theoretical framework that at once accounts for the complexity of the human and offers positive avenues for growth, change, and ultimately transcendence, it makes sense that he would be the real beginning or creator of the effort that would be dubbed humanistic psychology.

Fromm identified three risks that stand against development and growth of the individual authoritarianism, destructiveness, and conformity. Throughout his work Fromm returns to these haunts or tormentors of progress and writes about the struggle it would require to overcome them. Fromm stated that only a fully developed individual would have the strength to say no and avoid reducing zirself to the "consumer, eternal suckling, whose one wish is to consume more and "better" things" (2010, 51).

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Frustration

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Synonyms

Annoyance; Dissatisfaction; Foiling; Hindrance;
Interference; Obstruction; Thwarting; Vexation

Definition

Frustration is a key negative emotion that roots in
disappointment (Latin frustrā or "in vain") and
can be defined as irritable distress after a wish
collided with an unyielding reality.

A Functional Perspective

The experience of brief and intense emotions is
an integral component of our everyday conduct.
Emotions influence how we make decisions and
navigate our worlds, via bodily changes that
prompt us to action. Frustration is a key negative
emotion that roots in disappointment and can be
defined as irritable distress in response to limi-
tation, exclusion, and failure (a state of dissatis-
fied insecurity). Frustration elicits negative
affect to signal that interests and interactions
must be adjusted, and emotional tension or
"arousal" to instigate defensive or aggressive
behavioral responses, such as strive to
reduce or eliminate the blocking agent or
circumstances.

Frustration evolved to deal with a particular,
evolutionarily recurrent situation type and is expe-
rienced when people encounter unresolved prob-
lems, such as contextual or psychological barriers
or obstructions, which must be removed to fulfill
personal goals, desires, drives, or needs. Techni-
cally, frustration is elicited when a goal-pursuit is
not fulfilled at the expected time in the behavioral
sequence (an unexpected nonreward). The most
reliable trigger of frustration is an *externally
attributed* omission of a rewarding event or item
and especially a perceived obstruction by an
intentional antagonistic act (Jeronimus et al.
2016). The intensity of frustration is a function
of the reward value of the frustrated approach goal
(reward proximity and motivation), the degree of
interference (partial/total), the number of interfer-
ences per unit time, and one's self-regulation abil-
ities (Berkowitz 1989).

From a functional perspective, frustrated
arousal should facilitate approach tendencies
when the problem is deemed *controllable* and
the goal perceived as *attainable*, e.g., inflicting
costs via anger to overcome problems. Con-
versely, when the problem is appraised as *uncon-
trollable*, frustration should facilitate avoidance
(withdrawal, via fear or anxiety), or low approach
when the goal is perceived as *unattainable*
(downregulation of expected benefits via sad-
ness). After cues trigger the frustration mode, the
way we see the world and feel about the world
changes. The energizing effects of frustration can
thus catalyze a broad range of processes, which
may be positive, because when we are frustrated
we make greater efforts and strive in other direc-
tions, which resulted in the creation of the electric
light bulb, Internet, and Facebook, among others.
All people suffer from frustration, because our
needs cannot always be adequately satisfied in
all situations, and frustration can help us identify
these needs. The ability to effectively deal with
frustration is therefore a very important skill to
develop.

The Development of Frustration

Experiences of frustration have a substantial
genetic basis (ca. 50%) which can be observed

from very early in life. Generally, frustration emerges during the first year of life and increases over childhood to peak during early and middle adolescence (Buss 2011; Putnam et al. 2001), followed by slow declines with age. Specifically, over childhood children usually lack the impulse control that is required to hold back from an intense immediate response. Moreover, in our first 2 years we typically cannot stand frustration, which may be expressed in tantrums. After our second year this frustration-tolerance improves, also due to better language skills. A 3-year-old may say "I hate you" when frustrated by limits, whereas many 4-year-olds experience frustration when they are unable to make sense of an explanation to one of their "why" questions. Over childhood new sources of frustration emerge, including new expectations, and comparisons with peers, older siblings, and adults. Adults, finally, who predispose for frustration early in life tend to score higher on the "angry-hostility" facet of the neuroticism personality domain, in which frustration clusters with trait anger and bitterness (McCrae et al. 2005).

Importantly, developmental patterns of frustration vary slightly across genders. Male infants are typically less able to regulate their frustration reactivity physiologically via behaviors. And while childhood frustration-proneness is comparable in both genders, boys become somewhat more inclined to frustration than girls over early adolescence until age 16, and adult men typically remain slightly more angry and hostile than women.

Causes and Consequences of Frustration: The Social Environment

Childhood frustration-intolerance has been associated with a broad range of outcomes, including psychological, social, and occupational functioning, well-being, and somatic and mental health service use (Caspi et al. 2016). Both stability and change in dispositional frustration emerges from an interplay between individuals and their (social) environment. Easily frustrated infants are typically perceived to be less attentive, more active, and more distressed to novelty than their less easily frustrated peers and are more likely to develop an insecure-avoidant attachment style.

Children and adolescents who are easily frustrated report more stressful social events with parents and peers, in part due to the *perception* of more frequent hostile intent, rejection, and disapproval in others (Laceulle et al. 2015). As such, dispositional frustration can have pervasive social consequences, in term of social relationships and interactions, but also with regard to occupational and job performances.

The social environment can also affect our frustration tolerance, either in terms of further reinforcing and stabilizing an already existing predisposition or in terms of contributing to small changes in frustration. For instance, more rigid and disciplinarian parents can increase the number of frustrations their child faces. In addition, frustration-tolerance may decrease after major social stressors, and this change can persist for months and may get under the skin (Jeronimus et al. 2016). Thus, frustration tolerance both affects and can be affected by the social environment, and these processes are known as person-environment transactions (e.g., Laceulle and van Aken 2017).

Frustration, Psychopathology, and Life-Outcomes

Dispositional frustration, as well as interactions between frustration and the social environment, can have profound consequences for an individual's vulnerability for the development of psychopathology. Frustration explains a substantial part of the development of psychopathology over adolescence, which suggests that frustration is close to the origin of the causal pathways towards psychopathology (Caspi et al. 2016; Jeronimus et al. 2015). High frustration during adolescence predicts increases in general distress and externalizing symptoms such as anger and substance abuse, and an increased risk to develop anxiety, depression, substance abuse, and thought disorders and their symptoms during adulthood (Jeronimus et al. 2016, 2017).

Frustration has repeatedly been related to aggression and attention deficits, such as in the famous frustration-aggression hypothesis (Berkowitz 1989).

Frustration typically elicits anger (an emotion), which in turn reduces inhibitions and narrows attention to cues for threat, which *can* lead to aggression (a behavior which causes harm or damage, either physical, verbal, or relational), as outlined. Importantly, whereas frustration requires a blockage to obtain a desired goal, this is not a necessity for anger and aggression. The frustration-aggression link has been refined via the dual aggression model which distinguishes reactive from proactive aggression (Hubbard et al. 2010). Frustration elicits *reactive* aggression to a perceived blockage ("aroused/hot"), which can be either internally or externally provoked, resulting in an emotional, impulsive, and defensive or hostile/retaliatory reaction. *Proactive* aggression, in contrast, tends to be calm and instrumental and is associated with popularity, delinquency, and psychopathy, rather than frustration.

Frustration intolerance may be particularly notable in new situations and when the person is tired or stressed. Low frustration tolerance is a characteristic feature of personality disorders, especially for borderline and antisocial personality disorder, and has been associated with narcissistic, obsessive, paranoid, histrionic, and schizoid traits. Being easily frustrated is also commonly reported by adults with sleep problems, medically unexplained complaints, attention deficit (hyperactivity) disorder, dyslexia, dyspraxia, dementia, Alzheimer's, and traumatic brain injury. Also high functioning autistic people (previously known as Asperger) are typically more prone to frustration.

Animal Models of Frustration

Frustration has been extensively studied using animal models. In these models, frustration is often conceptualized as part of a cognitive "rage system" that influences memory-retention and learning processes to suit a deliberative mind-set to deal with the source of danger or obstruction, or to retrieve or replace a lost resource. Individual differences in frustration have been observed in chimpanzees, pigs, rats, and birds. Even honeybees show frustration-like responses when experimenters shift access from a high very-sweet concentration of sugar to one that is much less concentrated, thus presumably less desirable. Frustration enables organism both individually and collectively to adapt, survive, and reproduce.

History

About 2500 years ago Gautama Buddha claimed that frustration is often generated by desire and attachment. At the same time Graeco-Arabic medical traditions conceived frustration intolerance as characteristic of the choleric type, a person who is quickly tempered (irritable/angry) due to highly active bodily fluids and a preponderance of yellow bile. These "fire people" responded rapidly and sustained their response for a relatively long time (hot/dry).

Early in the twentieth century, Sigmund Freud revived interest in frustration with his psychodynamic theory of neurosis, in which frustration referred both to external barriers to goal attainment and internal obstacles blocking need satisfaction. Freud postulated that unresolved frustrations from infancy and early childhood played out unconsciously in adulthood and saw frustration as a necessary condition for mental illness and the most common cause for neurosis.

The psychotherapist Albert Ellis' rational emotive behavior therapy (REBT) purported that emotional disturbances typically root in frustration intolerance, viz. the belief that reality should be how we want it to be. Frustration was thought to be the typical response to irrational cognitions like "life should be fair." Challenging the validity of these beliefs then challenged the frustration that resulted from it.

Over the past century, the choleric and melancholic temperament types evolved into the modern personality dimension neuroticism, whereas neurosis developed into anxiety, depression, and somatic disorders.

Conclusion

Frustration is a key emotion that can elicit a wide range of responses. Although frustration is known to have a substantial genetic component, research

has provided support for both lifespan development and (small) environmentally driven changes in frustration. Individual differences in frustration can have profound consequences for major life outcomes, including how we shape our social environment, our occupational functioning, our well-being, and a (increased) risk for the development of somatic problems, psychopathology, and aggression.

