Silvia Helena Koller *Editor*

Psychology in Brazil

Scientists Making a Difference

Springer

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Foreword

Almost everything we learn about the field of psychology in our university studies quickly becomes out of date. I studied as an undergraduate student at Yale University from 1968 to 1972 and then as a graduate PhD student at Stanford University from 1972 to 1975, and I can say with confidence that almost nothing I learned, including even methods of statistical analysis, is of much use today. It is a tribute to the field that it advances so rapidly that what one learns at one time becomes dated so quickly and so completely. What, then, is the value of studying psychology (or, really, any scientific field) in university if what one learns quickly becomes outdated?

The main value, I believe, is learning how scientists think about problems. In particular, what makes a problem scientifically or societally important? How does one translate an idea about a phenomenon into a research study? How does one interpret data analysis in terms of a prior theory so that the theory sheds light on the data rather than leading one astray? How does one relate one stream of scientific work to another? These are the kinds of questions that universities can teach their students to answer. Universities, thus, have a great deal to teach their students about how scientists explore the world and the human mind.

There is yet another problem, however, besides work going out of date. And this other problem is the enormous challenge of separating the wheat from the chaff in scientific research. When I was early in my career, there were perhaps a dozen first-rate journals to which one might submit one's work and another dozen that were just below the top ones. Today, journals have proliferated to the point that it is difficult even to recognize what the important ones are. Some of the new journals are top flight, but others are of much more variable quality, and some are journals in name only. Even within the reputable journals, however, there is a great variation in the quality of work that is published.

What is to be done? Susan Fiske, Donald Foss, and I thought that we might make a meaningful contribution to the education of the next generation of research (and possibly other) psychologists by editing a book, which eventually was entitled *Scientists Making a Difference: One Hundred Eminent Behavioral and Brain Scientists Talk About Their Most Important Contributions* (Sternberg et al. 2016). As, at the time, past, present, and future presidents of the Federation of Association

in Behavioral and Brain Sciences in the United States, we had the dual goal of educating our young people and of supporting the Federation through the contribution of all our royalties. We used objective criteria to choose these highly eminent psychologists, based on the work done by Diener et al. (2014). The essays, we believed, represented the best of what psychology had to offer in the latter twentieth and early twenty-first centuries. All contributing authors were invited to talk about their work, what motivated the work, and what they thought the contribution of the work was to the field and to society. A notable limitation of the volume, though, was that North Americans were way overrepresented, with relatively few essays from outside the North American continent. Thus, the scope of the work could not possibly encompass all of the great work being done on other continents, such as in South America. Brazil, one of the largest countries in the world by population, had no representation at all in our volume.

I therefore am delighted that Silvia Koller has chosen to edit a related companion volume, published by Springer, entitled *Psychology in Brazil: Scientists Making a Difference.* As did Fiske, Foss, and I, she provided the scientists with a distinctive list of questions to address. Her questions were "1. What is your most important scientific contribution? 2. Why do you consider it as your most important contribution? 3. How did the idea come about? (Mentors, readings, contacts, teams, inspiration, etc.) 4. How does your contribution add to the production of international scientific knowledge? 5. How is your contribution reflected in the world outside academic psychology? 6. What would you like to see as the next steps in theory and/ or research, based on what you produced?"

The essays in this volume represent some of the best minds and the best work Brazilian psychology has to offer. The essays are true gems, and I am confident that readers of the book will be well rewarded by spending their time learning how the greatest minds in Brazilian psychology think about and tackle difficult problems in psychology. A book such as this one enables students of psychology (of any age!) to learn how great minds in the field think and perhaps to emulate these great minds and to produce their own outstanding research. I am confident every reader will find a treasure chest of information in this book. Enjoy it please, just as I have.

Cornell University   Robert J. Sternberg
Ithaca, NY, USA

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R.J. Sternberg, S.T. Fiske, D.J. Foss (eds.), *Scientists Making a Difference: One Hundred Eminent Behavioral and Brain Scientists Talk About Their Most Important Contributions* (Cambridge University Press, New York, 2016)

Preface

This volume was inspired by the book *Scientists Making a Difference: One Hundred Eminent Behavioral and Brain Scientists Talk About Their Most Important Contributions*, published in 2016, by Robert Sternberg, Susan Fiske, and Donald Foss, Cambridge University Press, which is also a fascinating collection of first-person narratives from the top psychological scientists of the modern era. Just like in Sternberg et al.'s book, each chapter of this volume highlights the most important contributions of Brazilian authors to the psychological science, forming a volume of Who's Who of contemporary psychology in Brazil.

They answered to the following six questions, some of them borrowed from Sternberg et al.'s book and some more contextualized to the Brazilian reality:

1. What is your most important scientific contribution?
2. Why do you consider it as your most important contribution?
3. How did the idea come about? (Mentors, readings, contacts, teams, inspiration, etc.)
4. How does your contribution add to the production of international scientific knowledge?
5. How is your contribution reflected in the world outside academic psychology?
6. What would you like to see as the next steps in theory and/or research, based on what you produced?

Our book emphasizes the innovative knowledge on psychology in Brazil. It gathers a clear agenda for the internationalization of psychology, which has been an important topic in national conferences and agencies. By internationalization, we aim to give visibility to the outstanding research that has been done in Brazil to the world. The internationalization of Brazilian psychology may offer many benefits to individuals, institutions, and the discipline. While extending a research agenda across borders presents multiple challenges, this team of researchers is open to sharing their personal and professional paths to the world through this publication. The mainstream literature presents a North-South division, which might have repercussions for both science production and application of knowledge. Northern research agenda defines as global the theories, methodologies, and application of knowledge

on social policies and interventions. However, the contexts, histories, and cultural processes understanding are essential for producing and applying research knowledge accordingly to specific continent-/country-related characteristics, organizations, and conditions (Blicharska et al. 2017).

Psychology as a science is related to contextual features and cannot be directly imported from one place to the other. Local scientists are the ones who have the appropriate legitimacy to translate research knowledge into sensitive interventions and social policies strongly related to their development. There is a growing awareness in the international community of the importance of adopting cross-cultural perspectives in psychological studies, and this book will contribute to the international community to get in touch with a scientific production that largely is still not accessible to researchers from several countries. The main reason is that most of the scientific production in Brazilian psychology is published in Portuguese. In this way, the book could serve as a tool to expand access to an important production, but still little known internationally, which can bring important contributions to the development of intercultural studies in the field of psychology. The book will also draw attention to the imbalance between sciences produced in the Global South and North to show how this book can contribute to addressing this problem.

Over the last two decades, there was an enormous growth of Brazilian scientific production in the field of psychology, which has placed Brazil among the ten countries that produce the most knowledge in this field. SCImago data (a digital platform that analyzes data from scientific publications indexed in Scopus) stated in 2000 that Brazilian psychologists published only 11 articles in periodicals indexed by Scopus, which made the country occupy the twenty-ninth position in the ranking of the countries that publish the most in these journals. In 2016, Brazilian psychologists published no less than 626 articles in journals indexed by Scopus, which gave the country the seventh position among the countries that publish the most in these journals. In other words, in a period of about 15 years, Brazil has moved from a position of little relevance in the international scientific psychology scene to become an actor of weight in this scenario, integrating today the elite of scientific production in psychology in the world. From this point of view, therefore, this book will facilitate the access of the international community to the production of an emerging power in psychological science, which, because of a linguistic barrier, is still relatively unpopular for much of the international community. This book contains chapters that will inform those contexts about groundbreaking answers to theoretical, methodological, and interventional questions and has particular importance to the field at this time and will bring an innovative contribution to the psychology of the Global South.

Psychology in Brazil is a growing field. There are 94 programs to graduate PhDs and Masters in a universe of 22,000 psychologists and growing. It is probably the largest number of psychologists in the whole world, with many of them producing

research and knowledge. We welcome you to learn throughout the chapters about these experts in Brazilian psychologist careers and ideas. Their work raised them to the highest rankings in the country and surely will inspire you to learn more about Brazil.

Porto Alegre, Brazil   Silvia Helena Koller

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In Search of Integration

Jairo Eduardo Borges-Andrade

Abstract I understand that my most important contribution is on integration. An evaluation model that I proposed in the 1970s, which I still use for conducting research and promoting interventions on training and development, reveals this intention to integrate. Two decades later, a method I developed for literature reviewing on organizational behavior also echoed that purpose. In this chapter, I reflect on my professional life and some aspects of my personal history, particularly in relation to two distinct contexts in which I have spent most of my professional life: an applied research organization (EMBRAPA) and an academic institution (UnB). Because my interest in science originated well before those two jobs, I will start this history in 1969, 10 years before I began my job in the first of those contexts. I will finish this narration 48 years later, after describing why, how, and where I contributed to both contexts.

In 1992, in the middle of my professional career, I prepared an academic autobiography as part of my application for a professorship at the University of Brasília (UnB). I began by reflecting on the fact that academicians usually focus their autobiographies on the activities they performed, the degrees they earned, and the products they developed. In this way, they attempt to organize the patchwork of their professional lives into a coherent and beautiful quilt. The thread that stitches the pieces together and unites them is time itself. The selection committee assesses the quilt and assigns points to the pieces and the work as a whole, which it uses, along with other information and considerations, to decide who to select for that position. Typically, head professor positions go to individuals who are already at an academic institution, often at the university that is searching for a new head professor. I was not. I was trying to change a career and to move to another job.

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My application to the position revealed a disposition to sever ties with another institution, people, and a way of working that I had immensely appreciated during the previous 13 years. The object of my organizational commitment had changed before severing such ties. Evidently, in my 1992 biography, I wrote what was expected; however, to the temporal thread that sewed the patchwork pieces together, I also added the color of *why*. Therefore, my patchwork quilt described activities, degrees, and products organized in chronological sequence and tinted by the hue of an old (but always present and relevant) aspiration to have a professional career centered on research. References to my family showed that I could not detach them from my career project. Thus, I invited my biography appraisers to follow my reasoning, and I apologized for an occasional lack of modesty—a rather frequent sin of autobiographies. However, in 1992, my decision was not the first time I changed jobs, as I intend to show in this chapter.

In writing this chapter, I addressed the guiding questions provided by the book organizer: What is your most important scientific contribution? Why do you consider it as your most important contribution? How did the idea come about? How does your contribution add to the production of international scientific knowledge? How is your contribution reflected in the world outside academic psychology? What would you like to see as the next steps in theory and/or research, based on what you produced? I have not always followed a chronological order of events. Some things do not happen just once, and we only realize their relevance when they reoccur. In such cases, I will make small leaps forward and then recede again in time. Section subtitles, in this chapter, refer to four phases and a conclusion follows them.

The First Phase: Undergraduate Education and First Work Experiences

When I had to choose a college major at the end of the 1960s, the option for research strongly influenced my decision. At that time, there was no university in Uberlândia, my hometown. Little information was available concerning the full scope of possible degrees. I was surrounded by friends who were being selected (I do not dare say they were the ones choosing!) to study medicine or engineering, frequent options among the youths who had attended the best high schools. Yet, to me, neither alternative was attractive. I wanted to be a researcher, and the stereotypical ideas that I had then of what a doctor or an engineer could do did not include research. Instead, I chose biology; today, I recognize that a scarcity of information was the basis for my choice. Having to choose between São Paulo and Brasília for a university, I came here to study in 1969, burdening my parents with the cost of attending a school more than 400 km away from home, on a road not yet even paved.

By sheer luck, I landed at an innovative learning institution that exposed its students to a broad scope of options centered on scientific and (afterward) professional training. In less than 1 year, abrupt contact with a universe of options quickly amplified my perception of the range of available knowledge. I discovered that doing

science was not restricted to the courses that served as the basis for medicine and engineering. My proximity to students in other undergraduate programs, facilitated by the requirement to attend a common basic course during the first year, introduced me to psychology. I very quickly fell in love with it.

At the end of my first year at UnB, after taking advantage of all the credits that I had earned (an additional benefit of attending the flexible institution that UnB was then), I switched to the psychology program to develop my professional career as a researcher in this field. Naively hopeful, I could only envision the laboratory packed with Skinner boxes as my work environment for the rest of my life. I was stimulated by the theoretical framework then strongly prevalent at UnB's Institute of Psychology and by the scientific incompetence of the followers of other approaches trying to convince me otherwise. I came to believe that there was a single way to do science in psychology: the approach formulated by the person who had named the laboratory boxes.

The undergraduate psychology program was extremely useful for my training in research. My earliest participation at psychology conferences held in Brazil (i.e., the 1st and 2nd Annual Meetings in Ribeirão Preto) and in the organization of a local scientific meeting strengthened my desire to devote myself to a research career. Frequent activities as a teaching assistant and the daily and intense contact with professors (I used to stay at least 10 h a day at the university) greatly helped me develop my own view of what academic work is supposed to be. From the middle to the end of the program, I felt pressured by the need to broaden my training to increase my comparative advantage in the labor market. Impressed by professors who had returned from Mexico where they had attended a graduate program in applied behavior analysis, I received significant teachings that prepared me to work in both clinical and educational settings. As to the organizational field, no way! In addition to being politically incorrect, the amount and quality of the training available at the time did not recommend such an adventure.

I finished my psychology degree in 3½ years, partly thanks to the innovative system that then existed at UnB, whereby it offered a broad scope of courses even during the vacation periods. From August 1972 to the end of 1975, I taught at private higher education institutions in the Federal District, a modality then undergoing wide expansion, thanks to the university education project launched by the military governments of the 1970s. For the first 2½ years, that was my main source of income, having just married Mariza, a former course colleague at UnB. She was also a colleague at one of the schools where I worked. These activities showed me that teaching was a type of job that I liked very much, even under the adverse conditions that prevailed at the institutions where I taught. Although it was my desire, research was unthinkable under such conditions. When available, the laboratories at these institutions only served to demonstrate research procedures and results, not to conduct proper research. Their aim was to reproduce, not produce, knowledge.

In parallel, I tried to develop a private clinical practice, together with Mariza. However, I found that it produced little motivation, personal satisfaction, or income. I could not see much social repercussion in what I was able to do, even if my appointment book were someday to become full. I caught myself wishing countless

times for my few clients to miss their appointments so I could study an interesting text that I had found or I could prepare a class.

At the end of 1974, a tempting invitation made by the Ministry of Education and Culture (MEC) to become a member of a team of investigators on adult education provided the final excuse to put an end to my career as an autonomous professional. Mariza entered the Master's Program in Psychology at UnB as a member of the very first class, and after many years applying for grants for graduate education abroad, we temporarily gave up. It was impossible for us to receive support, either from them or from government funding agencies, while working at private schools. Thus, our plan now was to obtain, one and then the other, graduate education in Brazil, which was showing signs of expansion.

At the MEC, through participation in research projects on adult education (regarding education policies, teaching technology, and the assessment of needs) conducted across several Brazilian universities, I learned how to work in an effective multidisciplinary team that included pedagogues and sociologists. These professionals exposed a variety of research methods to me. I learned to respect these methods as a means for knowledge production. Such learning and exposure triggered a process of professional development that radically shifted my interests toward graduate education and work, as the next three sections will show.

The Second Phase: Graduate Studies at Florida State University

At the end of 1975, an enrollment form for a one-year graduate program in teaching technology at Florida State University (FSU) accidentally and belatedly fell on my desk. The Organization of American States (OAS) offered grants to Latin American students. However, one needed to attain a minimum score on the TOEFL. Although rather late, I managed to take the test, trusting in the 5 years that I spent learning English in Uberlândia. I attained the required score but received no answer from OAS. As a couple, Mariza and I defined our plans for 1976. A new family member was to arrive soon. Therefore, we decided to continue with our lives, but another surprise was on its way.

In February 1976, a letter from the OAS arrived, confirming my selection. I should attend the spring semester, starting a few weeks later in Tallahassee, Florida. Mariza dropped out of her master's program; we took a leave from our jobs and went to FSU with no salaries (both the MEC and the schools where we worked refused to continue paying us) and only a single student grant (US$ 435 per month). Upon arriving in Tallahassee, I discovered that the alleged specialization program actually meant I had to earn 1-year credits at a graduate program, which I could then continue until earning a degree if I wished and if FSU accepted me. From the very beginning, I set myself to take advantage of the credits paid by the OAS (as specialization program requirements) and then use them in a master's or even a doctoral program.

We soon discovered that the OAS grant was not sufficient. The third member of our family was born there: Clarissa.[1] Help came from my parents, the Ministry of Foreign Affairs, and the Ford Foundation. Additionally, in the last year, with no OAS grant and having already written my doctoral dissertation, I received a grant from the Brazilian Federal Agency for the Evaluation and Support of Graduate Education (Coordenação de Aperfeiçoamento de Pessoal de Nível Superior; CAPES),[2] a supposed profitable investment for Brazil, because I was so close to finishing the program. Mariza also received help from CAPES to pay the fee for credits as a special student at FSU.

Under these circumstances, and thanks to a trimester-based credit system and the strategy of choosing my courses, I earned my master's degree in March 1977 (supervised by Dr. Robert Reiser, a young professor at FSU), and earned my doctoral degree in March 1979 (supervised by the reputed instruction theoretician Dr. Robert Gagné). They were both at a graduate program in Education with an emphasis on Instructional Systems. The latter integrated knowledge produced by learning and teaching (initially behaviorist, cognitivist at the late 1970s) systems and communication theories; media production and administration principles; and educational assessment models. The program trained teachers, researchers, and high-level technicians for work in education or training at public and private institutions.

The FSU program was well known for its alumni being hired by instructional design companies and public civil and military institutions in the USA as well as for having designed the successful educational system of South Korea. For the master's degree, I chose a modality that did not require a thesis (but more credits instead) to have the OAS pay for more credits, which I could then use for the doctoral program. On several occasions, when choosing the courses for the master's degree, I skipped those offered at the master's level (with my supervisor's fearful consent) to enroll in those taught at the doctoral level.

My doctoral dissertation included an experiment with various comparable groups of children. I tested and compared teaching procedures (via multimedia) as well as isolated and combined verbal and model-based instruction variables (from the cognitivist perspective akin to the social learning theory recently formulated by Bandura). My aim was to establish how such variables influence the acquisition of rule-governed behaviors, according to the taxonomy formulated by Gagné. Although I had taken courses devoted to business and military training, my dissertation disclosed my goal of returning to Brazil and work in the field of education. Having this intention as a guide for my training, I did not anticipate the surprises that the future would bring.

An automobile company in the USA offered me a job, but I was ready to come back to my country. Thus, while I was still in Tallahassee, I established contacts aimed at finding a job. UnB and two other federal institutions in the southern and northern ends of the country demonstrated interest. We chose to return and live in

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[1] Currently, a professor at the Federal University of Uberlândia.

[2] In the late 1990s, I coordinated the CAPES Office in charge of evaluating the Brazilian graduate programs in psychology and of distributing grants and scholarships nationwide.

Brasília, initially with Mariza's parents, because we had sold everything to pay for our stay in the USA. I made a hasty and optimistic assessment, and once again, I was wrong.

For three distressing months, the UnB administration treated my case with the rhythm of a bolero: two steps back and two steps forward. It was an unclear process but seemingly tinted with the hues of policies related to the fact that I had participated in student political activities at UnB. The country was still under a military dictatorship. I grew tired of the dance and offered my services to other institutions, now focused on human resources. I gave up the expectation of a university career. The Brazilian Agricultural Research Corporation (Empresa Brasileira de Pesquisa Agropecuária; EMBRAPA) made the most tempting proposal (although not from a financial point of view): to be a member of a team then being put together that initially included doctors of sociology and mathematical education to perform research in human resources.

I decided to accept EMBRAPA's offer since it fitted my career choice to be a researcher. Mariza went back to the Master's of Psychology program at UnB, resuming the plans that she had interrupted when we traveled abroad, trying to take advantage of what she had accomplished before the trip and (when our family's third member allowed her) as a special student at FSU.[3] Life was returning to normal, which was evident by the arrival of our fourth family member, Priscila.[4] I had not yet realized that my new job was about to add extremely relevant peculiarities to my professional development. I was moving toward the fields of organizational and work psychology and research management and moving away from the field of education.

The Third Phase: Applied Research and Development at EMBRAPA

From 1979 to 1990, I worked as part of the EMBRAPA headquarters research team that sought to produce knowledge for intervention within its own organizational setting. It is a public organization with more than 40 decentralized research centers and services that do research and development on agriculture, biology, and related fields, all over Brazil's states. EMBRAPA expected us to conduct research, but not any type of research: the focus was on assessing its human resources activities and development programs conducted since 1974. It always had many employees attending graduate training programs, and its team of researchers was remarkable (Borges-Andrade 1985). All of this experience in training and development (T&D), as well as in other domains, needed evaluation in order to accomplish public accountability.

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[3] Years later, UnB hired her as a professor, and some time afterward, we again became coworkers.

[4] Now, my coworker at UnB.

Our initial team had an advantage: it included people already accustomed to working in interdisciplinary settings. Years later, the team grew through the inclusion of investigators with training in psychology and management as well as a technician for statistical data processing. We also collaborated with two other research teams at the company headquarters, which had foci on the diffusion of technology and on agricultural economics. Quantitative-centered training always predominated in our team, which accounts for a large part of the nature of its scientific production described ahead and the mutual influence upon us. The need to integrate information from different fields served as an imperative to produce knowledge relevant for the purpose of intervention.

Starting in the second year, we began receiving undergraduate students as interns, most of whom attended the undergraduate program in Psychology at UnB. This change marked the beginning of a very fruitful relationship. Some of these interns are now professors at UnB and other teaching institutions. By the middle of the 1980s, I began to collaborate with the UnB's graduate program in Psychology and with graduate programs in Business at other universities, first as a co-supervisor and committee member and then as a supervisor and visiting professor. Although our focus at EMBRAPA was research on human resources, naturally, the activities were not restricted just to this subject. The knowledge and technologies produced demanded some type of "outreach" that would ensure their inclusion in management processes.

From the formal structure perspective, our team earned the title "consultancy," which was always directly linked to the chair of the Department of Human Resources (HR). For instance, I participated in the improvement of the methods for the selection of new employees at EMBRAPA and of applicants for graduate programs. I designed short-term T&D programs for employees. I also collaborated with EMBRAPA's new Job and Salary Plan as well as in the development of policies and guidelines, especially regarding human resources and research management. In the performance of these activities, I learned much from my colleagues in the team. I also developed intense political and management activities in the 1980s, outside EMBRAPA, at the Regional[5] and Federal Boards of Psychology.[6] They respectively followed local and national election processes.

When we began our work in 1979, EMBRAPA had no HR assessment system. Assessment requires identifying variables, designing data collection instruments, analyzing and interpreting data, and making judgments based on this information. Therefore, there was a need for people with scientific training and we followed the same steps as researchers. I participated in assessments of the EMBRAPA's graduate training program (Quirino et al. 1980) and its effects (Ávila et al. 1983) and then of its short-term training program (Lima and Borges-Andrade 1985) and its effects (Lima et al. 1989). We also developed and used a method to assess training needs for both training programs (Borges-Andrade et al. 1989; Guimarães et al. 2001). In these cases, all I learned at FSU was essential.

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[5] Conselho Regional de Psicologia—CRP1ª.

[6] Conselho Federal de Psicologia—CFP.

By the third or fourth year, we decided that we should not restrict ourselves to individual assessments, but to seek to conduct other studies with these data, other data already available, or those to be collected. Thus, we began to gather and develop larger and more complex databases. Our group developed models and tested hypotheses. Several publications followed this move (e.g., Borges-Andrade et al. 1990b; Lima et al. 1988).

We produced knowledge and information systems to predict and explain internal phenomena. We created empirically tested systems that could serve the purposes of EMBRAPA's management. However, our scientific production lacked external validity. We published everything that we wrote, thanks to an organizational culture that encouraged dissemination at scientific conferences and journals. A few years later, we decided to take one step forward: we broadened the scope of our variables far beyond those inherent to personnel management. We conducted studies on different aspects of organizational behavior (e.g., Borges-Andrade et al. 1990a, 1992), developed, tested, and compared various indicators of scientific and technological production (Borges-Andrade and Quirino 1989), and empirically investigated their relationship with individual and work environment characteristics (Borges-Andrade 1994a).

These steps considerably broadened the scope of the theories that I needed to use and tried to integrate. Closeness with team members whose backgrounds differed from mine was essential to accomplish these goals. We learned much from each other. In my particular case, for instance, I learned to conduct multivariate analyses with large amounts of data and to understand the concepts of organizational theory and the principles of research management. I had little exposure to those research methods or these knowledge fields, before. The intensity of this experience would most likely correspond to another doctoral training if compared to formal education. Recognition of the relevance of other variables, as well as the likely desire to broaden the scope of antecedent variables, was a one-way ticket. I clearly realized this fact during my last 2 years at EMBRAPA, when its new management invited me to move from human resources to another work team (strategic management). I remained there until applying for a head professor position at UnB. I will explain this later.

I classify the research conducted on work and organizational psychology (WO&P) into three categories:

- First, studies center on *traditional product variables*: These are those with a focus on the performance or results achieved by individuals within organizations. They as well focus on the internal or external factors that are associated with such results or performance.
- Alternatively, one might investigate payment systems and selection methods, perform a task analysis, and assess performance or T&D. Therefore, such studies belong to the category *established organizational functions or technologies*.
- The third category corresponds to studies of *psychosocial processes*, which generally attempt to answer theory-driven questions.

The studies that we conducted starting in 1983 sought to identify the variables able to explain the production among individuals and EMBRAPA units. Those studies might belong to the first category. The findings of this category were relevant to EMBRAPA as well as to perhaps other science and technology (S&T) institutions. They suggested arrangements that optimize organizational and individual production. Such findings were also relevant for Brazilian society because the government invested in public S&T institutions. However, their contribution to the development of WO&P was limited, given the specificity of the context of S&T organizations. This category of studies allowed us to establish relationships with other important groups of scholars, managers, and policymakers, in Brazil and elsewhere (USA, Europe, and Latin America), devoted to these organizations. Those relationships resulted in several publications when I was already at UnB, but they refer to these previous achievements at EMBRAPA.

My involvement with studies belonging to the second category, *organizational functions or technologies*, began in 1979. This category was the most fruitful of the three. The work concentrated on two fields: "performance measurement" and "T&D." We tested and integrated various performance measures of S&T institutions at different organizational levels to develop a multidimensional measurement system (Quirino and Borges-Andrade 1987). In addition, as stated previously, I sought to develop a method for assessing T&D needs that resulted from the combination of elements from role and system theories and scientific research principles. A later publication systematized it (Lima and Borges-Andrade 2006).

Another experience in methods development relative to the field of "training" began with a model that I had designed while still in Tallahassee. It proposed an integrated and summative system for the assessment of instructional products in education (Borges-Andrade 1982). I adapted it as a way to identify and organize theoretically relevant variables for T&D assessment in EMBRAPA. This model was useful for defining a minimum framework for consultancy and training as well as to generate research hypotheses at the company and later at other organizations. I refined it in the current century, in order to use it as a framework for the development of studies at UnB (Borges-Andrade 2006). We more recently suggested its use as a model for the management of T&D (Borges-Andrade et al. 2013). A third experience occurred in technological development that involved the methods that we designed to investigate the effects of the EMBRAPA training programs on former trainee and company performance, as I described before.

The methods that we developed for T&D assessment, with regard to either needs or outcomes, provided EMBRAPA with administrative knowledge and technologies for decision-making. What contribution did they make to WO&P? Although they were born within a specific setting (i.e., an S&T organization), the technologies that resulted from this second category could be more easily adapted to other organizational contexts compared with the work that we had performed relative to the first category. This quest for adaptation following empirical testing was one of the reasons that I moved from EMBRAPA to UnB. It later evolved to a theoretical book on training and development (Borges-Andrade et al. 2006), to a book that offers a collection of instruments with evidences of measurement validity (Abbad et al. 2012),

and to several systematic literature reviews published by my research group at UnB (e.g., Borges-Andrade and Abbad 1996; Cassiano and Borges-Andrade 2017).

My interest in the systematic study of "psychosocial processes," the third category of studies that I conducted at EMBRAPA, became stronger starting in 1987. The increase in my teaching and supervision activities at UnB (as a visiting professor) explains this development. The changes then taking place within EMBRAPA's organizational environment, after the end of the military dictatorship, also indicated the need to conduct these studies. We began with a pioneering Brazilian research on organizational commitment (Borges-Andrade et al. 1990a). We adapted and tested a scale formulated in the USA and tested a theoretical model to explain affective commitment. In addition to their diagnostic value, the results of this type of research suggested strategies for organizational intervention. These results derive from, and come back to, WO&P theories. It is worth observing the speed and intensity of the appropriation of the findings from this study, thanks to collaborations we established with graduate programs in Psychology and Management. Seemingly, I had succeeded in finding a research topic inherent to the *zeitgeist*. However, the generalization of these findings needed testing outside of EMBRAPA.

I began another line of research in 1990, fully outside of EMBRAPA and supported by the National Council for Scientific and Technological Development (Conselho Nacional de Desenvolvimento Científico e Tecnológico—CNPq)[7] that concerned the meanings attributed to work by individuals who perform paid activities. For this purpose, I adapted a questionnaire used in a study conducted in eight countries. I sought to investigate three constructs: the centrality of work, societal norms, and valued results and goals. To me, this project represented my first research experience involving many organizations. However, the project evolved too slowly because it was not of interest to EMBRAPA and, therefore, I had little time for it. I wanted to devote myself more to this type of work, thereby broadening the scope of the investigated organizational contexts, especially in the categories "organizational functions or technologies" and "psychosocial processes." Later, this desire became a strong motivation to apply for the head professor position at UnB.

The research that I conducted resulted in different scientific and technological developments. Enormous effort was required to integrate findings. The factors that made this effort at integration difficult included:

- The nonacademic nature of the studies conducted at EMBRAPA and
- The "micro" approach tradition in WO&P that is characterized by a broad scope of data resulting from an extremely applied and "atheoretical" research.

For these aforementioned reasons, I came to believe that an academic setting would facilitate my efforts at integration. I also trusted that this could work even under the adverse conditions that then prevailed at Brazilian universities. I started to gain the confidence that I should pursue this path.

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[7] A few years later, I coordinated the group of researchers, in CNPq, in charge of evaluating and distributing grants and scholarships for psychology, nationwide.

I began to realize that I had to move to another institution. An UnB public call afforded the occasion. It was a matter of joining my strengths (without modesty, my high research output at EMBRAPA, published outside the company) with an environmental opportunity (the head professor position). For someone like me, who (during my last year at EMBRAPA) had been trained to perform strategic planning, and then sought to persuade and train several others (read the next paragraph), this rationale was free from objection. I sought to accomplish that professional career mission. However, a new work challenge may have initially delayed my decision and may have later helped to strengthen it.

The Fourth Phase: Professorship at the University of Brasília

In 1990, I received an invitation to be a member of the technical group of EMBRAPA's Secretariat of Strategic Management, an agency then created and directly subordinate to the company's president, to coordinate a large project of institutional change. Thus, I left the company's Department of Human Resources. That step represented my most significant experience in organizational intervention, given the magnitude of the changes that we accomplished. It was also, or for the same reason, exhausting. From 1990 to 1992, we designed and applied an assessment process that involved and integrated several levels: researchers, research projects, and all EMBRAPA units. At the same time, we conducted seminars on organizational change at all such units to discuss and persuade 10,000 employees of the need for change. I participated in an external training program on strategic planning for S&T organizations. Next, I contributed to the formulation of a manual of strategic planning specifically designed for EMBRAPA and I worked as an instructor to disseminate it among the employees who must use it at the company units. As long as the manual was in use, I worked as an internal consultant to follow up and guide the strategic planning process at various units. I became a member of the group that coordinated the full process at the national level (Göedert et al. 1994).

By the end of 1991, I received an offer for a managerial position at the aforementioned Secretariat, which was impossible to refuse. My new organizational position dramatically increased the demands that fell upon me and on the team responsible for the strategic planning and assessment process. At the same time that my power within the organization increased, I felt a deep loss of control over my personal, family, and professional lives. I could no longer manage my time and still fulfill the endless family, research, and teaching obligations outside of EMBRAPA. In addition, the cognitive strategies required by management and research activities were incompatible. Furthermore, in my unfortunate situation, the former overtook the latter. I began to have difficulty thinking and behaving like a researcher. I was aware that my choice to develop a research career was in jeopardy. I felt distressed. One more reason to switch jobs!

From 1991 to 1992, given the international repercussions of our work on assessment and strategic planning at EMBRAPA, we were invited by the International

Service for National Agricultural Research (ISNAR), located in The Hague, the Netherlands, to participate in a Latin American group and provide consultancy. The idea was to develop case studies on planning, monitoring, and assessment of agricultural research across 13 countries (Borges-Andrade 1994b; Borges-Andrade and Horton 1994). These case studies identified training needs and later served as instructional and consultancy materials (e.g., Borges-Andrade et al. 1995). The company had a strategic interest in this activity and our group started participation in it. My new latter employment relationship with UnB, after having been selected and hired, did not hinder the continuity of this project until its conclusion.

We applied the knowledge on strategic planning for S&T that we organized and integrated at EMBRAPA. Once again, I was able to put the instructional design skills that I acquired at FSU into practice, as well as the model and methods we developed for T&D assessment and performance measurement. This resulted in several publications, two of them with a colleague from FSU (e.g., Borges-Andrade and Siri 2000; Horton and Borges-Andrade 1999; Siri and Borges-Andrade 2000). ISNAR also invited me to make part of a team that performed its institutional assessment, published in a book by Mackay et al. (1998). From 2004 to 2005, I participated in a similar and shorter experience at the research centers overseen by the Brazilian Ministry of Science and Technology (MST) that also resulted in a book by Castro et al. (2005). They were former colleagues at the group who had coordinated the experience at EMBRAPA and participated in the ISNAR project.