Cross-References

▶ Basic Emotions
▶ Frustration-Aggression Hypothesis
▶ Neuroticism
▶ Personality Structure
▶ Temperament

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Frustration-Aggression Hypothesis

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Synonyms

The frustration-aggression model; The frustration-aggression theory

Introduction

"Frustration is an interesting emotional state, because it tends to bring out the worst in whoever is frustrated. Frustrated babies tend to throw food and make a mess. Frustrated citizens tend to execute kings and queens and make a democracy. And frustrated moths tend to bang up against lightbulbs and make light fixtures all dusty."
– Lemony Snicket, *The Wide Window*

Lemony Snicket was correct – frustration seems to bring out the worst behavior in people of all ages, including aggressive behavior. One of the

earliest theories of aggression, the frustration-aggression hypothesis, was proposed in 1939 by a group of five Yale psychologists: John Dollard, Neal E. Miller, Leonard W. Doob, Orval H. Mowrer, and Robert R. Sears. This theory predicted that frustration was a sufficient and necessary precursor to aggression. They defined a *frustration* as something that blocks or interferes with a goal (a definition that notably excludes the emotional reaction to the goal being blocked), and they defined aggression as a behavior whose goal is harm or injury to the target. The Yale group formulated the frustration-aggression hypothesis based on the early writings of Sigmund Freud (1961/1917), who regarded aggression as the "primordial reaction" to frustration.

History of the Frustration-Aggression Hypothesis

In their book bearing the title *Frustration and aggression*, Dollard et al. succinctly summarized their theory using two bold statements on the very first page: (1) "the occurrence of aggressive behavior always presupposes the existence of frustration" (p. 1), and (2) "the existence of frustration always leads to some form of aggression" (p. 1). In other words, aggression was *always* a consequence of frustration, and frustration was *always* followed by aggression. Dollard et al. further contended that other factors, such as desire to complete the goal, the degree to which a frustration hinders goal completion, and the number of times goal completion was hindered, would all be positively associated with aggression. The Yale team also emphasized that aggression was not always directed at the perpetrator of the frustration and may instead be displaced against innocent victims.

When the Dollard et al. (1939) book was first published, it had a great impact on the behavior sciences. For example, a 1941 issue of *Psychological Review* contained multiple different articles on frustration, aggression, and the Yale team's theory. However, much of that attention came in the form of criticism, largely due to its sweeping claims and overreaching scope. Many

disparaged the idea that frustration *always* leads to aggression, as stated in the initial hypothesis, instead believing that only some frustrations will lead to aggression. Generally, modern researchers reject the initial version of the theory in favor of Berkowitz's iteration or another aggression model (e.g., Fox and Spector 1999).

Miller endeavored to assuage some of these concerns in his revision of the theory in 1941, which aimed to soften the second bold claim that frustration always leads to aggression. Miller explained that frustration can lead to other consequences besides aggression and that frustrations can lead to *instigations* of aggression, but not necessarily the occurrence of aggression (Miller 1941). Thus, he rephrased the hypothesis to state that frustrations can elicit numerous responses, such as aggression, escape, or finding a new way around the frustration to complete a goal. After an individual evaluates what course of action would best assist goal completion, they would act in that manner, potentially changing their future courses of action depending upon the outcome.

Despite Miller's (1941) improvements, many still criticized the theory. Berkowitz (1989) attributed many of these criticisms to psychologists still perceiving the theory as initially laid out in 1939, and therefore failing to assess the merits of both the original theory and Miller's revision. Thus, the frustration-aggression hypothesis was also dismissed and criticized by many prominent aggression researchers in the mid-twentieth century, such as Albert Bandura (1973) and Dolf Zillmann (1979), two prominent psychologists who both studied aggression. Zillmann and Bandura argued that frustrations lead to emotional arousal, not directly to aggression. Zillmann also argued that only certain types of frustrations (e.g., personal attacks) are directly tied to aggressive behavior. Although Miller's iteration of the frustration-aggression hypothesis was not widely successful itself, the idea that individuals can learn to handle frustrations in aggressive or nonaggressive ways influenced early learning theories of aggression (for a review see Bushman and Huesmann 2010).

It was not until Berkowitz (1989) reimagined the frustration-aggression hypothesis that the

theory found success. Although he acknowledged the failings of Dollard et al.'s (1939) initial version, Berkowitz also saw the merit in many of their ideas. Berkowitz criticized other aggression researchers, such as Zillmann, who tried to bind the theory specifically to instances where the aggressor felt the frustration was socially inappropriate or a personal attack. In his version of the frustration-aggression hypothesis, Berkowitz narrowed the scope of the theory, adding some conditions that differentiate it from the nearly universal claims made by Dollard et al. (1939).

First, Berkowitz stipulated that although frustration is one potential motivator for aggression, aggression can also be a learned instrumental behavior. For example, a mugger may harm someone not because they are frustrated but because they perceive that course of action to be the best way to get what they want (e.g., someone else's wallet), a behavior that would not be explained by the frustration-aggression hypothesis. Therefore, Berkowitz argued that the frustration-aggression hypothesis is most relevant to hostile, and not instrumental, aggression. Hostile aggression is "hot," impulsive, angry behavior that is motivated by a desire to harm someone. Instrumental aggression is "cold," premeditated, calculated behavior that is motivated by some other goal (e.g., obtaining money, restoring one's image, justice). Berkowitz also argued for potential mediators and moderators to the relationship between frustration and aggression, such as social rules, individual differences, previous experiences and learning, and thoughts about the goal and frustration. Berkowitz also added one large modification to the theory: he stated that frustrations can lead to aggressive inclinations, but only so far as they lead to negative affect. In other words, frustration will only lead to aggression if it causes sufficient unpleasant feelings.

Berkowitz's (1989) work has seen greater success than either of the other two versions of the frustration-aggression hypothesis and is used as a theoretical basis for many modern research articles (e.g., Breuer et al. 2015). Berkowitz's version of theory has also inspired other theories, such as the model of work frustration-aggression (Fox and Spector 1999), which explains counterproductive workplace behavior.

Conclusion

The frustration-aggression hypothesis is one of the first academic attempts to explain aggression. Despite its controversial beginnings, the theory gave rise to discussion, further research, and new theories that saw success. Thanks to Berkowitz, the frustration-aggression hypothesis eventually became popular in its own right, and is used in modern research today. Perhaps because frustration brings out the worst behavior in people, as Lemony Snicket noted, it also brought about one of the earliest and most important aggression theories.

Cross-References

▶ Aggression
▶ Albert B.
▶ Frustration
▶ Miller, Neal

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F

Fulfillment

▶ Personal Growth

Fully Functioning

▶ Personal Growth

Fully Functioning Person

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Synonyms

Capabilities; Eudaimonic well-being; Flourishing;
Functional well-being; Optimal functioning; Self-
actualization; Self-determination theory; The good
life; Values in action; Wisdom

Definition

The fully functioning person is a central term in
Carl Rogers's person-centered theory of per-
sonality, developed to describe the essence of
a good life. Three elements are particularly
important in his conceptualization: to be open
to new experiences, to live in an existential
fashion, and to find ones' organism trustwor-
thy. The general idea that goodness can be
defined with reference to functioning was not
born with Rogers though. Both Plato and Aris-
totle proposed theories about goodness in
which functioning worked as the most central
concept. Arguments about goodness and func-
tioning keep developing in contemporary work
on human goodness. The work of Sen, Stau-
dinger, and Tomasello serves as renowned
examples.

Fully Functioning

Historical Background

In Plato's book *The Republic*, Socrates puts for-
ward the argument that each thing in the world has
a function, which he defines as the thing one can
do "only or best with that thing" (cited in
Korsgaard 2008, p. 129). In the ancient Greek
worldview, the soul was what took care of us;
hence a human could be called good only if his
or her soul was functioning at its best. Elaborating
on this reasoning, Aristotle (1996) maintained that
only when we understand how something is sup-
posed to function can we grasp what it means for
this something to be good. Appealing to his theory
of human nature, and how it functions excellently
only when acting virtuously, Aristotle arrived at
the conclusion that the highest human good was
"activity of the soul in accordance with virtue."

In modern psychology, the idea of a soul has
disappeared, and the concept of virtue has
changed. But the idea that goodness and function-
ing are associated was picked up by the first wave
of humanistic psychology, perhaps first and fore-
most by Carl Rogers (1961).

Rogers' Conceptualization

In Rogers' view, becoming a fully functioning
person involves stretching and growing toward
realizing one's potentialities. The good life is not
a state of satisfaction or happiness but a process
toward an increasingly deeper of understanding.
Rogers' insights were developed through his work
on client-centered therapy. He was inspired by a
hypothetical end point of a therapeutic process,
where therapy was as "completely successful as is
theoretically possible" (Rogers 1963, p. 18). Such
optimal therapy not only depended on the client
but also the personal relationship between the
therapist and the client characterized by empathy,
compassion, and unconditional acceptance.

From Rogers' work, three major personality
characteristics emerge in the *process* of becoming
a fully functioning person. Firstly, the process
means moving toward increased openness to
experience. Whether the experience originates
within the organism or in the environment,
whether it triggers positive or negative reactions,

a person open to experience would have that experience completely available to awareness without any distortion. Second, the process implies to live fully in each moment. Rogers refers to this as experiencing each moment completely without defensiveness, observing without controlling, adapting to the structure *in* experience. Self and personality thus grow out of pure moments rather than being adjusted to fit a preconceived self-structure. Thirdly, such process of being and becoming will increase what Rogers refers to as "trust in one's organism." A fully functioning person has the courage to trust her organism's notion of what is "right" and use this notion as a competent and trustworthy guide to behavior. A person who has psychological freedom to move in any direction will naturally trust her organism and naturally move toward becoming a fully functioning person. A fully functioning person is able to live fully in and with all kinds of feelings, also the troubled and difficult ones.

Rogers' contemporaries in the first wave of humanistic psychology were also concerned about the idea of optimal functioning. For example, Maslow's (1954) theory of self-actualization depicts a hierarchical realization of different needs with fulfilment of potential and self-growth as the highest level of human functioning. When studying self-actualized people, Maslow noted that their motivation was *qualitatively* different from other people. They actively strived toward perfection, constantly seeking for opportunities to character growth, character expression, maturation, and development. Similarly, scholars from the same epoch, such as Allport, Fromm, and Jahoda, developed theories on functioning and well-being that broadly reflected the ideas proposed in the classical virtue ethics and in Rogers' perspective on the fully functioning person.