There was satisfaction with all the accomplishments at EMBRAPA and with the mentioned internal and external recognition; albeit there was a belief that the time for a change had come. I became aware that it was no longer possible to remain a researcher in my field, given the position that I had come to occupy within the company. The best evidences supporting this corollary were the many and insistent invitations to take a managerial position, that I started receiving since the 1990s. If my intents were a managerial career or a higher income (no matter the type of job), then my professional path over the following years was clearly traced and most likely well paved. However, I did not envision this path when I decided on my college degree; I gave up my autonomous professional work and joined the MEC research group; I received a Ph.D. degree; and I accepted the invitation to join the research group at EMBRAPA. I always made my decisions based on the option of having a research career. That was the time to do it again. I passed through the stages of developing thoughts of leaving, strengthened my intentions to sever ties, and lastly applied to the position of head professor at UnB.

I felt that I was at the exact intersection of a "Y" with one arm broken. I had developed my career as researcher exactly up to that point of the intersection. On the one hand, I had a management career. On the other, if I were a researcher in a company-related field, then I could expect a career centered on issues that are more fundamental. Yet, it would not be appropriate to attempt it in my case. I was deeply aware of EMBRAPA's mission, and I would not try to persuade it to open space for research inconsistent with its mission. Other people's experiences demonstrated that this situation would not last and would result in bitter consequences. During my previous training in strategic planning, I learned not only how to associate strengths

and opportunities but also how to anticipate threats and not associate them with weak points. The time had come to consider the head professor position as a personal opportunity.

UnB hired me 14 years after that politically based veto in 1979 when I just arrived in Brazil after completing my Ph.D. at FSU. I started working at its Institute of Psychology in May 1993. After the conclusion of the 1999 ISNAR and 2005 MST intervention projects, I abandoned the first category of studies (*traditional product variables*) to which I had contributed knowledge and technologies. I considered that the knowledge and technologies produced within this category were too specific to S&T organizations. Whereas I intended, ever since leaving EMBRAPA, to broaden the scope of the organizations upon which I would concentrate my intellectual production.

I had already collaborated with graduate programs at various universities, particularly the psychology graduate program at UnB, during most of the time that I worked at EMBRAPA. Thus, I was aware of two working conditions at this university that were fully different from those in my past. I allude to the conditions to perform effective research. The *first* of these conditions concerned the financial support and human resources available for data collection, analysis, and networking. At EMBRAPA, these resources were abundant, if the research projects met its interests. Nevertheless, the situation at the university was wholly different. I could choose what to study, but I had to procure the required resources elsewhere and persuade graduates and undergraduates of the relevance of participating in my projects.

The second condition concerned the dissemination of the knowledge and technologies produced. At EMBRAPA, our team or internal multipliers incorporated the produced knowledge and technologies into practices. Publication in scientific journals, although a source of prestige for us, was not required. At the university, this publication was mandatory because of the demands imposed by the external agencies that evaluated graduate education. There was no guarantee whatsoever of the actual use of the produced knowledge or technologies by public or private organizations.

To address these new conditions, I designed a work plan even before leaving EMBRAPA. I resorted to what I had learned during the doctoral program at FSU, particularly in a course devoted to the dissemination of innovations, and to all that I had learned (and taught) at EMBRAPA and ISNAR on strategic planning. The plan had to overcome, through specific strategies, the two aforementioned weak points that I addressed: the lack of internal resources for research and the difficulty of ensuring the incorporation of the produced knowledge and technologies within the practices of external organizations.

I immediately submitted a research project to provide continuity to the studies on organizational commitment that I conducted at EMBRAPA. It aimed at increasing the quality of evidence regarding the validity of its measurement and predictors. This project included the establishment of a research team with psychology and management professors from UnB and some federal universities in the southeast and northeast regions of Brazil. CNPq, which provided financial support until 1997,

approved this project. I also succeeded in recruiting undergraduate, master, and doctoral students for the local team and we published several articles (e.g., Bastos and Borges-Andrade 1995; Borges-Andrade and Pilati 2001; Flauzino and Borges-Andrade 2008; Oliveira et al. 1999). To this day, these students constitute the most relevant human resources for my projects, and CNPq always provided financial support. The following project, which ended in 1999, sought to develop measures and investigate the predictors of the effect of T&D on work and also resulted in several published articles (e.g., Abbad et al. 2000; Borges-Andrade 2002; Pantoja et al. 2001). The former project can be included in the category *psychosocial processes*, while the latter can be included in *established organizational functions or technologies*.

With regard to promoting the adoption of our findings, the corresponding strategy demanded a longer deadline. I was aware that no university could accomplish this task alone. If UnB were to try, it would most likely find itself restricted to public organizations, because it is located in Brazil's capital city, Brasilia. The research network established for the project funded by CNPq would work well in the end. In the medium term, I thought that it was important to build a drive belt from inside UnB to outside, using my teaching and supervision activities as a basis. I began to teach undergraduate and graduate courses focusing on organizational behavior and T&D. These subjects were related to the research projects conducted until 1997 and 1999, respectively. In addition, I began to supervise dozens of undergraduate students each year who were interns at public and private organizations. Interns and future professionals who had taken the aforementioned courses would bring the produced knowledge and technologies to different applied settings.

For instance, in the courses that targeted T&D, I included information on the methods that we developed to assess training needs, the effects on the integrated and summative assessment model, and everything that I learned on instructional planning at FSU. In turn, in the courses that focused on organizational behavior, information on organizational commitment (the subject of my first research project at UnB) was included along with topics such as motivation, leadership, and job satisfaction. For the graduate level, I developed a method for surveying and categorizing Brazilian publications on organizational behavior. Its fundamentals were from FSU, where I learned to perform systematic reviews of published empirical studies. I still use this method in this course: students feed data into a spreadsheet that currently includes 1000 reviewed articles. This technique integrates and enables comparisons of different types of studies and is described by Borges-Andrade and Pagotto (2010). Furthermore, it already served as the basis for several literature reviews conducted by master's and doctoral students (e.g., Cantal et al. 2015; Fonseca et al. 2015; Nascimento et al. 2016; Vasconcellos et al. 2016).

The ongoing teaching of these courses, the continuous supervision of students during the internship stage, and the increasing search for more information by Brazilian professionals active in the fields of WO&P led to the conclusion that publishing scientific articles does not suffice. Translations of foreign works still predominated at the end of the twentieth century among the books targeted at students and professionals, with no mention whatsoever of the work performed in Brazil.

Moreover, there was no attempt to take the particularities of Brazilian organizations and workers into account. The solution was to organize books that would integrate the available knowledge and adapt it for an applied purpose. We shared this diagnosis and solution at a meeting with professors from other Brazilian universities. It became clear to all of us that the problem had a nationwide dimension. In addition to books, we needed to create an association and a scientific journal for WO&P as well as hold a conference to attract like-minded students and professionals.

Thus, we established a network of researchers that has now been in operation for more than 20 years with the support of the National Association of Research and Graduate Education in Psychology (Associação Nacional de Pesquisa e Pós-graduação em Psicologia; ANPEPP). The WO&P association (Associação Brasileira de Psicologia Organizacional e do Trabalho; SBPOT)[8] that we created is politically strong, its scientific journal has good standing, and its conferences happen every 2 years. Our network published several books in which we sought to integrate what we had produced at universities all across Brazil. They deliver content that professionals understand and instructors use it in classrooms. A dictionary organized the major constructs in the field of WO&P in Brazil (Bendassolli and Borges-Andrade 2015b). Some of these books are currently well-known bestsellers, including in other Latin American countries, despite the language barrier. One of them is responsible for the largest number of citations that I have, according to Google Scholar (Zanelli et al. 2014).

The idea to work within a network was present in my research project on organizational commitment. The development of the network linked to ANPEPP strengthened that idea. I partially linked my subsequent research projects to this network. From 2000 to 2006, we were recognized as a group of excellence, and we received significant financial support to develop measures to assess the effects of T&D as well as to investigate the individual and organizational variables associated with these effects. The theoretical model that guided this project was the one denoted "integrated and summative" that I formulated while attending the doctoral program at FSU and adapted to the context of training, at EMBRAPA. This project resulted in a large number of research articles, including results of T&D evaluation at the individual, group, organizational, and societal levels (e.g., Freitas and Borges-Andrade 2004; Mourão and Borges-Andrade 2013; Pilati and Borges-Andrade 2008).

In addition, we published two books (mentioned in the above section) that integrated the findings associated with the aforementioned theoretical model. One focused on the education of T&D professionals. The other book provided public access to the measures that we developed during that project. The number of T&D consultancies provided by the members of our team, to Brazilian public and private organizations, increased. We taught tens of minicourses, on T&D, in most states across Brazil's five regions. That knowledge and those technologies also support a significant proportion of the professional internships that I supervise to this day at training centers and corporate universities within organizations located in Brasília.

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[8] In the current century, I was elected President of ANPEPP and later of SBPOT.

We trained a large amount of master and doctoral students, in that group of excellence, who currently are professionals or professors in a wide variety of organizations in Brazil. Our scientific output visibly changed the country's state of the art of T&D publications.

Although I still supervise master and doctoral research projects on T&D, the focus of my own projects shifted starting in the mid-2000s. The accumulation of organized knowledge and available technologies on this subject is disproportionately large compared with the knowledge about learning at work derived from non-formal actions. In other words, there is little understanding about what workers do to learn when no formal practices for learning promotion are available. Clearly, a dominant theoretical and methodological paradigm for T&D exists. However, in the absence of these formal practices, when learning results from the worker's initiative, research methods and micro-theories proliferate, often in mutual conflict. Therefore, I sought to contribute to filling the gap between the fields of formal and nonformal learning at work, through the application of a theoretical framework that can integrate both fields (Abbad and Borges-Andrade 2014; Borges-Andrade 2015a, b; Moraes and Borges-Andrade 2015a).

Until 2016, I conducted a project that sought to investigate the individual processes of skills development and the use of strategies by workers to learn at work. Its second objective was to study the relationships among such processes and measures of knowledge and skills, motivation for learning, support for continued learning, work teams, changes in organizations, T&D, participatory planning, personnel management, and individual and organizational performance (Brandão et al. 2012; Haemer et al. 2017; Lins and Borges-Andrade 2014; Moraes and Borges-Andrade 2015b). The research project that I started in 2016 investigates the relationships among work design, the learning strategies used by workers, and their consequent professional development. However, I need satisfactory measures of work design. The ANPEPP researchers' network is currently testing them across Brazil. A separate partnership, with a member of this network, made my return to the study of meaningful work (e.g., Bendassolli and Borges-Andrade 2015a) and strengthened a latent interest on investigating entrepreneurship (e.g., Bendassolli et al. 2016).

That shift of research focus in my projects, in the mid-2000s, led to the creation of a course in workplace learning, at the UnB graduate program. As a visiting professor, I taught smaller versions of it, along with the course in training and development, at graduate programs in Valencia, Spain; Coimbra, Portugal; and Cali and Barranquilla, Colombia. I delivered invited conferences, on workplace learning, in Santiago, Chile; Lisbon, Portugal; Medellin, Colombia; and Johannesburg, South Africa. These courses and conferences aimed at disseminating the research findings from the last 15 years. Why that shift, from formal to nonformal learning at work? It seeks to equate the technological advances we achieved in formal learning at work, especially through instructional design and evaluation. Nonformal learning may rely on work design technology, instead of instructional design, and it will need other evaluation methods. I perceive this as a new challenge or the next frontier.

Conclusion

A theoretical and methodological approach was the basis of my undergraduate training. Notwithstanding, professional life quickly taught me that I needed diversification, either via graduate education or through learning at the workplace. Yet, I still needed to integrate everything that I learned one way or another. Relative to my graduate education, I owe my training more to a set of professors than to my supervisor. Consequently, I developed expertise with diversified focus. Figure 1 synthesizes my journey in search of integration. A colleague[9] designed it, after reading the previous sections of this text.

My choices of research topics responded to organizational challenges at EMBRAPA or intended to reduce identified theoretical or methodological gaps at UnB. In both cases, I was lucky to have excellent colleagues, and I received support for my projects. I oscillated between safe research fields and others in which I could fail. There is a need for the development and validation of universal frameworks in the workplace, giving more attention to human behavior diversity and its management (Feitosa et al. 2017). There is also a need to integrate the Brazilian accomplishments to those in other Latin American countries, as well as to compare them to the current USA and European WO&P profiles (Borges-Andrade et al. 2018). I am sure this is not something to achieve alone, or in the short run.

I appreciate and fight for autonomy. Although priorities existed and I was able to identify them, I always had the autonomy to choose how to meet them. Nonetheless,
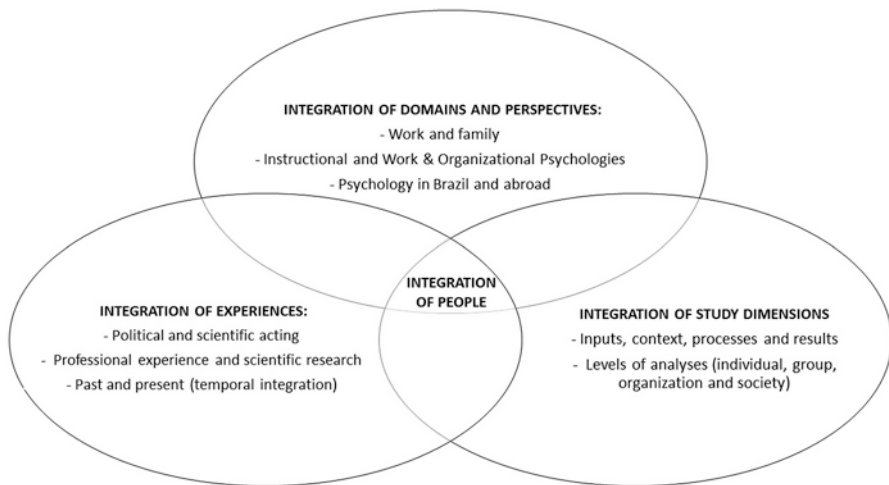

Fig. 1 Synthesis of the four phases

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[9] Luciana Mourão Cerqueira e Silva, to whom I am thankful.

I am extremely uncomfortable when I feel hindered from reaching them or when I must shift my focus. I always need to ponder how the parts of a given task are mutually integrated and to what purpose they serve. My research projects must make explicit how such integration occurs.

The collaboration of other authors always improved my publications in books and journals. Frequently, I sought out colleagues to collaborate with, and often they sought after to collaborate with me. Although the number of my publications is large, the assumption that I would perish, were I not to publish, was not the reason for their existence. The goals of my career are to understand the rationale underlying the workings of the world, to contribute toward others' understanding of it and to have fun by doing it. Strategies to accomplish these goals comprise organizing and integrating perspectives and this path is boundless.

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Building Community Psychology in Brazil as a Tool for Change and Social Well-Being

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Abstract Latin American countries bear the brunt of social inequality and historical oppression, challenging those who deal with scientific and academic knowledge to find alternatives and strategies for the development of social technologies, public policies, and psychosocial strengthening actions especially for the most vulnerable populations. Community Psychology in Brazil had its origin in the mid-1960s, but its development began in the 1980s and today, after more than 50 years of its emergence, Community Psychology, as an academic discipline, is present in most of the 600 Psychology courses in Brazil. Community Psychology in Brazil showed its strength and its international insertion with its scientific contributions in the Latin American context, in the 5th International Conference on Community Psychology in Fortaleza, in 2014. Personally, I had the opportunity to be able to follow and contribute in this evolution of the area, as a researcher, teacher, editor and author, a professional and representative of the area in different national and international events. A theoretical contribution, based on research data, has been the socio-community model of well-being. The intervention and methodological contribution of projects aimed at developing and strengthening well-being in groups, especially children and adolescents, has been a constant concern.

Latin American countries bear the brunt of social inequality and historical oppression. This aspect challenges those working with scientific and academic knowledge to find alternatives and strategies for developing social technologies, public policies, and actions for psychosocial strengthening, especially for the most vulnerable populations. Community Psychology in Brazil has its origins in the mid-1960s, but it only started to be fully developed in the 1980s during the consolidation of democracy after the period of dictatorship. Today, more than 50 years after emerging, Community Psychology is established as an academic discipline in most of the 600 Schools of Psychology in Brazil.

Community Psychology in Brazil showed its international relevance with the scientific contributions in the Latin American context in the 5th International Conference on Community Psychology in Fortaleza, Ceará (2014) and in the 4th Multidisciplinary Conference of Community Health of MERCOSUR in Gramado, Rio Grande do Sul in 2009 (Sarriera, 2011). Personally, I had the opportunity to

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follow these two events and to contribute to the growth of this field as an organizer, researcher, professor, editor, author, professional, and representative of community psychology in different national and international events.

I consider one of the most important scientific contributions of my career the socio-community well-being model, which is a theoretical contribution based on empirical data. In this multidimensional well-being model, the socio-community dimension is complemented with several aspects that are not included in well-being theories, such as the sense of belonging to the community, access to resources and opportunities for overcoming poverty, ecological care, and socio-environmental interaction.

Other relevant contributions of our Research Group in Community Psychology are the interventions and methodologies aimed at developing and strengthening well-being in different groups, especially children and adolescents. Our process for developing psychosocial programs starts with understanding the reality of communities, through an ecological and qualitative immersion, and through the interaction with participants. Based on the data collection, we develop well-being indicators to inform the construction of surveys and scales to be used in a representative sample. We assess the quantitative data with multivariate analysis, estimating the characteristics and the predictors of well-being in each group. This supports the development of empirical models for the construction of psychosocial intervention programs based on the characteristics of the population under study, and using a process of monitoring the intervention and evaluating the impact on the community.

The importance of this contribution comes from the fact this work has international relevance, with an emphasis on the study and evaluation of indicators of subjective well-being in partnership with the International Society for Child Indicators (ISCI), which our group represents in Latin America. In this project, we have developed research with more than 3500 children from Rio Grande do Sul, a State in Southern Brazil, by interviewing children and adolescents through focus groups in five subregions in the State (Rio Grande, Santa Maria, Santa Cruz do Sul, Passo Fundo, and Porto Alegre). The empirical data were combined with the data for Chile and Argentina, which allowed a comparative analysis of our reality. Studies with data from eight countries in three continents from the ISCI network were also carried out, observing specific economic and cultural aspects and their relationship with children's well-being.

As a social psychologist, I understand that the individual is a social being who develops through the interaction with his or her environment. In this way, the healthy development of an individual cuts across different life dimensions (family, school, community, environment, etc.), available resources (health, education, work, income, etc.), opportunities to achieve goals, as well as capacities and personality. Thus, socio-community well-being should be one of the most relevant dimensions in assessing people's satisfaction with life and quality of life.

I believe that this contribution on the socio-community dimension is an advancement in the frontier of research, which has focused on the person, even when addressing the social well-being of the individual. These studies attempt to assess whether the person feels socially integrated, excluded, empowered, etc. From an

ecological and developmental perspective, the person and the environment are inter-dependent, so that any change in one part has an effect on the other. An ecocentric perspective, different from the anthropocentric (or "homocentric") perspective, would remove the person from the center of the universe, and would integrate other elements that are part of it, helping maintain the functioning of our world. Therefore, the nature, the environment, physical aspects, and socially constructed aspects, such as culture and traditions, are part of a fundamental scenario for the well-being of people.

Through qualitative and quantitative research, we have studied the associations between personal well-being (Cummins 2003) and socio-community variables, such as satisfaction with the environment, community, and material resources (Sarriera et al., 2015a). We have observed the strong association of these variables with sub-jective well-being, and the results are revealed in publications from recent years.

The consequences of these discoveries are the prioritization of social and com-munity development for enhancing the quality of life and well-being in the popula-tion, while providing resources to ensure employment and income, and conditions to live with dignity. It is not enough to feel happy being alienated and excluded. Happiness and well-being reside in a politically and socially enlightened consciousness.

This research comes from a multicultural and multidisciplinary personal trajec-tory. I have been dedicated to community work since my youth, traveling from Europe to Latin America as an educator. I worked as a graduate student in a slum in Asunción (Paraguay), working with Paulo Freire's popular awareness methodology during the early 1970s. Later, I followed the community psychology path as a pro-fessor and advisor of student research since the 1980s. Some of the important sources were the European movements of anti-psychiatry and the return of the excluded to their origins as a form of family and social reintegration, as well as the development of Community Social Psychology in Latin America, with Marisa Montero in Venezuela and Irma Serrano in Puerto Rico. In Brazil, we have as impor-tant sources in 1960s the Christian Movements, followed by Silvia Lane in São Paulo, and the Research Group of Community Psychology of the National Association for Research and Post-Graduate Studies in Psychology (ANPEPP, Associação Nacional de Pesquisa e Pós-Graduação em Psicologia) from the 1990s.

Another important step was my work as a graduate professor, when I focused my research on young adolescents from low-income groups. I started to raise resources for research on the problems associated with youth unemployment, eco-nomic immigration, and risky behavior. For this research, the methodology has always involved, as a first step, understanding how people experience their prob-lems by conducting individual interviews or focus group interviews, with an aim at creating indicators. These indicators are the base for developing surveys to collect, in a broad and diversified way, data that can create knowledge and, at the same time, enable programs of social intervention. We have published books (Sarriera, Saforcada, & Alfaro, 2015b) and articles that explain and analyze the realities of these populations, and, at the same time, produced indicators and strategies for psychosocial interventions.

While developing this research program, we have changed from a focus on the problem to a focus on the development and empowerment of young people. Some authors such as James Kelly, Urie Bronfenbrenner, Diener, and Seligman were crucial in moving from prevention to the promotion of health and development. In addition, the partnership with Universitat de Girona since 2004, through Professor Ferran Casas, founder of the Research Institute on Quality of Life of Children and Adolescents, and other partnerships such as with the University of Buenos Aires, through Professor Enrique Saforcada, and Universidad del Desarrollo de Santiago de Chile, through Professor Jaime Alfaro, as well as with the association with the International Society for Child Indicators (ISCI), have contributed to the research on the socio-community well-being model highlighted in this chapter.

In recent years, our research on well-being during childhood and adolescence in Latin America has followed a similar methodology. First, focus groups and qualitative research were conducted to observe and understand the existing perceptions and representations about well-being. Second, a standard survey with several scales was developed and data collected for more than 1500 adolescents and 3500 children aged 8–12 years. These results were part of an international survey in 16 countries, coordinated by ISCI. We published an article with data from 8 countries and more than 23,000 children on the relationship between material resources and well-being among children from different continents and socioeconomic backgrounds (Sarriera et al., 2015a). With adolescents from three Latin American countries (Chile, Argentina, and Brazil), we published the results on well-being and other associated factors in the journal Universitas.

My contribution at the international level focuses on the continuation of the studies on subjective well-being and on the proposed dimensions for multidimensional well-being (see Sarriera and Bedin 2016) in which psychosocial and social dimensions are recognized as increasingly relevant for public policies and for quality of life. Our proposal aims at an integrated perspective of human development with its complexity and with the different aspects of life. For us, socio-community well-being is a dimension that has a direct impact on subjective well-being, as two interdependent dimensions of human reality.

The methodological and applied aspects are as important as the theoretical aspect. Our work with the socio-community dimension of well-being, among other dimensions, was developed by our research group through psychosocial intervention. We observed that well-being interventions, most of them in schools, using different methodologies, usually do not consider an evaluation of processes and impacts, only considering observations and reflections. Our contribution is relevant in an international context, with our book published by Springer (Sarriera and Bedin 2017), in which the methodological steps of this intervention, its process, techniques, and impact evaluation strategies are most relevant parts. The application of this methodology on children and adolescents of schools in suburban neighborhoods of a Brazilian city is detailed in the book and in other articles, aiming at sharing the lessons of these interventions at the international level.

Academic psychology is in debt to society. For many decades, the knowledge was at the service of the production system of a small elite with resources to afford

therapy. Research in the field did no go beyond the walls of universities or beyond the system of publications to which few citizens have access, or do not know how to access.

Since the creation of my Research Group, the generation of knowledge through research, especially on the youth (unemployment, risky behaviors, free time, and well-being), was transformed into Psychosocial Intervention Programs. These programs were developed and evaluated within the community, and later documented in books for educators, parents, youth, and technicians, with a conceptual basis, the intervention program, each developed module, their objectives, activities, strategies, and resources, as well as the methods for assessing impact. An example is our latest book from Springer in 2017 entitled "Psychosocial Well-Being of Children and Adolescents in Latin America" edited by my colleague, Lívia Bedin, and me.

Regarding the next steps in theory and research, based on what I have produced, I would like for Psychology to be increasingly social in character and to focus on the community, and for theoretical models to follow the multidimensional and complex perspective of human reality. To that end, it is necessary to create multidisciplinary teams to deal with the major challenges we face: poverty, social inequality, violence, intolerance, discrimination of all kinds, refugees, social ills, corruption, etc., by strengthening groups and communities through a deep sense of identity and belonging, care for the land and sustainability, solidarity, and participation.

In this sense, the theoretical development of the socio-community well-being model can contribute to strengthening communities. Without communities, well-being, happiness, optimism, and satisfaction with life do not reach its full extent if they are not living in solidarity.

A complex research perspective implies enormous difficulties, but it has an essential external and ecological validity. Advances in quantitative and qualitative methods allow more comprehensive approaches, and in a few years, it will be possible to have more complex systems for analysis and for developing explanatory models.

Finally, research and ethics must go together. Our knowledge is at the service of society, and that is why we receive research grants and other support. Everyone in their area must ask what they are doing to build a better, healthier, more committed, more equal, more ecological, and more supportive society.

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Interrelationships Between Health and Childhood Development: Research and Preventive Interventions at Early Ages

Maria Beatriz Martins Linhares

Abstract Child development depends on the interrelationships between biological, psychological, and social factors. However, several risk factors and adversities could threaten the typical child development. At-risk children and micro-system families with adverse psychosocial events should be targeted in investigations about child development, aiming to protect children from the negative impact of risks factors on the developmental pathway. The interrelationships between health and development in childhood present great challenges for investigators and clinical practitioners. The investigations under my coordination have addressed several topics about the health and development of vulnerable children at early ages, generating findings about the following issues: (1) interrelationships between neonatal pain-related stress experiences and later development in high-risk preterm infants; (2) temperament, development, and behavior problems of children born preterm, differentiated by the prematurity level and other neonatal severity of illness conditions; and (3) parenting practices of mothers to strengthen mother–child interactions, reduce child behavior problems, and promote their developmental self-regulation process. The research laboratory under my coordination (LAPREDES, FMRP-USP, Laboratory of Research for Prevention Child Development and Behavior Problems) maintains international collaborations, respectively, in pediatric pain, temperament, and parenting practices targeting to protect early childhood development. Our findings provide scientific evidence to better understand the development of vulnerable preterm children, from the neonatal phase to school age, and to establish preventive intervention strategies in Brazilians who use public health system.

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Introduction

The career path of the psychologist investigators should present a high level of motivation to face many challenges related to solving human problems. As a developmental psychologist, the main target of my path of research is the well-being and quality of life of children and supporting their parents in positive parenting roles. Since 1989, I have taught at Ribeirão Preto Medical School of the University of São Paulo; thus, I have coordinated studies about childhood health and development.

Concerning the path of human development, there is an interchange of risk factors and mechanisms of protection that needs to be better understood to provide positive psychological support in several areas. In middle- and low-income countries, such as Brazil, there are many high-risk conditions for childhood development, including contextual adversities (a violent environment), low resources (poverty, unemployment, and low educational levels), and vulnerable populations (preterm childbirth and chronic diseases). Many relevant questions have been raised about the risk factors to early childhood development and how to protect children against negative impacts, aiming to increase the potential of development and avoid the loss of it. My investigations focus on a relevant risk factor, *preterm childbirth*, which impacts childhood developmental outcomes and the emotional state and behavior of mothers.

I consider this my main contribution related to the field of the development of children born preterm (<37 weeks of gestational age). In 1996, a physician colleague in the faculty, Francisco Eulógio Martinez, who is a professor in the Neonatology Unit, invited me to develop a research line aiming to better understand the development of preterm infants who survived with the support of the Neonatal Intensive Care Unit (NICU) in the Hospital of the Clinics of Ribeirão Preto Medical School (University of São Paulo). At this time, the NICU presented a good rate of surveillance of very preterm children (<32 weeks of gestational age), but the physicians had many questions about the quality of the later development of children born in these high-risk conditions, including prematurity and its associated diseases, such as bronchopulmonary dysplasia, retinopathy of prematurity, and consequently the exposure to a long stay in the hospital (2 months on average). They were also concerned about the emotional experiences of mothers of these preterm infants; these mothers usually exhibited anxiety and depression facing the premature status of their children. I established a partnership with this physician and his team to investigate the development of preterm infants and their mothers' emotional conditions. The interrelationship between Psychology and Medicine was very fruitful. This union has been very productive, developing several studies in collaboration over 21 years.

Additionally, in 2002, I completed a postdoctoral fellowship at the University of British Columbia (Vancouver, BC, Canada) for developing studies about neonatal pain in preterm infants. My supervisor was Ruth E. Grunau, Psy, PhD, a preeminent researcher of pain and the development of the preterm population. She is a psychologist and eminent leader in the pain assessment field and developed the Neonatal

Facial Coding System (NFCS), a well-known pain scale for full-term and preterm neonates. In Canada, I was trained to use this scale by experts in NFCS, and I had the opportunity to develop a study about pain relief and positioning (prone or supine) in the neonatal isolettes in the NICU (Grunau et al. 2004). When I returned to Brazil, I implemented a research line about neonatal pain, and we conducted studies on pain-related stress experiences in the NICU and the later development of preterm infants. Presently, our studies about the preterm population have led to advances in methodological and conceptual aspects, contributing to the national and international scientific literature. Consequently, I combined the knowledge about early stressful and painful experiences with the development of preterm infants.

In 2005, we began another fruitful international collaboration with researchers into temperament issues with Samuel Putnam, Psy, PhD (Bowdoin College, USA), and Maria Gartstein, Psy, PhD (University of Washington, USA), and continue to maintain our collaboration. We added to the literature new knowledge about the specificities of temperament in the preterm population at toddlerhood (18–36 months) and preschool age. In collaboration with these international investigators, I have had the opportunity to translate all of Mary Rothbart's Temperament Questionnaires into Portuguese. These scales provide a developmental perspective, from infancy until adulthood, for the assessment of temperament, which is comprised of three factors: negative affect, surgency, and effortful control, and its dimensions (the Infant Behavior Questionnaire, the Early Childhood Behavior Questionnaire, the Children's Behavior Questionnaire, the Temperament in Middle Children Questionnaire, the Early Adolescent Temperament Questionnaire—Revised, and the Adult Temperament Questionnaire).[1]

In my career, I have supervised many master and doctoral students in psychology and mental health graduate programs and undergraduate students. In the present work, I use the terms "we" and "our contributions," as I did not work alone on the research line. I developed all of the studies with my students, aiming to guarantee their education on conducting investigations and communicating the main findings through published papers.

Characteristics of the Development of Preterm Children

Preterm childbirth is a worldwide problem. It leads to many diseases and most neonatal deaths and is the second-leading cause of death in children under 5 years of age (Blencowe et al. 2012). Additionally, the authors highlighted that deaths caused by neonatal preterm birth complications will increase from 15% to 18% by 2030.

Preterm birth can be classified as follows: *extreme preterm* ($23–28^{6/7}$ weeks of gestational age [GA]), *very preterm* ($29–31^{6/7}$ weeks of GA), *moderately preterm* ($32–33^{6/7}$ weeks of GA), and *late preterm* ($34–36^{6/7}$ weeks of GA) (World Health Organization 2012; Chabra 2013). The rate of preterm childbirth in 2010 in 184

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[1] For more information, see https://research.bowdoin.edu/rothbart-temperament-questionnaires/.

countries was 11.1% (14.9 million infants) (Blencowe et al. 2012). Brazil is one of the 10 countries with the most preterm births (World Health Organization 2012), with a rate of 11% in 2,979,259 surviving infants (Ministério da Saúde do Brasil/Brazilian Health Minister 2014).

If preterm infants survive, they have high risks for morbidities and disabilities such as motor problems, cognitive impairment, language disorders, learning impairments, visual disorders, behavior problems, cerebral palsy, and psychiatric disorders (Liu et al. 2015; Schmidt et al. 2015). Prematurity is associated with other neonatal clinical problems and increased risks for those problems. Further, the more premature an infant, the greater is the risk of developing developmental problems. Intervention strategies must include programs to prevent preterm birth and protect surviving infants to enable them to reach healthy developmental outcomes.

In addition to the immaturity and vulnerability of the biological mechanisms of preterm infants, especially those with severe respiratory diseases and early physiological dysregulation, they must be hospitalized in an NICU to survive. This context presents several inevitable adverse events that are part of the clinical routine. The NICU setting is a paradoxical experience; preterm infants need this treatment to survive, but it is a stressful and uncomfortable environment inherent to the intensive treatment of infants. The NICU is a "chaotic developmental microsystem" that includes temporal irregularity, lack of structure, unpredictable daily activities, high activity, and stressful stimuli (Goffaux et al. 2008; Linhares et al. 2013). The intensive medical treatment of preterm infants is usually comprised of repeated invasive and painful procedures (Lahav and Skoe 2014) that provoke toxic stress and negatively affect the neonates' central nervous system (Grunau 2013; Valeri et al. 2015). Consequently, neonatal pain-related stress experiences negatively impact the development of preterm children (Morag and Ohlsson 2016; Valeri et al. 2015). They are immature and unable to cope with adverse stimuli (Valeri et al. 2015). Neonatal pain has been associated with internalizing behaviors at 18 months of age (Gaspardo et al. 2008a, b), leading to overall behavioral problems at 7 years of age (Mooney-Leber and Brummelte 2017) in children born very prematurely. Additionally, greater biobehavioral reactivity to neonatal pain and distress predicted a temperament with high negative affectivity factor in toddlers born preterm (Hornman et al. 2016).

There is strong evidence in the literature that, compared to full-term children, those born prematurely presented more developmental problems (motor, cognitive, and emotional) (Vieira and Linhares 2016) and behavioral issues (Cassiano et al. 2016a, b; Arpi and Ferrari 2013) at different ages. Few longitudinal studies have examined the impact of neonatal pain and stress on the long-term development of children born preterm (Morag and Ohlsson 2016).

Additionally, premature infants experience deprivation of the mother's physical contact and interactions. The mothers presented emotional dysregulation with anxiety (Padovani et al. 2004; Zanardo and Freato 2001) and depression symptoms (Hagan et al. 2004; Padovani et al. 2004). Mothers who were interviewed 1 year after the preterm birth of their children reported symptoms of depression, humor problems, anxiety, and physical symptoms (Garel et al. 2006), presenting a long-term toxic stress experience.