Recent Developments

The concepts developed by the ancient Greeks and the early humanistic psychologists were articulated without the preciseness needed for careful empirical investigation. Despite some recent support for Rogers' initial conceptualization (Proctor et al. 2016), typical developments in the study of fully functioning persons have operationalized the concept in ways more suitable for empirical investigations. For example, Ryff's (1989) model of psychological well-being includes a self-report scale to measure the concepts important to lead a good life. Ryff's student Corey Keyes continued within these frames in his work on mental health and flourishing and designed a self-report scale on "social well-being" (Keyes 2002). To be fully functioning, i.e., *flourishing*, individuals must experience emotional, psychological, and social well-being.

Self-determination theory (SDT) is grounded in the idea that some psychological needs must be satisfied in order for humans to function optimally (Ryan et al. 2013). Fulfilling the needs for competence, relatedness and autonomy are prerequisites for a fully functioning person. These needs enable us to master our environment, connecting and belonging, and act intrinsically consistent with our interests and values, which again are considered to be the hallmark of a happy life.

The idea of acting congruent with deeply held values is at the core of the classification system of strengths and virtues developed by Peterson and Seligman (2004). The values in action (VIA) is based on a long philosophical tradition of virtues and morality, with character strengths as the psychological ingredient that define the virtues. These virtues and strengths are universally valued as important contributions to living fulfilled and good lives. Fulfillment in this sense does not refer to momentary pleasure or happiness per se but reflects effort and pursuit over time, much like the process-oriented development of a fully functioning person described above.

The study of wisdom offers another virtue-based understanding of the concept of a fully functioning person. In the influential work of Ursula Staudinger (Law and Staudinger 2016), wisdom is considered to be the end point of human development, the most significant indicator of optimal functioning. The theory makes a distinction between two kinds of functioning, referred to as adjustment and growth. The first facilitates social adjustment and competence, whereas functional growth is associated with progress toward personal wisdom. Staudinger's theory of wisdom emphasizes the role of moral,

claiming that a person cannot be truly wise unless she considers both seeking good for herself as well as for others.

The distinction between adjustment and growth, and the importance of moral, is also central to the functional well-being approach (FWA; Vittersø 2016). In order to function optimally, this view proposes, humans must manage their need for adjustments and growth, or stability and change, which is the terminology of the FWA. After all, stability and change seem to be the overall concepts that connect all the relevant aspects of behavior regulation and adaptive functions in biological organisms. Positive feelings are important facilitators for these overall needs, but they differ in content and function. Some, like pleasure, happiness, and satisfaction, help in maintaining the need for stability. Others, like interest, engagement, or immersion, assist in the regulation of change (Straume and Vittersø 2012). In addition, empathy, compassion, and awe are proposed to be important elements of prosocial behavior and human moral. Scholars like Tomasello (2016) and Haidt (2012) have elaborated the associations between these emotions and moral in more detail and point out how the concept of a fully functioning person cannot be accounted for unless it is realized that human thinking is fundamentally cooperative. As an ultra-social and cultural species, a person is only fully functional to the extent that he either subordinates or treats as equal his own interests with the interests of others. According to Tomasello, to function well even involves a sense of obligation to do so.

Outside psychology, the most widespread idea on a fully functioning person is probably that of Sen (1993), referred to as the capability approach. It holds that the concept of functioning has to do with what a person manages to do or to be. The concept of a capability, on the other hand, reflects a person's ability to achieve a given functioning. Sen's capability approach is rather abstract, though, and has proven hard to operationalize for the purpose of empirical studies. A more concrete version of the approach is offered by Nussbaum (2011), a moral philosopher, who has proposed a list of ten universal capabilities.

Limitations to the Idea of a Fully Functioning Person

Critics of the early theories of the fully functioning person have pointed out that the characteristics proposed by Rogers and his contemporaries as essential for effective functioning are misleading. The kind of complete openness and realism in Rogers' theorizing is no longer considered a precise description of how humans function. Rather, people perceive their inner and outer environments imperfectly. Using "all of the data his nervous system can thus supply" (Rogers 1963, p. 21) is neither possible nor functional. A human person can simply not operate without the use of heuristics and biases. The trick is to figure out how and when these mental "shortcuts" are beneficial and when they are not.

It is also worth noting that, as with most terminologies in the science of psychology, the phrase "fully functioning person" suffers from the so-called jingle-jangle fallacies. Sometimes different concepts are interpreted as being similar because they share a common name (the jingle fallacy), while at other times separate terms are mistakenly taken to mean different things, even if they really refer to the same concept (the jangle fallacy). In order to make progress in the study of a fully functioning organism, some care about these conceptual perils should be taken.

Conclusion

A time travel in the history of the fully functioning person consistently connects the concept to the process of living a good life. This process requires efforts and development beyond the feelings of pleasure and happiness. What distinguishes the different perspectives is the degree to which being fully functioning is driven by psychological needs versus virtues, values, and acting strengths, the role of emotions and moral, the degree to which it depends on personal or social factors, and whether it distinguishes between different kinds of functioning. As opposed to early humanistic psychology, contemporary views have also operationalized these concepts in ways that make

them more suitable for empirical investigations. The knowledge of optimal functioning keeps accumulating, and, hopefully, the time travel to come will reveal even more insights into how and why fully functioning is beneficial for persons, relations, and society.

Cross-References

▶ Capabilities
▶ Eudaimonic Well-being
▶ Flourishing
▶ Personal Growth
▶ Self-Actualization
▶ Wisdom

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Functional Autonomy

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Synonyms

Drives; Dynamic personality psychology; Instincts; Learning; Motivation; Perseverative functional autonomy; Propriate functional autonomy

Definition

Functional autonomy is part of a dynamic approach to personality psychology which allows for the uniqueness of personal motives (Allport 1937, 1961). The concept of functional autonomy is a clear departure from psychoanalysis, wherein all motivations stem from either infantile biological drives or sexual drives (Allport 1937). Instead, adult motives are considerably varied and self-sustaining, with new motives growing out from, and replacing precursor systems and

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motives, thus becoming functionally independent of those precursor systems (Allport 1937). Essentially, functional autonomy refers to "any acquired system of motivation in which the tensions involved are not of the same kind as the antecedent tensions from which the acquired system developed" (Allport 1961, p. 229). Furthermore, Allport (1961) argues that there were two levels of functional autonomy, perseverative and propriate. Preservative functional autonomy is based on neurological principles including repetitive actions and simple behaviors, often seen in animals as well as humans. Propriate functional autonomy relates to higher level functioning and is based on philosophical assumptions about the self, including mastery and competence (Allport 1961).

Introduction

Allport suggests that adult motives are considerably varied and self-sustaining. Current motives grow out from antecedent systems and motives and become functionally independent of them (Allport 1937, 1961). He argues that motivations are always contemporary, allowing for experience and development to influence human motivation. Just as a child is initially dependent upon his or her parents and eventually "develops a will of his own, becomes self-active and self-determining, and outlives his parents, so it is with motives" (Allport 1937, p. 143). Furthermore, he asserts that William James' "transitoriness of instincts" (i.e., that an instinct that appears only once and immediately disappears via its very transformation into a habit) is correct (Allport 1937). An instinct cannot maintain its influence once it has been assimilated and transformed into a habit via the influence of learning. Thus, according to Allport, personality must be the study of *post-instinctive* behavior.

Allport (1937) takes a behavioral approach to functional autonomy and provides examples such as the following as evidence:

> An ex-sailor has a craving for the sea...Now, the sailor may have first acquired his love for the sea as an incident in his struggle to earn a living. The sea

was merely a conditioned stimulus associated with satisfaction of his 'nutritional craving.' But now the ex-sailor is perhaps a wealthy bander; the original motive is destroyed; and yet the hunger for the sea persists unabated, even increases in intensity as it becomes more remote from the 'nutritional segment.' (p.145)

For Allport, this demonstrates that the link between current motivations and past motivations is historical but not functional or serviceable to current needs. Allport also suggests that such motives interact with innate dispositions (i.e., inner qualities that are the building blocks of personality) to work toward their development. As such, unlike behaviorist approaches of the time, functional autonomy moves the emphasis away from the stimulus: "A motive is no longer regarded as a mechanical reflex or as a matter of redintegration, depending entirely upon the capricious operation of a conditioned stimulus. In a very real sense dispositions *select* the stimuli to which they respond, even though *some* stimulus is required for their arousal" (Allport 1937, p. 155, his italics). Essentially, this theory distinguishes between drive and motivation – and extends learning theory by demonstrating that the stimulus can stop dictating action, and selection of the stimulus can take place as defined by one's current interests. Thus, new purposes or motivations are born of, and replace old ones, and the new purposes can be unexpected and unpredictable. Because Allport was, for his time, a radical thinker, a number of criticisms were leveled at him by a group of psychologists known collectively as *instinctivists*.

Critiques of Functional Autonomy

Bertocci (1940) argues that Allport does not satisfactorily explain the consistency and continuity of personality. For Bertocci, because Allport suggests that current motives continuously supplant prior motives, it becomes difficult to then account for why purposeful striving in certain life directions occurs. For instance, one may critique Allport's ex-sailor example by arguing that it suggests that the ex-sailor develops a new motivational system, and therefore, a new aspect of personality takes over from the old, suddenly

transforming him into a new person altogether. For Bertocci, this seems to be impossible, and to him it is far more reasonable to suggest that humans possess permanent motives guiding their life directions.

Bertocci also struggled with Allport's lack of explanation for why certain motives become functional, while others do not. If, as Allport suggests, repeating any action leads to it developing its own autonomous motivational system, then there must be some limiting principle in play because it is not possible for humans with finite capacities to develop an infinite number of motives.

Like Bertocci (1940), Oppenheimer (1947) expressed dissatisfaction with Allport's lack of explanation for why motives develop and further argues that Allport seems to suggest that motives can develop by accident simply because they are repeated often enough. For Oppenheimer, accident is not a satisfactory explanation, and a more reasonable explanation would be to suggest that underlying propensities seek out environments in which they can be satisfied, without needing to resort to any additional motivation mechanics. To demonstrate this, Oppenheimer suggests that in Allport's (1937) ex-sailor example, had the hypothetical person been someone entirely different, such yearning for the sea would not occur. In other words, as a mechanism functional autonomy is redundant, it is more reasonable to suggest that pre-existing innate drives and dispositions determine one's behavior.

Finally, both Bertocci (1940) and Oppenheimer (1947) suggest that all of Allport's (1937) examples do not discount the fact that other basic instincts may drive contemporary behavior. Just because one basic drive (e.g., hunger) becomes irrelevant to current behavior, does not discount the possibility that other basic drives (e.g., self-esteem) remain, or become, currently relevant. For example, the ex-sailor may be currently driven by an innate, pre-existing need for self-esteem in his yearning for the sea, rather than the drive for hunger which initiated his pursuit of the sea in the first place. If this is indeed the case, then what Allport describes as autonomous motives in and of themselves are nothing more than secondary motives manifested from deeper,

pre-existing primary motives. Allport (1940, 1961) considered these criticisms of his work (especially those of Bertocci) and further clarified his ideas by developing the concepts of *perseverative* and *propriate* functional autonomy.

Perseverative Functional Autonomy

Perseverative functional autonomy describes low-grade processes that constitute a shift of earlier motivations into new motivations. The newer motivations can originate from the earlier ones, and persevere, although they no longer receive reinforcement (Allport 1961). Allport (1961) uses animal research to illustrate this type of functional autonomy; he describes a rat who has previously learned to run a maze successfully for a food reward will continue to do so even when it is no longer hungry. It is a perseveration because it is a mechanism, or program, that once begun continues to maintain itself. For example, people with true addictions will return to their addiction even once the withdrawal symptoms have disappeared. According to Allport, this is due to a personality subsystem that developed to manage life's challenges by turning to alcohol or narcotics to cope, rather than due to a *physiological* craving (Allport 1961). Task perseveration is another example of perseverative functional autonomy. Allport (1961) explains that incomplete or interrupted tasks create tension that keeps an individual focused on completing it. As evidence of this, Allport offers that *the Zeigarnik effect* (the observation that uncompleted tasks are better recalled than completed ones [Zeigarnik 1938]) demonstrates a yearning to persevere and complete the task.

To his credit, Allport (1961) acknowledged that, at the time, technology was not advanced enough to describe the underlying neurological structures for this type of functional autonomy – but he assumed that the very presence of these types of behaviors indicated the presence of these types of self-sustaining circuits above and beyond the ones dedicated to simple stimulus control.

Propriate Functional Autonomy

In contrast to the relatively "low-grade" or simple processes involved in perseverative functional autonomy, propriate functional autonomy refers to self-sustaining motives (such as interests) that are related to the proprium. The concept of the proprium is similar to the concept of the self and was the term Allport preferred to Freud's "ego," but it is not as broad as the concepts of "person" or "personality" (Shirk and Allport 1957). Rather, proprium refers to "those functions that make for the peculiar unity and distinctiveness of personality, and at the same time seem to the knowing function to be subjectively intimate and important" (Allport 1955, p. 61). Propriate functional autonomy relates to the sense of responsibility or ownership a person can feel about their life and the way one's role and duties are defined can determine a person's daily behavior.

This subtype of functional autonomy can explain how ability can turn into interest. He provides the example of an unwilling student who is required to study a field as part of their undergraduate studies but ends up engrossed with the topic (Allport 1961). The original motive may be lost, and what was originally a means to an end becomes an end to itself. Propriate motives can include interests, values, or sentiments and can have selective powers. As an interest grows not only can it create tension which will lead a person to more congruent conduct, it will also select and direct a person to whatever is related to the interest (Allport 1961). Hence, the motivational system can run autonomously.

Propriate functional autonomy is necessary to account for a cohesive and consistent personality; otherwise, personality would be "like that of a jeweler's repair shop filled with unrelated self-winding watches" (Allport 1961, p. 235). Although personality consists of multiple autonomous systems, ultimately its central focus is on the master systems of motivation which confer more cohesion on personality rather than disparate perseverating systems can do (Allport 1961). Essentially, although these perseverative autonomous systems exist, the more vital illustration of functional autonomy is found in the complex propriate system which determines the mature adult (Allport 1961). This form of functional autonomy is also more selective, in that multiple and competing motives will not develop if not needed or incongruent with current goals. It also provides the mechanism for the development of unique aspects of individuals' personalities.

Conclusion

Gordon Allport tried to holistically account for human personality by proposing his theory of functional autonomy. He strongly believed that an integrative account of human personality that considered both general propensities and individual differences was essential to the advancement of the field of personality (Allport 1940). He believed that functional autonomy was the best way to describe why people differed and that these differences were not born of innate drives but personal choices that one makes in life in and of themselves. As such, Allport endeavored to wrestle away the grip that nomothetic researchers had on personality research, by attempting to bring in a theory of motives to account for personality from the idiographic perspective.

The theory of functional autonomy was the first to separate motives from biological drives and was a brave departure from the dominant psychodynamic perspectives of the time. Considered a radical thinker, Allport attempted to change the discourse by de-emphasizing the importance instinctivist psychologists placed on innate drives, as well as the overemphasis that early learning theorists placed on the role of stimuli. In doing so, he tried to demonstrate that the behaviors that individuals engaged in are not purely driven by inner instincts or external pressures, as behaviors can be motivating in and of themselves (Allport 1937, 1940, 1961). In the face of criticism, he continued to develop his ideas (Allport 1960, 1961), further refining the definition of functional autonomy, and providing clearer insights into how motives change and sustain, over the course of one's life.

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Functional Brain Imaging

Functional Dependency

Functional Magnetic Resonance Imaging (fMRI)

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Synonyms

Big Five; Functional brain imaging; MRI; Personality and the brain; Personality traits; Structural imaging

Definition

Functional MRI is a neuroimaging procedure that measures brain activity by detecting changes in cerebral blood flow, which correspond to neuronal activation of brain structures. Functional MRI studies typically assess participants' brain activation at a resting state and then compare the same individuals' brain activation response to a particular task. The use of resting state fMRI can also evaluate participants who do not perform an explicit task, which is useful for understanding the dynamic neural architecture in the absence of experimental conditions.

Introduction

Personality patterns consisting of thoughts, emotions, and behaviors are fairly consistent throughout the lifespan. Currently, personality is thought of as a set of broad and complex traits, which boil down to the Big Five. These personality traits are typically measured via self-report, but the field has sought alternative, more objective measures to quantify personality. Brain imaging using functional magnetic resonance imaging (fMRI) provides one noninvasive, unbiased window with which to observe personality-based brain differences. Functional MRI has attained some degree of popularity in the world of personality

psychology research, with recent evidence demonstrating neurobiological pathways to personality traits and personality disorders. With the use of fMRI as a biomarker, results from fMRI studies help empirically record personality traits within the scope of neuroscience and psychology.

fMRI Methods

Functional MRI detects small changes in blood flow throughout the brain and outputs an image that shows neuronal activity of specific brain structures. In order to generate these images for research, participant's brain activity is viewed at rest and again during a particular task that is thought to target a specific brain region. In fMRI personality research, investigators often obtain data from both self-report measures and fMRI data. Self-report results are then correlated with activity in various brain areas and large neural networks that can vary in blood-oxygen-level-dependent contrast signaling. While fMRI methods provide an alternative way to measure personality, it is important to note that these measures come with some limitations. For instance, because the use of fMRI can be costly and time-consuming, many fMRI studies have small sample sizes. Thus, caution should be taken when interpreting fMRI results due to the relatively low statistical power allowed by such studies

fMRI Correlates of the Big Five

Using fMRI, researchers have worked to link specific areas of neural activation to personality, and have found that personality is associated with activity in the prefrontal cortex and that different personality traits relate to different brain areas. To date, much of the work on fMRI and personality has focused on neuroticism, as this trait is positively correlated with many psychological disorders. Examining the role of neuroticism in neural processing of natural social interactions, Saggar et al. (2016) found that participants with higher neuroticism had more fMRI activity in the

bilateral frontal operculum, anterior insula, and right amygdala when others were oriented away to shield their face versus when others were facing the participant so that their features were visible, suggesting that emotional elements such as facial expression and social engagement influence social processing as a function of personality. Furthermore, these findings show that the amygdala and other limbic system areas are involved in emotional processing and feedback. Other studies have shown that higher levels of neuroticism are associated with impatience and a preference for immediate. Functional MRI results demonstrate greater activation when a person selects a reward timeline that conflicts with their personality, implying that more mental resources are needed when a person makes a choice in contradiction to their personality rewards (Manning et al. 2014).

Functional MRI research has also demonstrated a link between neuroticism and functioning of the vestibular network, which includes the cerebellum and cerebral cortex. For instance, one study found a positive association between neuroticism and brain volume in the cerebellum, along with areas such as the middle temporal gyrus and cingulate gyrus (DeYoung et al. 2010). In response to negative stimuli, more neurotic individuals have greater neural activity in the pons and vestibulo-cerebellum and increased activity in the connections between the pons and the amygdala, suggesting that personality is a moderating factor in brain reactivity to emotional stimuli.

Openness to experience has also been examined using fMRI techniques. Beaty et al. (2016) examined default network functioning, or the degree to which interacting brain regions are correlated in their activity during wakeful rest (e.g., daydreaming and mind-wandering). In this study, fMRI results determined that openness explained 18% of the variance in default network functioning, showing that high openness is associated with more efficient functioning of default networks. These findings raise the possibility that openness is linked to a biological mechanism. Further, this shows that there is a relationship between large-scale brain networks and personality traits.

Beyond the default network, openness to experience has been linked to increased amygdala activity in response to group success (Morawetz et al. 2014). Based on the positive correlation of openness and amygdala activity, it appears that openness specifically affects the way the brain's reward system responds to teamwork (i.e., cooperation).