Our findings advanced some aspects of preterm child development, especially issues concerning pain-related stress, temperament, behavior, developmental regulation processes, and mothers' emotional responses to the preterm birth experience. I supervised master and doctoral studies that published several papers in national and international journals. Our main contributions are presented herein.

Main Contributions of Studies on Neonatal Pain-Related Stress in Preterm Infants

During NICU hospitalization, preterm neonates are usually exposed to pain-related stress events, such as surgeries, mechanical ventilation, intubation, endotracheal aspiration, and punctures for blood collection, that cause different levels of pain and discomfort (Klein et al. 2011; Linhares and Gasapardo 2017). Preterm infants might undergo six painful procedures daily during intensive treatment (Gaspardo et al. 2008a, b).

A review of the literature found that neonatal pain negatively impacts preterm children's development (Valeri et al. 2015). The main findings of the studies showed that, in extremely premature children, the high number of painful and stressful events experienced in the NICU was associated with growth delay, poor neurodevelopment, and alteration of cortical development. Additionally, greater painful procedures at the neonatal phase result in more motor and cognitive problems in preterm infants during the first year of life and cortical alteration by age seven. The biobehavioral reactivity–recovery pattern of very preterm infants facing painful punctures for blood collection in the NICU was a significant predictor of temperament, with negative affects at 18–36 months of age (Klein et al. 2009). This study relating neonatal pain and temperament was developed in my research laboratory.

Another relevant contribution explored a broad set of stressful events in the NICU environment related to the very early neurobehaviors of preterm infants using two scales for stress measurement (Neonatal Infant Stressor Scale) and neurobehavior assessment (Neurobehavioral Assessment for Preterm Infants) (Gorzilio et al. 2015). The infants were assessed prior to reaching the term age, at 34–36 weeks of postconception, and the sample included three groups differentiated by the gestational age level: extreme, 23–28 weeks of GA; moderate, 29–32 weeks of GA; and late, 34–36 weeks of GA. The neurobehavioral development of motor, vigor, alertness, and orientation of preterm infants was predicted by the prematurity level and the environmental stress of the NICU environment, including pain-related stress events. Extremely preterm infants experienced more stressful events than their moderate counterparts. However, moderately preterm infants were more vulnerable to negative neurobehavioral development outcomes. It is important to note that extreme preterm infants were more exposed to stress and pain, but were also more protected with developmental care strategies in the NICU and presented better neurobehavioral outcomes than their moderate counterparts.

To protect preterm infants, we developed a relevant randomized control trial about the management of pain relief using the oral administration of sucrose (Gaspardo et al. 2008a, b). This is a pioneer study using a sweet sucrose solution on a repeated dosing schedule over consecutive days. The pain biobehavioral responses of preterm infants during puncture procedures in the NICU were examined while using sucrose. This study found that sucrose was efficacious and safe for pain relief in preterm infants, with no side effects. A subsequent study also showed that sucrose for pain relief was effective independent of the severity of the preterm infants' illness levels as measured by the Clinical Index of Risk Babies in the first 12 h of age (Valeri et al. 2015; Valeri et al. 2018). Taken together, these two studies embody a scientific advance with practical clinical implications for the assistance of preterm infants in the NICU setting. It is important to highlight that in the methodology of the measurement of the pain biobehavioral responses of preterm infants, these studies used the NFCS scale, which measures infants' facial activity.

Main Contributions of Our Studies on the Development, Temperament, and Behavior of Preterm Children

Our studies advance the understanding of the longitudinal impact of clinical neonatal risks and child temperament characteristics on the behavior of preterm children with high biological and social risks. After hospital discharge, the preterm infants participated in a longitudinal follow-up program at the children's hospital until they were school age. Using this scenario, we conducted a set of studies on the developmental path of these preterm infants.

Traditionally, the literature about preterm children has mainly centered on the comparison to their full-term counterparts. Few studies have focused on the temperamental characteristics of this vulnerable population. We examined the subgroups of preterm infants considering the level of prematurity and other neonatal clinical conditions associated with a preterm status. We also studied the temperamental traits of preterm children.

Initially, we found that preterm toddlers showed temperaments with motor activation, perceptual sensitivity, high-intensity pleasure, and less cuddliness compared to their full-term counterparts (Cosentino-Rocha et al. 2014; Klein et al. 2013). We examined the gender effect on the temperament and behavior of preterm toddlers compared to full-term toddlers. Specifically, girls exhibited more fear and discomfort traits than boys, regardless of whether or not they were born prematurely (Cosentino-Rocha et al. 2014). The overall behavioral problems in toddlers born prematurely were predicted by temperament, with negative factors and less effective control, lower socioeconomic status, and younger mothers at childbirth (Cassiano et al. 2016a, b). The findings showed that temperament was consistently associated with behavioral problems in preterm infants during toddlerhood.

We recently focused on other neonatal clinical conditions of preterm infants that cause multiple biological risk factors to better understand this population's temperament and behavior during toddlerhood. The temperament and behavior of preterm toddlers were assessed according to the level of prematurity, the presence of bronchopulmonary dysplasia (BPD), and the retinopathy of prematurity (ROP) (Cassiano et al. 2017). In this study, the level of prematurity and the presence of BPD and ROP did not affect temperament and behavioral problems in preterm toddlers. However, the covariates age and length of stay in the NICU affected temperament and behavioral problems, respectively. Older toddlers showed higher inhibitory control and lower activity levels than younger toddlers (range of 18–36 months of age). Furthermore, toddlers who remained in the NICU longer had more pervasive development and emotionally reactive problems than those who stayed in the NICU for less time. Longer stays in the NICU increased the risk of behavioral problems, and the ages of the toddlers increased the later regulation of temperament at 18–36 months.

Additionally, in the study of temperament of preterm toddlers, we examined the relationship with the behavior problems by including the mothers' temperamental characteristics (Gracioli 2013). We recently found that a high neonatal pain-related stress total index was associated with toddlers' temperament with less effortful control and mothers' temperament with high surgency, explaining the attention problems; otherwise, the externalizing behavior problems were explained by temperament, but not by neonatal pain-related stress (Gaspardo et al. 2017). These findings support the impact of neonatal pain experiences. Current toddlers' and mothers' temperaments were characterized by poorer self-regulation of attention problems in preterm toddlers. Developmental care in the NICU and follow-up programs after discharge are recommended to promote regulated temperaments of the mother–child dyads, aiming to prevent attention problems in preterm toddlers.

Main Contributions of Studies on the Impact of Preterm Childbirth on Mothers' Emotional Responses and Parenting Practices

A set of our studies on the emotional responses focused on the psychological experience of mothers of high-risk preterm infants hospitalized in an NICU. The findings showed that preterm childbirth provokes symptoms of anxiety and depression in the mothers (Padovani et al. 2004), which were associated with the mothers' reporting more negative thoughts and reactions compared to the mothers of full-term infants (Padovani et al. 2008). The mothers of preterm infants reported crying, sadness, fear, discomfort, insecurity, anguish, and rebelliousness. The lower gestational age and birth weights of their infants and longer stays in the NICU led to more negative feelings and reactions (Pinto et al. 2009). Additionally, the preterm

infants' greater neonatal clinical risks caused their mothers more apprehension toward breastfeeding their babies (Padovani et al. 2011).

We proposed a psychological program to protect mothers from emotional dys-regulation in the intervention neonatal phase of their preterm infants using psycho-educational support by a trained and expert psychologist involving a video and a guide about the psychological effects of premature birth on mothers (Carvalho et al. 2009). In this study, we developed an intervention procedure and showed that, compared to the pre-intervention phase, the anxiety of the mothers of preterm infants hospitalized in NICU decreased immediately post-discharge and during the first year after birth (Carvalho et al. 2008).

We recently employed a parenting curriculum to strengthen mothers' positive practices and to reduce behavioral problems in preterm children. It is called the ACT Raising Safe Kids program, a universal preventive program developed by the American Psychological Association (Silva 2009). This study is in progress, but preliminary data indicate that there is an increase in the parenting practices of communication and emotional/behavioral regulation and a decrease in mother-reported childhood behavioral problems post-intervention compared to the pre-intervention phase (Belotti et al. 2017).

Contributions of Our Studies Outside of the Academic Psychology Context: Applying Scientific Evidence to Support the Development of Preterm Children

Concerning our contributions to the world outside the academic psychology context, I have been coordinating the Pediatric Psychology Service in the Hospital of the Clinics of Ribeirão Preto Medical School since 1996; we are presently in the new Children's Hospital with 10 trained expert psychologists under my supervision. I trained the psychologists in the Neonatology Unit to develop assistance for preterm patients using evidence-based interventions. The psychologists perform a vital role in the support of preterm infants' development care in the NICU, psychological support for the parents, and early stimulation of development of preterm infants in the post-discharge follow-up from infancy until school age. Emotional support for the parents of preterm children, especially the mothers, and other family members (brothers/sisters and grandmothers/grandfathers) are available during free visits to the NICU. The psychologists assess the children and offer psychoeducational support to the parents. The results of the studies developed at our hospital provide validated and updated knowledge to apply to the proxy assistance fields in similar hospital settings, with ecologically valid outcomes.

Future Directions

Regarding the future, I expect to continue to develop both research and assistance focusing on preterm children. There is at present sufficient scientific evidence to sustain practices to protect the childhood development of these vulnerable children. I also hope to maintain interdisciplinary assistance at the Children's Hospital of Ribeirão Preto Medical School (University of São Paulo), including developmental care in the NICU (Als et al. 2004; Linhares et al. 2013) and the post-discharge follow-up program (Linhares et al. 2013), both centered on infants and their families. We have developed a social safety net to support preterm infants and their mothers (Custódio et al. 2014; Linhares et al. 2013). The assistance programs are relevant for new questions about the impact of positive intervention strategies to protect the physiological, emotional, and behavioral development of preterm children born. We support the parenting practices of ACT Raising Safe Kids as a routine intervention for the family caregivers of preterm infants.

Concerning pediatric pain management at the hospital, I hope to fully implement the Pain Assessment and Management Guidelines according to the Principles of ChildKind (Schechter et al. 2010) as an effective institutional policy at the Children's Hospital. We have written all of the protocols for acute and chronic pain and have trained the multidisciplinary health teams to manage pain issues. I participated in the Pain Committee of the Children's Hospital that was responsible for writing the guidelines. The next step will include continued training of the health teams and the implementation of high-quality control of pain assessment and the pharmacological and non-pharmacological pain management of pediatric patients (Linhares and Doca 2010). The assessment of the entire process of the pain guideline implementation could be a new research question to be better explored from a systemic institutional perspective.

Future studies should address new questions about the executive functioning of preterm infants and the association with attention problems and learning outcomes, the development of twin preterm infants with different paths, psychological protective procedures for parents to better promote emotional and behavioral regulation of these children, and the epigenetic studies that emerge.

In conclusion, my team will continue to conduct researches and develop guidelines for other hospitals in Brazil, with the goal of enlarging the scaling of the accumulated scientific evidence.

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Studies on Social Skills and Social Competence in Brazil: A History in Construction

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Abstract The studies developed by the authors in this area, since its beginning in the 1980s, articulate three axes of academic production: conceptual, methodological, and empirical (research and practice). They were simultaneously addressed to answer relevant questions to any person at a first contact with the area. Examples of frequent questions derived from an initial contact were such as: what social skills are, which their fields are, which their processes and their scopes are, what characterizes a Social Skills Training, and how it links to cultural issues of social living. Answers to these and other questions allowed to identify theoretical and conceptual issues associated with different aspects and practices in vogue in the historic moment in question. Considering the first mentioned axe, one can note the conceptual development presented in the literature and, particularly, in our last book (Del Prette and Del Prette, Habilidades Sociais e Competência Social: Manual teórico-prático [Social Skills and Social Competence: a theoretical-practical handbook], 2017). which systematizes the key concepts of the area, proposing the centrality of the notion of social competence, as well as its requirements and criteria for orienting evaluation and intervention. The methodological axe is the development of inventories, resources, and assessment procedures (for children, adolescents, adults, and the elderly in different social roles), associated with the studies of characterization of the nonclinical and clinical populations and implications for practice and research. The empirical axe is the development and improvement of the experiential method for programs for the promotion of social skills and social competence, together with studies of the effectiveness of these programs with diverse clienteles and contexts and related to different problems and goals of health and quality of life. The advancement of the area derived from these issues (research, conceptual, and practical) counted on the collaboration of researchers from Brazil and abroad, as well as involving undergraduate and graduate students. The systematization of the conceptual basis and the development of instruments and procedures for the evaluation and promotion of social skills were important to

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guide empirical research and to improve the intervention programs. The empirical researches also generated remaining issues for the improvement of instruments and for the conceptual reworking. Our contribution in the field of social skills is being recognized in other countries by validation of the instruments (especially in Argentina and Portugal) and the increase of citations to our studies published in Brazil and abroad. The academic production on the theme has been generating what can be called "the social skills movement in Brazil." One can measure this movement by the involvement of professionals and lay public in events and books about social skills. Due to its relevance to health and quality of life, outside the academic environment, this production is being used by the practitioners, especially with families, schools, organizations, and clinical care. Thus, it characterizes processes of dissemination that make this knowledge accessible to the greatest number of people. We expect that the available knowledge is even more widespread and constantly leading to new conceptual issues and research applied to different sectors of interpersonal relations.

During the 1970s, when encountering the term *social skills* or *social skills training* or their corresponding acronyms, *SS* and *SST*, scholars of Psychology in Brazil, with rare exceptions, initially remained confused, without knowing exactly what were and whether they were analytical or descriptive categories. In the first case, it was understood as a term related to the behavior (descriptive) of someone in an interaction, and in the second, as a process of teaching a behavior. During this period, we worked with the theme of the assertive behavior (Del Prette 1978; Del Prette and Del Prette 1983) and behavioral training (Del Prette 1982, 1985a, b).

Even after the publication of the first essay on the practical theoretical field of Social Skills in Brazil (see Del Prette and Del Prette 1996), the terms Social Skills and Social Skills Training, or their corresponding abbreviations, SS and SST, although with exceptions, were unknown to psychology scholars. The students did not know exactly what they were referring to, nor whether they were descriptive or analytical categories. In the first case, they understood SS as a term that related (descriptive) behavior of someone in an interaction and, in the second, SST as a process of teaching behavior. By that time, we worked with Assertive Behavior (Del Prette 1978) and Behavioral Training (Del Prette 1982, 1985a, b; Del Prette and Del Prette 1983).

Only from the decade of 1990, the authors begun focusing on and disseminating the knowledge related to these acronyms (Del Prette and Del Prette 1996, 1997, 1998; Del Prette et al. 1992, 1998). In 1999, we published in Brazil the first book regarding the conceptual framework. With this publication, we aimed to present the history and the basis of the field of SS. Furthermore, in 1999 the first article about a program of SST was published abroad (Del Prette and Del Prette 1999).

Currently, it is possible to refer to an "SS movement" in Brazil. We borrowed the term "movement" from Sociology (Bobbio et al. 1986; Doimo 1995). It can also be particularized in Psychology in our country, as collective behaviors related to a process of proposal and identification of a field of study not adopted yet or just referred to. Applying the criteria of accession, visibility, and permanence in time,

appropriate to the concept of movement in the analysis of the SS field in Brazil, we believe that the temporal permanence does not occur without accession (interest) to the theme that, on the other hand, are both being kept by the visibility, at least in terms of scientific production.

We refer to the accession based on a growing number of researchers and postgraduate students involved in this area, including external to Psychology. The visibility and permanence are related to the increasing amount of publications in this area and the presence of the theme in scientific events and media sectors, in the last 20 years of production and application of knowledge in Brazil.

This term, *social movements*, in the case of knowledge is based on the premise that if knowledge does not produce change in behavior, it works as mere incompetence and, of course, it ceases to have immediate practical usefulness of change. In the opposite sense, it becomes necessary to verify what direction of behavior it produces. In the case of SS, the behavior change, or more specifically its acquisition, has served, in a first moment, inside academy and, after that, in the community. In academy, questions about SS and SST led us, as teachers, to provide increasingly detailed responses, as they were followed by other issues, such as its definition, functionality, and origins. At present, a significant number of people benefit from the programs of SST, such as businesses, schools, governmental offices, and associations.

At the end of the 1970s, we observed, in the supervision of the trainees, both in clinical and educational areas, that, with some exceptions, our supervised students presented difficulties in the relationship with the people they met, whether they were adults, adolescents, or children. The difficulties were related to the collection and verification of client's tasks, request for compliance with the established timetable, and communication regarding the closing of the service session, among others. Noting that instructions and feedback did not have the desired effects, we began conducting Assertive Training programs with students (voluntary participation), which was in vogue in the USA at that time. Although this procedure proved to be relevant and potentially effective (see Del Prette 1978), it did not yet address all the skill classes required in care, for example, empathy. Concomitantly, we found that, in clinical, educational, or community interventions, many interpersonal difficulties of the clientele were at the root of the problems reported or emerged in the diagnostic configuration. All these questions led us to the search for new strategies and, among the alternatives found, the theoretical–practical field of social skills, originating in England (Argyle 1967/1994, 1984; Argyle et al. 1974), looked promising. With our involvement in this field, we have noted the need to deepen conceptual and practical issues in this area in our country and the urgency to develop procedures and resources for evaluation and intervention.

Our current research group at UFSCar (www.rihs.ufscar.br), founded nearly 25 years ago, was not only an outcome but also an initiator of this movement in Brazil. It has been acting in its consolidation and dissemination in our country. This venture has focused especially on three axes of academic production. The first is the conceptual elaboration sent mainly through books and, particularly in the last *Habilidades Sociais e Competência Social: Manual teórico-prático* (*Social Skills*

Fig. 1 Focus of studies that characterize the field of production and application of psychological knowledge of social skills in Brazil (source: Authors)

and Social Competence: a theoretical-practical handbook; Del Prette and Del Prette 2017a). The second is the development of instruments and evaluation procedures, associated with the characterization of social skills studies in different populations and contexts. The third axe is the improvement of methods, resources, and intervention programs, with an emphasis on experiential method that we have developed and disseminated in the country. Enacted to these three axes, we have invested in the training of researchers for the improvement and expansion of the production of knowledge in the area as well as in the training of professionals for the dissemination of the practice of SST, always in the perspective of the concept and criteria of social competence (SC). Figure 1 illustrates, schematically, the main sources of production and implementation of knowledge in the field of social skills in Brazil.

The Conceptual Elaboration of Social Skills

The first theoretical article about social skills published in Brazil (Del Prette and Del Prette 1996) presented briefly the field in its main concepts and application alternatives for the different problems and populations, somehow foreshadowing its expansion in the following years. Two important aspects can be identified in this

publication. The first was the name given to the body of knowledge produced in this theme: theoretical–practical field of SS. With this, the term *social skills* came to be used both to refer to the theoretical–practical field, as to the classes and subclasses of SS applied to this field, explaining the two uses that were already made, but without sufficient clarity, generating some confusion in the communication. This appointment allowed, immediately, to list the concepts (now) in the field, including facilitating the analysis of existing controversies, especially regarding the concepts of SS and SC. For these, we adopted the position of McFall (1982), to distinguish them from one another, since first written, following a chain of researchers and experts in the area. This position was important, both in its theoretical and practical implications. In conceptual terms, it allowed discussing and refining the relationships between concepts and classes of SS inherent to the field (such as self-monitoring, communication, civility, assertive or coping and exercise of rights/ citizenship, and emphatic and work skills). In practical terms, it allowed defining more clearly what is being assessed and what objectives are, in fact, sought and achieved in different interventions.

Among the basic concepts of the area, the most recent (Del Prette and Del Prette 2017a) holds the previous developments and points for future studies and theoretical–practical implications. The conceptual structure that we have adopted is schematically presented in Fig. 2.

As it can be seen in this scheme, the concept of SC is taken as central. It is guided by criteria that characterize its two effectiveness dimensions, instrumental and ethical. For the evaluation of SC, there are five associated criteria (Del Prette and Del Prette 1999, 2001a, 2005a). The first is achieving a goal (immediate results obtained by individual in interaction). The second is maintaining/improving self-esteem (emotional indicators of personal satisfaction). The third is maintaining/improving the relationship quality (fewer immediate consequences, in the medium or long term, in terms of the probability of maintaining or improving a relationship between

Fig. 2 Schematic of relations among concepts of the practical theoretical field of Social Skills (based on Del Prette and Del Prette 2017a)

the interlocutors). The fourth is balancing power among interlocutors (positive reciprocity of trades, whether of behaviors, either concrete or symbolic products among the interlocutors). Finally, the fifth criterion is respecting/standing for interpersonal rights (results in terms of maintaining or expanding socially established rights for the interlocutors). Although partially overlapping, these criteria can be seen in a growing continuum from instrumental up to the ethical dimension.

The upper and lower parts of the diagram delimit the essential context for the evaluation of the performance and attribution of SC. On the left, there are background contexts: above, interpersonal tasks in which the individual is faced in his or her relationship with other persons; below, cultural practices that define the performance standards which are approved, disqualified, or tolerated by the social environment. On the right, there are as possible contexts resulting from socially competent performance (SCP): above, the outcomes for the SCP of two or more people in interpersonal tasks and, below, the possibility of new cultural practices, when such performances are widely disseminated.

The socially competent performance (SCP) is supposed to depend on four important requirements. The first consists in a good SS repertoire, guided by the variability. A second requirement is self-monitoring associated with analysis of the contingencies during the performance in progress. Moreover, it is also required the knowledge of the context and the rules and social standards, along with the own behavioral resources, deficits, and patterns of psychosocial functioning. Finally, a fourth requirement is the values of coexistence to which the individual adheres and which, in principle, should be consistent with the dimensions of SC, especially the ethical dimension. With this background, we define the main concepts of this scheme, as follows:

- *Interpersonal task*. Based on the concept of the social task of McFall (1982), we define an interpersonal task as "a segment of interaction identified in a culture, in response to the question about people interacting: What are they doing? One can understand every social interaction as a sequence of behavioral exchanges, where people involved plays one or more social tasks" (Del Prette and Del Prette 2017a, p. 68). Unlike McFall, we consider that both participants of an interaction have social tasks that may or may not be complementary and even opposite or conflictive. For example, in an interaction someone might want to sell something to another, while this second person has not any intention of buying something.
- *Social skills*. It is defined as "a *descriptive* construct (1) of the social behaviors valued in a particular culture with a high probability of favorable results for the individual, group and community, that may contribute to a socially responsible performance in interpersonal tasks" (Del Prette and Del Prette 2017a, p. 24). We can understand that both the comprehension and the promotion of SS must be buoyed by the notion of *variability* in the repertoire of the individual, both in terms of diversity of classes of SS (for example, assertive, emphatic, and work) and alternatives for each of the same classes (for example, the different ways of showing affection or assertiveness). Moreover, this should generate choices based on discrimination of demands, and contingencies present in interpersonal tasks. Del Prette and Del Prette (2017a) developed a *portfolio*, with a list of

classes and subclasses of SS relevant and pertinent to different tasks and social roles as well as the stages of development of the people. This portfolio is based on the conception that the classes of SS are subsets that differ in topography as well as in functionality. By considering these differences, one can find that it is simplified to evaluate and to promote the client repertoire. This portfolio is a complementary version of the previous one (Del Prette and Del Prette 2001c), because in the current version there are ten SS classes as well as their subclasses. This modification provides to the reader a wide range of major subclasses of each of the SS. In addition, it presents a second portfolio, with the topographic components related to the functionality of each class (Del Prette and Del Prette, 2017a).

- *Social competence*. It is understood as an "*evaluative* construct of (1) the performance of an individual (thoughts, feelings and actions in an interpersonal task) (2) that meets the objectives of the individual and the demands of the situation and culture, (3) producing positive results as instrumental and ethical criteria" (Del Prette and Del Prette 2017a, p. 37).
- *Self-monitoring* refers to "a meta cognitive and behavioral skill in which a person observes, describes, interprets and regulates his or her thoughts, feelings and behaviors in social situations" (Del Prette and Del Prette 2001a, p. 62). This process involves exercise and mastery of a diversity of open and covered behaviors along the interaction, for example, to assess the availability of behavioral repertoire to deal with the situation, select, play, and observe their behavior, inhibit impulsive reactions, predict the impacts of different reactions, and change the performance during the interaction in order to contemplate the criteria of social competence (Del Prette and Del Prette 2017a, p. 54).
- *Knowledge*. As specified in Del Prette and Del Prette (2017a), it is the "collection of information on the culture: the standards and rules that regulate and define the expected social behaviors, valued, accepted or disqualified for different situations and interpersonal tasks" (p. 60) and "on the(se) partner(s): their likely social behaviors, goals, feelings, values of coexistence" (p. 61).
- *Self-knowledge*. "It includes not only what is publicly accessible to others, but also what is private, concealed, little or not accessible to colleagues (in case of training group), such as beliefs, knowledge, feelings, expectations, self-rules etc." (Del Prette and Del Prette 2017a, p. 61), as content or processes that should be the focus of attention both in group or individual care.
- *Values*. In this context, they are referring to the values of coexistence, while results or consequences of behavioral patterns that combine what is good for the person, for others, and for culture (Dittrich and Abib 2004) and normally associated with the notions of human rights, justice, equality, freedom, dignity, compassion, and so on.

This scheme and set of concepts constitute the basis for evaluating and promoting social skills. It has been built over mainly book publications (Del Prette and Del Prette 1999, 2001a, 2005a, 2017a) by bringing together written chapters with invited contributors to present, for example, social skills under different approaches, such as the Behavioral Analysis (Gresham 2009), the Cognitive Approach (Caballo

et al. 2009), and Social Cognitive Theory (Olaz 2009). In addition, we did some conceptual essays on social skills from the perspective of Behavior Analysis (Del Prette and Del Prette 2010, 2012), the Bioecological Theory of Bronfenbrenner (Romera-Leme et al. 2015b), Social Psychology (Del Prette and Del Prette 2003a) as well as the Evolutionary Biology and Culture (Del Prette and Del Prette 2001b, 2014). These texts are the reference material that has guided the production of knowledge about evaluation and promotion of social skills, as summarized below.

Evaluation and Characterization of Social Skills

Throughout our involvement with the field of SS, we have been producing and improving tools, procedures, and resources for assessing SS in children, adolescents, and adults. On the basis of this investment was the research for evidence-based practices (Del Prette and Del Prette 2017a) and the understanding that such practices depended, on the one hand, on adjusting interventions to the needs identified in different clienteles and, on the other hand, on the need to understand variables related to the learning and development of social skills throughout the life span. In addition, evaluation was seen, from the earliest intervention studies, as the basis for assigning effectiveness or ineffectiveness to resources and programs, seeking to improve them.

One can find at our website (http://www.rihs.ufscar.br/avaliacao-de-hs-2/) a brief presentation of the instruments produced or adapted by our research group, with evidence of validity and reliability, and manuals and standards available for use in different contexts, recommended by the Federal Council of Psychology. They are briefly described in following.

The first instrument published in Brazil for self-assessment of SS was the Social Skills Inventory (*Inventário de Habilidades Sociais*, IHS-Del-Prette; Del Prette and Del Prette 2001), originally validated for the university population from 18 to 25 years. The way how this instrument was accepted and used in Brazilian studies showed that it filled a gap and has contributed significantly to the scientific production in our environment, as identified later (Del Prette and Del Prette 2013a). The factorial structure and norms of this instrument was extended for population from 18 to 59 years and the new manual was just published (Del Prette and Del Prette 2018). A version intended for elderly people over 60 has already been used in research (Braz 2013; Carneiro et al. 2007; Scheufler et al. 2016).

The IHS-Del-Prette is under the process of adaptation to Portugal. The items and the factorial structure of the IHS-Del-Prette served as the basis for an Argentine version (Oláz et al. 2009; Morán et al. 2015). It was also the basis for construction of other instruments in Brazil, with evidence of validity and reliability: the inventory of Social Skills for couples (Villa and Del Prette 2012) and for adolescents (Del Prette and Del Prette 2009), the latter with a brief version available for research (Romera-Leme et al. 2017). Additionally, the IHS-Del-Prette was used for the

construction of a specific inventory of assertive social skills, with preliminary validity tested in a sample of women entered into the labor market (IHA, see Malcher 2015).

We also developed the Multimedia Inventory (Del Prette and Del Prette 2005b) to evaluate SS repertoire of children. This instrument is composed of three versions: self-assessment, assessment by parents, and assessment by teachers. For all versions, one can evaluate SS according to indicators of frequency. In addition, parents and teachers can evaluate difficulty and appropriateness of desirable and undesirable behaviors. Moreover, we developed a similar feature, illustrated in interactive vignettes, in order to assess specific behavioral components of self-monitoring (see Dias 2014).

In the last 10 years, along with other researchers, we finalized the adaptation and Brazilian publication of Social Skills Rating System (SSRS-BR; Gresham and Elliott 2016). In this instrument, there are also three versions: self-evaluation, evaluation by parents, and by teachers. By using SSRS-BR, one can evaluate social skills, such as problem behaviors and academic competence. Considering research with preschoolers, we also performed the validation of *Pre-School and Kindergarten Behavior Scale* (Dias et al. 2011), facilitating the research with preschoolers.

Evaluation resources have been widely publicized in Brazil (for example, in Del Prette and Del Prette 2013a) and abroad (Caballo et al. 2006; Del Prette et al. 2006). Considering the situational nature of SS, it was being perceived the need of specific instruments for certain conditions of social interaction, in addition to the age differences. Thus, instruments were constructed to assess preventive coping skills for consuming alcohol and other drugs (IDHEA-AD; Sá 2013; Sá and Del Prette 2016; Sá et al. 2017), and for caring for elderly relatives (Queluz et al. 2017). Currently, an instrument to assess SS of caregivers of psychiatric patients is under development (Lima n.d.). Considering the specificity of educational SS of teachers and parents (Del Prette and Del Prette 2008a), including university professors, we are developing new instruments, with preliminary evidence of validity and reliability (Del Prette and Del Prette 2013b, c, n.d.). In addition to inventories, we have developed and refined other resources such as questionnaires. In this case, we can mention the *Interpersonal Relations Questionnaire* (QRI), aimed at the evaluation of interactive conditions in the classroom (Del Prette and Del Prette 2013d).

The investment in the construction of instruments, procedures, and evaluation resources enabled studies to characterize the SS repertoire of different clienteles and to establish relationships between social skills and other variables. There were found evidence of positive correlation between SS and (a) personality traits (Bartholomeu et al. 2008; Bueno et al. 2001), (b) quality of life (Carneiro et al. 2007), (c) psychological well-being (Guilland and Monteiro 2010; Romera-Leme et al. 2016), (d) quality of the relationship between parents and their children (Cia et al. 2006, 2007; Cardozo and Soares 2010), (e) academic adaptation and performance at university (Bolsoni-Silva and Loureiro 2016; Gomes and Soares 2013; Soares et al. 2009), (f) academic self-efficacy (de Sá 2006), (g) adaptive coping strategies (Pinto and Barham 2014), (h) interpersonal conflicts (Pinto et al. 2016),

and (i) self-esteem (Ongaratto et al. 2016). On the other hand, studies found negative associations between social skills deficits and indicators of problems, such as: (1) burnout, anxiety, and depression (Pereira-Lima 2014; Pacheco and Rangé 2006), (2) substance abuse (Wagner and Oliveira 2009; Wagner et al. 2010), (3) depression in university students (Bolsoni-Silva and Loureiro 2017), and (4) social anxiety and social phobia (Angélico and Loureiro 2012). In evaluation studies conducted with children and adolescents, results highlighted the role of SS as a facilitator of academic learning and protector from learning problems (Del Prette et al. 2012a; Molina and Del Prette 2006), behavior problems (Bandeira et al. 2006; Dias et al. 2013; Barreto et al. 2011; Casali et al. 2015), and several other indicators of disorders (Campos et al. 2014; Elkis et al. 2016; Rocha et al. 2013; Del Prette et al. 2012b), in addition to relations with social support and well-being (Romera-Leme et al. 2015a) and special educational needs (Angélico and Del Prette 2011; Dascanio et al. 2012; França et al. 2015; Freitas and Del Prette 2014).

In summary, the evaluation studies carried out in Brazil are aligned with the literature from abroad. Moreover, these studies characterize the SS such as facilitators of learning and protective factors against psychological disorders and problems along the vital cycle. There is evidence of the association between good repertoire of SS and positive outcomes. On the other hand, it was found an association between repertoire deficits and negative outcomes. These evidence both signal the importance of including the promotion of SS among the conditions that enable human development and quality of life.

This position is consistent with the characterization of symptoms of mental disorders in general, for example in the case of personality disorders (Del Prette et al. 2013), whose analysis demonstrated the importance of differentiating SS and SC for antisocial and histrionic disorders.

In addition to contributing to the expansion of the nomologic network of relationships between SS skills and different variables of interest for mental health and healthy development, evaluation studies in Brazil also led us to reaffirm or to adjust our conceptual elaboration, particularly the studies contradictory or counterintuitive results between SS and psychological problems or disorders. For instance, contradictory results on SS and drug addiction (Sá 2013; Sá and Del Prette 2014, 2016) have led us to consider more accurately the situational nature of SS and the importance of an instrument with items that are relevant to this condition. For instance, this specificity must be taken into consideration in research and/or practice with parents and educators. In both cases, it is possible that they do not always translate into the specific skills that are required in the relationships with children and students, respectively. Another example is the contradiction that Comodo (2015) found in her results for SS and bullying, which reinforced the previous understanding of the centrality of the SC concept. This author did not verify SS deficits in most of the practitioners, witnesses, and victims of bullying, yet she found it for SC, corroborating the importance of evaluating and promoting also the other requirements of the SC.

Intervention Studies

The knowledge for the promotion of SS and SC has always been at the center of the concerns to the research group, anticipating or following conceptual and methodological issues. For this reason, efforts were directed to design, implement, evaluate, and refine the SST programs, as well as resources and specific procedures.