Functional MRI evidence of empathetic processing shows that interpersonal elements of extraversion and agreeableness are associated with the ability to recognize emotional states of others and greater brain activity in the regions corresponding to empathy. People who have high warmth and altruistic traits show more activity in brain regions such as the temporoparietal junction and medial prefrontal cortex (Haas et al. 2015). DeYoung and colleagues determined that the retrosplenial region of the posterior cingulate cortex had a positive association with agreeableness (DeYoung et al. 2010). Much like agreeableness, extraversion is positively correlated with activity in the posterior cingulate cortex, along with bilateral thalamic activity when people observe social gestures (Saggar et al. 2016). Further, extraversion is positively associated to brain volume of the medial orbitofrontal cortex (DeYoung et al. 2010). Functional MRI results have additionally shown decreased activity in the prefrontal cortex when participants imagine a team loss, which corresponded to higher levels of extraversion (Morawetz et al. 2014). This decrease in prefrontal cortex activity further supports that cooperation and empathy mediate brain activity as a function of personality.

Finally, functional MRI has been used to understand how people perceive *others*' personalities. Hassabis et al. (2014) examined neural activity via fMRI as people imagined the behaviors of targets that varied in their degree of agreeableness and extraversion. Target agreeableness was associated with activity in the dorsal medial prefrontal cortex and lateral temporal cingulate cortex, while target extraversion was linked to participants' posterior cingulate cortex. Notably, researchers were able to predict which target a person was thinking of by the location of brain activity. This study implies that when we observe others' behaviors, we assume certain personality traits, and as we continue to get to know them, we build a personality model, which can be used to predict their future behaviors.

fMRI in the Abnormal Brain

While research in fMRI can be useful in furthering knowledge of normal personality, fMRI research can address personality disorders as well. For instance, patients with antisocial personality disorder show a reduction in the amplitude of low-frequency fluctuations in the front-temporal network (i.e., right orbitofrontal cortex, left temporal lobe, right inferior temporal gyrus, and left cerebellum posterior lobe) at resting state, compared to normal individuals (Liu et al. 2014). Krause-Utz et al. (2014) assessed patterns of hyper-connectivity in patients with borderline personality disorder and found altered resting state functional connectivity in networks associated with processing of negative emotions (e.g., the amygdala), encoding of salient events, and self-referential processing.

Some researchers have put efforts toward examining individuals with focal lesions in order to understand the impact of loss of functioning in certain brain areas. A study of individuals with focal brain damage showed that left dorsolateral prefrontal cortex activity is associated with conscientiousness (Forbes et al. 2014). Patients with damage to this area showed lower self-reported conscientiousness, supporting the idea that a healthy prefrontal cortex is needed to sustain high levels of conscientiousness. On the other hand, Morawetz et al. (2014) discovered that when normal individuals were asked to imagine a team loss, activity in the ventromedial prefrontal cortex regions correlated negatively with conscientiousness. Together, these findings suggest that the prefrontal cortex mediates conscientious behaviors and thoughts, and that the relationship between conscientiousness and prefrontal cortex activity may be dependent on both situational and health factors.

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Conclusion

Functional MRI studies have had a notable influence in mapping neural networks for specific cognitive processes. Recent work has shown that fMRI techniques can be a promising and effective biomarker in personality psychology research. These findings show that many personality traits can be linked to functions and structures in the brain, which in turn assist in understanding the etiology of certain traits. By using fMRI data along with self-report measures, personality researchers gain better knowledge of how and why people differ, but also pave the way to potential personality disorder interventions.

Cross-References

▶ Amygdala
▶ Anterior Cingulate Cortex
▶ Electroencephalography (EEG)
▶ Emotional Networks in the Brain
▶ Neural Networks
▶ Neuroimaging
▶ Orbitofrontal Cortex
▶ Prefrontal Cortex
▶ Psychophysiological Assessment of Personality and Individual Differences

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Functional Well-Being

▶ Fully Functioning Person

Fundamental Emotions

▶ Basic Emotions

Fundamental Postulate (Kelly)

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Definition

A person's processes are psychologically channelized by the ways in which he anticipates events (Kelly 1955, p. 46).

Introduction

George A. Kelly's (1955) personal construct theory (PCT) is a theory of personality mainly devoted to clinical diagnosis and psychotherapy. Its assumptive structure rests on a philosophical position called by Kelly *constructive alternativism* – "all of our present interpretations of the universe are subject to revision or replacement" (p. 15) – and on the fundamental postulate, meant as a tentative statement so basic in its nature that it antecedes everything said in the system it supports. The theory is then elaborated by means of 11 corollaries.

Terms

An analysis of the words chosen by Kelly for enunciating the fundamental postulate will help to grasp its far-ranging implications.

PCT has the individual *person* "rather than any part of the person, any group of persons, or any particular process manifested in the person's behavior" as its object (Kelly 1955, p. 47), and the person is regarded as a set of *processes* rather than as an inert substance: in the effective description given by Kelly, "the person is not an object which is temporarily in a moving state but is himself *a form of motion*" (p. 48, italics mine). Such an assumption excludes the necessity for some sort of mental energy and motivational principles.

The person's processes are conceived as *channelized*, a metaphor suitable for indicating that they are "operating through a network of pathways rather than as fluttering about in a vast emptiness" (p. 49). Even though the network is susceptible of changes, at the same time it is structured, thus providing the person with possibilities and constraints.

They are the *ways* invented by the individual persons in order to achieve a purpose to channelize their processes. The first corollary, the construction corollary, will specify that such ways are conceptualized as constructs of similarity and contrast.

Since the personal constructs emerge from the construction of regularities, they allow the person to anticipate events. The structured network of pathways leads toward the future, and anticipation is the only motivational feature: "Anticipation is both the push and pull of the psychology of personal constructs" (Kelly 1955, p. 49).

The *events* the person seeks to anticipate are ultimately regarded as real events. Kelly insists on distancing himself from phenomenology, at least the way he understood it, and emphasizes that he sees the "psychological" processes as tied down to reality.

The choice of the adverb *psychologically* when referring to the person's processes rather than the adjective *psychological* deserves a special consideration, since it carries many implications (see also Chiari (2009, 2013)). Consistent with the philosophical position of constructive alternativism, Kelly (1955) makes clear that he does not conceive the subject of psychology to be itself psychological. "A person's processes are what they are; and psychology, physiology, or what have you, are simply systems concocted for trying to anticipate them." Consequently, Kelly goes on, "when we use the term *psychologically*, we mean that we are conceptualizing processes in a psychological manner, not that the processes are psychological rather than something else" (p. 48).

Conclusion

The fundamental postulate of PCT has in it the germ which will see its development in the following corollaries. Briefly, the persons are not determined by their past, pushed by stimuli, or pulled by needs, motives, or drives. "It is the future which tantalizes man, not the past. Always he reaches out to the future through the window of the present" (Kelly, 1955, p. 49), being the window the personal construction of events. Given the ontological assumption of constructive alternativism, PCT is an essentially psychological theory, which excludes the possibility of a connection with other disciplines. As such, it deals in

a peculiar and fresh way with many central aspects of psychology, like emotion and affect, which explains the lack of understanding it appears to be suffering.

Cross-References

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Fundamentalism

Funder, David C.

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David C. Funder is a Distinguished Professor of Psychology at the University of California, Riverside. He is a Personality and Social Psychologist who has conducted research on the accuracy of personality trait judgments, attributions, longitudinal personality assessment, and most recently how to assess psychologically important aspects of situations and how situations are perceived.

Early Life and Educational Background

Funder was born on February 15, 1953 in Long Beach, California. He earned his B.A. in Psychology from the University of California, Berkeley in 1975, where he worked with Jack Block, who in Funder's words was "one of the most influential personality and developmental psychologists of his generation and of the 20th century." Funder went on to earn his Ph.D. from Stanford University in 1979, where he worked with Daryl Bem. His graduate studies were supported by a predoctoral fellowship from the National Science Foundation, and his dissertation examined the person-situation interaction in attitude change.

Professional Career

Funder's first academic position was at Harvey Mudd College/Claremont Graduate School, where he was an Assistant Professor from 1979 to 1982. Teaching at this college that focused on science, engineering, and mathematics required Funder to think hard about the importance of social sciences as part of one's general college education. He then moved to Harvard University, where he was an Assistant Professor from 1982 to 1986. His next move was to the University of Illinois, Urbana-Champagne, where he was an Associate Professor from 1986 to 1989. Funder was also a Visiting Research Psychologist at the University of California-Berkeley in 1980, 1981, and 1988. He made his final move in academia in 1989 to the University of California, Riverside, where he now works as a Distinguished Professor. He was Department Chair from 2002 to 2006 and Vice Provost for Administrative Resolution from 2010 to 2012. In 2007, he was a Visiting Researcher at the Max Planck Institute for Human Development in Berlin, Germany. During his career, he has mentored over 20 graduate students, many of whom have gone on to successful careers in academia and industry that utilize the

important skills that they gained and refined under Funder's mentorship.

In addition to Funder's academic appointments, he has served the profession of Psychology in several other roles. He was the President of the Association for Research in Personality in 2010–2011 and the President of the Society for Personality and Social Psychology in 2013. He was an Associate Editor of the *Journal of Personality and Social Psychology* from 1989 to 1991 and the Editor of the *Journal of Research in Personality* from 1994 to 2002. He is best-known among undergraduate students for authoring the Personality Psychology text book titled *The Personality Puzzle*. The first edition of this book was published in 1996, and the book is currently in its seventh edition that was released in 2015. He has been influential in shaping the course of research in personality, as evidenced by his publications over the years regarding current trends and the future of the field, and on the resolution of the person-situation debate.

Funder has been very successful at securing federal grant support for his research. He was supported by the National Institute of Mental Health for his work that examined factors that affect the accuracy of personality judgment (1985–2005), and by the National Science Foundation for his work on the assessment of situations (2007–2010) and situational construal or perceptions across cultures (2011–2015). He has over 100 publications, including journal articles and book chapters, describing his work and thoughts on the various topics of his research, many in highly prestigious journals such as the *Journal for Personality and Social Psychology*, *Journal of Personality*, and *Personality and Social Psychology Review*. An indication of the importance and influence of Funder's research is the more-than 15,000 citations of his publications.

Funder has also played an important role in the response from the field of Psychology, and from Social Psychology in particular, to the movement to increase replicability and dependability of research findings. He was a member of the Task Force on Publication and Research Practices formed by the Society for Personality and Social Psychology, and a coauthor on publications related to this task force and the topic in general. He has also been a proponent of studying actual behavior, rather than only what people report about their behavior.