Considering the characteristics commonly found in the literature, an SST program is usually understood as (Del Prette and Del Prette 2017a) a set of activities that structured learning processes, mediated and conducted by a therapist or facilitator,[1] aiming at: (a) increasing the frequency and/or improve the proficiency of SS already learned, but still in deficit; (b) teaching new significant SS; and (c) reduce or extinguish competing behaviors with such skills. In our research group, considering the centrality of the concept of SC, our understanding of SST programs is expanded to contemplate more explicitly the requirements of SC. Thus, we believe that an SST program, guided by the concept of SC (Del Prette and Del Prette 2017a, p. 80), is "a set of planned activities that structured learning processes, mediated and governed by a therapist or facilitator, aiming not only to the acquisition and/or development of social skills, but also of the other requirements of social competence."

In SST programs, usual procedures are instructional exercises, dialoged exposure, behavioral rehearsal, and interpersonal tasks. These procedures are presented with evidence-based techniques as feedback, reinforcement, modeling, analysis of contingencies, and use of vicarious models (real or symbolic). Considering SC and its requirements, in our SST programs, we added the experiential method, which is a structured context for the group sessions. We defined it as (Del Prette and Del Prette 2001a, p. 106) "a structured activity [...] that mobilizes feelings, thoughts and performances of the participants and allows the therapist or facilitator to adopt specific procedures for achieving the objectives of the program."

Over these years, we have developed and disseminated experiences that enable other professionals when planning and running SST programs for adults (Del Prette and Del Prette 2001a), children, and adolescents (Del Prette and Del Prette 2005a) or for both (Del Prette and Del Prette 2017a). More recently, we have invested in brochures and books for parents, college students, and the general public, with practical guidelines and exercises (Benevides and Del Prette 2013; Del Prette and Prette 2017c; Pinheiro et al. 2003) and illustrative features on cards, booklets, and videos (Del Prette and Del Prette 2005b; Comodo et al. 2011; Dias and Del Prette 2015). There are widely documented empirical evidence regarding the effectiveness of this program as well as its resources. These evidence were published in master's and doctoral dissertations (http://www.rihs.ufscar.br/teses-e-dissertacoes/) and articles (http://www.rihs.ufscar.br/artigos-em-periodicos/), and some examples

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[1] We have adopted the term *facilitator* to designate the professional who conducts SST programs once these programs have been carried out in different contexts such as the clinical, educational, work, or community.

were gathered in a collection (see Del Prette and Del Prette 2017b) aimed for professionals with a more detailed description of recently tested effective experiential programs.

With the development of programs and resources for the SST in Brazil, the interventions were diversified. We highlight the interventions directly targeting children and adolescents, such as a triadic model, with customer service exclusively to parents (Freitas 2005; Pinheiro et al. 2006; Rocha et al. 2013) and educators (Lopes 2013; Molina 2007; Rosin-Pinola and Del Prette 2014; Rosin-Pinola et al. 2017), whose effects were expected and measured in the behavior of their children and students. Besides interventions directly or indirectly designed to children and adolescents, there are also empirical evidence of SST programs designed for diverse clienteles such as the elderly (Braz et al. 2011), population with special educational needs (Ferreira and Del Prette 2013; Freitas 2005; Lopes et al. 2013), psychotic patients (Elkis et al. 2016), and nonclinical population looking for work positions (Del Prette and Del Prette 2003b; Pereira-Guizzo et al. 2012; Lopes et al. 2015, 2017). When developing and running SST in Brazil, researchers assessed these results using instruments produced by our group, as verified, for example, in a survey of the use of the IHS-Del-Prette (Del Prette and Del Prette 2013a).

Thus, the studies and interventions in SST programs became to target clienteles from diverse stages of the vital cycle (children, adolescents, adults, and elderly) as well participants with different social roles (parents, caregivers, teachers, and educators in general, couples, executives, etc.). In this context, it was becoming clear that the SST programs could be applied as a *major* intervention or as a *coadjutant*, in therapeutic and educative services from a wide variety of problems, such as recommended in its early days, by the first researchers of the area (Falloon et al. 1982).

In the quest for improvement of SST programs, we went from an initial exploratory stage of interventions to further studies under experimental and quasi-experimental designs, in a perspective of consolidation of evidence-based practices (APA 2006) and toward the dissemination of these programs (Murta 2011). We recognize that this process was supported by two previous conditions. The first one is regarding the evaluation, more specifically the efforts into the development of evaluation instruments. The second is condition is related to the improvement of procedures and techniques as well as audiovisual and multimedia resources for intervention.

We have evaluated the effectiveness of many SST programs by the clinical significance and reliability of change's analysis using the JT Method (Jacobson and Truax 1991). This analysis was particularly useful in cases in which there was no control group or when intervention was designed for individual cases. We defended the JT Method as an important method in the field of social skills (Del Prette and Del Prette 2008b). Moreover, we organized a website in which researchers and professionals can perform this analysis (Villa et al. 2011) and compare their results to classical statistical procedures (Villa et al. 2012).

Considering the visible expansion of publications on SS in Brazil, some researchers were interested in mapping out this production, both in journals and chapters of books and collections. We highlight the analyses of: (a) Murta (2005), about SS

preventive programs; (b) Bolsoni-Silva et al. (2006) about the papers' publication; (c) Freitas (2013) focusing only on the experimental studies in SS; (d) Fumo et al. (2009) on the annual collection of ABPMC publications, entitled "Behavior and Cognition," for the period from 1997 to 2007; and (e) Nilsson et al. (2014), bringing articles of Latin American researchers. All these studies pointed to the increase of publications on SS in Brazil and to the crescent internationalization in terms of partnerships in projects that have been converted into publications. In the case of SS, our main partners were from Portugal, Argentina, and the USA, with which we have published several articles and book chapters. Additionally, publications in English and Spanish languages are another form of internalization and therefore, the dissemination of the produced knowledge about SS.

The Movement of Social Skills in Brazil: Past, Present, and Future[2]

Somehow our history of academic production is associated with the Brazilian SS movement, both in quantitative terms and in terms of methods and objectives of research and application of this theme. We believe that the Social Skills Training (SST), as a therapeutic method, started late in Brazil, and in other countries of South America. Perhaps one reason for this was the delay in adherence to the process of dehospitalization of psychiatric patients, which was one of the initial focuses of interest in SST programs in Canada and the USA to prepare psychiatric patients for life in community (Brown 1982; Falloon et al. 1982; Goldsmith and McFall 1975; Wallace 1982). At the same time, this type of intervention, coming from England (Argyle 1984; Argyle et al. 1974), began to gain prominence, starting to be part of the alternative services designed for several types of problems (Bellack et al. 1976; Curran 1977).

Thus, while in the decade of 1970, the SST had already been consolidated abroad as "one of the major developments within the history of the behavioral model" (O'Donohue and Krasner 1995, p. 4), in Brazil no study on this theme had been presented in scientific events by that time. Only in 1996, there was the publication of the first theoretical article on social skills in Brazil (Del Prette and Del Prette 1996), and after a short time, the first article on intervention describing a program of SST in group (Del Prette et al. 1999) and the first book (Del Prette and Del Prette 1999).

An important event happened then, in 2002, when it was created a working group (WG) in the National Association of Research and Graduate (ANPEPP www.anpepp.org.br), composed of researchers on SS. Much of the movement of social skills in Brazil is an outcome of the structuring and production of this group, including activities for the formation of new researchers as well as the dissemination of

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[2]This section reproduces and extends part of the chapter written in Portuguese on the movement of social skills in Brazil (Del Prette and Del Prette 2016).

the area in scientific events, such as the International Seminars of Social Skills (I, II, III, IV, V, and VI SIHS, and for 2019 is expected to occur the VII SIHS in São Luis do Maranhão, www.sihs.ufscar.br).

In addition to the consecutive and successful editions of the SIHS, it should be pointed out, yet, as indicators of the "movement" of SS in Brazil, the presence of the theme in other important events around the country. This has led some, for example, the Brazilian Association of Behavioral Psychology and Medicine (ABPMC), to include the keyword social skills in the theme of indexing of papers submitted. Courses, conferences, symposia, roundtables, and panels covering about SS are a constant presence in several events in Brazil.

Focusing on the Brazilian researchers' publications in journals, in Brazil or abroad, it is possible to highlight the most recent survey, covering the production of the period from 1990 to 2014 (Del Prette et al. n.d.), illustrated in Fig. 3.

This survey contemplates about 25 years and points to the growth of scientific production in SS in Brazil. The publications prior to the pioneer article of 1996 consisted only of ten articles, from which two were empirical and made explicit reference, in the title, to SS and SC, respectively. A gradual increase can be seen up
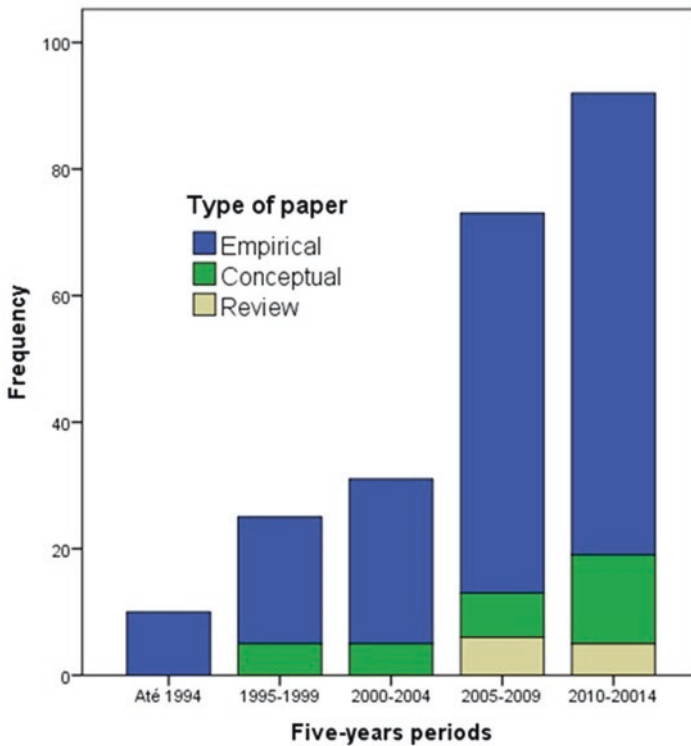
Fig. 3 Distribution of empirical, theoretical, and review articles, produced on SS published until 2014, in 5-year periods (Del Prette et al. n.d.)

to 2004 (65 papers) followed by a significant increase to 231 papers (almost three times more) in the next 10 years and with the appearance of review studies, some of them focused on Brazilian production, suggesting that the SS field already has a history in Brazil. Another important aspect to be emphasized is the qualification of the journals. About 90% of the studies were published in journals B2 level or higher, which are a qualification considered good or very good by the criteria of the development agencies, especially Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES, Coordination for the Improvement of Higher Education Personnel) and Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq, Brazilian National Council for Scientific and Technological Development).

Another interesting aspect observed in the survey was the distribution of the studies according to the research sample and/or the clientele in this area. Figure 4 illustrates this distribution.

There is a reasonably equitable variety of studies with children, teenagers, students, clinical samples of participants, and professionals, as well as couples, parents, and caregivers, in addition to a general category of others or mixed when it came to conceptual tests or methodological studies that did not specify the participants or when there was more than one type of sample.

The axes of knowledge production also appear with differentiated distribution along the five quinquennia covered in the survey. This is illustrated in Fig. 5.
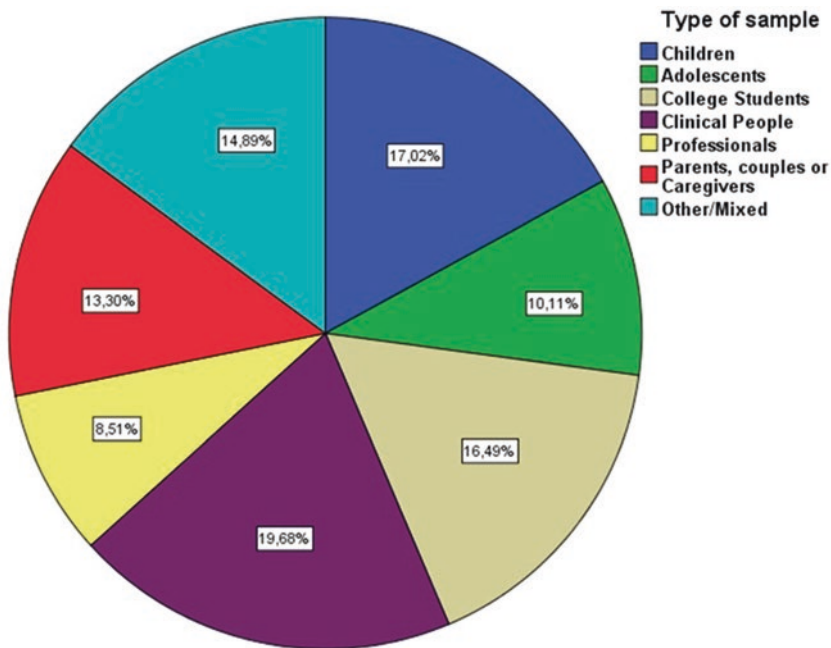
Fig. 4 Distribution of samples and clienteles from the studies on SS in Brazil (Del Prette et al. n.d.)
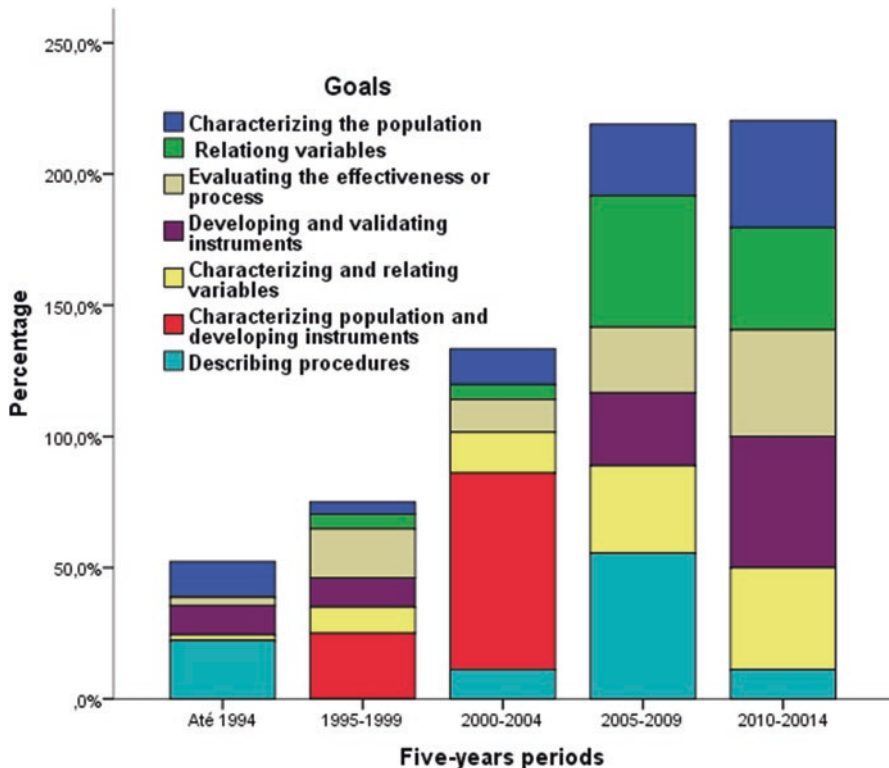
Fig. 5 Distribution to the objectives of the studies, in publications on SS in Brazil (Del Prette et al. n.d.)

There is also a great diversity of aims, approaching, in a fairly equitable way, the scheme presented in Fig. 1. However, specific studies on instrument construction (in red) were reduced, possibly because the instruments started to be used for the investigation of the nomologic network of relations between variables (in green), coupled with the characterization of population segments. One can infer that the instruments have been available in various ways (for example, books and manuals), favoring new types of studies, including those for effectiveness analysis (in mustard color). To ensure the dissemination of SST programs supported by evidence of effectiveness (Del Prette and Del Prette 2017b) is an important investment, as recommended by the American Psychological Association (APA Presidential Task Force on Evidence-Based Practice 2006).

The data from this survey are only briefly mentioned here to highlight the increase in the number of publications, associated with the increase of researchers and determined by qualified vehicles. It is understood that this is an indicator of maturity of the area in Brazil as well as an important basis for its consolidation and development. In addition, it is understood that the future of the SS movement in Brazil depends, also, on the process of formation of human resources for research and practice in this theme.

Regarding the training of researchers, the previous survey has also shown an increasing amount of masters, doctorate, and postdoctorate graduates or in training in this area in recent years. The first masters and PhDs in the SS theme were formed by researchers who, while not having this theme as main object of research, met the expectations of a new generation of students interested in the topic. Some of these advisors have integrated this theme to their foci of research and the new doctors, in their majority, remained in the area, by inserting themselves in postgraduate programs and, in this way, continuing the process of formation of new researchers. In a survey on the Lattes Platform/CNPq (http://lattes.cnpq.br/), from 1990 to mid-2015, we found 40 defended doctoral theses and 21 others in progress. At master level, there were 130 completed dissertations and 14 in progress. In addition to these numbers, there has been, in the last 5 years, training of researchers at postdoctoral level, part of them without previous experience with SS, but with interest in it. For these postdoctoral students, their insertion in the SS field was possible by internships along with senior researchers.

Regarding the issue of the SS movement in Brazil and considering the criteria derived from sociology for the identification of this phenomenon—adherence, permanence in time, and visibility, it is possible to draw some conclusions about the "SS movement in Brazil." Adherence can be seen in the influx of researchers for training and acting in this field, possibly contributing and being fed by scientific production and exposure of this production in scientific events and outreach events outside the academic scope. This interest opens up positive perspectives for the dissemination of the field in contexts such as therapeutic care, education, work, international relations, and tourism. Regarding permanence, the presented indicators, especially the review studies, suggest the development as a history of increasing academic production that seems fundamental for the sustainability of this movement.

Despite these analyses, the issue of permanence in time deserves some considerations, apparently obvious, yet that need to be explained. Certainly, the theoretical–practical SS field is not, today, the same that was drawn up by Argyle and his collaborators in the decade of 1960. New SS classes have been incorporated, such as the relations between representatives from different countries, the interactions mediated by technology and virtual communication, and the other demands of today's society. Therefore, the permanence in time includes the ability of the area to take into account of new issues that arise in a globalized and in constant change world. As the phenomenon called SS is a dynamic process, inserted in the different cultures, it is possible to predict that different research problems will continue to receive attention from researchers.

All social movement leaves an important landmark that can: (a) be resumed by other movements or (b) obtain continuity in time, with specific proposals. Considering the SS movement, there may be continuity, for example, with the creation of undergraduate courses on this subject, and/or discussion within the university of questions related to pedagogical practice and SS in higher education.

In any case, the future of the SS movement must be a present issue. Researchers in the area express concern about the direction of this movement, in order to protect it from banalization and to ensure quality in research as well as in training in this

area. It is an area of knowledge that is apparently simple and of public domain, but whose simplicity dissolves under a more careful analysis. It is, therefore, up to the new generations to warrant this attentive eye and the productive exploitation of the potential of this area for the resolution of many human problems that necessarily pass by the interpersonal relations.

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Human Values: Contributions from a Functional Perspective

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Abstract This chapter presents my personal, academic, and professional journeys that enabled me to develop the functional theory of human values, contributing to Psychology in Brazil and abroad. It describes first my initial personal concerns while living in indigent neighborhoods in Brazil, involving significant events related to my family, friends, and mentors. Second, it focuses on the functional theory of values, summating its fundamental elements and differentiating it from other theoretical perspectives, thus elucidating its contribution to the theme of human values. Third, it discusses some attempts to apply this theory to real living conditions, in addition to presenting future challenges this theory will address. In conclusion, the current chapter offers my personal point of view about my life and carrier as a professor and researcher in Psychology, expressing my gratitude.

Introduction

This chapter presents my personal, academic, and professional journeys that allowed me to develop the functional theory of human values. Moreover, it outlines the contributions of this theory to explain several human behaviors and its potential for practical applications. Even as an adolescent, I was interested in understanding what makes people different from each other. Growing up between several poor neighborhoods in Brazilian cities, I was surprised to notice that some of my friends were normative, whereas others expressed antisocial behaviors. Likewise, I was intrigued by how, living in the same cultural context, some people were happier, whereas others experienced psychological distress. During my university years, I had the opportunity to explore some of these questions and find some answers. However, during my PhD course, in collaboration with colleagues from the Complutense University of Madrid (Spain), I had my primary opportunity to focus on human values.

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In fact, when introduced by María Ros to the construct of "human values," I thought that I could offer some contributions to this field based on my training in psychological assessment and social psychology. I was not satisfied with the models and measures of values (e.g., Hofstede, Inglehart, Rokeach, and Schwartz), which seemed intuitive, not theoretical, and limited to circumstantial data and statistical speculations. For instance, their authors were not successful in explaining the origin of values or their functions.

In the 1990s, I introduced the functional theory of values that combined essential elements of Inglehart's and Schwartz's models. This offered a more parsimonious explanation for the structure and content hypotheses, differentiating compatibility and congruence of values. Recently, this theory gained attention in prominent scientific journals (e.g., *Archives of Sexual Behavior*, *Frontiers in Psychology*, *Journal of Cross-Cultural Psychology*, *Personality and Individual Differences*, and *Personality and Social Psychology Bulletin*), and it was used as a framework for several international research projects that included participants from over 60 countries. To conclude this chapter, I will discuss some of the future challenges of this theory, including neuronal mapping and the genetic basis of human values.

Personal, Academic, and Professional Journeys

I was born in an inner city (Itabaiana) from Paraíba, Brazil, where I lived for 6 years (1966–1972). In an extreme collectivist environment, composed of an extended family with dozens of uncles and cousins, conforming to social and family norms was generally demanded. In a hard period of military dictatorship and dry weather, without sufficient natural resources and employment, my parents (João and Bernadete) decided to migrate to Rio de Janeiro. We lived for 5 years in that state (1972–1981), initially in a slum, and then in a poor neighborhood (Califórnia) in São Gonçalo. My mom was dedicated to our home and to small homework activities (e.g., making purses, caps, cakes) to contribute with the family income; my father was an attendant in a gas station, gaining a minimum wage salary and tips. Despite this adverse economic context, witnessing violent and delinquent behaviors, my parents offered strict moral patterns, emphasizing principles like honesty, dedication, humility, and respect. My older brother (Vianey) was my hero. He was considered by everyone as a smart and educated boy. Contrarily, I was seen as rambunctious. Often, our neighbors warned my mother about me, despite my effort to be a good boy.

In 1981, with a promise of better days in Paraíba, my parents decided to return. An uncle lent us a house in a poor and violent neighborhood (Mandacaru) in João Pessoa. With a small amount of money, we bought a tent in a free market, where we used to sell everything (e.g., beans, sugar, coffee). For approximately 8 years (1982–1989), I worked by helping my parents in the market: from Monday to Friday I helped them during the afternoon, and every Saturday, beginning at 4 a.m., I helped them for 12 h. My fundamental studies were entirely held in public schools located 3–5 km from my home. Often, I walked to school with my brother and our friends

under a hard sun for most of the year. During my secondary school, I studied at night, because I needed to work with my father at his business. When I was 18 years old, my life changed drastically: I was admitted as a student of Psychology at the Federal University of Paraíba, and I got my first job as a city traffic agent.

During my undergraduate studies at Paraíba (1985–1989), motivated by Professors Bartholomeu Tôrres Tróccoli, Francisco José Batista de Albuquerque, and Mardônio Rique Dias, I was more dedicated to instrumental aspects of Psychology, i.e., research methods and statistical techniques. Thus, I was interested in developing instruments (e.g., scales, inventories) to study social themes (e.g., attitudes, expectations, prejudice, well-being). I earned the title of Social Psychologist, supervised by Prof. Maria da Penha de Lima Coutinho, focusing on a measure to assess satisfaction with life among Brazilian physicians.

In line with my initial interests, I decided to study at University of Brasília. Here, I obtained my Master's degree in Social and Organizational Psychology (1990–1991) and wrote a thesis on survey methods and environmental issues (e.g., perception of noise) that was supervised by Prof. Hartmut Günther. He was more than a supervisor, a good friend. In fact, Hart (and Isolda, his wife) was very important in my life, providing me with basic conditions, including financial support to stay in Brasilia. Some months later, I went back to this same university to obtain the Specialist's degree in Psychometry (1992–1993) under the supervision of Prof. Luis Pasquali. In addition to being a close friend of mine, he was an important academic mentor, mainly by stimulating my interest with psychological assessment.

Meanwhile dedicated to my academic formation, I obtained a position of Lecturer of Experimental Psychology at the Department of Psychology, Federal University of Paraíba in February 1992. For 2 years, I taught Experimental Psychology, Introduction to Psychology, and Social Psychology in the graduation program. Invited by colleagues of this department, I also got in charge of the course of Statistic Methods, teaching Master's students. Also during this period, I founded the Laboratory of Research in Measure and Psychological Assessment, and I presented my first research project to the National Council of Scientific and Technological Development (CNPq), obtaining a scholarship of Regional Scientific Development.

In October 1994, my university allowed me to stay in Spain for 4 years to obtain a PhD degree in Social Psychology at the Complutense University of Madrid (1994–1998). My supervisor, Prof. Miguel Clemente, was a benevolent tutor, giving me the opportunity to choose the topic of my dissertation. First, I decided to study the chaos theory applied to Psychology. However, it was an excessively chaotic issue for me at that time. Then, I changed the focus to cultural comparisons, thinking about individualism–collectivism, which was an important cultural dimension. Nevertheless, I was not satisfied, because I was interested in individual variations, i.e., to understand why people endorse some specific principles rather than others (e.g., religiosity vs. pleasure and power vs. affectivity). Thus, I began to consider human values as the main topic of my dissertation.

In Spain, I was lucky enough to get along with excellent researchers who were interested in values, such as José Luis Alvaro, Francisco Morales, and María Ros. Besides my teacher, María was a special friend. She was Schwartz's collaborator but was always stimulating my different ideas about human values, recognizing their

legitimacy and novelty. Support from both her and my supervisor was important for my PhD dissertation, which entailed a critical analysis of the main theoretical models of human values at both individual and cultural levels. Moreover, it reported the fundaments and first evidences of the *functional theory of human values,* described the first version of the *Basic Values Survey*, and tested its adequacy in three cities from Brazil (Brasília, João Pessoa, and São Paulo) and from Spain (Barcelona, Madrid, and Pontevedra). This dissertation was approved with the distinction of *Sobresaliente* "*cum laude*," and months after it was awarded the *Concepción Arenal de Humanidades* (1998) prize.

At the end of 1998, I was back to Brazil. At that time, I founded a research team named Normative Bases of Social Behavior. I was now an adjunct professor, resuming my academic duties at the Federal University of Paraíba and beginning a new function: supervisor of Master's students. In addition, I became Researcher Level 2 of the CNPq. For some years, I was dedicated to advising theses, carrying out studies on human values, and gathering evidence of adequacy for my functional theory of human values. One of the first Master's theses based on my theory was authored by Taciano (Milfont 2001), who is currently at Victoria University of Wellington (New Zealand). He is an important friend and collaborator who has helped to improve and promote this theory in the international context. Its historical backgrounds, fundamentals, findings, and applications have been described in recent books (Gouveia 2013, 2016). Possibly, my academic maturity was achieved in 2012, based on my ideas and studies about human values. That year, I became Full Professor of Social Psychology (Federal University of Paraíba), presenting a monographic report about my functional theory of human values. I also became a Researcher Level 1A of the CNPq, with projects on the same topic. Next, I summarize this theory, trying to map its contributions to Psychology.

The Functional Theory of Human Values: My Contribution to Psychology

I had my first teaching experience in a university when I was 24 years old. Since then, I have contributed substantially to Psychology in Brazil. For instance, I have taught hundreds of undergraduate and graduate students, advised more than 30 PhD students, written 17 books, 52 book chapters, over 200 scientific papers, and developed or adapted several psychological instruments to the Brazilian context (e.g., General Health Questionnaire, Satisfaction with Life Scale, Child Depression Inventory, Positivity Scale). However, I think that my most important contribution to Psychology was the development of the functional theory of values, including the corresponding instruments to assess human values (Gouveia 1998, 2003, 2013, 2016). It has had an impact on the international literature of human values, being recognized by eminent researchers in different countries (e.g., Maio 2017; Rodrigues et al. 2012; Schwartz 2014).

Fundaments of the Functional Theory of Human Values

I have previously detailed the fundaments of the functional theory of human values (Gouveia 1998, 2003, 2013, 2016). Here, however, I offer a summary of the main ideas underlying this theory. First, I considered at least four basic assumptions: (1) humankind is essentially good, so their values are all positive; (2) they have approximately the same values across time. Values are like diamonds; they have not always existed, but they have been built slowly through an invisible process for people over their life span; (3) individuals have the same set of values, what varies is only the importance attributed to specific values according to particular personal history and cultural milieu, for instance; and (4) despite talking about cultural values frequently, they are in fact personal. The values that have succeeded in a culture are more likely to be endorsed by individuals in the future.

In the functional theory of values, I define them in terms of functions they serve (Gouveia et al. 2014a, 2015a). Thus, values are an orientation criterion that guides human actions and gives expression to human needs. This implies two main functions of values: the first function outlines *circles of goals*, corresponding to the type of orientation that values serve when guiding individuals' behaviors; and the second function outlines *levels of needs*, corresponding to the type of motivator that values serve when cognitively representing human needs. There are three types of orientation (personal, central, and social goals) and two types of motivator (thriving and survival needs), which are combined to define the axiological space in line with Fig. 1.

This figure shows six basic subfunctions of values (basic values), which are products of interactions between the two main function levels: excitement (personal and thriving), promotion (personal and survival), existence (central and survival),

		Values as guides of actions (circle of goals)		
		Personal goals (the individual by itself)	*Central* goals (the general purpose of life)	*Social* goals (the individual in the community)
Values as expressions of needs (level of needs)	*Thriving* needs (life as source of opportunities)	**Excitement Values** Emotion Pleasure Sexuality	**Suprapersonal Values** Beauty Knowledge Maturity	**Interactive Values** Affectivity Belonging Support
	Survival needs (life as source of threats)	**Promotion Values** Power Prestige Success	**Existence Values** Health Stability Survival	**Normative Values** Obedience Religiosity Tradition

Fig. 1 Functional dimensions and basic values

suprapersonal (central and thriving), interactive (social and thriving), and normative (social and survival). The *content hypothesis* predicts that the best factorial structure to represent the set of values is a six-factor structure, grouping specific values (e.g., prestige, beauty) into their corresponding basic subfunction of values (e.g., promotion, suprapersonal). The *structure hypothesis* indicates that values can be represented on a two-dimensional space, corresponding to the two functions of values. Thus, on one dimension—the *circles of goals*—three goals are specified: personal, central, and social. On the other dimension—the *level of needs*—two needs are specified: thriving and survival. The two dimensions are spatially distinct.

In addition to the content and structure hypotheses, this theory presents two others. It is not assumed that basic values (subfunctions) are in permanent conflict, but that some basic values are likely to be relatively more congruent if a shared type of orientation is emphasized, rather than a shared type of motivator. On the other hand, basic values are less congruent when they do not share neither the type of orientation nor the type of motivator. Thus, the *congruence hypothesis* admits three levels of congruence of values (Fig. 1): *low congruence* (normative–excitement and interactive–promotion), *medium congruence* (excitement–interactive and promotion–normative), and *high congruence* (excitement–promotion and interactive–normative). The *compatibility hypothesis* suggests that, despite not being in permanent conflict, values can differentially predict some criterion variables. Moreover, patterns of correlation result from the congruence between the basic values. For instance, one can expect antisocial behaviors to correlate positively with excitement values and negatively with normative values (low congruence) (Santos and Lopes 2016); also, infidelity behaviors are more likely to be negatively correlated with both interactive and normative values (high congruence) (Guerra et al. 2016).

In sum, the functional theory of human values represents a new conceptual ground by reconciling two separate value-traditions (e.g., Inglehart 1989; Schwartz 1992). Moreover, it defines values according to the functions they serve, proposes a theoretically based approach to identify the number of basic values, avoids confounding compatibility/conflict with congruence of values, and discards the need of different theories of human values at individual and cultural levels.

Evidences of the Importance of the Functional Theory of Values

The functional theory of human values has been an important contribution to at least three conceptual–theoretical aspects. First, it represents the first formal intent to define human values based on their functions (Gouveia et al. 2014a). Previously, the functions of values received scarce attention in the literature (Allen et al. 2002). For instance, despite Rokeach's (1973) indications of some of the main functions of human values, he offered only a speculative approach in line with the literature on attitudes from the 1960s (Katz 1960), without any implication for his measure and definition of human values. Recently, Schwartz (2014) advocated that his theory is a functional theory of values; however, this was not explicit in his most cited papers

(Schwartz and Bilsky 1987; Schwartz 1992, 1994) nor in the recent version of his theory (Schwartz et al. 2012), indicating a lack of support for his pretension (Gouveia et al. 2014b).

Second, the functional theory of human values is a different approach to values, but it is not incompatible with previous models. In fact, it improves and permits the integration of well-established theories in the literature, such as those proposed by Inglehart (1989) and Schwartz (1992). Specifically, this functional theory considers dimensions present in previous models, such as the circles of goals/type of orientation (Rokeach 1973; Schwartz 1992) and the levels of needs/type of motivator (Inglehart 1989; Maslow 1954).

Third, and perhaps most importantly, the model is a theory based, which considers a functional perspective to define the set of values and its hypotheses (Gouveia et al. 2014a, b; Gouveia et al. 2015a). Despite the existence of previous frameworks, they were predominantly intuitive. For instance, Rokeach (1973) was the first to theoretically elaborate specifically about human values. He proposed two models: (1) one well-known model with two main types of values: instrumental values (moral and achievement values) and terminal values (personal and social values), and (2) another on political ideology that uses two specific values (equality and freedom) to classify different political systems or forms of government (e.g., capitalism, communism). However, most of his studies focused on specific values, not admitting an underlying theory behind them. Schwartz (1992) is an update of Rokeach's model, including his Schwartz Values Survey based on the Rokeach Values Survey, which was elaborated intuitively. Schwartz changed his framework to include more value types, which began with seven (Schwartz and Bilsky 1987) and currently has 19 (Schwartz et al. 2012). Perhaps his intention is to achieve an omnipotent model, discarding all the other theoretical efforts.

Finally, when I decided to elaborate a theoretical model, I thought about the source of values (Gouveia 2003; Gouveia et al. 2008). It would be important to define a referent: an objective criterion to map the set of values. Thus, the importance of the functions of values seemed evident. The interaction between circles of goals (types of orientation: personal, central, and social) and levels of needs (types of motivator: thriving and survival) permits the identification of the most important basic values, in which all the specific values that are present in other measures can be located (Gouveia et al. 2014b). Of course, it is possible to define more specific facets of values (e.g., power and achievement; Schwartz 1992), but it seems evident that they can be gathered into more inclusive basic values (subfunctions) (e.g., promotion; Gouveia et al. 2014a).

The Sources and Mentors of the Functional Theory of Values

I have not thought of building a theory before. However, because my undergraduate formation, my specializations, and my Master's degree were focused on technical aspects (e.g., research methods, statistics analyses), I decided to dedicate my PhD

to a theoretical topic. I was initially interested in studying the chaos theory in Psychology, but it was a truly chaotic topic for me. Then, my supervisor suggested that I think about a paradigm in Psychology that was popular at that time, i.e., Hofstede's cultural dimensions, emphasizing individualism–collectivism. He also recommended that I contact two Spanish researchers dedicated to this issue: Francisco Morales and María Ros. Coincidently, María was starting a doctoral course on human values, and I was one of her students. Two weeks after Maria's first classes, the topic of my dissertation seemed clear: using values to understand individualism and collectivism.

I had to do a review of all the available publications on human values, considering different fields and authors. My Master's degree supervisor, Prof. Hartmut Günther, was a researcher who was interested in human values in Brazil, and he had made the first attempt to adapt the *Rokeach Values Survey* in that country (Günther 1981). However, the most dedicated researcher to the topic of values in the Brazilian context was Prof. Alvaro Tamayo, with whom I exchanged some messages about it. However, María Ros was surely the most influent researcher on my first steps in studying human values. She was Schwartz's collaborator, but was always open to hear new ideas, which made it possible for us to develop a close relationship and friendship. Still as her student, I suggested that María edit a book on values, which led to the book *Social Psychology of Human Values: Theoretical, Methodological and Applied Developments* (Ros and Gouveia 2001).

During my years as a PhD student, I was often a visitor at the Complutense University of Madrid library. Fortunately, because my PhD in Social Psychology was composed of two scientific fields (Psychology and Sociology), I was in contact with some classical books and articles about human values and correlated topics in social sciences. For instance, I had the opportunity to read important authors who, directly or indirectly, influenced my comprehension of values, such as Abraham Maslow, Alexis de Tocqueville, Clyde Kluckhohn, Émile Durkheim, Ferdinand Tönnies, Robert Merton, and Talcott Parsons. Two of the most inspirational books were *Toward a General Theory of Action: Theoretical Foundations for the Social Sciences* (Parsons and Shils 1951) and *Personality and Motivation* (Maslow 1954). However, the greatest lessons were learned from Milton Rokeach: the father of empirical studies on human values. He helped me to understand the contributions of subsequent authors, such as Ronald Inglehart, Geert Hofstede, and Shalom H. Schwartz.

In the 1990s, the most influent theory of values was the one proposed by Shalom H. (Schwartz 1992, 1994; Schwartz and Bilsky 1987). My reading about Schwartz's approach suggested that he was influenced by three important works: (1) Rokeach's definition and measure of human values, (2) the prevalent discussion based on Hofstede's dimension of individualism–collectivism, and (3) the facet theory, a metatheory useful for building and testing theories, mainly based on multidimensional scaling (MDS) analysis. For instance, using a kind of MDS (i.e., the SSA; smallest space analysis), Schwartz's first papers aimed to test hypotheses that differentiate values according to both, the instrumental and terminal types, and the personal (individualist) and social (collectivist) orientations (Schwartz and Bilsky 1987).

I was not satisfied with Schwartz's speculative approach. In addition to admitting positive and negative values (Schwartz and Bilsky 1987), some aspects of this model were not clear, such as the source of values, the theoretical reason why they were organized the way they were, and the arbitrary separation of values into a two-dimensional space. Moreover, I considered Inglehart's (1989) classification of values into materialistic and post-materialistic values to be important. These aspects jointly led me to think about a more simple and integrative model, resulting in my *functional theory of human values*. This theory cannot be reduced into a synthesis of Schwartz's and Inglehart's models; it offers different contributions. For instance, it discards the assumption of different theories at individual and cultural levels, it makes a distinction between congruence and compatibility of values, and it assumes the functions of values as the main source of specific value structure, avoiding a speculative approach to define the number of basic values (subfunctions).

According to aforementioned, it seems clear that I did not have a specific mentor or theory to develop my functional theory of values. In fact, different authors and colleagues in the social sciences have influenced me. However, if I was asked to name a specific person that inspired me, it would surely be María Ros (*in memoriam*). Less for her theoretical approach, but much more for her scientific attitudes and openness to new ideas, even when she did not agree with them. Her availability to discuss and confront my ideas, including critiques of previous models, allowed me to develop more elaborative thinking.

Contribution to International Scientific Contexts

A theory really has an international impact when colleagues abroad recognize it. This can occur in several ways. For instance, when this theory becomes a framework for international research projects or academic works (Master's thesis and PhD's dissertations), supports scientific papers, or is recognized in specialized books about the considered construct. I think that the *functional theory of human values* has achieved this status. In fact, it is possible to identify substantial evidence of its influence on international research. First, the cross-cultural project on human values and beliefs in a just world, which I coordinate, relies on the participation of more than a dozen of colleagues in approximately 50 countries (e.g., Angola, Argentine, Chine, France, India, New Zealand, Poland, Spain, United States). It is a voluntary collaborative study, without any financial support, that primarily uses samples of undergraduate students. Perhaps the most important cross-cultural project that has used this theory is the one organized by Professor James Liu (Massey University, New Zealand). He used random and representative samples of the general population in 20 countries with financial support from the American and Chinese governments.

Regarding empirical studies, in addition to several that use this theory in Brazil (for a summary, see Gouveia 2013, 2016), it has also been used in PhD dissertations by colleagues from New Zealand (Böer 2009), Portugal (Marques 2015), and United

Kingdom (Guerra 2009). Moreover, following our recent publications in the international context (Gouveia et al. 2010, 2014a, b, 2015b; Hanel et al. 2018b), this theory begins to appear in high impact journals abroad. For instance, it is possible to identify some of these papers that describe and test the functional theory of values (Ardila et al. 2012; Marques et al. 2017b; Mohamed et al. 2018), that try to explain the variability of values within a culture (Fischer et al. 2011), or that use it to explain some psychological constructs, such as attractiveness (Lopes et al. 2017), political ideology (Brusino et al. 2013), sexual liberalism–conservatism (Guerra et al. 2012), and satisfaction with life (Marques et al. 2017a).

In line with recent books published about the functional theory of human values in Brazil, it has become more popular in the Ibero-American milieu. First, in Maria Luisa Teixeira's book, entitled *Human Values and Management: New Perspectives*, a specific chapter describes this functional theory, reporting its hypotheses of content, structure, congruence, and compatibility (Gouveia et al. 2008). More recently, in Torres and Neiva's book of *Social Psychology*, a chapter on human values has been included, summarizing previous theoretical models and exploring the functional theory of values with more details (Gouveia et al. 2011a). Finally, the oldest handbook in *Social Psychology* in Brazil, which has recently completed 20 years since its initial publication, recognized the functional theory of values in its latest version (Rodrigues et al. 2012). Besides these, a recent book dedicated exclusively to human values has considered my functional theory, summarizing it and showing its potential to improve previous theories (Maio 2017).

In sum, the functional theory of human values adds a different and more parsimonious perspective to the international field of values, avoiding a speculative approach. Despite sharing some concepts with previous theoretical models, it is distinct without discarding them. Perhaps most importantly, this functional theory avoids incorporating many dimensions of values, a practice outdated in studies on personality traits (Barbaranelli and Caprara 1996). Contrarily, it seems more interesting to identify axes or specific sources of values, deriving the most fundamental ones (the big six) that accounted for the set of specific human values.

Contributions beyond Academic Psychology

Despite my scientific interest in human values, during the past decade I have been also dedicated to think about how human values work to solve some of emergent problems in society. In this way, in a recent book my collaborators and I tried to demonstrate some applications of this theory to the real world, beyond the academic walls. For instance, a program has been developed to change people's values, aiming at promoting academic performance, reducing favorable attitudes to the use of drugs, discouraging corrupt behaviors, and gathering more environmentally sustainable attitudes and behaviors (Gouveia 2013, 2016).

In addition to our initiative to use this theory in real life, I have experienced several opportunities to contribute with organizations. For instance, I have been invited by the Ministry of Planning and Social Development in Brazil to discuss change in values according to my theory, in order to improve PROJOVEM instructors' attitudes toward government social programs. Nevertheless, also in the organizational context, this theory reveals a potential to contribute further. In this case, an important Brazilian industry of beauty products requested me to use this theory in order to analyze the company's ad portfolios, trying to map the transmitted values. Thus, the utility of the functional theory of values seems evident, which can contribute to solve problems in a wide range of fields (e.g., social, political, environmental, economic).

Challenges and Future Directions

There are many important challenges to whoever decides to study human values. For instance, mapping the corresponding neuronal regions associated with specific values, identifying the genetic load of values, and developing more reliable measures of values. However, this is not restricted to the functional theory of values, and, in fact, we have tried to carry out studies that contribute to each of these aspects (Gouveia 2013, 2016). For instance, we identified that stimulating the dorsolateral prefrontal cortex highlights the importance of excitement values (Athayde 2015); regarding the genetic load of values, we saw that personal values (excitement and promotion) have around 50% of genetic heritability (Araújo 2013). Finally, we developed different versions of the *Basic Values Survey* (*BVS*), including versions for children (Gouveia et al. 2011b), for implicit association (Athayde 2012), and for diagnostic purposes (Souza et al. 2015).

Thus, perhaps the main challenge of this theory is to consolidate itself as a universal and useful theoretical model. We have data from more than 60 countries, covering the five continents, including random samples from 22 of them, as well as some Master's theses and PhD's dissertations that used our framework in several countries. Nevertheless, the impact of this theory is still small when compared to S. H. Schwartz's model, for instance. However, in studies where these two models were used, the findings support the adequacy of our theory when compared to Schwartz's (Böer 2009; Hanel et al. 2018a; Lima 2012). Moreover, it is also important to consolidate the functional theory of values as a unified theory and to avoid speaking in terms of individual and cultural models of values according to its level of analysis, which is suggested by many authors (e.g., Hofstede 1984; Schwartz 1994). Furthermore, while its hypotheses of content and structure were tested in several contexts, including ones that accounted for different samples (Gouveia et al. 2014a) and instruments (Gouveia et al. 2014b), evidence of the compatibility and congruence hypotheses is still scarce (Gouveia 2016).

Conclusions

I am a lucky man! Looking back, this is the clearest conclusion. Even though I was born in an inner city, lived in poor neighborhoods, always studied in public schools—in Brazil, unfortunately, this is a synonym of poor education—and needed to work while studying, I was able to do so much in Psychology, in both national and international contexts. Surely, my primary luck was having loving and dedicated parents, who did all they could to offer the best to their two sons (my brother and I). Then, I married a dedicated woman—wife (Rildésia), who was always by my side, and gave me two wonderful and supportive children (Andrés and Catalina). In addition, I always met amazing people in my life, including friends, colleagues, mentors, and collaborators. I am aware of it and grateful for the important social support I received.

I am also a lucky man for my dispositional characteristics. I always wake up happy to work, feeling excited with new ideas and challenges. Surely, some of my personality traits helped me on my journeys, mainly to persist with my academic interests. I would like to highlight three of these traits: conscientiousness, resilience, and optimism. In essence, I am a positive man, perhaps a humanist, grateful for having survived in several adverse contexts. However, nothing would have been possible without hard and dedicated work, transposing multiple personal and economic difficulties, always believing in better days. When everything seems to be impossible, I think to myself: I did my best, I deserve to be rewarded. Nevertheless, I never focused on only one purpose in life. Instead, I always preferred taking alternatives into account in order not to be paralyzed.

In definitive, I am also a lucky man for choosing an exciting topic to dedicate my academic life. It is strange for a scientist to assert this, but everything was written! Different to the common practice of having a doctoral topic and then researching a different one during the career, for more than two decades I have been dedicating mainly to human values and their correlates. Developing the functional theory of human values was an important part of these studies, but I have also offered substantial findings to the recognition of the central role of values in the human cognitive system (Rokeach 1973). Despite a more sociocultural perspective to approach values (Parsons and Shils 1951), I have preferred to think in more biological terms, focusing on motivational processes, genetics and neuronal bases of values, and evolutionary processes. However, values are different from personality traits, having a more social connotation, although less social than attitudes.

Finally, working with human values reflects my past experiences. In essence, it permitted me to understand, for example, how, living in the same poor and marginal context, some boys, but not all, were interested in studying, not being influenced by drug trafficking. Thus, human values are not words taught to children. They are the social basis of many of our attitudes and behaviors, mainly the ones that imply social and moral connotations (e.g., antisocial behaviors, attitudes toward drugs, infidelity). However, they cannot be seen as a *cajon de sastre*, i.e., a magic construct able to explain every type of psychological phenomena.

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Relation in Social Psychology: A Central Concept for the Understanding of the Human Being, Groups, and Society

Pedrinho A. Guareschi

Abstract I am convinced that my most important contribution, both theoretical and empirical, is based on reflections on the concept of 'relation' and practices drawing on it. After graduating in Philosophy, Theology, Sociology and Psychology, I remained dissatisfied with the contributions brought by these areas and sought a vision that would help me understand both Human Being and society. I found it on the elaborations of the African philosopher Augustine of Hippo. Human Being is neither an "individual"—indivisum in se sed divisum a quolibet alio", as proposed by the individualist liberal vision, nor part of a whole, as proposed by the totalitarian view. It is person-relation, meaning 'relation' as ordo ad aliquid, that is, the intrinsic ordering of something towards another(s). The Human Being, the society, the objects, and the social dimension are all essentially conceived as the outcome of their relations. I have seen such a dimension in several other authors who try to account for the complexity of the world, but they have never formulated it explicitly. The notion of 'relation' as the core of my ontological, epistemological, ethical, and aesthetical approach to diverse matters has been fruitful in my attempts to deeply understand social phenomena.

At the beginning of my academic career I graduated in Philosophy, Communication, Sociology, and Psychology. But I must confess that I was not happy with the approaches of these disciplines. None of them was giving me the possibility to fully, or convincingly, understand the human being, communities, and society in the way I was experiencing these realities in the daily struggles. Even lecturing at the Graduate School, I never abandoned a deep commitment to popular movements, slum dwellers, landless peasants, and other racial or gender social injustices. When I was forced to leave the country (Brazil) in 1971, due to political persecutions during the dictatorship that started in 1964, I had the chance to further develop my research during my Master's Degree (at Marquette University, USA, 1972), and later in my PhD (at University of Wisconsin at Madison, 1977). It was during this

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time that I inclined myself to the area of Social Psychology, trying to investigate a space placed "in between" the social and the psychological,[1] trying to account for the core, the characteristics, the formation, the dynamics, the exchanges, the giving and the receiving, and the performance of anything placed in the space both subjective and objective between the singularity of the human being and the consistency of the social. My intuition was that one cannot deeply understand the human being, for example, looking only at a social dimension, or understanding the social as something concrete, material, as a *chose* (thing), as it was generally supposed and expressed by most sociologists; or, on the contrary, assuming the social as something individual, single, isolated, as shown in many psychological and clinical writings. Revisiting many philosophers, social psychologists, and sociologists and reflecting upon the philosophical assumptions of most of the theories present in these fields, I was faced with a concept that, in my perception, could help me to explain, to a certain extent, this supposed dichotomy between social as a *chose* and social as something absolute and isolated. I am referring to the concept of *relation.*

Progressing in my reflections and investigations, and questioned by discussions with colleagues, I was surprised by and happy with the utility of that concept for empirical investigations. It was in the field of Social Psychology that I found the possibilities to develop, both theoretically and empirically, new approaches to several fields of research making use of the concept of relation. To account for this pilgrimage, I structured this paper following these interrelated steps:

1. A discussion of the concept of relation.
2. An understanding of the social, Ethics, groups, and society in the framework of the concept of relation.
3. An account for the interconnection between the concept of relation and the dichotomy theory vs. practice/*praxis.*
4. An approach of areas of investigation inspired by the concept of relation: ideology and communication.

A Discussion of the Concept of Relation

Relation is a word commonly used in the daily conversation. As many other terms, very seldom we stop to question its deep meaning. What I noticed during more than 40 years of academic life is that few people really go to the core of the concept. When philosophers tried to define it, the best way they found to explain its possible meaning was to state, in Latin terms, that relation is *ordo ad aliquid*. It is important to emphasize here a first crucial point. In most of the occasions when we found in the literature the word relation it does not appear alone. Usually it refers to situations, behaviors, and processes, as in relations of production, relations of

[1] Forty years later I'm seeing this expression already present in the books of Social Psychology like the one of Jovchelovitch: "spaces of mediation that lie on the *inbetween* of intersubjective and interobjective relations."

friendship, and relations of love. We are inclined to pay attention to the meaning of the terms to which relation is attached, but not to the noun relation itself. The point I want to call attention to is specifically the term relation in itself. My intention is to reflect on the meaning of relation and point out what happens when we consider it alone.

One of the main philosophers that brought out this discussion and reflected deeply on it was the African Bishop Augustine of Hippo (354–430). His intent was to justify the belief of Christians that three "realities"—living beings in this case—could constitute one "reality." The point in discussion was this: is it possible to justify the understanding of what Christians call "the Trinity," three "realities" in one, showing that this affirmation would not be an absurd? He argued that this is possible if one makes use of the concept of relation: if these three realities present in this one reality were taken as relations, it would be possible to argue that three realities can constitute one. Augustine called this reality person, and by person he meant relation. Persons are relations. In this case—the Trinity—the persons are pure relations: they merge together making one through communion: three persons (relations) in one reality are what he called Love. Augustine (Augustinus 1968, L. lX. n. 2) expresses this "reality" in the following terms: "When I love something, I meet three realities: myself, what I love, and the love itself. Because I do not love the love if I do not love the one who loves, there is no love when nothing is loved. There are, then, three elements: the one who loves, the one who is loved, and the love."[2] To Augustine, when these three realities are pure relations, they merge together making one reality.

Let us retake the notion of relation: *ordo ad aliquid.* A central point in question is to understand what order (*ordo*) means. This concept alludes to a universal discussion and refers to "the essential question of all metaphysics: the relation between the one and the multiple," as Oliveira e Silva (2007, p. 15) state it. This is the question that permeates not only Philosophy, but all other social sciences. In my personal case, it is the concept that inspired and still inspires all my researches and interpretations of phenomena. We can state that relation is something that necessarily implies an "other" or "others." This is precisely what philosophers refer to when defining relation as *ordo ad aliquid*: that is, an intrinsic direction, an intrinsic orientation of a reality towards other(s); in other words, something can only be what it is meant to be, if it carries within itself an "other." Not necessarily his total being must be directed towards other. As we will see ahead when discussing what a group is, are these personal dimensions (of many) *directed* towards other(s) that constitute a group. As we will further discuss in this paper, the concept of group implies the notion of personal dimensions of many directed towards other(s). A group is, then, the sum of its total relations. Therefore, relation cannot be understood as something that happens between two parts. Instead, it is to be taken in its philosophical sense, the inner directedness of one being towards other(s). A better term to express this

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[2] My translation from the original: *Ecce ego qui hoc quaero,* cum *aliquid amo tria sunt: ego, et quod amo, et ipse amor. Non enim amo amorem, nisi amantem amem: nam non est amor, ubi nihil amatur. Tria ergo sunt: amans, et quod amatur, et amor* (Augustinus 1968, L. lX. n. 2).

reality is *relational* and not *relative:* relative is a word generally employed as the opposite of absolute, a certain totality. Relational refers to a rather different reality, as we can see when discussing the concept of person as relation, as opposed to human being as individual. An individual can imply something relative to other(s), but not necessarily, as in the concept of person as relation. Despite being singular, relational implies other(s) in its ontology.

It helps to understand this discussion looking, for example, to a woman, Mary, or a man, John. But if we say that Mary is a mother, or John is a father, we can understand Mary as mother, or John as father, only when they have a son. This is precisely the point: mother or father are relational terms. They alone cannot be father or mother, they need an "other." One can question: but aren't they singular? Yes, but as mother, or as father, they are one, and at the same time as father or as mother they need "other," without giving up their uniqueness, their singularity. A person = relation is one, and at the same time is also "other." As Augustine (Augustinus 1968, L.V, n. 17) puts it, "someone is called lord, only when he posesses a servant." There is an intrinsic necessity of "other" to complete the one. This brings us to the discussion of the way I understand other concepts, as human being, Ethics, groups, and society.

An Understanding of the Human Being, the Social, Ethics, Groups, and Society in the Framework of the Concept of Relation

It is commonly said that all our theories and actions imply some presuppositions that necessarily underlie them silently. The underlying assumptions are taken for granted and they are never discussed. One of my intents during my reflections and investigation had always been to shed some light upon these underlying dimensions. I used to emphasize at least four among them which are intrinsically related and always present in our theoretical statements. One is a conception of the human being. This conception is always there, and most of the times we do not bring it into light. A second is the ethical dimension, the beliefs and values that account for what is meant by Ethics. A third one is a social dimension that accounts for what we can understand by the social (my central point in this paper), by groups, community, and society. Finally, something that only later started catching my attention is the dimension of practice/*praxis*[3] that accounts for the whole dynamics of the social world. These four dimensions are intrinsically interrelated and they constitute what we can express by the word cosmovision (a vision of the world) or *weltanschauung.*

In my book titled *Psicologia Social Crítica* (Guareschi 2003) [*Critical Social Psychology*], I tried to summarize a tentative synthesis of my approach to the field

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[3] *Praxis,* as I assume here, is explained at item 3, when I discuss what action means: a practice that implies action in a positive or negative sense, the impossibility not to act.

Table 1 Three major cosmovisions discerned under the light of the concept of relation

| | Cosmovisions | | |
Dimensions	Liberal-individualist	Relational	Collectivist-totalitarian
Concept of human being	Individual	Person = relation	"Cog in a Machine"—part of a whole
Ethical dimension	Liberalism (psychologism)	Solidarity	Collectivism Totalitarianism (sociologism)
Social dimension	Capitalism	Community	Nazism-fascism
Practices/*praxis*	Individualism Competitiveness	Solidarity Co-operation	Massification Anonymity Bureaucracy

of the social world, and compare three major cosmovisions, identifying their dimensions and discerning the shortcomings and ideologies (a concept I will discuss later). What is new, and that is the reason to bring this point into discussion, is the fact that the key concept to analyze and compare these cosmovisions is the concept of relation (see Table 1).

In the following sections, I will discuss the three cosmovisions criticizing them from the standpoint of the concept of relation.

Different Ways to Understand the Human Being

The use of the concept of relation helped me to reflect and take a position against the imperative necessity of all scholars who want to penetrate the mysterious area of the human disciplines: Who is the human being? I started reflecting upon this point reading the reflections of Israel (1972, p. 123–211) on the stipulations present in Social Sciences and their metaphysical assumptions.

The three main cosmovisions display accordingly different conceptions of human being. The liberal/individualist in the present times shows itself as hegemonic and diffused throughout the entire society. The concept of human being assumed by this vision of the world is that he is an individual. It is crucial to make here a clarification. As seen and taken on board by liberal philosophy, human being is defined as an individual. This concept is immediately referred to the philosophical assumption of liberalism. It became central in the modern era with the institution of the Cartesian *cogito*, where the individual becomes the key point of reference to all other realities.

One must go to the philosophical presuppositions of this concept. Ontologically speaking, it totally differs from other conceptions I will discuss later. Individual, as philosophers put it, means a reality *indivisum in se*, undivided in itself, that is, something that is one, unique; but not just that: it is also *divisum a quolibet alio*, that is, separate from any other thing; something that has nothing to do with others, someone isolated from all the rest. This vision of the human being has its roots in the

Renaissance, but it grows and becomes robust from the French Revolution onwards. This emphasis on the human being as *divisum a quolibet alio* emerged in opposition to the absorption of the same individual by the social, communitarian fabric of the *ancien régime*. It was this individualism that served as inspiration for the first Declaration of the Rights of Man and of the Citizen in 1789.

This philosophy legitimized itself and crystallized around the time of the Industrial Revolution and the Capitalist Mode of Production. Jeremy Bentham, one of the principal liberal philosophers, affirmed that the human being is profoundly egotistical and seeks always to maximize his or her advantages and to minimize losses. Human life consists of a struggle to guarantee one's interests and the maximum profit possible. All the rest is poetry. In this sense, the search for the common good consists of seeking the greatest profit possible, at whatever price, since the common good is nothing more than the sum of particular goods. Increasing one's patrimony is the way in which the individual contributes to the common good.

At the opposite side, in a collectivist, or totalitarian view, we can detect a concept of human being where he is nothing more than a "part of the whole," a "cog in the wheel of the State machine" (João Paulo 1991, n. 25). Human being becomes dispensable; what really matters is the institution, the system, or the political party. The philosophical presupposition of this assumption sees human being as a kind of instrument within a totality; this totality is what really matters. This conception encompasses the singularity and the subjectivity of the notion of person, as we will see.

We can identify a third understanding of human being that I would like to bring into consideration: human being as relation. To account for this concept, a new term was invented, starting with Augustine of Hippo (L.VII, n. 1–10). For him, person is relation. Person is, then, different from individual. As shown above, individual is one, singular, but absolute, *indivisum in se*, with no relation with other(s), *divisum a quolibet alio*. Person, however, is also singular but, as the concept of relation implies, it necessarily contains another. Departing from the concept of relation as *ordo ad aliquid*, we can substantiate that what constitutes ourselves are the relations. We, however, remain singular, unique, because in building up our subjectivity—the sum of our total relations—we select always different aspects and different dimensions out of the innumerous relations we establish at every moment of our existence.

Augustine, after elaborating on this concept and saying that it is not absurd that three make up one if one considers these three as pure relations takes the argument further saying that this is also the status of the humans. The aim of human being is to make communion with others, building up groups and communities that search for a kind of existence where the persons struggle and aspire a status of pure relations, that he calls love.

I am not alone within this perspective. Zúñiga (1994) affirms: "To be relation, to express ourselves in social relations, is not a detail, an 'accident', as Aristotle said; it is the essence of the human, as said Thomas Aquinas, and as repeated Karl Marx and Martin Heidegger. In the world of the human, *the specifically human are the relations*, the capacity to be always *being-in-society,* that makes possible the characteristic of the person to be, exactly, not to be limited by his 'individuality', by his

'closeness in itself', but by being open in his 'personality', his capacity to relate. *Individuality means closeness; person means openness, relation"* (p. 9).

One can be surprised, but this is the reading I dare to make interpreting the statement of Karl Marx in his VI thesis on Feuerbach. Joachim Israel (1972), following this path, offers a philosophical discussion about the conception of human being that he calls *a relational man.* It helped me to further clarify this issue. What he presents about the conception of Marx falls close to the conception of person = relation of Augustine:

> "To illustrate the relational model let us start with Marx's definition of Man in the sixth of his theses on Feuerbach: There he asserts: 'The essence of Man is not an abstraction inherent in each particular individual. The real nature of Man is the totality of social relations.' (Marx 1964, p. 68). We should observe that Marx does not state that Man's nature is a consequence of his social relations, but that Man's nature *is* the totality of social relations. … Man's nature is equal to these social relations: he is not an object shaped and influenced by the social relations he establishes but he *is* in relation to other men, with whom he interacts" (Israel 1972, p. 127–128) [emphasis in the original].

I could continue bringing other quotations mainly from theologians (La Cugna 1993; Zizioulas 1985) who could help legitimize this vision and understanding of what I like to call as the mystery of human being. As I will try to bring into discussion at the end, my experience shows that there is a strong communion between what a person thinks and what he/she does. It is the *way* one acts, his practice/*praxis* that reveals one's understanding of these realities. At the opposite side, one can speak about and make affirmations without putting them in practice. This is what I use to name alienation.

Different Ways to Understand Ethics in the Light of the Concept of Relation

A second utility I found making use of the concept of relation is a new understanding of what Ethics must be. Based on the concept of relation, as discussed above, we can clearly distinguish among different understandings of Ethics. Looking at Table 1, we can see that according to the conception one has of human being, one will consequently accept and support a specific conception of Ethics. Therefore, three different meanings can be identified:

An individualistic, or bourgeois Ethics: in which the individual himself decides what is ethical or not: he is the only judge of the ethnicity of human actions.

At the opposite side, there is a totalitarian or collectivistic Ethics: in this case, what is ethical or unethical depends upon what would be good or bad for the group, the community, the system, the institution.

Now, having the concept of relation in mind, we can speak of a relational Ethics, where Ethics is always a relation. The only noun (substantive) to which we can apply the adjective "ethical" would be the noun "relation." Consequently, one alone

will never be able to decide by himself if he is ethical or not. To be ethical or not depends essentially on other(s). This relational approach brings therefore a completely new understanding of what Ethics must be.

The implications of this understanding are immediately apparent. For example, a man cannot judge alone about the ethical dimension of his behavior towards a woman. Ethics will be the result of this dialogue where both engage in discussion in equal positions and having the same rights to speak and argue. In the same way, a man cannot judge for himself whether he is or not a racist. Instead, he must ask other people—better black women and men—about his actions. These are the implications of conceiving Ethics as a relation. Aristotle himself had already stated that "ethics is justice" (Pegoraro 1995). Justice is always a relation. In the same way, Ethics as a relation cannot be established by an individual alone. It is established through a dialogue between people in equal positions and with equal rights (Dos Anjos 1994).

In the last 20 years, I became more interested in the area of communication, and kept reflecting upon what is named as the Ethics of the Discourse. The main scholars in this field are Karl-Oto Apel (2000), Jürgen Habermas (1984) in Europe, and in Latin America Enrique Dussel (1977), Javier Herrero (2000), and Paulo Freire (1973). The basic insight of these authors refers to what I am trying to emphasize here: that Ethics is always *relational*. Ethics emerges from a dialogue among persons in equal positions that have the same opportunities to present their ideas and arguments. I discussed this issue in a recent book (Guareschi 2013, Chap. 4), trying to show how a new understanding of communication (I named a "re-foundation" of the concept) brings to a new foundation of Ethics, an Ethics of the Discourse that brings us beyond the traditionalist naturalistic or legalistic approaches. The bottom line of the argument is that having in mind the concept of relation, a new foundation of Ethics can be established when the process of communication (discourse) is based on presuppositions of equality of possibilities and rights to speak and argue.

The Social, Groups, Community, and Society in the Light of the Concept of Relation

A third advantage, certainly for me the most important within the present reflection, in favor of which I keep struggling, and that constitutes something new, as far as I can see, is the great value of employing the concept of relation to better understand and investigate what is the social, a group, a community, and a society, a discussion I intend to address now.

What Is the Social?

I must confess that I was, and still am, uneasy and at the same time unable to accept a distinction between Sociology and Psychology, these two central Social Sciences. Having graduated in both, and in the Master's Degree at Marquette University, and

later the PhD Degree at the University of Wisconsin at Madison (UWM), I found there the time and academic resources to deeper address these questions.

We cannot imagine a society without human beings, and we cannot imagine a human being isolated from a social context. This concern persecuted me and I searched for a way to overcome this supposed dichotomy. Once more, following the reasoning I am developing here, it was the concept of relation that helped me not to fully explain, but at least to foresee and then to demonstrate that there is a way out of this apparent dichotomy.

The discussion about the real nature of the social has been in my mind since the beginning of my academic experiences. It has always been one of my most important concerns. We use the term social in many different occasions and circumstances. When one brings it into discussion and starts questioning it, very surprisingly he will discover that it carries different meanings, some of them almost in opposition to each other. Few students, and even few scholars, in the field of the Social Sciences have the courage to face the challenge, deeply examining and discerning among these different understandings of the social. The consequence of this is that if one does not have a clear understanding of what he understands by social, the dialogue between discussions and papers remains a dialogue of deaf.

I came to this understanding of what *social* may be after many research and discussions. At the beginning, reading Durkheim, I became enthusiastic with his "discovery" of the social. Starting from its etymology, from Latin, *socius*, that means colleague, companion, or comrade, it carries the idea of other or others. If one names something as social it becomes clear that there are more, and that it—the social—is more than the sum of their parts. This was the intuition of the first sociologists. For some of them—at least this was what I listened from professors when studying sociology—the social is a *chose*, a thing. But at the same time the social does not subsist alone. It is, in fact, something real even if we cannot touch it. It constrains us, forces us to act in different ways. It is a creation of someone. So how it came about?

What is generally said is that just as the human body as a whole is something different from the sum of its parts, the social whole should constitute an entity that possesses a reality *sui generis.* Moscovici (1993, p. 110) comments that one cannot "remain suspended between the Charybdis of psychology and the Scylla of sociology." But it is also interesting to read what he, as a sociologist, says about his colleagues: "sociology has never severed the umbilical cord that joins it to psychology."

Later on, reading Durkheim in the originals, I started suspecting that the version of the first sociologists was not exactly how it has been told us. For example, see this passage of Durkheim (1982, p. 129):

> In addition, these consciousnesses must be associated and combined, but combined in a certain way. It is from this combination that social life arises and consequently it is this combination which explains it. By aggregating together, by interpenetrating, by fusing together, individuals, give birth to an entity, psychical if you will, but one which constitutes a psychical individuality of a new kind. Thus, it is in the nature of that individuality, and not in that of its component elements that we must search for the proximate and determining causes of the facts produced in it. The group thinks, feels and acts entirely differently from the way its members would if they were isolated. If therefore we begin by studying these members separately, we will understand nothing about what is taking place in the group. In a word, here is between psychology and sociology the same break in continuity as there is between biology and the physical and chemical sciences.