Research Interests

Funder's early research examined the importance of considering the interaction between personality and the situation for predicting behavior. He wrote an influential paper with Daniel Ozer that was published in 1983 that explained how personality predicted behavior as well as the situation across three well-known studies in Social Psychology that are often used to demonstrate the strength of the situation on behavior. The conclusion of this paper was that personality predicts behavior as strongly as does the situation, and therefore both are important to consider when predicting behavior. He has also published the results of studies on personality development, similarities and differences between self-reports of personality and reports from others, delay of gratification, ego-control and ego-resiliency, and attributions, among other topics.

He is best known for his work on the accuracy of personality judgment, as this was his main research focus for about 30 years of his career. He developed the Realistic Accuracy Model (RAM) to describe the four-step process of how accurate judgments of the personalities of others are made, and the factors that influence the efficacy of this process. The four stages in RAM are relevance, availability, detection, and utilization. The person being judged, who is referred to as the target, must emit cues that are relevant to the trait being judged in such a way that they are available for others to perceive. Then, the person making the judgment, referred to as the judge, must detect these cues and utilize them correctly to arrive at an accurate judgment. The factors that influence this process are referred to as moderators of accuracy. The good judge reflects that some judges tend to be more accurate than others, the good target reflects that some targets are generally more accurately judged than others, the good trait reflects that some traits are generally more accurately

judged than others, and good information reflects that higher quantities of high-quality information that is relevant to personality results in more accurate judgments than having less information or information that is less relevant to personality. Empirical support has been found for the stages and moderators of accuracy, with research on this topic coming from Funder and many other researchers. He summarized the findings in this area in his book titled *Personality judgment: A realistic approach to person perception* that was published in 1999 by Academic Press. Many researchers continue to test the predictions of this model, and more recently, research has begun to test the generalizability of this model by applying it to judgments in domains beyond just personality traits, such as personal values and emotional states.

Funder has developed methods for objectively assessing the important attributes of both behavior and situations by building on an assessment of personality that used the Q-sort method. With the Q-sort method, a set of items that describe a given construct, such as personality, are placed into a forced-choice distribution in which only a few items are allowed to be rated as extremely descriptive of the construct. The assessment of behavior, the Riverside Behavioral Q-sort (RBQ), was developed to describe behaviors in situations that are relevant to personality. Funder published a paper describing this assessment with R. Michael Furr and C. Randall Colvin in 2000. The assessment has been slightly revised since then and now consists of 68 items that include descriptions such as: seeks advice, volunteers a large amount of information about the self, and is reserved and unexpressive. The RBQ has been used to examine the relations between behaviors and many other constructs and outcomes, such as the behaviors that good judges exhibit when interacting with targets, the ability of personality assessments from childhood to predict behavior during a medical interview over 40 years later, and the behaviors that are related to high levels of well-being. The assessment of situations, the Riverside Situational Q-sort (RSQ), was developed to describe psychologically meaningful

aspects of situations. Funder published a paper describing this assessment in 2016. The RSQ consists of 89 items that include descriptions such as: situation is potentially enjoyable, someone needs help, and rational thinking is called for. These instruments have been translated into nine languages, including Arabic, Chinese, Danish, Dutch, Estonian, German, Italian, Japanese, and Spanish. A program can also be downloaded from Funder's website that allows for the Q-sorting task to be completed on a computer. A web-based version is also being developed.

Funder's current research focuses on the assessment of psychologically important aspects of situations and situational construal, which is how people perceive situations. Funder worked with several collaborators across the United States, Germany, and Spain to identify the major dimensions of the characteristics of situations, which was organized into a taxonomy identified as the Situational Eight DIAMONDS, in which DIAMONDS stands for Duty, Intellect, Adversity, Mating, pOsitivity, Negativity, Deception, and Sociality. Research has demonstrated that people agree on their descriptions of situations, the dimensions are related to concrete situation cues, and the dimensions can be used to predict behavior even beyond what can be predicted from personality and other assessments of situation dimensions. Funder also developed the Situation Construal Model (SCM), which describes behavior as a function of the direct effects of personality, the situation itself, and how people perceive and respond to the situation. Some interesting findings that have already emerged from this work are that people who are less emotionally stable and more open to experience are likely to perceive situations in ways that differ from how most others perceive them, and people who are high on the personality traits of extraversion, agreeableness, openness to experience, and emotionally stability are more likely to perceive situations in ways that match the typical construal of that situation and to perceive situations in a more positive way. In order to examine situations across cultures, Funder is collaborating with researchers in many countries on The International Situations Project,

which is funded by the National Science Foundation. This project aims to address several areas, including similarities and differences in situational experiences across cultures; how relations among personality, behavior, and situations vary across cultures; the essential dimensions of how people experience situations across cultures; and relations between cultural values and situational experience. Future work in this topic is likely to examine the practical applications of the SCM to educational, medical, and industrial settings.

Honors/Awards

Funder has received several honors and awards throughout his career. He is a fellow of several research organizations, including the American Association for the Advancement of Science, the American Psychological Association (Division 8), the Western Psychological Association, the Society for Personality and Social Psychology, the Association for Psychological Science, and the Society of Experimental Social Psychology. In 2013 he received the Doctoral Dissertation Advisor/Mentoring Award from the University of California, Riverside, in recognition of outstanding contributions to training advanced graduate students. In 2008, he won the Jack Block Award for Distinguished Research in Personality Psychology, which recognizes scientifically rigorous research accomplishments throughout one's career.

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Funniness

▶ Humor

Furnham, Adrian

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Biography

Adrian Furnham was born in Port Shepstone in
the Union of South Africa. It was the major center
of the South Coast of Natal, the home of the Zulu.
It had Norwegian, British, and German settlers in
the nineteenth century. There was a German
church near Oslo Beach. His grandmother joined
the Sons of England who met in a shop owned by
a Swiss business man. His neighbors were Poles;
his mother worked for a Russian doctor who
changed his name from Rittenski to Ritten. It was
a place of displaced people: of people rejoicing
their good fortune with respect to standard of living
but very homesick for another place and its people.

Furnham's father was a newspaper man:
printer and publisher; his mother a nurse. Like
both of his parents, Furnham was an only child.
He believes that he got his impulsiveness from his
mother and his love of books from his father. He
believes that he looks more like his father but has
more of his mother's (and maternal grandfather's)
body shape. Furnham reports having various
noticeable, frequently commented on, habits that
he attributes to his upbringing. They are time
conscientiousness, impulsivity, the work ethic,
humor, and money consciousness.

However, he believes that he is a child of the
baby-boomer generation: neither victors nor pris-
oners but conditioned by the morals and values and
hopes of aspirations of his time. So he believes that
he is unlike his parents in many ways:

1. *Ambition*: He believes that he is deeply – but
   not pathologically – ambitious. He wants to
   "get on." He wanted to be a professor before
   he was 40. He just made it. He wanted to earn

as much as the Prime Minister. He didn't. His
parents were not at all entrepreneurial. His
mother did well being promoted to only one
level below the top available in her field. But
she was ambitious for him rather than herself.

2. *Exoticphilia/Openness-to-Experience*:   He
   likes the new, the different, and the exotic.
   His parents were somewhere between afraid
   of and distrustful of things not solidly Anglo-
   Saxon. They did not try exotic food or yearn to
   travel to new places. They expressed little
   interest in foreign cultures which they were
   surrounded by.

   Furnham, in contrast, enjoys nothing more
   than a trip to a far-off place off the beaten track.
   He longs, not for wild barren places like Law-
   rence of Arabia, but for rather exotic urban
   landscapes particularly of places caught in
   time. He rejoices in his close quirky "alterna-
   tive," hippy friends. Cultured, compassionate,
   and self-critical, they were a breath of fresh air
   in the arid anti-intellectual Puritanism that was
   South Africa. They taught him that being differ-
   ent was sometimes a gift rather than a handicap.

3. *Curiosity*: His parents were not particularly
   curious in the way that Furnham is. They
   took things at surface value. They were amused
   by human foibles but did not yearn to under-
   stand them. The best his mother did was to read
   detective novels. And she did so enthusiasti-
   cally, often devouring five a week, while hold-
   ing down a full-time job. His father, a good
   storyteller, enjoyed telling yarns about odd
   people and their behavior. But they never had
   a great yearning to understand things.

One day his mother who was studying psy-
chology for a diploma was met by a list of differ-
ent and contradictory personality theories.
"Well?" she demanded of Furnham, sage on all
things psychological, "Who is right?" She did not
deal in ambiguities.

Education

Furnham was in full-time education for the whole
decade on the 1970s who believed that staying at

university was a wonderful way to postpone adulthood. At this stage, he has, along with his first degree, three master degrees and three doctorates.

He went to university when he was 16. He was not an amazing precocious child but one whose mother insisted he go to primary school young: over a year younger than the legally prescribed age. He therefore graduated from school around a year and a half younger than his peers.

His mother brought home one of those early Hans Eysenck paperbacks, and Furnham was hooked. The early Eysenck Penguin paperbacks were (and are) easy to read, interesting, and provocative. He read it in one sitting and was captivated. He resolved in fifth form to read psychology rather than math.

Furnham registered for a liberal arts degree, and as a foretaste of his current workaholism, he did a degree-and-a-half (three majors instead of two). Even though he was a student at an obscure colonial university registered for Psychology 101, he had to read Freud's *Psychopathology of Everyday Life*, Fromm's *The Art of Loving*, and Lorenz's *King Solomon's Ring* as preparation for the first year. It was a broad degree and he benefitted from this enormously.

Furnham entered the local university (the University of Natal, founded in 1910) in 1970 graduating with three (not the two usual) major subjects (Divinity, History, and Psychology). He then completed an honors degree in Psychology (1973) followed by an MA (1975). He then went to England to complete two further master degrees: M.Sc. Econ at LSE 1976 and an MSc at Strathclyde in Glasgow (1977). Furnham then went straight to Oxford to complete a doctorate in (1981). He later received a D.Sc from London (1991) and a D.Litt from Natal in (1997).