Following this path, I was happy reading some quotes from Freud where he affirms that there is not a pure psychology: "the contrast between individual psychology and social or group psychology, which at a first glance may seem to be full of significance, loses a great deal of its sharpness when it is examined more closely … In the individual's mental life someone else is examined, as a model, as an object, as a helper, as an opponent: and so from the very first individual psychology, in this extended but entirely justified sense of the words, is at the same time social psychology as well".

Now it comes the counterpart of this supposed dichotomy. When choosing a program of study at the Graduate School, at Marquette and at University of Wisconsin at Madison, I enrolled in the Program of Social Psychology. Surprisingly I discovered that there were two Programs of Social Psychology: one at the School of Sociology and another at the School of Psychology. I started to see that the dilemma was not only mine. I kept searching for a possible solution and I applied for the discipline of Social Psychology at both Programs.

My surprise grew even more when I discovered that in both disciplines this discussion was not brought into question and the notion of social assumed in both fields was fundamentally individualistic, a characteristic of a human being understood as an individual, as I discussed above. We can refer to the following quotation from one of the "fathers" of the American Social Psychology, Allport (1924), in his classical *Handbook of Social Psychology*, always listed as a required reading in graduate courses:

> There is no psychology of groups which is not essentially and entirely a psychology of individuals. Social Psychology must not be placed in contradistinction to the psychology of the individuals; *it is a part of the psychology of the individual,* whose behavior it studies in relation to that sector of his environment comprised by his fellows… Psychology in all its branches is a science of the individual (Allport 1924, p. 4) [emphasis in the original].

I came to understand this American *weltanschauung* in the 1990s, when I came through the now classical book of Robert Farr, at the London School of Economics and Political Science (LSE), and invited him to discuss this curious situation at the Pontifical Catholic University of Rio Grande do Sul (PUCRS, Brazil). At that time, he was also struggling with this problem and finishing his only book comprising 25 years of research on this topic, *The Roots of Modern Social Psychology* (Farr 1996). Interesting enough, one of his main concerns was to discuss and rescue the reflections of an American philosopher, George Herbert Mead (1932), and his concept of self. Looking attentively to this concept, I found in it most of what I was understanding by person relation. A human being is unintelligible out of his relations: he is a synthesis between mind and society, constituted through the language, something truly social.

In this pilgrimage, I came through the book of Israel and Tajfel (1972), where I found some clues to shed light over this problem. The first chapter of this book is written by Serge Moscovici, *Society and Theory in Social Psychology,* where he discusses different approaches to this area. What struck me and caught my attention was item 4, where he asks: *What is "social" in Social Psychology?* (Moscovici 1972, p. 54). He presents there his famous schema, trying to overcome the opposite

models of Social Psychology, one emphasizing the object (taxonomic model) and the other emphasizing the subject (differential model). He presents a new model. In his words: "The relationship between Ego and Object is mediated through the intervention of another subject; this relationship becomes a complex triangular one in which each of the terms is fully determined by the other two" (p. 52).

This was for me a step ahead. Despite this "fully determined by the other two," the supposition is still the presence of more. I was asking myself: Is it possible to merge these two or more into one? Is there another way to understand the social? The social is created through the conversation and negotiation of persons, it has authors, originators, even if you cannot identify them; and it cannot become real, that is, become social out of this process. It is not, however, a social reified, a crystalized entity.

Later, in the 1990s, deepening in the thinking of Moscovici I found new lights that helped me to clear up, to some extent, this dilemma. I started trying to understand and apply in research his concept of *Social Representations* (SR). In the concept of SR the subjective aspect—I would better call the psychic—is always present. He clearly states in one of his central books—*The Invention of Society* (English translation in 1993)[4]—that he had written the book, as he emphasizes, trying basically to account for this dichotomy. At the *Introduction—The Problem,* he states that the main reason why he wrote the book was to recover the psychic dimension that Sociology supposedly had lost. He strongly criticizes those who affirm that social problems can only be explained through social causes, where the social rules out the psychic dimension.

To fully understand what Moscovici wants to say in his 500 pages' publication, we must read attentively his *Introduction.* First, we need to see clearly what he understands by the psychic. For him, psychic is not opposed to the social. In the ordinary language and even in the suppositions of most of the social theories, psychic is related to subjectivity, and social is related to objectivity (real, concrete). But he wants to clarify that there is also a psychic that is social and in this sense, it is also objective—real, concrete, a phenomenon, even if not tangible. This is precisely the novelty*,* the innovation of the concept of SR, as I discussed deeply and in detail in a recent article (Guareschi 2017). What he criticizes is the reduction of the social as the only objective as most of the sociologists seemed to defend. He intends to show that the great well-known sociologists cannot be fully understood out of a psychic dimension: Durkheim when discussing religion in *The Elementary forms of Religion;* Weber in *The Protestant Ethic and the Spirit of Capitalism;* and Simmel in *The Philosophy of Money.*

It is my understanding that if one assumes the human being as a relation problems like the one presented by Moscovici can be better understood. Even though he criticizes a psychologist approach that is reductionist when taken as the expression

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[4] The book was first published in France as *La Machine à faire des dieux*—Paris: Fayard, 1988. The English translation by W. D. Halls (1993) brings a new title, *The Invention of Society.* What is new is the suggestive sub-title added by the editors to it that brings the dilemma into discussion: *Psychological Explanations for Social Phenomena.*

of psychic dimension, the dichotomy remains. However, the problem that I want to point out is that when one tries to understand a social phenomenon one can never forget that there is always a relation, or a set of relations, intrinsic to it. Putting it more clearly, it is this relation, or this set of relations that constitute this phenomenon. And this applies also for a group, a community, and a society: what constitute them are the relations.

Methodologically, one must start searching how these relations appear in a specific moment, in specific circumstances. This is an infinite process. We try to do what is possible, to approach as closer as possible the mystery of the phenomenon, and be sufficiently humble to accept that we will never arrive at the core of this mystery. For me, the concept of relation helps to closer address this reality. In my perception, this is what Augustine did for the Trinity; what Marx did for human being; and what we can do for all other social phenomena. Taking some risks, we could go even further and say that this can also be applied to objects, understood as the sum of their total relations.

What Is a Group, a Community, a Society?

If one goes through the literature about groups, community, and society he will be confronted with an enormous body of theories, reflections, and investigations. It is not my intent to enter at this moment in a discussion about theories, their value, and power of explanation. I will only address some considerations already suggested in the previous pages concerning the usefulness of the concept of relation in dealing with groups, community, and society. I will try to be brief and go straight to the core of the problem.

In some occasions, when I tried to introduce this discussion using the concept of relation, the participants questioned me saying I was taking a quantitative approach. Why? The reasoning goes this way: One must start reflecting and questioning when someone says that there is a group. For example, is there a group when we count five persons? The answer is yes. And when we count 500, is still there a group? The answer is not completely unanimous, but still is yes. And when only young people are present, or old ones; or only women, or men; or only black or white people, is there a group? The answer is always yes.

We can conclude then that what makes up a group is not a specific number, nor age, or sex, or the color of the skin, and so on. What then constitutes a group?

We are approaching the point. Let's start from a negative standing: If more persons do not have anything in common, if they do not know each other, not even that the others exist, can he still say that there is a group? Obviously not. What he certainly has are stakes in the same place. When, then, can we say that there is a group?

My answer would be that a group exists when there is a relation among different realities (persons, object, circumstances, and so on). Once again, this term comes into the scene. I invite the reader to go deeper in this consideration: What concretely constitutes the group?

Let's advance in the reflection. People generally belong to different groups. Why and how? One answer can be—and this is what I want to call attention to—that people do not always merge themselves completely, totally into a group. People join different groups according to different interests they want to share. These sharings are part of themselves, are the specific relations they want to share out of the sum of their total relations that constitute them. And they orient these sharings, these relations, towards different groups, becoming this way participants in many groups.

Now concluding: What constitutes a specific group? It is not difficult to see that the group is constituted by the sum of all the relations each one wanted (or was obliged) to share with that specific group. It can be 5%, 50%, more or less according to his/her commitment to this group. One can only say that he belongs to a group if he puts in it something of his being, his shared relations.

In the same way, one can apply this reasoning to investigate a specific community or to study a society. Of course, one cannot see the relations. However, the real essence of a group, a community, or a society are the relations. Evidently, one cannot measure these relations, nor quantify them. Relations imply *meaning*, and meaning is not subject to numbers or measurements, but only to comprehension and interpretation. This does not mean that meaning is not there, at the core of a group, a community, or a society.

An Account for the Interconnection Between the Concept of Relation and the Dichotomy Theory vs. Practice/*Praxis*

Trying to choose and discern among so many approaches to Social Psychology, I went through the insights and contributions of a great number of scholars and schools. One of them was the so-called Frankfurt School (Critical Theory, *Ideologiekritik*). Their contributions helped me to advance in my searching to understand basic social questions specifically in two main points: first, to see more clearly the intrinsic relation between theory and practice, through the reflection of what *action* is; second, which problems to choose and how to proceed in my investigations (as I will discuss in point 4).

The reason I wanted to discuss the concept of *action* is that through the contact and partnership with Paulo Freire, in Genève, I started understanding the importance to overcome a very serious dichotomy that I noticed mainly in my scholarly experience when studying in US Universities. It was difficult for me to understand and accept how a University professor and a researcher of social issues could remain distanced from popular movements and from the *actual* life of society. Of course, most of this restlessness was due to my Latin American experiences and my participation in political activities. I wanted to go deeper in the understanding of this surprising, at least for me, division between theory and practice.

The first clues to deepen this reflection came from the readings of some authors of the Frankfurt School tradition. I was told by some of my colleagues that this School could be defined as the "marriage between Freud and Marx." I sympathized

with this expression because these were two of my main inspiring authors. One of the first contacts came from the book of Raymond Geuss who I met many years later in Cambridge: *The Idea of a Critical Theory*—Habermas and the Frankfurt School. He presents the presuppositions of the School saying that

> Critical theories have special standing as guides for human action in that: (a) they are aimed at producing enlightenment in the agents who hold them, i.e. at enabling these agents to determine what their true interests are; (b) they are inherently emancipatory, i.e. they free agents from a kind of coercion which is at least partly self-imposed, from self-frustration of conscious human action (p. 1–2).

I found there the same insights of what Freire discussed through his main construct, *conscientization,* a process of growing in the personal awareness of what and why we are the way we are, and why the circumstances in which we live are this way.

What challenged me was what these authors meant by to act and action; and why actions are enlightening and emancipatory. In my point of view, actions could also be the opposite, that is, obscuring and dominating. This question of what action is certainly forced upon us. The Danish philosopher Von Wright, asserting that maybe we will not find a complete answer for all the cases, gives the following definition: "To act is intentionally ('at will') to *bring about* or to *prevent* change in the world (nature). By this definition to forbear (omit) action is either to *leave* something *unchanged* or to *let* something *happen*." (von Wright 1968, p. 38) [emphasis in the original]. Departing from this statement, I arrived to a framework that really contributed to understand many of my social and political activities. A human being, living in society with others, can perform many kinds of action (see Table 2).

The conclusion I arrive at is that, by living in a society constituted by relations—and here again the concept shows up—it is impossible not to act. There is an intrinsic link between relation and action. One can only arrive at this conclusion if he assumes society as a set of relations. If one assumes it as a static and fixed system, according to the assumptions of a functionalist theory of society, the concept of action changes drastically. If one assumes society as an ongoing set of relations he cannot avoid to act: in each of the types mentioned above, he is always doing something, even when there is no visible action.

Table 2 Different kinds of action (practice/*praxis*)

To act actively or passively	Types of action	Final effects: what really matters
One acts actively: there is a visible action	1. Bringing something about	– Something happens: there is a change
	2. Preventing a change	– Nothing happens: thing remain as they are
One acts passively: there is no visible action	3. Letting something happen	– Something happens: there is a change
	4. Leaving something unchanged	– Nothing happens: things remain the way they are

Source: von Wright (1968) and Guareschi (2003)

The reading of an article of Israel (1972) helped me to go deeper in this discussion and find some ideological implications present in some assumptions of what action is:

> This analysis [referring to quotation of von Wright stated above] throws some light on the consequences of the attitude taken by a majority of traditional social scientists. They claim that their position with regard to society is neutral, and that social science in the name of value-freedom should not participate in social action. In other words, far from their own claim that they do not take a normative stand, their position can be characterized by the norm not to act at all … a scientist ought not to act at all. Thus forbearance or omission is his normative position. But, since forbearance either means to "leave something unchanged" or "to let something happen", the representatives of this type of "positivistic" science either – willingly or not – support conservatism or become passive witnesses when things happen. To be conservative is to take a definite stand on matters of value. Therefore the "positivistic" accusation levelled against those rejecting this "positivistic" position, for not being value-free, becomes a boomerang. If, on the other hand, one "lets things happen", one makes oneself accessory in that which happens. This position is not less value-free than the one taken by those recommending an "emancipatory social science". The latter position seems to be preferable from a moral point of view (Israel 1972, p. 204).

The fallacy hidden behind the assumption of a functionalist approach to society is that we can *separate* ourselves from what society is. An expression I read in a book of Michael Löwy helps to clarify this point: "In the river of history, there are no contemplators of the river: *we are the river*" [emphasis in the original]. The dichotomy between theory and practice in the academic work ignores that we are part of the river or society. In this river, whatever one does, he is acting: either changing the riverbed, damming on the river, leaving the river overflood, or maintaining the river the way it is with all possible consequences deriving from this decision. Action, whether active or passive, must be considered in its final effects. Action must be understood in a relational dimension. The emphasis is again on the concept of relation. In this sense, it is impossible not to act.

Along the same path follow the reflections of Paulo Freire and Serge Moscovici, two authors that inspired most of my investigations. The reason I bring them to this reflection is that both have as central the importance of the impossibility to separate theory and practice. Better, the concepts we use and the theories that inspire our investigations are themselves practices.

A first point to emphasize in Moscovici is that Social Representations (SR) are not a concept, they are a phenomenon: "So what I propose to do is to consider as a phenomenon what was previously seen as a concept" (2000, p. 30). In the first paragraph of his seminal book, *Psychoanalysis, Its Image and Its Public*, he clearly states his presuppositions: "We know that they correspond, on the one hand, to the symbolic substance that goes into their elaboration and, on the other, the practice that produces this substance" (2008, p. 3).

These features—their specificity (symbolic substance) and their creativity within collective life (the practice that produces this substance)—make social representations different from the sociological and psychological notions with which we have compared them, and from the phenomena which correspond to them.

The term relation is continually present in his writings. It is in his book *Psicologia das Minorias Ativas* (Moscovici 2011) where he clearly states the impossibility of separating theory and practice. For him, SR are action, practices. What he intends to show in this book is that these are practices that bring change, not reflections, or theoretical concepts. He calls these practices a behaving style. The style is a manner, a method, a way, a practice that is a specific kind of relation.

He points to three main styles, relations: autonomy, an "independence of judgment and attitude that reflects the determination to act according to their own principles" (Moscovici 2011, p. 120); coherence and consistency in action, the central *style*, where one can check through time and compare what one says with what one does*;* and justice, equity, which basically means "the concern to take into account the position of the other" (Moscovici 2011, p. 148), an Ethics of alterity.

As for Freire, 13 books, out of his more than 30, carry the word pedagogy in the title*,* meaning that the essential content of the pedagogical affair is the practice*,* the interactions in behavior, the way a teacher behaves. What really remains from one's teaching is his pedagogy, his didactics, with their tacit assumptions present under the presuppositions underlying his relations, practices; they constitute the real content of one's teaching. The term he employs to express his understanding of the inseparability between theory and practice is *Palavração (Wordaction)*: "*the word made flesh"*.

An Approach of Areas of Investigations Inspired by the Concept of Relation: Ideology and Communication

Two main areas within Social Psychology challenged me when going to the battle-field of the empirical social world, namely problems related to Ideology and to Communication. As I mentioned before, I see now that I was certainly influenced by the contributions of the Frankfurt School. It was not by chance that this School is also known mainly in Germany as *Ideologiekritik,* that is, a critique of ideology; and most of the investigations conducted by scholars belonging to this School are concerned with communication.

I was already under the influence of these researches when I came through the following statement by Moscovici: "The central and exclusive object of social psychology should be the study of all that pertains to *ideology* and *communication* from the point of view of their structure, their genesis and their function" (2000, p. 110), [emphasis in the original]. These two concepts/constructs ended up accounting for most of my investigations.

I started reflecting about ideology in a book I wrote, "in dialogue with Erik Wright," when living in Wisconsin, that carries the title *Sociology: Class, State, and Ideology* (Guareschi 1992)*.* To clear up this notion I tried to systematize more than 50 different understandings of the concept in four different conceptions, according to two axes: the positive and negative (critical) axes. Here we have a clear division according to the understanding of Ideology as something negative that brings illusion

Table 3 Ideology: axes and fields

IDEOLOGY
AXES AND FIELDS

1st Axis:
Positive

Cosmovisions

The use of Symbolic forms
to produce, or Reproduce our
subjectivity

2nd Axis:

Values

Static ←——————————————————————→ Dynamic

Apparatus
of domination

The use of Symbolic Forms
to produce, or reproduce relations
of domination

Negative
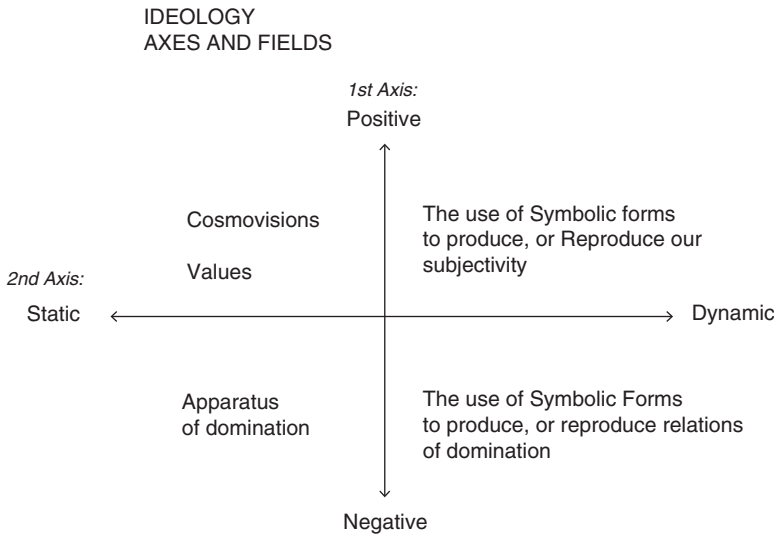
Source: Thompson (1990)

and deceiving; or as something positive, neutral, a kind of cosmovision, a set of ideas or values. And a second axis, segmenting the two meanings of the first axis in other two dimensions: a static dimension, and a dynamic, practical dimension, completing four areas or fields (see Table 3).

This figure is inspired by discussions with John Thompson (1990), from Cambridge, based in the book *Ideology and Modern Culture,* which I translated into Portuguese. Out of these four fields, I chose for my investigations the ~~fourth~~ fourth field, considering ideology as the use of symbolic forms to create, or reproduce, relations of domination. Here again the concept of relation comes into the scene. The social world is constituted by relations. They can be positive, or negative, critical; and they can be static (like culture, understood as a crystallization of these relations), or dynamic, that is, practices. The last one is the conception I adopted and discussed in several publications (Guareschi 1992, 2003, 1984/2015).

A second area of research I developed, in which I am still working hardly, is the area of communication. Within this area I emphasized a critical analysis employing most of the times the concept of ideology, mainly in instances and problems where domination over people and their manipulation were registered. Surprisingly, I am discovering here the two dimensions of *action* I mentioned above when discussing the assumptions of the Frankfurt School: that actions "are aimed at producing enlightenment"—here the other side, manipulation; or are "inherently emancipatory"—here domination.

The researches in the area of communication materialized in several other publications. Maybe the most important is *Os Construtores da Informação*, where 11 researches conducted within my research group are reported and discussed. Other publications in the area are Guareschi (2013) and Guareschi et al. (2017).

Conclusion

If someone asks me what would be my most important contribution to the area of Social Psychology I will promptly answer that theoretically it is the specific use I make of the concept of relation; and empirically, the investigations I conducted in the area of ideology, in the critical sense, and communication. During my academic career, and even now, I find myself happy with this concept of relation. It helps me to better understand the human being, the groups, the community, and the society. In my pilgrimage through the battlefields of the Academy the concept of relation helped me to shed light over many realities of the social.

The areas of research I tried, and I am still trying to investigate, are specifically the fields of ideology and communication. The last book I coedited (Guareschi et al. 2017), *Psicologia, Comunicação e Pós-verdade* [*Psychology, Communication, and Post-Truth*] is exactly a reflection about the social media at the present moment.

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Child Development in Context: From Clinical Remediation to Promotion in School

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Edna Maria Marturano

Abstract I immersed myself in research about 50 years ago, when Brazilian psychologists had just obtained the official recognition of the profession. The work that would gain the preference of colleagues and students began when I became responsible for a child psychology clinic at the Medical School of Ribeirão Preto. The prevalence of school-related difficulties among the clients of this clinic led to the examination of the conditions associated with the academic and socio-emotional development of school-age children. A small but committed team has accumulated empirical evidence of interactions between family, school, and child variables that influence development under adversity or life transitions. Inspired by an optimistic view of development, we found interpersonal relationships as the root of difficulties and also the way to protect children through socialization in the family and school contexts. As a result of studies carried out in real-life contexts, with a focus on concrete problems faced by children, the research contributed to the formulation of programs to support children for dealing with interpersonal demands. Throughout the text, I recover significant steps of this collective construction. The chapter ends with some reflections on what could be seen as my personal contribution to the development of Brazilian psychology.

About 50 years ago when I began research, Brazilian psychologists had just been granted official recognition. It was a time when a few pioneers were still fighting for psychology to be recognized as a science and no longer as a branch of philosophy.

Psychology had not been my first professional choice. It was not even a possibility, since the profession was not yet officially established when I was considering career options in the 1960s. My involvement in psychology happened by chance. When I realized that it would not be possible to study linguistics and literature in the capital city due to financial limitations, the newly established psychology course of the School of Philosophy, Sciences and Letters of Ribeirão Preto, where I lived, admitted students for the first time. It was December 1963, 1 year after the enactment

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of Law 4119, which officialized the profession and provided training courses for psychologists. It was a leap of faith. I was admitted after the entrance examination and began college.

My passion for the science of human development emerged in the second year of the course, when we attended Professor Tereza Mettel's classes. It was then that I decided I would dedicate myself to the promotion of child development in the school context. In this chapter, I will report my trajectory to achieve that goal.

From School to Clinic: A Turning Point

I completed my PhD studies in Experimental Psychology in 1972 under the supervision of Professor Carolina Bori, with whom I learned the logic and ethics of research in psychology. I carried out a series of observational studies with pre-school children interacting with their mothers. As an independent researcher, I began research in my field of interest—child development in school contexts. I introduced a method of observation and analysis of classroom behavior, first in kindergarten and then in elementary school, supported by image recording technology, which was a novelty at the time (Marturano 1980).

When I was hired as a professor at the Medical School of Ribeirão Preto in 1974, I was given two assignments from the head of my department. First, I would have to reinstate the child psychological clinic for children aged 6–12 years, which had been closed since the professor who preceded me had left; once the clinic was reopened, I would have to organize an in-service training program for psychologists. I started work by analyzing the demand and reasons for referrals of requests for consultation. I realized that school problems were the main reason for the referral of children for psychological services, a finding that would be present in the following decades in Brazilian clinics (Carvalho and Térzis 1989; Campezatto and Nunes 2007; Santos 1990).

It was an embarrassing finding. In Brazil, there was a strong movement against school problems being treated by the health care system, as it was considered as "psychologization" of school failure, a way of blaming the victim. The movement is justifiable. Even nowadays, more than 25% of people are functional illiterates in Brazil. At that time, the situation was even worse: approximately 40% of students from public elementary schools were held back in school. Statistics revealed the fragility of the Brazilian public education system. In this context, it made no sense to refer children to a doctor or psychologist because of learning difficulties. However, when we became close to the families who attended the clinic, it became clear that something else was affecting those children besides learning. They presented signs of psychic suffering. The referrals to the clinic were the culmination of a chronic adverse situation for them, which tended to persist over time. And we, those who received the requests for consultation at the clinic, were faced with a disturbing question: How did school problems affect the child's emotional health?

Caught between the dilemma of joining the long-standing collective movement or meeting emerging individual needs, I chose the second alternative. The first step was to organize the clinic to provide psychological school service, which was, at the same time, a research field on community demands and professional training program to meet those demands. The second step was to develop a line of research to explain the question that troubled us. From then on, it was possible to develop practices to provide support to the children and families based on the results of the research developed at the clinic.

My choice took its toll. For a while, which seemed long, I had to swap the school for the clinic as a field of research and work. However, looking back now, I think it was worth it.

Over the course of years, a cohesive and determined team was formed, which included my department colleagues Sonia Regina Loureiro and Maria Beatriz Martins Linhares. Vera Lucia Sobral Machado, from the School of Philosophy, stayed with us for a while before retiring. After the establishment of the Graduate Programs in Mental Health and Psychology at the campus of Ribeirão Preto, graduate students joined the group with great enthusiasm. Many of them, after their in-service training at the clinic, were professionals who were familiar with the complaint of school problems and, therefore, they were able to formulate research questions based on our original question. Some of these graduate students, such as Luciana Carla dos Santos Elias, later developed their own lines of research focusing on school-aged child development.

One of the concerns of the team in the early days was to establish a conceptual and empirical framework for research. The empirical framework was based on the literature on school learning. At that time, empirical research on school learning was going through an important transition, changing the focus from sociodemographic factors to the search for mediating processes between those factors and the results of the child's development. Important references were the studies by Bradley et al. (1988), and Stevenson and Baker (1987).

We found the conceptual framework in Developmental Psychopathology (Sroufe and Rutter 1984). This new discipline understood normal and atypical development as two poles of a continuum, and so it was well fitted for the clinical and developmental peculiarities of our target population. With the support of the developmental perspective, we determined the line of research considering the concept of developmental task and the notions of resilience, competence, resources, mechanisms of risk, protection, and vulnerability. School problems, a condition acknowledged by schools and family, was postulated as an adverse event that places children at risk for psychosocial maladaptation as it directly interferes in self-perceptions related to academic achievement, one of the main tasks in the child's development. The research goal we established was the search for child and family resources that could work as mechanisms to protect children's development in view of school adversity.

The focus on resources rather than deficiencies was then a novelty among Brazilian psychologists in the 1980s. When we presented papers at conferences, the audience was fascinated by the notion of resilience, which was not widespread in Brazil as a concept associated with human development. I believe I was the first to mention the subject in a Brazilian scientific paper (Marturano et al. 1993).

First, it was important to delimit and operationally define the concepts representative of the developmental perspective that were compatible with the focus of our research. Once the variables of interest were selected, we investigated the assessment instruments available in Brazil, whose results were later discussed (Marturano et al. 1997b). At the same time, we developed measures for the concepts not addressed in the national instruments (Marturano 1999; Santos and Marturano 1999). Thus, the Family Environment Resource Inventory was developed (Marturano 2006), which has been used and quoted by Brazilian researchers on a regular basis since its publication.

The research widely supported the clinical observation of children affected by psychic suffering (Marturano et al. 1993, 1997a). Through group comparison designs and follow-up studies, our small, but committed, team collected empirical evidence from interactions between family and child variables that influenced the child's school development in the midst of adversity. Elementary school students with poor school performance whose families sought health care were exposed to greater environmental adversity, when compared with students at the same level of school performance whose families did not seek help outside of school (D'Avila-Bacarji et al. 2005). When the school problem was associated with externalizing behavior problems, children experienced several difficulties in the interpersonal domain, such as punitive parenting practices and exposure to aggressive adult models at home (Ferreira and Marturano 2002). The children had impaired self-concept and low sense of self-efficacy for school tasks when compared with children with satisfactory school performance (Medeiros et al. 2000; Stevanato et al. 2003).

The follow-up studies of the children who attended the outpatient clinic pointed to the interpersonal domain as a prominent predictor of developmental outcomes. We found that interpersonal variables influenced children's improvements observed at the clinic, the maintenance of these gains and further improvements in adolescents' mental health. Children whose difficulties were limited to school performance became well-adjusted adolescents in the academic and interpersonal domains, with positive self-image indicators. In contrast, children with early relationship difficulties associated with school problems showed persistent academic difficulties and vulnerability to severe psychosocial problems in adolescence. Relationship difficulties, a precursor to psychosocial problems, were identified in the family (Santos and Marturano 1999) and with peers (Campos and Marturano 2003; Marturano et al. 2004a).

The main results of the investigations on school problems were collected in the book "Vulnerability and protection: Indicators in the history of school development" (Marturano et al. 2004b). These results supported the development of empowerment strategies for children to deal with adversity in school and interpersonal domains. To strengthen the child's resources to deal with adversity in school, we proposed language workshops that aimed to promote a positive sense of self-efficacy in school tasks and a favorable attitude towards reading and writing. In a pilot study, language workshops were associated with improved school performance, homework, attention, and internalizing problems, such as anxiety; interpersonal problems, such as withdrawal and aggressive behavior, were not affected by the intervention (Elias and Marturano 2005).

In a follow-up study, emotional and academic improvements were confirmed and maintained 6 months after the intervention (Elias and Marturano 2014).

For the development of interpersonal skills, we developed an adapted version of the program "I Can Problem Solve"—ICPS (Shure 1993). The ICPS program was published by Shure in 1993 for teachers to use in the classroom. With the author's permission, two graduate students, Luciana Carla Elias and Ana Maria Motta, and I translated and culturally adapted the program, which included the adaptation of content and replacement of some of the original pictures by other objects and situations more familiar to the children for whom the program was intended. For example, a sequence of illustrations depicting two children making a snowman was replaced by one with a sand castle on the beach.

The adaptation to the clinical context was carried out by Motta (2003) who obtained excellent acceptance from children with school problems in small groups during 20 weekly sessions. In this population, ICPS proved to be more effective than the language workshops for reducing aggressive and antisocial behavior, and equally effective for improving performance on school tests (Elias et al. 2003; Elias and Marturano 2014). Positive effects were maintained in the 6-month follow-up (Elias and Marturano 2014).

The two programs were adopted at the clinic and are still used for children and professional training. We have published the adapted ICPS program (Shure 2006), which has enabled studies on ICPS effectiveness in Brazilian schools. More recently, we shared the adapted ICPS program to clinical context with the community (Elias et al. 2012). We have also shared the organization and functioning model of the clinic (Elias et al. 2013) with the purpose of exchanging knowledge between the university and community and disseminating professional practices sensitive to local demands (Marturano et al. 2014).

Throughout the period dedicated to research on school problems, I received funding from Brazilian agencies. The funding for the Integrated Research Project was granted by CNPq from 1989 to 2000, which ensured the continuity of studies, and the FAPESP Thematic Project Grant, from 2000 to 2003, made it possible to translate knowledge produced into evidence-based practices and assessment tools with good psychometric indicators.

As of 2000, after the health care service model and professional training at the clinic was consolidated, I was able to restart work at school. Twenty-five years later, I was once again working with kindergarten and elementary school students and I experienced new concerns.

Back to School

The first investigation was motivated by the inquiries of a graduate candidate who was a first-grade teacher in a public school in the municipality. Dâmaris Simon Borges posed a concrete problem: How can we deal with the difficulty of maintaining students' attention during classroom lessons? How can we deal with so many

conflicts in the classroom? This was a recurring problem in schools, so Damaris and I decided to start a classroom intervention project that would be applied by the teacher to improve relationships among students. This happened in 2000. Years later, Damaris expressed her own expectations concerning the intervention: "… I was looking for an intervention program that would miraculously solve behavioral problems in the classroom" (Borges and Marturano 2012).

Where should I begin? Damaris' training and teaching experience was within a cognitive perspective and I had the ICPS program, a manualized program framed within the socio-cognitive approach. We started with a pilot trial to evaluate the effectiveness of ICPS (Borges and Marturano 2002). We assessed the interpersonal problem-solving skills of children before and after the intervention, comparing the group that participated in the ICPS program with the group that did not. We also used a field diary to record the conflicts among children during the year the group participated in the ICPS program. The program proved effective in increasing interpersonal problem-solving skills. The analysis of the field diary indicated a continuous decrease in conflicts from the beginning of the intervention in March until July holidays; however, there was a rebound after the holidays so that, in the end, the frequency of conflicts did not differ between February and October.

Based on the feedback from this experience, we planned a multimodal intervention in which the ICPS program was combined with self-control training and a module on human values with the purpose of expanding the repertoire of pro-social responses and pro-social motivation of students (Borges and Marturano 2009, 2010). This intervention presented more stable effects than the ICPS program alone. Children increased their interpersonal problem-solving skills and decreased participation in conflict. Children who participated in the intervention perceived their partners as more supportive and became less susceptible to daily stresses of the school environment (Borges and Marturano 2009). The program was named Literacy in Human Values (Borges and Marturano 2012). Its development was an exciting adventure during which the children taught us many things about respect, justice, and how to work and have fun together. We are currently working on a teacher training project for the implementation of the program.

Marlene Trivellato Ferreira participated in the second investigation at school. We were both intrigued by the results of her master's research, which has been the most cited article published during the clinical stage of my academic trajectory (Ferreira and Marturano 2002). In that study, we compared two groups of children, based on the presence or absence of externalizing behavior problems associated with school failure. We found that children without behavioral problems lived in more supportive and nurturing home environments. The resources that differentiated this group were typically present in the family interactions directly involving the child. We were then curious to see if, and to what extent, the relationships between the resources from the family environment and the emotional health of the child would be reproducible in a sample of the community recruited at school and not at the clinic.

We thought that the family influence could be best observed at a challenging time for the child, and we considered elementary school admission to be one of those moments. At that time in Brazil, many children began elementary school without

any previous school experience, and those who had gone through early childhood education needed to move to another school when starting the first grade.