Without doubt his best experience was at the LSE where he did an MSc in Social Psychology. The whole atmosphere was exciting. The lecturers had a very broad view of education and the discipline of psychology. He maintains contact with a number of the faculty after 40 years.

Oxford was wonderful. It was there he met his wife and where he met a number of who are now his closest friends.

Educators

Furnham had the great good fortune of being taught by brilliant academics. At every university he has attended, he has come across dedicated, clever, and curious (in every sense of the word) teachers. What are the characteristics of the inspirational teacher?

First, there is unbounding *enthusiasm*, even *passion*, for their subject. They show the thrill, the joy, and the sheer pleasure of acquiring skills and knowledge in a particular area. And they are able to communicate this. Indeed, they cannot hide it. You cannot easily fake passion – or at least not over a sustained period. All great teachers are passionate. Work becomes play with them. The motivation is purely intrinsic. They define the very concept of *Flow*.

Second, they are *evangelists*, trying to convert minds rather than achieve exam-oriented goals. They want others to share their joy and passion, believing it is good for them. They really want to communicate the good news. One of the characteristics of the inspirational evangelist is that they never retire. They do not want to and neither do their employees want them to. They are simply too valuable. Further, good administrators know it. They soon become "emeritus" but usually eschew the titles preferring simply to carry on ignoring the passing of the years.

Third, they *set high standards*. Inspirational teachers are not merely benevolent, kindly parental substitutes. They have the highest expectations of people. They do not compromise, but they do encourage. They teach the "hard stuff" but in a way it can be grasped. They understand the learning process and the markers along the way. They are able thus to get the best out of people, and it is often for this that they are profoundly admired. They know what individual pupils are capable of, and they strive to help them achieve their potential.

Fourth, they *update their material*, metaphors, and messages. Every generation needs a different introduction to the discipline. They come with different experiences and expectations. Their hot (and cold) buttons are different. They need to be

approached differently. It goes without saying that they have to update their knowledge as well.

Fifth, there is the issue of *adaptation and flexibility*. This means knowing how to "package the brand" differently to appeal to different individuals and generations. The intelligence, social backgrounds, and values of students dictate they have to be addressed differently. Brilliant teachers can and do this.

Furnham has been a lecturer for nearly 40 years starting at Pembroke College Oxford and continuing at University College London. He has tried hard, over this period, to follow the example of those he greatly admires.

Furnham has had many great teachers and colleagues who have changed his life, but he wanted to draw attention to two of them in particular.

Michael Argyle: Furnham's D.Phil (PhD) Supervisor

Argyle wrote around 250 papers on a variety of topics including body language, religion, money, happiness, and work it was possible to see clear threads and themes which he pursued. He believed that social behavior, even the most ephemeral aspects like eye contact, was law like and that one could be taught the rules of social etiquette to improve communication.

He had no interest in in-depth psychology, psychoanalytic speculation, or grand theories. Nor did he rely on advanced multivariate statistics to reveal hidden patterns in data. His experimental work was novel: he designed simple but illuminating studies. His survey work was also characterized by innovation. He preferred not to rely on standardized questionnaires but designed his own to measure the sort of things that interested him. Indeed, there were no existing measures of the sort of thing that most interested him like happiness.

Argyle never bothered with disciplinary distinctions and could happily move from anthropology to zoology when investigating a topic. His books were always distinctive. They always brought together material in a unique way and offered a new way to look at old ideas. Many remain best sellers.

There were many things rather unique about Argyle. For instance, he advised doctorate students not to read too much initially because it limited their creativity and channelled their thinking into too well-plowed furrows. He was not attracted to theory building often dismissing those he saw as theoretical baggage that imprisoned rather than liberated.

He was not interested in forming a school of thought but was very interested in forming and maintaining a social group. For nearly 30 years, he presided over a very active but heterogeneous group of social psychologists at Oxford. The social group was social in what they studied and how they studied it. In many ways, like all PhD students, they were marked by their doctoral experience and very loyal to Argyle and no doubt to his memory.

There were many sides to Argyle, at one stage the fourth most cited British Psychologist. On the other hand, he was the epitome of the English gentleman: polite, slightly formal, and kind. He knew about social rules and obeyed them carefully. But he was also a fun-loving maverick. He described his hobbies as "utopia speculation" and "playing the goat." He was almost child-like in his playfulness and love of school-boy jokes and humor.

What did Furnham learn from him? He learned that it was OK, indeed desirable, to "plough new field," to start out on new areas of research. He learned what was required of a good doctoral supervisor. He learned to be cooperative with other academics. He learned to work hard and play hard.

Hans Eysenck: Furnham's Role Model

Furnham met Hans Eysenck while doing his PhD. Once Furnham became a lecturer, he made contact and would cycle from his office to Eysenck's office (6 miles) two or three times a year to work in their excellent library and have tea with him. Eysenck impressed Furnham enormously with his intellect, courage, and foresight.

It has been argued that Eysenck's approach to science was characterized by very specific principles. He always argued, even at a time when this was deeply unfashionable, that there was a physical/biological basis to personality. He maintained that taxonomization was the beginning of science

and that personality research could not proceed without it. He insisted on a hierarchical model with highly specific behavioral responses at the lowest level, leading up to broad habitual responses at the facet level (e.g., sociability, liveliness, and excitability) and culminating into three giant super-factors at the apex of the hierarchy. He was one of the earliest theorists to advocate a biologically based theory of personality and to promote a continuous theory refinement approach in order to link up specific stimulus properties with general personality functioning.

Furnham became an Eysenckian through his books and papers. He started using his tests during his PhD and became an enthusiastic psychometrician. Furnham et al. (2008) suggested five reasons why these measures have stood the test of time: parsimony, explanation of process, experimentation, wide application, and continuous improvement and development.

His Modest Contribution

Furnham is not sure if indeed he is a personality psychologist. In fact, he reports being uncertain as to what type of psychologist he is, if indeed he has to be labelled at all. This has caused his department consternation over the years. Furnham has been labelled an applied, differential, economic, health, occupational, and social psychologist at different times. He is, however, a BPS chartered occupational and a chartered health psychologist. Furnham thinks his personality and upbringing has led him to be curious about all sorts of issues within and outside the discipline.

Furnham has always been interested in personality psychology. This was first stimulated by a brilliant lecturer (Bruce Faulds) who lectured him as an undergraduate. In his 2nd year, Furnham had a Wednesday afternoon psychometric class that involved students doing a test and the following week analyzing it. This was done very thoroughly in a 3-h session. Furnham completed projective techniques, standard personality tests, and the rod-and-frame in a dark room, as well as tests of artistic and musical ability. The instructor was an enthusiast and the test library was well stocked.

As a result, to this day, Furnham knows about a very wide range of tests from obscure psychoanalytic projective techniques (Blackies Pictures), through tests of aesthetics (the Meier Art test) to more standard tests.

Furnham was always interested in the relationship between personality and social psychology doing his PhD on the topic. This experience lead him to become more interested in differential psychology as he became aware how powerful personality and intelligence factors are in determining so many life outcomes from income to longevity (Furnham 2008).

Some Themes

Psychometric housekeeping and reviews: Furnham has done a number of reviews where he looked at developments and progress in various personality tests, some very old. These are always very extensively quoted, even though they are not meta-analyses, but they attempt to be comprehensive and critical reviews off the major (extant) literature over a set period. Occasionally he has updated these reviews. Three examples may be Tolerance of Ambiguity (Furnham and Ribchester 1995; Furnham and Marks 2013), Belief in a Just World (Furnham 2003), and the Protestant Work Ethic (Furnham 1990). Perhaps the most extensive has been his review of Locus of Control measures (Furnham and Steele 1993). Furnham's interest has been in documenting different scales supposedly measuring the same thing and comparing their psychometric qualities. There seem to be more interest in developing new scales in the hope of eponymous fame than testing and improving those tests which already exist.

Test development: Over the years Furnham has developed a number of tests. Sometimes he has simply adapted ideas to make specific tests like his Economic Locus of Control measure (Furnham 1986) and the Organisational Attributional Style Questionnaire (Furnham et al. 1992). He also developed the Trait Emotional Intelligence Questionnaire which he worked

on with his PhD student Dino Petrides and the High Flyer Trait Inventory which he worked on with his colleague Ian Macrae (Macrae and Furnham 2014). Indeed, Furnham's most quoted publications are with Petrides, and the measure has been enormously successful (Petrides and Furnham 2000a; b; Petrides and Furnham 2001; Petrides et al. 2003; Petrides et al. 2008). Furnham and his colleagues have spent a great of effort in the pure psychometric work checking factor structure, internal reliability, etc. but also struggling to find appropriate behavioral measures to check the predictive and construct validity of the tests.

The relationship between tests of preference and power: Furnham has long been interested in the relationship between those two great pillars of differential psychology which have never had a very close relationship. Personality psychologists and those interested in intelligence seem to have drifted apart, yet the early differential psychologists like Cattell and Eysenck were always aware of both playing an important role in all behaviors. Furnham gave his *International Society for the Study of Individual Differences* presidential address on this topic. He worked on this topic for years, and still does, ably assisted by some of his most talented PhD students (e.g., Chamorro-Premuzic and Furnham 2003a; b; Moutafi et al. 2003).

Self-appraisal and awareness: From the very beginning, Furnham was interested in the ability of people to predict their own personality and intelligence scores. Although his early research was on self-awareness about personality, he has published many studies on self-estimated intelligence (Furnham 2001; Furnham 2016a). These studies have yielded various consistent findings. *First*, males of all ages and backgrounds tend to estimate their (overall) general intelligence about 5–15 IQ points higher than do females. Always those estimates are above average and usually around one standard deviation above the norm. *Second*, people believe these sex differences occur across the generations: people believe their grandfather was/is more

intelligent than their grandmother, their father more than their mother, their brothers more than their sisters, and their sons more than their daughters. *Third*, sex differences are cross-culturally consistent. While Africans tend to give higher estimates and Asians lower estimates, there remains a sex difference across all cultures. *Fourth*, the correlation between self-estimated and test-generated IQ is positive and low in the range of $r = 0.2$ to $r = 0.5$ suggesting that you cannot use test scores as proxy for actual scores. *Fifth*, with regard to outliers, those who score high on IQ but give low self-estimates tend nearly always to be female, while those with the opposite pattern (high estimates, low scores) tend to be male (Storek and Furnham 2013; Swami and Furnham 2010; Szymanowicz and Furnham 2013).