The first year of school is a challenge due to the new demands, such as dealing with unfamiliar adults, gaining acceptance in a new group of peers, adjusting to new rules, and confronting more challenging performance requirements. We soon realized that a developmental conception that would include life transitions and multiple developmental environments as key concepts was needed to guide research. It was with great excitement that Marlene and I turned to the writings of Urie Bronfenbrenner (Bronfenbrenner 1996; Bronfenbrenner and Morris 1998) in search of support to investigate the transition of the first graders as an ecological transition.

From this point on, the research at the school took place in three areas. One of them focused on the transition after admission to elementary school from the perspective of the child who experiences the daily stresses of transition (Marturano 2008). The first study on the subject evidenced the importance of the child's resources and family support for the accomplishment of the adaptive tasks of transition, as well as the protective effect of early childhood education in view of transition stress. In contrast to the research conducted at the clinic, the resources from the family environment were more strongly associated with indicators of competence than with emotional health indicators (Trivellato-Ferreira and Marturano 2008).

In subsequent research after transition, intensity of daily stress in first graders was associated with poorer academic performance and more externalizing behavior problems (Marturano and Gardinal-Pizato 2008; Marturano et al. 2009). However, contrary to the initial hypothesis, it was in the second grade of elementary school, and not in the first, that children reported greater susceptibility to daily school stressors (Marturano and Gardinal-Pizato 2010).

Two results of the first area of research motivated the definition of the second one, which focused on the development of competencies relevant to the challenges of childhood, in which school and peers become relevant contexts (Masten and Coatsworth 1998). The first finding was the prominent role of the child's resources and disposition, as defined by Bronfenbrenner and Morris (1998), to predict the adaptive outcomes during the transition of the first grade (Marturano and Gardinal-Pizato 2008; Trivellato-Ferreira and Marturano 2008). The second finding was related to the protective effect of childhood education on stress symptoms and perceived school stressors, an original contribution of our study, that are convergent with the evidence that pre-school education programs have positive effects on social-emotional development (Sassi 2011).

In the second area of research, through longitudinal studies with socioeconomic-level control, the importance of access to early childhood education for positive trajectories in elementary education was confirmed, either due to better academic results, improved social skills, or fewer internalizing emotional problems (Gardinal-Pizato et al. 2012, 2014). However, time spent in early childhood education did not clearly differentiate those children who had had 1 or 2 years of education when the same variables were compared. Children who stayed longer in childhood education

only differed in their higher sociometric measure of preference from their class-mates (Pereira et al. 2011).

During the development of the research, there was a change in the Brazilian educational system that affected the course of the investigation: the age of admission to elementary education changed from 7 to 6 years. This fact led us to check the results obtained because of the possible developmental implications of the change. We then designed a research program to verify if we would replicate the results described above in the new educational scenario. The program, which began with the doctoral research of Correia-Zanini (2013), contemplated extended models of prediction, which included, in addition to the previously investigated variables, predictors related to the quality of the elementary school.

Correia-Zanini followed the development of children from the first to third year of the 9-year elementary education and carried out annual evaluations. In the first year, stress symptoms were predicted by a pool of school variables including average student performance, school location (suburb vs. downtown), daily stress with peers, and daily stress related to studies (Correia-Zanini et al. 2016). The research confirmed the previous results obtained in the 8-year elementary schools (Gardinal-Pizato et al. 2012, 2014; Marturano and Gardinal-Pizato 2008, 2010; Trivellato-Ferreira and Marturano 2008). The relevance of the child's resources in the prediction of outcomes, the protective effect of early childhood education, and intensification of stress in the second grade were reaffirmed (Correia-Zanini and Marturano 2016; Correia-Zanini et al. 2017; Crepaldi et al. 2017). The indicators of elementary school quality were associated with academic performance and stress symptoms (Correia-Zanini et al. 2016). The trends observed suggest that the effects of transition between early childhood education and elementary education extend throughout the second grade, and developmental achievements are consolidated in the third grade.

As for early childhood education, the contribution of the study was that children who stayed longer in pre-school education achieved better results, a finding that had not been clear in previous studies of the group. Same-age children showed better performance and fewer stress symptoms in the third grade of elementary school if they had attended pre-school education for 2 years instead of 1 year (Correia-Zanini et al. 2017). However, this finding is still an isolated result that further requires verification.

The strength with which school context variables emerged as influential factors of performance and stress in the early years of elementary school almost made us forget our initial inquiry about the relationship between the resources from the family environment and the child's emotional health. After the study by Trivellato-Ferreira and Marturano (2008), the subject was studied by Leme (2011). Leme's study investigated predictors of social skills, behavioral problems, and academic competence of children in the first grade of elementary school in different family settings: traditional families, single-parent families, and remarried families. In addition to the family setting, the predictors included in the research were parenting practices, the resources from the family environment, and the child's relationship with the biological father. The results indicated that negative parenting practices and

the quality of the child's relationship with the biological father were the best predictors of the child's behavior and academic competence. The family setting was not associated with the indicators of child adjustment (Leme and Marturano 2014). This matter still requires further research as there are many issues that need to be investigated.

The line of research at the school brought an original contribution regarding the role of daily stressors in the adjustment of children to the school environment. We proposed a theoretical model (Marturano 2008) and developed an instrument to assess the perception of stressors, which showed good indicators of reliability and construct validity (Marturano and Trivellato-Ferreira 2016). With this instrument, we tested the hypotheses derived from the model. It was possible to confirm a few hypotheses and refine others. Circumstantial factors associated with changes in elementary education forced the replication of the studies, and this replication confirmed the previous results. We observed that at the threshold of elementary school, children perceive interpersonal relationships as potent sources of stress in school; that the children who were less vulnerable to stress were those who began the first grade with more personal resources developed in the family environment or in early childhood education; we found that stressors experienced at school were associated with stress symptoms; and that, contrary to what is postulated in the theoretical model, stress symptoms increase from the first to the second grade, a recurrent observation that we interpret as a consequence of the increase in academic demands in the second grade. We also found that stress levels decrease in the third year, although they are still high.

These results have clear practical implications. As we have discussed (Correia-Zanini and Marturano 2016), changes in stress symptomatology are suggestive of a process of adaptation to elementary education that would last from the first to the third grade. If reaction to stress is situational, as stress theory suggests, then children would be chronically exposed to stressful situations early in elementary school, with a high level of emotional distress. Thus, the implication of the results for education is outstanding in the sense that work should be carried out during the transition to minimize the stress children experience. It would be up to the school to implement practices that would favor a smoother transition.

The third research area, carried out in recent years, is related to the social commitment of the group to give back the investments made to our research to the community. The general goal is to develop evidence-based practices (APA Presidential Task Force on Evidence-Based Practice 2006) to prevent behavioral and academic difficulties in the school context, since such difficulties often co-occur and increase the risk for unfavorable developmental trajectories (Hinshaw 1992; D'Abreu and Marturano 2010). In accordance with the developmental perspective, the studies focus on practices that promote children's competences. These competences can work as resources to promote development under favorable conditions or as protection mechanisms against risk conditions (Masten and Coatsworth 1998). Given the relevance of interpersonal relationships in school, the main focus of the interventions has been the child's capacity for relationships and, according to the systemic view of development, the understanding that skill improvement in an adaptive domain

contributes to the improvement in other domains. It explores the possibility of the school intervening in these processes through teacher-led programs.

With the experience obtained in the ICPS programs (Elias et al. 2012) and Literacy in Human Values (Borges and Marturano 2012), I have participated in other initiatives in elementary education together with colleagues who are interested in intervening to improve the lives of children in schools.

In early childhood education, we are developing a program with group play activities and analyzing the applicability for children aged 2–4 years. Preliminary results indicate good acceptance and suggest the effectiveness of the intervention to increase the child's positive engagement with peers (Bonome-Pontoglio and Marturano 2010; Trivellato-Ferreira et al. 2016). However, these results must be confirmed by control group comparison studies.

In elementary schools, Luciana Carla Elias and I resumed our old partnership to assess the effectiveness of the "I Can Think Program" that she developed. The origin of the "I Can Think Program" was based on her experience during a teacher training to implement the ICPS program in public schools in a small city in the state of São Paulo. During this training program, 25 teachers received training in the first semester and applied the ICPS program with supervision in the second semester. In spite of the positive results reported by Elias et al. (2012), some limitations were pointed out by the teachers participating in the program. Among them, the difficulty of accommodating the program in the school calendar was due to two factors: (a) the extent of the program, 83 lessons; (b) the time teachers needed to set aside for the lessons, since the students' high enthusiasm to participate in the lessons frequently led them to exceed the estimated time of 30 min a day. Based on the participants' statements, Elias developed the "I Can Think Program" (Programa Posso Pensar—PPP) that included 40 interactive thematic lessons to promote sociocognitive skills by using stories and play activities.

The first test to evaluate the effectiveness of the PPP was conducted in a group comparison study with assessments before and after intervention, as well as a six-month follow-up. The results indicated that the group that participated presented better outcomes than the group that did not, considering academic achievement, social skills, and behavioral problems (Elias and Marturano 2016). The limitations of the method, such as the non-equivalence of the groups before the intervention in some criterion variables, motivated the replication of the research. At this moment, the team is conducting a large-scale field trial to evaluate the effectiveness of the PPP program.

Some Concluding Remarks

Real-life problems faced by children motivated our research team from the beginning. Inspired by an optimistic view of development, we found interpersonal relationships as the root of difficulties and as the way to protect children through socialization in the family and school contexts. The emphasis in interpersonal

relationships as privileged predictors of outcomes in the course of the development of school-age children further contributed to the formulation of support programs for educators and children, based on the strengthening of child resources for daily living in school.

So, we started with a focus on concrete problems in real-life contexts, and proceeded by inductive reasoning trying to understand what was going on. Gradually we came to predict some relationships that seemed to be crucial to the problems under study and then tried to act on them. Now we go on with plans to empower children for dealing with interpersonal demands, by means of evidence-based practices for teachers.

I think this way of inquiry is perhaps my most valuable contribution to Brazilian psychology. This is not a personal but collective contribution. I share it with all the researchers of my generation. Fifty years ago, there was no tradition of scientific research in Brazilian psychology. We, who have occupied the spaces of Brazilian scientific journals, ever since, publishing the results of our research, were responsible for establishing the basis of psychology as a science in Brazil. I think we provided models for the next generations. I see my team's work, in particular, as a fruitful model of inquiry about child development under mild adverse conditions.

I have to recognize that this kind of impact is not measurable. Roots also are not visible, but they are there indeed, supporting the tree.

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Vulnerable Children and Youth: The Psychology of Social Development Innovative Approaches

Silvia Helena Koller

Abstract My best research ideas came up when I was cooking dinner. It was on a black bean pot that I first thought of the Center for the Studies on At-risk Populations (CEP-RUA), still as a seed of my research, with the possibility of training psychologists to work in the context of people's development, and to have real outreach that could make sense in the lives of people. Nothing can combine well than by practicing a good theory in the execution of a striking bean casserole, with the thoughts floating in ideas about science. Moreover, cooking is a way to love and to do applied research is to show love for the work that is being done. CEP-RUA translates my most important career path and my best ideas over the years have been inspired by Sunday meals with my team around my kitchen table. Smoothly, CEP-RUA has become a reference in research on street children, girls and boys victims of violence and prejudice, and people of various ages who had their rights violated. Several other themes have covered CEP-RUA's years of work, in which theoretical, methodological, and ethical concerns have been developed that embrace the contexts and the people we work with. Studies were carried out on human development in its various ecological contexts, on positive aspects, well-being, and health. We proposed and implemented the bioecological engagement method and varied other processes of evaluation of the interventions and psychometric measures. This chapter describes this progression of almost 30 years of our team's studies on translational research on vulnerable children, adolescents and families, applying research to social policy and intervention. And at my kitchen table all this time, I have been with many colleagues from around the world, sharing black beans soup—feijoada—and showing them the excellent research that is being done in Brazil.

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Investigating Psychology in the Context of Brazilian Reality of At-Risk Children

Our main objective, in this chapter, is to present the Center for the Studies on At-risk Populations (CEP-RUA), an academic group that was born in the Institute of Psychology of the Federal University of Rio Grande. Each study developed by this team only has a real effect if it is carried out to integrate the tripod of academic work: research (research), outreach (intervening), and teaching (informing and training). University professors, researchers, psychologists, graduate students, and undergraduate students in Psychology, whose main activity is to work responsibly in order to improve the quality of life of the community, compose our CEP-RUA. Although linked to a university institution, our role as "street psychologists," as we call ourselves, consists in exercising our activities not only as producers of scientific knowledge, but mainly as social educators and health agents. In the course of this text, we will demonstrate how we have been conducting our activities in order to achieve our goals.

CEP-RUA was created in 1994 in response to the concern of a group of professors, psychologists, and undergraduate students who identified the urgent need to integrate the knowledge of Psychology with the reality of populations at social and personal risk. There was little production in the area on these subjects and there was a lot of Psychology that presented itself as universal and had not been analyzed in relation to this population (Bandeira et al. 1995; Desouza et al. 2003). With the initial goal of working with street children and all the variables that involve this reality, CEP-RUA was created to produce knowledge and be a space for dialogue with the community that worked with these children and adolescents. However, very soon this initial goal was expanded. Frequent reports about the reasons for leaving their homes to the streets led us to travel back to their houses, arousing our interest in issues related to domestic violence and resilience. Their daily experience of urban violence, opportunities for psychoactive substances abuse, lack of adequate hygiene, housing and care, low schooling, and early work attracted the attention of our group and stimulated the search for partnerships to carry out research and implementation of intervention programs. We wanted to better understand living on the street, whether it was a space for exposure to risk, protection against a history of abuse, or as an expression of health and overcoming. It was unclear whether choice or contingency led these young people to live on the street. Imbricated to scientific curiosity there was ethical concern with the lives of these children and adolescents. We join forces with professionals trained and experienced in street work to understand and act in this reality, in which citizenship and respect for children and adolescents as subjects of rights are daily violated. We have developed training for all members of CEP-RUA to approach the youth population and research in the streets.

The preparation to face daily situations of abuse, violence, and other events in the street space was also enabling the team to criticize, denounce, and handle unusual situations every day. Our training and performance, however, fortunately did not make us lose the ability to be astounded by what we watched or heard being

reported by these children or families. And this holds true so far. We have been developing more than technical, theoretical, or methodological preparation, we are looking for new alternatives to deal with these situations, new learning and the promotion of children's quality of life and our own, as professionals. The street situation has become one of a number of other risk situations researched, which now includes children, adolescents and families who, in general, find themselves in a situation of misery, both economic and affective.

Most of the work we do takes place outside the walls of the university, in direct contact with the community, whether in the streets, institutions, favelas, poor neighborhoods and community, social movements, or public schools. The integration of academic psychology, based on studies on human development, with community practice has proved possible by the constant exchange established that favors our formation and those who interact with us. Through the research we integrate the theoretical with the empirical with the communities with which we work. We understand that in this stable and reciprocal relationship, it is possible to build knowledge. We seek knowledge of the populations and their demands to find topics for our research, social intervention and to subsidize with more appropriation the teaching of future psychologists. As professors and students, we have access to the most up-to-date findings of science and we have the training and tools to understand and explore them. The populations that we access have daily life experience, coping strategies, and overcoming and often accumulate hundreds of cases and data that need to be systematized, in order to understand and structure effective actions. The integration of the knowledge learned in books, scientific review, and on the Internet becomes "concrete" in the dialogue and the cooperative search for better living conditions for all of us. We believe that any scientist is at risk if he or she does not find work relevance. Our desires and expectations aim at the theoretical and social relevance, so ensuring this integration makes us professionals happier and more accomplished.

Conversely, academic life demands productivity, and therefore we have responded with an expressive number of publications in national and international books and scientific journals. Our work is based on the theoretical–methodological assumptions of the Bioecological Approach to Human Development (Bronfenbrenner 1979), emphasizing the healthy psychological aspects preserved in the development of children, adolescents, and families living in situations of social and personal risk. It was not very common, in the beginning of the 1990s in Brazil to see an academic group that work on research, intervention, and education of professionals—both graduate and undergraduate students and those who are in the field, at the same time. However, after starting our center and publishing our findings and experiences, we have been invited for many academic groups either in Latin America, North America, or Europe to share our knowledge and what we are learning from the ground. Nowadays, many academic groups are using our model in their work. So, our work has been a reference, because it seems to be relevant to other cultures and contexts, and I know we are giving a small contribution to the effort to develop psychological knowledge that has social relevance and that might be helpful to those who are excluded from the mainstream society: the very poor, the homeless, those who lost everything, or who never had anything to begin with.

Working with Street-Involved Children: The Beginning

The phenomenon of children taking to the streets is worldwide. Street children develop various strategies to survival. The political systems in many countries of Latin America have very sophisticated laws to protect children and adolescents. They are all signatories of the Convention on the Rights of Children (United Nations 1990). They postulate the rights to have a good life, with health, respect, freedom, dignity, family and community support, school and education, information, culture, leisure, sports, and job training for adolescents. They also protect children against exploitation at work, sexual exploitation, abuse of all kinds, and so forth. The Brazilian social systems, as many others in the region, however, in reality are not as protective as they should be, considering the law and the high level of political awareness embedded in it. Actually, many times and in many places the social system is both turbulent and insensitive. The swelling number of children in need, or at risk, creates a whole new set of issues, which need to be addressed and readdressed. Different kinds of child abuse, illiteracy, malnutrition, diseases, and exclusion are realities that are showing no signs of getting under control. Prevention efforts must be taken by societies, actually not only in developing countries, but also all over the world, to improve the quality of life, to promote the growth and well-being of people. This will improve the lives of our families, our societies, and our countries. Nobody can be happy, or at least feel comfortable, when they have to live their everyday lives watching so much poverty and social unfairness. So, it is our role as social scientists to study, scientifically, the experiences and conditions of these children, aiming to find possible solutions through need-based interventions. To achieve those solutions children have to have their own voice listened. So, the right of participation has to be guaranteed.

We started to ask what did Psychology know about these youngsters and how could psychologists give any support to them. We also asked how we could make the already built knowledge in Psychology fit on those children. We soon found out that few studies were conducted with street children and that most of them were descriptive and plagued with methodological problems. Almost no information was available about developmental processes, cognitive, social, or personality development, especially when we searched Latin American scientific databases. To make it worse, some information was clearly misleading. Actually we found some papers about this population written by foreigner researchers about Latin American children, who did not know how to pronounce a word either in Spanish or in Portuguese. We wonder how they interviewed the children; they analyzed their data, and who were the people who lent their work and its authorship for these papers published by a single author.

An initial methodological problem was found when referring to definitions. Two major and contradictory descriptions of these children emerged from the literature. Some authors described them as little heroes. Street children appeared as bright, smart, and empathic; they helped each other and were able to survive within a very hostile society. Leaving home was a tactic to escape violence and hunger.

The opposite picture was also present: street children are evil, they are not socialized, they are drug addicts, they are sexually promiscuous, and they present a danger to society. So, we were still in need to know: whom were those children living in the streets? We used the lenses of Bronfenbrenner's bioecological approach on developmental psychology (1979) to learn more about them and published some referential papers to answer to our many questions.

One first question was based on terminology. Without knowing who they were, it was impossible to make rigorous research about them. A street child was defined as anyone who was earning money by wiping windshields or selling candies at traffic lights, asking for money outside hotels and restaurants, or swiping wallets from unsuspecting people knows the definition. The United Nations defines as "… any boy or girl … for whom the street has become his/her habitual house and/or source of livelihood; and who is inadequately protected, supervised, or directed by responsible adults." Note that there is considerable ambiguity in this definition (what does it mean to be "inadequately protected, supervised, or directed" and what is a "responsible adult"?). The appearance of neglect singles them out as belonging to the same group. However, their life histories, family characteristics, street life experiences, and prognoses are very different, giving an erroneous implication to the street children denomination. Some researchers define street children based on characteristics such as sleeping location, family ties, school attendance, leisure, survival activities, and occupation on the street environment. Such definitions can lead to broad categorizations as: *children of the streets or children in the streets* (Thomas de Benitez 2007). Nevertheless, it is difficult and it may even be misleading to define a child as belonging to a specific category. We seldom found children who had completely lost contact with their family in our work. We also identified many children who lived at home and worked on the streets, but occasionally slept on the street; and children who periodically left home and lived on the streets for weeks or months and then went back home. The variability within these groups regarding the frequency of family contact, sleeping location, occupation on the streets, the destination for the money they earn, school attendance, and several other variables (including physical and sexual abuse, sexual activity, etc.) may be so large that the distinction between the *of the street group* and the *in the street group* may be meaningless or even misleading for research or intervention purposes. We suggest that it is more appropriate to categorize street children as a function of the risks to which they are exposed (for example, contact with gangs, use of drugs, dropping out of school, lack of proper parental guidance, sexual exploitation, and so on) and also of the protective factors available to them (for example, school attendance, supportive social networks, contact with caring adults, and so on). Research could then agree on how vulnerable children are to developmental risks and what appropriate actions could be taken in each specific case. However, a street child is much more than that. He or she is a developing child like any other.

Our work at the Center started focusing on street children, we developed research to investigate coping, perceived control, social competence, emotions, morality, empathy, how social networks were established, and their role in the life of street children—so developing processes (Hutz and Koller 1999; Koller and Hutz 2001;

Santana et al. 2005; Torres de Carvalho et al. 2006a, b). Our aim became to be finding out the variables and processes that worked out as protective factors to foster resilience and to diminish vulnerability. And then we have expanded this work to cover children and adolescents growing up under very difficult circumstances. We decided to make the way back from the street to their homes. We have listened to many tales about the bad conditions and abusive situations with which street children had to deal when they were living at home. We knew well enough that poverty is bad: it hinders psychological development, it is a major risk factor for everything that is undesirable, and it affects parental roles performance, and so on. We verified that these children and their families lacked social support to cope properly with conflictive situations. Moreover, we have learned that, given their poor conditions of survival, family cohesion might be very fragile or inexistent. Therefore, we decided to study the families too. Yet, in spite of the poor living conditions, and lack of social support, some families had strong bonds, stayed united, and took good care of their children. Other families, sometimes next-door neighbors, sent their children to the streets. Our need for understanding led us to study the development in their home environment. We really needed to know more. We needed to understand why some people (actually many people), in spite of poverty, managed to keep the children in school, away from drugs and crime. In the slums, there are people who work very hard, who never get involved in crime, who keep the family together; whose children do not become street children. What are the variables, the processes that protect them, that make them less vulnerable, more resilient? We think that when we have this knowledge we will be capable to develop community intervention programs designed to foster resilience. Then, perhaps, we could make a difference and we work along with them to eventually fight the war against poverty. The major problem, however, was to make research relevant and useful for the groups and communities we studied. From the beginning, working with at-risk populations, we considered that researchers have a responsibility to see that their findings benefit the participants. However, in a field like ours, publishing a paper, even a good paper, is not enough. The *hit and run strategy*, namely, getting into a school or a community, collecting data, and disappearing is not an ethical accomplish and it amounts to exploitation of the misery of many, for personal academic advancement. We also realize that although we need culturally specific strategies to study children growing up in poverty, our research problems are almost universal and require international, especially Latin American cooperation. To solve the problem of poverty and violation of rights of children we have to be able to plan relevant and respectful interventions and in-depth studies. We also need to examine how agencies and institutions function. Based in our research findings, these agencies may not be very effective, because their goals are different from those of the children: Adults want to remove children from the street, while children see the institutions as a part of street life, not as a way out. We have been researching for 30 years, but we still need to know more.

Building on the idea of producing knowledge about street children in Psychology, some of our early studies revealed that impoverished children who spent time on the street and were not attending school showed similar levels of prosocial moral reasoning as children from similar backgrounds who were attending school, suggesting

that street youth have access to alternative developmental opportunities. In another early study, similar levels of depression were found in street youth, orphans, and middle class children. We also found that working and homeless street youth had similar levels of subjective well-being. Raffaelli et al. (2000) designed the *Street Life Study* to investigate how street youth experience their lives. Youth aged 10–18 years (*N* = 69; *M* age 14.4; 50% female) completed a sentence completion task and a semi-structured interview. Just 30% of these youngsters were in the formal educational system, and three quarters never slept at their family home. Youth reported high levels of stressful events in their lifetime, including: hospitalization (80%), death of friend (61%), accident (56%), police violence (42%), imprisonment (28%), and death of father (23%) or mother (16%). Data from the *Street Life Study* have been used for three publications and numerous conference presentations. One paper focused on gender differences in family circumstances and experiences on the street. Over 80% of youth had family members in the same city; however, just one fifth said their family gave them money, and less than two thirds had visited their family home in the past month. Girls described more negative family backgrounds than boys; when asked why they left home, girls were most likely to say *conflict* (51% of girls, 36% of boys) or *abuse* (24% vs. 18%). Girls also described more negative relationships with their parents. Taken as a whole, this work indicates that gender differences may be found in experiences prior to going to the street, but not necessarily in current aspects of youngsters' lives. Another analysis revealed great diversity in youngsters' views of the street (Raffaelli et al. 2001). Completing a sentence stem "*In the street I feel*," about a third of the respondents (*N* = 69) listed positive emotions, just over half negative emotions, and over a tenth a combination of positive and negative emotions. When asked to complete the stem "*What I don't like about the street*," youth were most likely to report *authority figures or violence* (35%; "The police hitting us," "Assaults, murder"), *physical conditions* (22%; food, living situation), *people* (21%; passers-by, specific individuals), *activities* (9%; going to institutions, stealing), and *drugs* (9%). Despite the diversity in responses, few age or gender differences emerged; again suggesting that life on the street is similar for girls and boys. A third analysis revealed a mismatch between hoped-for and expected future events (considered an indicator of developmental challenge). Completing the sentence "*In the future, I hope*," the majority of youth gave optimistic responses (e.g., for "a good life," to "see my dreams come true"). In marked contrast, completing the more specific sentence "*For me, the future*" over half gave responses that were ambivalent (e.g., "will be a better or worse life") or negative (e.g., "is nothing"). Again, few gender or age-related differences emerged. Our literature review showed no comparable levels of ambivalence in published studies of adolescents in different countries, suggesting that future expectations may be a key factor in understanding street youth adaptation.

   On another study, we collected a dataset of more than 8000 cases of impoverished youth from nine Brazilian cities (Raffaelli et al. 2007, 2012, 2014). A considerable subset of these youngsters has spent time on the street, so we will be able to continue examining some of the key relations depicted in our conceptual model. We investigated the developmental risks and psychosocial adjustment

among low-income Brazilian youth. Exposure to developmental risks in three domains (community, economic, and family) and relations between risks and psychosocial well-being were examined among 918 impoverished Brazilian youth aged 14–19 (M = 15.8 years; 51.9% female) recruited in low-income neighborhoods in one city in Southern Brazil. High levels of developmental risks were reported, with levels and types of risks varying by gender, age, and (to a lesser extent) race. Associations between levels of risks in the various domains and indicators of psychological (e.g., self-esteem, negative emotionality) and behavioral (e.g., substance use) adjustment differed for male and female respondents. Findings build on prior research investigating the development of young people in conditions of pervasive urban poverty and reinforce the value of international research in this endeavor. We also looked for protective factors moderate between risk exposure and behavioral adjustment among low-income Brazilian adolescents and young adults. Our aim was to examine whether potential protective factors operating at different levels of the ecology ameliorate linkages between risk exposure and behavioral maladjustment among impoverished urban youth. Our sample was composed by almost 5000 Brazilian youth (N = 4759; 55% female) living in impoverished neighborhoods in seven state capital cities. Youth completed self-report measures of risk exposure in multiple domains (community, economic, family), behavioral adjustment (substance use, antisocial behavior, sexual risk-taking), and protective factors (school attachment, family support, self-efficacy). Regression analyses were conducted to examine whether associations between risk and maladjustment were diminished by the presence of protective factors, and whether gender and age modified these relations. In analyses involving composite measures, exposure to risks was positively associated with maladjustment but protective factors diminished that association. In analyses examining the three protective factors separately, school attachment was a significant moderator of the risk-maladjustment association for younger teens (ages 14–15) but not older teens. The other two protective factors (family support and self-efficacy) were not significant in these analyses. Findings shed light on the extent to which protective factors at different levels of the ecology might ameliorate exposure to risk in international contexts. Results highlight the potential role of schools in fostering positive development among urban adolescents exposed to high levels of developmental risks.

Our next step was to conduct a longitudinal study (Raffaelli and Koller 2013). This was really the only way to find out about the long-term effect of being on the street. It is a very hard job and very expensive, even for a group like ours! Only a couple of efforts to follow street children over time have been reported in the literature and they are not very conclusive. A lot has been written about the limitations of cross-sectional research to address developmental questions. This is even more problematic when trying to understand the development of street youth. Cross-sectional research generates a "snapshot" that may not correspond to reality in any meaningful way. If I go to the street and interview a group of children, they may seem to be doing fine, but we did not necessarily know about children that are commonly part of the group and are in hospital, jail, or recently dead. Our current work

is focused on testing a conceptual model of street youth adjustment that we have been elaborating over the years. The conceptual model draws on Bronfenbrenner's ecological model and integrates elements from stress and coping theory and resilience theory. Two studies provided information that we used in designing the proposed longitudinal study and developing the tracking plan. The first involved an effort to conduct a 1-year follow-up of the 69 Street Life Study participants (Raffaelli et al. 2000, 2001). Tracking information was obtained from participants, and research teams visited street sites and service agencies on a regular basis. Over a 6-month period, contact was maintained with all respondents. However, longer-term follow-up was not possible due to lack of funding at that time. The importance of maintaining ongoing contact was highlighted in another study conducted by our team. Of greatest relevance to the proposed study, 14 boys aged 12–16 were successfully followed over 8 months by using the bioecological engagement approach (Lima et al. under review; Raffaelli et al. 2018; Santana et al. 2018). Lima et al. (under review) examined longitudinal trajectories of adjustment of street-involved youth across a 1-year period. Participants ($N = 113$; M age = 14.18 years; 80.5% male, 91% non-White) were recruited in three Brazilian cities using standardized procedures. Interviews conducted at three time points included six measures of physical and subjective well-being. Unconditional growth models revealed declines over time (improved adjustment) on three indicators: health symptoms, sexual risk behaviors, and negative affect. No linear change was seen in drug use, positive affect, or life satisfaction. Conditional growth models revealed few significant effects for age or gender, but ratings of stressful life events moderated longitudinal changes in health symptoms, drug use, and negative affect. Findings have implications for practice, policy, and theory. Raffaelli et al. (2018) examined the prevalence, overlap, and impact of adverse childhood experiences in a sample of Brazilian children and adolescents who use city streets as spaces for socialization and survival (i.e., street-involved youth). Participants ($N = 113$; M age = 14.18 years) were recruited in three cities following standardized procedures. Most youth were male (80.5%) and non-White (91%). Lifetime exposure to ACEs was assessed at the first study time point; six indicators of psychological, behavioral, and physical adjustment were assessed 6 months later. Analyses addressed three research goals. First, the prevalence of seven ACEs was examined. Youth reported an average of 4.8 ACEs ($SD = 1.25$); no significant age or gender differences were found in ACEs exposure (all $ps > 0.05$). Second, the overlap between different ACEs was explored. Family dysfunction was correlated with family disruption and physical abuse; poverty and physical abuse were related ($ps < 0.05$). Third, prospective associations between ACEs and adjustment were tested. Total number of ACEs was not significantly correlated with any outcome, but several associations emerged for specific ACEs. For example, death of a close friend or family member was prospectively associated with negative affect; sexual abuse was associated with illicit drug use and physical health symptoms ($ps < 0.05$). Findings highlight the prevalence of ACEs in this vulnerable population and underscore the value of extending research on ACEs into novel populations and contexts. Children living on the streets are a social problem in many countries, a problem that has to be fought by all means available. To fight

this social ill requires that individuals and groups in society take the social and political responsibility to develop effective prevention and intervention projects. Children on the streets are vulnerable to risks but they manage to develop coping strategies that often make them resilient. They behave as children when they play or interact with peers on the streets, but they must also act as adults when they have to provide for their subsistence and safety. In spite of their circumstances, street children are still developing persons that require appropriate health care, education, a nurturing home, safety, and human rights to grow with dignity and to become adjusted and productive citizens.

The Bioecological Engagement Methodology and Other Innovative Research Approaches for the Study of At-Risk Populations

Another important set of studies of our team addresses methodological challenges to conducting research with at-risk populations. The difficulties of conducting even one-time assessments with some of this population, such as street-involved youth, are considerable. Many street youth never developed the self-discipline formal schooling provides, and become bored and restless when participating in data collection activities. Because surviving on the street requires constant vigilance to potential dangers, their attention tends to wander. Literacy levels are typically low, so an interviewer must administer measures. Data collection frequently occurs in street settings where distractions and interruptions may occur.

Based on an empirical work with at-risk families in a "favela," Cecconello (2003) proposed the operationalization of the theoretical model of the bioecological approach to human development (Bronfenbrenner 1979). This new methodology, which we named bioecological engagement (see Cecconello and Koller 2003), has been serving as the main research method for many studies in CEP-RUA (see Koller et al. 2016, and others). To use the bioecological engagement methodology, researchers and participants should follow the proximal process path (Bronfenbrenner and Morris 1998), being in interaction on a regular basis in time—based on a contract of beginning and end and with clear definition of objectives (Eschiletti Prati et al. 2008). The introduction of the research team to the context is fundamental and the joint commitment with participants is signed in a Consent Form Informed. Complex activities should be developed, so rigorous research methods, using interviews, assessment tools, questionnaires, and other traditional research tools are welcome and necessary. Associated with these activities, other more informal can occur and also produce data for the research in progress, with the consent of the participants, such as informal conversations and occasional observations by the researchers. Reciprocity in interactions is fundamental and, even if the objectives are different in the end, the progress of data collection activities should respect the diversity and complexity of the expectations of the participants and the researchers,

as contracted at the beginning of the research. In order to have bioecological engagement, the commitment in varied activities is fundamental: observation, active data collection, games, informal conversations, field journals, devolution, and focal groups might be present (Eschiletti Prati et al. 2008). The proximal process of development proposed by Bronfenbrenner and Morris (1998) is the basis of the bioecological engagement method. The proximal process is described taking into account five aspects: (1) for the development to happen, it is necessary that the person is engaged in an activity; (2) to be effective, the interaction should happen in a regular base, through extended periods of time; (3) the activities should be progressively more complex; (4) so that the proximal processes are effective, it should have reciprocity in the interpersonal relationships; and, (5) so that the reciprocal interaction happens, the present objects and symbols in the immediate context should stimulate the attention, exploration, manipulation, and the person's imagination in development. The bioecological engagement follows the same path. This method favors the placement of researchers in the research environment with the objective of establishing a closer relation with its object of study and, therefore, answering the research questions. Moreover, for being based in the bioecological approach, the ecological engagement foresees the systematization of the four key concepts proposed by Bronfenbrenner (1979): process, person, context, and time.