Dark side: It was Robert Hogan who introduced Furnham to the dark side personality research based on the concepts found in DSM-III. He had the brilliance and insight to see that the personality disorders scheme offered a wonderful opportunity to study misbehavior at work. Furnham had used his Hogan Development Survey in many studies and was very fortunate to get large amounts of very good quality data from friends serving as consultants. Furnham has also written two books on this topic (Furnham 2010, 2015) and many papers. His interest is the paradox of how and why people with certain dark side characteristics get selected and promoted (Furnham 2016b; Furnham et al. 2012a, b, 2013, 2014). My students love this research and I have three at the moment working on these topics.

Conclusion

Furnham was delighted and honored to be asked to write this contribution. He is currently working on two books: one on the Psychology of Disenchantment and the other on New Perspectives in PsychoBiography. So far he has published two books this year: a second edition of his book on leadership (Pendleton and Furnham 2016) and a

third edition of his quirky alternative textbook (Furnham and Tsivrikos 2016). Furnham has published 92 books and over 1,200 peer-reviewed journal articles: surely a sign of a workaholic.

Furnham has noticed how some great psychologists seem to "disappear" from the literature soon after their death, while others thrive. He is not sure why this is the case: but he hopes to be the latter.

Finally, he must acknowledge that whatever he has achieved academically it has often been because of the help of various mentors, colleagues, and graduate students, as well as those mentioned above. Among the mentors, he must mention the brilliant Robert Hogan whose wit, wide reading, and courage has always impressed and helped him. Of his colleagues, he needs especially to mention Barrie Gunter, Chris McManus, Alistair McClelland, and David Pendleton. However, it has been his various PhD students over the years who have helped him most. He needs to mention Tomas Chamorro-Premuzic, Dino Petrides, Viren Swami, Luke Treglown, and Simmy Grover.

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Furr, R. Michael

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Early Life and Education Background

In 1970, Mike was born to Dr. Richard M. Furr, Sr. and Margaret Lee Furr. He was raised in Greensboro, North Carolina, USA, where he attended Page High School with his brother David (a Tony-nominated actor).

He was introduced to personality assessment in childhood while "helping" his father (an organizational psychologist) score personality tests such as the MBTI and the FIRO-B. Skepticism of personality assessment also arose at this time, as he took those same tests and magically switched from an I to an E and back to an I on the MBTI from one day to another.

He earned a BA in Psychology at the College of William and Mary in 1992. Mike was not Phi Beta Kappa, summa cum laude, magna cum laude, cum laude, or any other kind of laude. Indeed, he was not particularly goal-directed or forward-thinking at W&M. As graduation approached, this laissez-faire attitude became, regrettably, unsustainable. Belatedly moved to action, Mike sought advice from Dr. John Nezlek. Nezlek advised him to explore Masters programs in general experimental psychology as a way to clarify his vague interests in the field and to obtain valuable research experience.

Taking a year off from academics, Mike worked with a psychologist who consulted with law enforcement agencies. His interest in personality, assessment, and analysis evolved during this period, as he was introduced to the CPI, integrity tests, and discriminant function analysis. During this time, Mike applied to Masters programs.

In 1993, Mike entered the Masters program at Villanova University, where he worked with Dr. Douglas Klieger and Dr. Deborah Kendzierski. His thesis, under the supervision of Klieger, was titled *The Validity and Scoring of the Social Phobia and Anxiety Inventory.* Klieger also taught a class in personality psychology, based upon Pervin's (1990) *Handbook of Personality: Theory and Research*. This class and this book crystalized Mike's interest in personality and personality assessment. Mike earned an MS in Psychology from Villanova in 1995.

In 1995, Mike entered the PhD program in Social/Personality Psychology the University of California at Riverside. His primary mentor was Dr. David Funder, but he also benefitted from the expertise and generosity of Dr. Dan Ozer and Dr. Robert Rosenthal. Mike's dissertation, under the supervision of Funder, was titled *A Person-Centered Approach to Behavioral Consistency: Situational Effects and Individual Differences.* Under the training and guidance of Funder, Ozer, and Rosenthal, Mike discovered new interests in analysis and psychometrics,

matching his substantive interests in personality and assessment. He earned his PhD from UCR in 2000.

Professional Career

Upon graduating from UCR, Mike was an Assistant Professor at Appalachian State University in Boone, North Carolina, USA, from 2000 to 2004 (helpful note: "Appalachian" is pronounced "Appa-latch-un" by North Carolinians, not "Appa-lay-shun"). In 2004, he joined the Psychology Department at Wake Forest University in Winston-Salem, North Carolina. He was promoted to Associate Professor at WFU in 2008 and to Full Professor in 2012. It was in Winston-Salem that Mike met and married Dr. Sarah Squire. They have two sons – Sebastian and Abraham.

At App State and WFU, Mike has taught undergraduate and graduate courses in personality, psychological testing, psychometrics, research methods, R, and statistics. At Wake Forest, he has contributed service to the department and university in various capacities. This includes directing WFU's Masters program in Psychology, which (as he often points out to new grad students) rejected him twice as an applicant. But that's OK.

His research has appeared in journals such as *Journal of Personality and Social Psychology*, *Journal of Personality*, *Psychological Science*, *Psychological Assessment*, and *Psychological Methods*. In addition, he has co-edited an interdisciplinary volume on moral character (Miller et al. 2015). He authored two books on psychological measurement. One of these, *Psychometrics: An Introduction*, is in its 3rd edition (as of 2018) and has been translated into Russian and Chinese. The other, *Scale Construction and Psychometrics for Social and Personality Psychology*, was part of a methodological package edited by Dr. John Nezlek (demonstrating Nezlek's continued generosity toward Mike). One of his more personally-fulfilling publications is a chapter (with David Funder) in the 4th edition of *The Handbook of Personality: Theory and Research*. This chapter

represents a connection back to the book that helped spark his interest in the field while taking Personality Psychology at Villanova.

Mike has served the field in a variety of ways. He has served on the board of directors of the Association for Research in Personality (ARP), and he served on organizing committees for conferences hosted by ARP, the Society for Personality and Social Psychology (SPSP), and the Society of Southeastern Social Psychologists (SSSP). He has served as Associate Editor of the *Journal of Research in Personality*, as Executive Editor of the *Journal of Social Psychology*, as Editor of the *Journal of Personality Assessment's* "Statistical Development and Applications" section, and as Consulting Editor for several additional journals including the *Journal of Personality and Social Psychology* and *Social Psychological and Personality Science*. As co-director of the Character Project and the Beacon Project (and with the support of generous funding agencies), Mike helped lead an interdisciplinary team that provided nearly $5,000,000 to fund research on moral character by young scholars in psychology, theology, and philosophy.

Mike has received recognition for his contributions. He is a fellow of SPSP, a fellow of the Association for Psychological Science, and a fellow of both Division 5 (Quantitative and Qualitative Methods) and Division 8 (Social and Personality Psychology) of the American Psychological Association. In addition, he received the Society for Personality Assessment's 2017 Walter G. Klopfer Award for distinguished contributions to the literature in personality assessment. In 2012, he received WFU's 2012 Award for Excellence in Research. And in 2018, he was the first recipient of the University of California at Riverside's 2018 Psychology Alumni Award.

Research Interests

Mike's interests include methodological issues and substantive topics. Methodologically, he has articulated and expanded the logic of contrast analysis (e.g., Furr and Rosenthal 2003),

developed and/or evaluated personality scales (e.g., Collier-Spruel et al. Under review) and outlined the importance and implementation of behavioral observation (e.g., Funder et al. 2000; Furr 2009a; Nave et al. 2018). In addition, he has authored books and chapters presenting psychometric theory in a way that is intended to be broadly accessible but grounded in cutting-edge work (Furr 2011, 2018, in press).

Much of his methodological work has focused on the analysis of profile similarity. The similarity between profiles of scores is examined in diverse research contexts, including studies of behavioral consistency, developmental stability, personality similarity (e.g., between spouses), and personality judgment. However, as discussed by Cronbach and others, such work is complicated by thorny methodological issues. Unfortunately, the complications were unknown or ignored in many areas of work, potentially compromising the psychological conclusions arising from that work. Mike re-articulated and elaborated those issues (e.g., offering the terms distinctive similarity and normativeness in this context), demonstrated the scope of their occurrence and effects, and developed models and procedures to grapple with the issues (e.g., Furr 2008, 2010; Furr and Wood 2013; Wood and Furr 2016). This work has subsequently been integrated into diverse research contexts. Mike has also applied the lens of profile similarity to shed new light on apparently unrelated topics such as person-situation integration, factorial similarity, and the quantification of convergent/discriminant test validity (e.g., Furr 2009b; Furr and Heuckeroth in press; Hartley and Furr 2017).

Substantively, Mike has examined diverse topics in social, personality, and clinical psychology. Overarching interests have included topics such as personality judgment, behavioral coherence, and person-situation interactions (e.g., Carlson and Furr 2009; Furr 2009b; Furr et al. 2007; Furr and Funder 1998, 2004, in press). He has examined these topics in general and with particular regard to moral psychology and Borderline Personality Disorder.

For example, he and his colleagues (Helzer et al. 2014) examined the convergence – or potentially the lack thereof – between self-perceptions of one's moral traits and acquaintances' perceptions of those traits (e.g., if you see yourself as highly moral, do your acquaintances also see you as highly moral?). Across samples of community members and college students, results revealed significant convergence between self-perceptions and acquaintances' perceptions of moral traits. Moreover, results revealed convergence between different acquaintances' views (e.g., if your spouse views you as highly moral, then your coworkers are also likely to view you as relatively moral). Such findings not only reveal a basic interpersonal fact (regarding shared perceptions of morality), but they suggest that moral behavior is grounded in personality to a meaningful degree. Contrary to some theorizing in moral philosophy, such findings provide important evidence for the existence and behavioral impact of moral character (for more on the personological foundations of morality, see Helzer et al. 2018).

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F

Fury

► Anger
► Rage

Future Selves

► Possible Selves