Nevertheless, it is not an easy method to use. The researchers are part of the scenario of the participants. They gradually come to their research goals, approaching without haste, using standardized and validated methodological techniques. All are people in development and through the engagement; they are differentiating themselves and acting actively in the context. What is important in this technique is to have as a theoretical basis the bioecological approach to development and the expectation of observing and evaluating protective and risk factors that can subsidize actions and policies that promote the overcoming of vulnerability and the promotion of resilience and the quality of life of all (Eschiletti Prati et al. 2008). There is a recognized need for participatory and ecologically sensitive approaches in street youth research. To apply the bioecological engagement methodology, researchers have to: (1) keep a field diary/journal by each member of the research team in order to analyze the participants' proximal processes as well as of the members of the research team; (2) participate in several activities with the participants in formal and informal moments of the data collection; (3) build developing bonds with participants and contexts; and (4) use a combination and integration of several strategies of data collection (interviews, tests, scales, etc.). A very careful preparation has to be done before going to the field. Researchers have to be very well trained in theoretical, methodological, and ethical issues, as well as, to have the informed consent of their participants. It is a participatory research and intervention and all actions have to be very well planned to guarantee ecological validity of the data and the rights of all.

One imperative instrument to be used when working with bioecological engagement methodology is the field diary (Aquino-Morais et al. 2016). The field diary includes records describing the context, people, their histories, routines, and their proximal development processes. Researchers are also people in development;

therefore, they are also participants in their own research. In other words, the development processes of the researchers pass through the data obtained and add quality to the processes lived as people and in contact with their participants. Therefore, the field dairy report is presented in the perception of the research context reality, in the researcher vision about the data.

In 2016, our book entitled "Ecological Engagement: A Study Method of Human Development" was published, including research different studies (Koller et al. 2016). This book brings together the contributions of Brazilian researchers who work and investigate the operationalization of the Bioecological Theory of Human Development. Throughout the chapters, the ecological engagement method is presented as an effective tool for access to qualitative and quantitative data in different contexts of human development. The book includes theoretical, methodological, and ethical reflections that guide the bioecological approach and are brought to a series of researches that reveal the step by step of this method and evidence research on situations of social vulnerability experienced by children, adolescents, and families in Brazil and Angola. Theoretical–methodological articulations and integration of theory with practice, subsidizing social policies, are also presented. Traditional methods and instruments of psychology are associated with ecological engagement. Recently, Coscioni, Fonseca, and Koller (under review), in a systematic literature review, identified 44 reports of empirical research, and two literature reviews, using the ecological engagement methodology in different areas, such as Psychology, Education, Physical Education, Public Health, Nursing, and others.

CEP-RUA research team members also added many other methodological contributions to the field. One challenge we have met since the beginning was related to the work on the streets with children who had low education and school experience. They hardly connected to paper and pencil or psychometric scale tests. Over the years, researchers affiliated with CEP-RUA have developed methodologies to address these challenges. We needed to facilitate the psychological instruments content in the form of a playful activity, without loosing their scientific rigor and meaning. Alves et al. (1999), for example, constructed a methodology for observing children in the street space, in order to investigate their daily activities, thus providing support for new team studies. Another methodological contribution was the proposition of the incomplete sentence set, by Raffaelli et al. (2001), which has been used in numerous researches (Alves et al. 2002; Cerqueira-Santos and Koller 2003; Silva et al. 1998). It consisted in the presentation of a set of short and incomplete sentences, which the participant ended with ideas that emerged immediately after the presentation of the stimulus. It is easier for children and adolescents in the street to complete sentences as a playful game than they need to structure an answer to a closed question presented to them. Other methods have been used with great success in assessing future expectations and self-representation with young people on the street and at risk. Neiva-Silva (2003), Borowsky (2003), and Haddad (2018) used the auto-photographic method, offering in a trust relationship, in which the bond was fundamental, photographic cameras to people to photograph their daily reality. In the construction of an individual book, with images obtained by them, the researchers, in each of the studies, could evaluate the importance of contexts such

as family, school, work, and well-being in the life of these people. Risk factors were also pointed out, such as the presence of the drug, the precariousness of the relationships, and the unmet desire to overcome the limiting developmental conditions. Cecconello (2003) evaluated the resilience of children living in a poor neighborhood by the relationship between social competence, empathy, mental representation of the attachment relationship, and quality of the mothers–children relationship. Social competence in the dimensions of trust, self-efficacy, and initiative was evaluated through the test of incomplete stories (Mondell and Tyler 1981), transformed by the addition of figures that illustrated the reports, favoring the child's interest in the instrument. Risk factors, protection, and mediators were investigated in interviews with mothers and caregivers on the development of children in a bioecological engagement of the research team with participants.

The Sentence Completion Task for Street Children and Adolescents was created for the Street Life Study. It consists of 24 stems covering different domains (e.g., the street, future expectations). The task is presented as a game: respondents are told that the interviewer will read some unfinished sentences and that they should "finish the sentences with the first thing you think of." These instructions ensure that answers are as close to uncensored as possible. Responses are recorded verbatim and content coded for topic and emotional valence. We have confidence in the validity of the sentence completion measure for several reasons. First, this task is very successful in eliciting responses; youngsters become readily engaged in the task, and levels of missing or uncodable responses were low. Second, comparisons of responses on this task to other measures reveal consistency. For example, respondents who reported negative emotions about the street on the sentence completion task were more likely to say they left home because of "push" factors (parental death, poverty, abuse) whereas those who felt positive on the street were more likely to say they left home because of "pull" factors (freedom, adventure, peers). Finally, responses obtained in research conducted with this measure are consistent with responses obtained from other measures.

Our team adapted the Five Field Map (Samuelsson et al. 1996) by revising the original paper and pencil measure to resemble a board game. Youth are presented with a felt-covered board depicting concentric circles divided into five pie-shaped fields representing major social contexts (e.g., family, school) and with a set of male (blue) and female (pink) child, adolescent, and adult figures that have Velcro glued to their undersides. A figure is placed at the center of the map to represent the respondent, who is asked to place figures representing important people in positions that reflect different levels of emotional closeness. Interviewers ask follow-up questions and record information on a structured sheet, including: characteristics of each person (e.g., age, relationship to respondent); relationship qualities (e.g., presence of conflicts); and the order in which the child completed the fields. This information is scored to create summary and field-specific indices of network size and proximity; information about specific relationships (e.g., whether the child's mother was included) can also be extracted. The adapted version of the Five Field Map has been used in several studies of impoverished, street, and abused children (Hoppe, 1998). There are strong indications that the measure captures meaningful aspects of youngsters' lives. For example,

sexually abused girls were significantly less satisfied with their social relationships, and more likely to describe conflicts, than non-abused girls. Comparisons of data collected from street youth and impoverished youth living at home revealed that the first person placed in the map by street youth was less likely to be a family member and that street youth tended to include agency staff in their maps (Poletto et al. 2008). There is also evidence of convergent validity; within the same study, youth and caregiver proximity reports were significantly correlated. These assessments have several qualities that make them suitable for use with street youth. They are playful and engaging, making it possible to hold participants' attention and obtain high quality data. They also do not resemble the types of questions youth are asked by social workers and other institutional representatives, and thus are less likely to generate the kind of "well-rehearsed" answers some researchers have reported in the past.

Ethical and Rights Issues Regarding the Work with at-Risk Populations

Children living on the streets are a social problem in many countries, a problem that has to be fought by all means available. To fight this social ill requires that individuals and groups in society take the social and political responsibility to develop effective prevention and intervention projects. Children on the streets are vulnerable to risks but they manage to develop coping strategies that often make them resilient. They behave as children when they play or interact with peers on the streets. But, they must also act as adults when they have to provide for their subsistence and safety. In spite of their circumstances, street children are still developing persons that require appropriate health care, education, a nurturing home, safety, and human rights to grow with dignity and to become adjusted and productive citizens. Ethical reflections have been another highly valued aspect of our work. Some articles have been developed trying to deal with the dilemmas of researchers, in the debate between methodological rigor and the minimum risk to which the participants are exposed in street life (Bandeira et al. 1995; Hutz and Koller 1999), the reality of intrafamily violence (Lisboa and Koller 2000, 2001; Koller and Habigzang 2015), and about the work with street-involved youth (Koller et al. 2012b; Torres de Carvalho et al. 2006a, b). The impediment to carry out some studies was not paralyzing for our team, when we are faced with the obligation to have the free and informed consent of parents absent from street children or parents of violence, which, when confirming the situation of abuse, we would report to the competent bodies. The validity of these caregivers' consent was further exacerbated by the fact that many of them and other guardians were illiterate and did not really know what they were signing. The Resolution No. 016/2000 of the Federal Council of Psychology (2000), currently extinct, helped the team at the time in conducting its research, but there are still ethical aspects that need to be focused when it comes to collecting data with people who are at risk. The main concern we have, and that

cannot be solved yet is to balance the legal ethical requirements with the real life research interests. Actually, it is impossible to interview children victimized by violence, since we need their parent consent to approach them. So we are doing research about the victimization, but not necessarily gathering data with the real victims.

Within the ethical studies, Sacco et al. (2015) and Souza et al. (2014) have studied the recognition of rights by children and adolescents in various contexts. They also produced some materials to be used with teachers, educators, and children about these topics (Souza et al. 2013a, b). In a recent article, Sacco et al. (2015) presented a review on children's rights in Brazil, since the implementation of the Child and Adolescent Statute in 1990 (Brasil 1990), which is a current and well-organized law, based on the Convention on the Rights of the Child (United Nations 1990). Topics related to life, identity, health, protection, education, and housing were analyzed. Violation of rights was also contemplated, with emphasis on child labor, sexual violence, and exploitation. Even in the presence of such advances in laws, the authors pointed out that the guarantee of rights has been still far beyond ideal. For the law to be fully implemented in reality, it will be necessary to ensure a culture of respect for children. Some recommendations have been included in the text for families, civil society, governments, universities and international organizations, in order to amplify, especially resources through education, as actions of protection, and guarantee of rights.

At-Risk Youth Studies, Violence, and Sexual Abuse

A large study was conducted with young Brazilians of different socioeconomic levels in Brazil (Dell'Aglio and Koller 2011; Liborio and Koller 2009). We investigated protective factors (self-competence, humor, optimism, hope, well-being, religiosity, cohesion, balance of power and reciprocity in relationships, and social and affective support network) and risk factors (conditions of education, work and unemployment, sexuality, drug use, conflicts with the law, violence, suicide, among others) in more than 11,000 youth from the five geographical regions of Brazil. This study was expanded for the Study of Brazilian Youth, conducted by a large team of the National Youth Research Group: Resilience and Vulnerability of the National Research Association and post-graduation in Psychology.

Violence against children is one of the most prominent aspect of at-risk situations that we have found in our samples around the country in different ecological contexts. The school has been an important development context in our work. Lisboa et al. (2002) constructed an instrument to evaluate the aggressiveness of children, based on the vision of their teachers. In addition, she identified coping strategies and patterns of aggressive behavior in schoolchildren who presented intrafamily victimization histories. Currently, she investigated relationships of friendship and victimization (bullying) in school children and its repercussions on development (Koller and Lisboa 2007). All these aspects have been important in the current relationship between children and their impact on urban violence. Mayer

and Koller (2000) also devoted their studies to the school context and evaluated perceived control and the social and affective support network and mental representation of attachment relationships of girls, victims and non-victims of intrafamily violence (Mayer and Koller 2012).

Studies with families that experience domestic violence have been one of the lines of research increasingly strengthened by our team. De Antoni and Koller (De Antoni and Koller 2000; De Antoni et al. 2006, 2009) dedicated their studies to investigate the view of institutionalized girls by victimization on their families of origin and their expectations for the future. Their findings revealed protective aspects that these girls presented, especially related to the hope of overcoming and with network resources for health, besides bringing a structured methodological proposal for the use of focus groups in Psychology. Currently, it evaluates cohesion and hierarchy in families with a history of physical abuse, in real situations, ideals, and conflict (Cecconello and Koller 2003; Koller et al. 2012a).

Habigzang (2006) also aimed to address the issue of development and health in sexually abused girls when undergoing a cognitive-behavioral psychotherapy program. One of the most significant studies in terms of social repercussion was developed by Habigzang et al. (2008, 2009), which described a cognitive-behavioral therapy group process developed for cases of sexual abuse, as this type of violence can trigger cognitive, emotional, and behavioral dysfunctions that require psychological intervention. The treatment of victims and their families is a challenge for the practice of psychologists due to the complexity of the phenomenon. The techniques used were presented from the experience of the authors in a research that aimed to evaluate the effectiveness of this model. The results showed that the process of group therapy contributes to the restructuring of dysfunctional beliefs, emotional and behavioral reactions. The group represented a link in the girls' social and affective support network and promoted improvements in quality of life. The proposed cognitive-behavioral psychotherapy program has shown that this group therapy intervention has been effective in treating children and reduces symptoms of stress, depression, anxiety, and post-traumatic stress disorder. A proposal that consists of sessions during 16 weeks of care was offered to the Brazilian public health system and has been well supported since it obtains good results and presents low cost and high effectiveness. Habigzang et al. (2006), investigating legal cases of sexual abuse victims, identified the need to establish a more effective network in terms of structure and functioning, composed of professionals trained to deal with the specific issue and that can present more resources and conditions of service. Later on, Hohendorff et al. (2014b, 2015, 2017) applied the knowledge about sexually abused children to work with boys. He found much more difficult to use the group therapy, since the boys did not like to share their experiences among others. However, in an individual basis, Hohendorff proposed a program—named SUPERAR (Overcome) to work with boys and had found interesting results (Hohendorff et al. 2012, 2014a). For 8 years, Habigzang and her team had run a clinic school, where thousands of sexually abused children and their family received clinical treatment and support and hundreds of professional were trained to work with this population (Damásio et al. 2014; Freitas et al. 2015).

The interlocution of the bioecological approach of human development with other theories and areas of knowledge has also been the target of some research interests in CEP-RUA. Freire et al. (2008) propose a dialogue with the person-centered approach proposed by Rogers, pointing to the positivity and unconditional acceptance of human health in both theories. Petersen and Koller (2011) emphasize the overlapping of psychoneuroimmunology with the bioecological approach, focusing on a human being with its psychophysiological systems by the different contexts of the ecological environment, and favor a more complete understanding of human development. Another strong topic of interest is related to the study of prejudice against different social groups. Our research team developed studies regarding racism (Sacco et al. 2016a, b), ageism (Paula Couto and Koller 2012), and prejudice against LGBT populations (Costa et al. 2016, 2017a, b, 2018).

The CEP-RUA studies compose a body of theoretical knowledge about human development in this Brazilian population that was, until then, non-existent in the science of psychology. From them it is no longer possible to say that there is no theory made by Brazilian researchers. However, each of the studies only really has effect if built for the integration of the tripod of academic work: research, extension, and teaching. It is a motto of our teams to ensure that participants in our studies feel better after working with us. That is, we have the firm intention of not being a protagonist in the history of abuse, risk, exploitation, and violence that our participants have already lived. We think it is better to lose the data than to act contrary to this precept. Often, in the middle of interviews, the data collection work is interrupted or finalized, to give effect to the demand that is brought to us by the participant. It has been fascinating to experience that some small observations we make or the knowledge we convey make a difference in their lives. In the same way, we learn a lot from them and we certainly become better professionals and people. Sometimes the demand presented to our team cannot be met directly by the group that is in the field. For example, in a school that researched resilience and the effects of poverty on children and their families, there was an immediate demand to talk about sexuality and limits on child rearing. In this case, we encourage other members of CEP-RUA and the scientific or professional community to respond to the request. Other times, there is a concern of the participants for an immediate or direct result to the problem that we are researching. For this we have established a contract with the participants so that the goals, time, and what they can expect from the research are clear. We also emphasize the importance of a collaborative work for the best results of the study and its possibilities of subsidies. In these cases, the participants feel responsible and value their inclusion in the study.

We have done a lot of consulting and advisory work to schools, communities, and care institutions for children, adolescents, and families at risk. Our goal is always to work together with these groups so that they can strengthen and find their own path to problem solving or action planning. We do not mean to be gurus, but to "empower" groups to find solutions to their problems. This activity necessarily involves the participation of all members of the context. We have to say that the intervention should aim at the cohesion of the actions and values of the advisory group; otherwise, the destruction of the proposed precepts may be inevitable. For

example, a cook can undo in the cafeteria what the monitor did in the workshop room if she does not demand the same discipline of respect among the young.

A very successful CEP-RUA experience in social intervention has been the realization of training programs. We started in 1994, conducting extensive seminars that integrated the results of our research with community practice. We organize weekly theoretical–practical meetings during several semesters. Professionals, technicians, community leaders, teachers, monitors, street educators, police officers, and people attended these meetings, which we call a Thursday's Seminar," from the community who had an interest in the proposed topics. Each seminar attracted a larger number of participants and some of them traveled for several hours to be with us. We noted that there was an immense demand for these activities and that the university urgently needed to provide this service to the community. Thus, the themes of the seminar included topics related to childhood and adolescence at risk, addressing issues such as domestic violence, drug abuse, street and school children, sexuality, and AIDS, among others. To give lectures were invited experts, who presented their recent research results I discussed with the community. This space has been characterized as a direct link between researchers and the community, creating fundamental opportunities for dialogue, which have helped to guide more integrated and effective actions on both sides. The seminar space became a forum for discussion of broad issues to the organization of a network of social support between entities and people who participated and researchers. We were very gratified to note that in addition to learning about the topics brought by the speakers, seminar participants could present their own experiences, reveal their most emerging demands, and exchange their practical knowledge with the theorist. Moreover, the experience of dealing with such a special population could be recognized and exchanged. Professionals working in care institutions for street children, when they met weekly, traced the course of some children in their daily routine. In the event of the disappearance of some of these children, they met their seminary colleagues and searched for information, sent messages for the children to return to the institutions from which they were absent. They could strategize to rescue some children who were attended in different shifts by several of them, when she left school, turned to drugs, needed to prepare for a school-workshop project, and so on. Often our research work also started from a request made by seminar participants or emerged from discussions generated at the heart of the seminar.

Curious situations occurred during the seminars. Some non-literate people asked to participate in the activities and were very proud and satisfied that they could sit on the university benches. Another common event occurred after identifying the lack of resources available in the community to meet some type of demand. In these cases, possible solutions were localized and those responsible for the potential services were invited to attend the seminar, become aware of the need, and provide some answers to the community requests. Such a seminar therefore served as a protective agent for at-risk populations, although this was not its primary objective. At the end of each seminar we carried out an evaluation of the work and demands for the next semester. We have observed that, over time, the groups that wanted to attend the seminar became more and more specialized. The constant search for new

knowledge and the need to return research data to the application in the community stimulated CEP-RUA psychologists, who study postgraduate studies, to organize extension study centers. The activities proposed by these nuclei aimed at training and developing the healthy potential of people who worked with the populations at risk. The objective was to allow integrated work, from practice to theory, to improve work performance and allow each member to feel better as a person and professional. In many cases, the capacity building work was extremely well-evaluated and continued over several years. In future encounters with some participants, we obtained the return of relevance of the training in the professional path of some of them. For some, core training was a watershed between the once immature and unprepared professional and the new one who had the tools for overcoming it and who knew what paths they had to follow to be social educators and health agents. Interesting cases also happened with professionals who, when participating in our activities, revealed their deep dissatisfaction with their work and quitted that activity, seeking a more pleasurable and fulfilling work. Certainly, in both cases, our goal of improving people's quality of life has been achieved. We also observed that practice with the community, in addition to preparing postgraduate students who are members of the center, and also as professionals who are better qualified for academic extension work, allowed them to exercise their research and teaching activities more enthusiastically and competently together with their teams.

The configuration of the center changed with the passing of the years, both with regard to the students who integrated them and with regard to the social demand presented. We realized that there was no longer a need to organize events dedicated exclusively to the initial themes of each one of them. The center became more flexible and permeable, a fact evidenced by the organization of intervention and training programs focused on varied demands that compose and recompose the teaching/training staff of each one of them.

CEP-RUA has ramifications that extend throughout the country. There are several academic groups organized under the inspiration of our work, of which we feel "godparents." Many independent research teams, although using other denominations, have their own autonomy and direction for the planning, organization, and execution of their work.

Much has happened since the beginning of CEP-RUA's work. We learn, we research, we create methodologies, we propose new theoretical formulations and ethical precepts, we intervene, we train psychologists, we publicize our studies. CEP-RUA has grown, changed, and is now composed of new members. Some have already left, taking with them the experience gained during their stay in CEP-RUA and seeking to multiply the knowledge obtained during their stay with us. Others also left and came back with new specializations. Others have distanced themselves physically, but retain the identity of "cepiano" that both prides and adds. But most have kept working hard for the growth of CEP-RUA. Since 1994, the year of our foundation, we have maintained a constant theoretical–methodological dialogue with national and international researchers in the field of Psychology and related fields. We have received several visiting professors and established various partnerships to work together to achieve our goals. Currently we have exchanged doctoral

students for internships, co-authoring, postdoctoral studies, and projects for international funding. Personally, I was lucky to have the best mentors a researcher may have. During the years I was mentored by Angela Biaggio, Anne Petersen, Marc Bornstein, Urie Bronfenbrenner, Nancy Eisenberg, Jon Haidt, Helen Haste, Marcela Raffaelli, Ken Rubin, and many others, who as mentors, inspiration, and friends have paved the way I walked to be now the inspiration of many others.

Being a reference in the area of study on children, adolescents, and families in situations of social and personal risk does not make us more proud, but responsible for the commitment of our mission and expectation that we generate. In fact we are a working group that learns to make many exchanges in that period. We exchange knowledge, concerns, problems, affections, and everything else a group of human beings can share. We love a party, we sing together, we welcome those who arrive, and we miss the physical presence of those who leave. We thank each one of those who have honored us with their recognition and who have helped us to make a better world.

Translational Research: Moving from Research to Practice—We Make a Difference by Intervening

We transformed some research findings into actions that have subsidized public policies or mere changes in contexts towards improving the quality of life of populations in situations of social vulnerability. The following pages were also described before by Koller and Dell'Aglio (2011). A very simple example was based on research on desires of street children. This was a brief study, with a graduate student (Silva et al. 1998), to be presented at an internal congress of the university. We feared for the children's question: "What would you like to have now?" Because it could generate answers with requests for material objects that we could not meet. However, it was surprising that, in the first case, we observed that the desire of these children was greater for privacy and intimacy, and the material requests, although present, were irrelevant. We identified that they wanted very much a private space that was theirs alone. When the director of the shelter asked for advice to prevent the young people from fleeing, which put them in even more extreme situations of vulnerability, it was suggested that each had a closet to store their belongings. The implementation of this suggestion proved to be highly favorable, greatly reducing leakage statistics and increasing return statistics. Keeping them off the street has protected them and lessens the chance of facing adversity. This may be an almost naive example of application of research results, but it represents the ability and sensitivity of researchers to make research findings that could go undetected.

From the theoretical point of view, many advances have already been offered to science by CEP-RUA studies. The conceptualization of street children and street children presented in the literature was, from the beginning, an impasse in CEP-RUA surveys since 1996. Based on parameters related to street sleeping and family relations (Aptekar 1996), some authors proposed the existence of two distinct

groups of young people in the street space. Our experience of approach and follow-up did not allow us to clearly define whom children fitted into any of these definitions and who would guarantee methodological rigor in our sampling procedures. In years of street work, with more than a thousand young people approached, we found that very few of them always slept on the street. They floated from place to place, from shelters to "mocós," from houses of relatives to others. Family relationships were present in the stories of all we dealt with. We never find one that does not have a reference to any family member. In general they report that they have several addresses and relatives, but most of them they consisted of unstable relationships and no depth in attachment bonds. Hutz and Koller (1999) discussed the controversies in the literature on the definition and characterization of the street children population, in order to obtain methodologically comparable data, to suggest the use of the expression "street-involved children"and a methodological approach which included the analysis of case by case and ensuring a clear description of the sample. Recently, a classification was proposed based on five parameters, taking into account the linkage with the family; the activity exercised; the appearance of young people; the place where they are, and the absence of a responsible adult from them (Morais et al. 2010). However, we soon realized that it was not completed as well, when Paludo and Koller (2005) had already proposed to add to these parameters, and also, the fact that some of these young people can be found at unexpected times for a person of their age range to be alone on the street.

Another example of application of findings, and one of the most challenging we have received, was spontaneously presented by a community demand. A community leader, half-literate, who sought us out for a research that could identify risk and protective factors in her neighborhood, so she could use our results in a petition to apply for its urbanization to the city's political administration. She commented that this was a region of high crime and drug trafficking that had been neglected by politicians and social agents and that in his opinion were negatively reflecting on development in children. The physical and urban conditions of community contributed to crime and low sense of belonging. Access was poor, the sewage was in the open and, according to her, "the police only came in to buy drugs." We sought the support of the local school to access the children and without engaging the traffickers in an offensive and antagonistic way—they were, in general, the parents and mothers of these children. We have been inserting ourselves into this bioecological context and demonstrating that our interest was to promote children's quality of life. We made several referrals for attendance and even some complaints to children's rights councils in cases of sexual abuse and neglect and other violations of rights, always with the support of the school and the leader who came to us. There were long periods of bioecological engagement and dedication, which allowed us to prepare a report, which was taken to the town hall and allowed the construction of 100 houses, a health center, and a community center.

Another finding of applied research was obtained in studies by Santana et al. (2005). Being a street child was identified as a high status position desired by some children who made use of the street just in passing. This controversial fact appeared in interview, in which some of them reported that, in order to have access to care

institutions and their services, they had to "pretend" that they had this identity. Institutions that originally wanted to take children out of the street and intended their services to them provoked this type of attitude in some excluded from its system. This finding was surprising because, instead of avoiding the migration of children to the street and the risks involved, the institutions without knowledge of this fact were playing an important role in the trajectory of institutional linkage carried out by children towards the street life.

Surprisingly, being a street child can be a "status" desired by some young people. This controversial fact appeared in the study by Santana et al. (2005), in which some children reported that to have access to some service institutions and their services they had to "pretend" that they had this identity. Institutions that initially intend to take children off the street and to them destine their services; provoke this type of attitude in some excluded of its system. This finding is surprising because, instead of avoiding the migration of children to the street and the risks involved, the institutions without knowledge of this fact play an important role in the trajectory of institutional linkage carried out by children towards the street life. With regard to such migration, Koller, De Antoni, and Carpena investigated the reports of several families about their children's reasons for leaving their homes, their attributions of causality, and expectations regarding them. Their study showed that most of these families have more favorable expectations of success for these children than those who stayed at home.

In another study, with a national collection with Brazilian truck drivers, the aim was to understand the determinants of sexual exploitation of children and adolescents (Morais et al. 2008). A total of 239 drivers were interviewed in different Brazilian regions through a questionnaire on biosociodemographic data and aspects related to life on the roads and to sexuality, as well as beliefs and attitudes regarding gender and others. Surprisingly, 85 of them admitted to having had sex with girls under the age of 18. The main determining factors were the social and economic inequality, the strong macho and adult culture of the truck drivers, as well as the tendency towards the lack of responsibility for abused children and adolescents, lack of knowledge, and consideration of the developmental rights and characteristics of this population. The relevance of this and other studies, which emphasize the abusers' perspective, can contribute to unraveling the economic, social, cultural, and political realities involved in both the formation of demand and the supply of the sex trade. Thus, they will allow the elaboration of perspectives to combat the sexual exploitation of children and adolescents that are more effective, ranging from working with girls and families to improving the quality of life of truck drivers themselves, who do not find options in their stay outside their home cities. The results of this extensive research are being widely disseminated in the national media and have generated a campaign entitled "Na Mão Certa" <www.namaocerta.org.br> and the "Pact against the Sexual Exploitation of Children and Adolescents on Brazilian Highways" that has been signed between transportation companies, gas stations, and other concessionaires, to prevent the sexual exploitation of children on the road and improve truckers' lives.

Conclusion

We transformed some research findings into actions that have subsidized public policies or mere changes in contexts towards improving the quality of life of populations in situations of social vulnerability. The varied examples of findings that have become intervention show that it is possible to move from research to action. In fact, research informed by theory and practice offers rich opportunities to improve the situation of populations in situations of vulnerability. Sometimes all that the people in a situation of social and personal risk really needs is someone who listens to and understands it. Therefore, the importance of an ethical attitude of attention and dedication to the participant has been the basis and the most important condition for the work that we have been developing. We also collaborate closely with "communities of interest," because they present us with demands that allow us to apply, in their reality, the knowledge obtained in theory, impel us to create work methodologies, and generate intervention strategies that improve the quality of life of these people based on our search findings.

Partnership is the key determinant of our success. And this is the most important of the values we follow and pursue. We are a group of researchers, professionals, always focused on learning and training. But we are mainly a group of friends who seek incessantly to promote the well-being of all and to improve our own quality of life, through friendship, solidarity, and mutual affection. Students and professionals from various parts of the country and the world join us annually to work together, but also to relax in social gatherings with joy and lots of fun. As our teacher Bronfenbrenner (media, see Koller 2004) said, teaching and learning are one word in Russian and we can incorporate this sense into our lives and the practice of our work. We learn-we teach that investigating, intervening, and reporting are our life mottos, and we work together for it. It is fundamental in our work to ensure that participants in our studies feel better after working with us. That is, we have the firm intention of not being a protagonist in the history of abuse, risk, exploitation, and violence that our participants have already lived. We think it is better to lose the die than to act contrary to this precept. Often, in the middle of interviews, the collection work is interrupted or finalized, to give effect to the demand that is brought to us by the participant. It has been fascinating to experience that some small observations we make or the knowledge we convey make a difference in their lives. In the same way, we learn a lot from them and we certainly become better professionals and people.

The mobilization of entire communities, governments, and even nations can change the world, and psychology certainly has its part in it. The experience of our team of researchers illustrates how small steps can lead to big changes. In the last 14 years, the Center's activities have assumed increasing importance. Most of the work we do takes place outside the walls of the university, direct contact with the community, be it on the streets, in institutions, in slums, poor neighborhoods, or schools. The integration of academic psychology, based on the studies of human development and community practice, has proved possible 14 years ago by the constant exchange

that favors our formation and those who interact with us. Through the research, we integrate the theoretical with the empirical with the communities with which we work. We understand that in this stable and reciprocal relationship it is possible to build knowledge. We seek, in the knowledge of populations and in their demands, to find topics for our research, extension programs (social intervention) and to subsidize, with more appropriation, the teaching of future psychologists. As doctors and students, we have access to the most up-to-date findings of science and we have the training and tools to understand and explore them. The populations that we access have daily life experience, coping strategies, and overcoming, and often accumulate hundreds of cases and data that need to be systematized, in order to understand and structure effective actions. The integration of the "abstract" found in books, scientific journals, and on the Internet becomes "concrete" in the dialogue and in the cooperative search for the best living conditions for all of us. We believe that any scientist is at risk if it is not relevant to his or her work. Our desires and expectations aim at the theoretical and social relevance, so ensuring this integration makes us professionals happier and more accomplished. Our recent book *"Vulnerable children and youth in Brazil: Innovative approaches from the psychology of social development"* brings together many innovative research built across the last three decades (Dell'Aglio and Koller 2017).

Intervene, Investigate, Inform is always a challenge (Koller and Dell'Aglio 2011). Our publications have attracted international attention and collaboration, and contributed to the understanding of the issues we have addressed. Nowadays, we feel that our many cooked black beans pots have been more than a way of feeding our research. They have been a community meal that we have been sharing with the scientific community and many collaborators, participants, social policy makers, and international fellows.

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For What and for Whom? Ethical and Political Commitments for Psychology in Brazil

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Abstract This chapter intends to review the trajectory of a profession that was instituted and consolidated in a dictatorial political regime, began to be reviewed and criticized in its genesis and ethical commitments with the majority of the Brazilian population. This review goes through the history of training, professional exercise and scientific production of a research group that assumed a critical perspective with an emancipating horizon in their daily work. The proposal involves an analysis of the historical milestones determining the process of professional identity and involvement with a specific field of professional activity—the Brazilian public school. Psychology in Education has an important role for the prevention and promotion of the integral development of children in the school space, together with teachers and families. This field, which integrates the educational process and the community insertion, brings a challenge to Psychology. From a historical-critical perspective and the theoretical and methodological foundations of action–participation research, the commitment to this production is to ensure the right of all children to fully develop to the fullest of their potentialities.

Introduction

Producing scientific knowledge in Brazil is a great challenge that requires from the researchers a lot of effort, creativity and a consistent financial and social support network. Always scarce resources, large and important social demands pressing for scientific answers and almost insufficient research infrastructure are some of the main obstacles to academic production. Despite efforts, one of the reasons for great difficulties in the production and visibility of Brazilian research may be the culture of a colonized science, which relies on financial resources to promote adequate training of professional researchers and offer important answers to the reality change.

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In Brazil, inequality and social exclusion determine the quality of life of the majority of the population and economic and social relations. These issues require research implications, often neglected by the country's scientific policies. This would be sufficient for the construction of a Psychology that would respond to this dimension and, in fact, commit itself to coping with and overcoming these problems.

Social issues have always been elements that have caught my attention in my career as a professional and researcher. I have always understood Psychology as a powerful tool to reduce social inequalities in Brazil, but this theme has never appeared in the disciplines I studied at undergraduate or postgraduate level. This situation made me think about how we would bring Psychology closer to reality. I started to feed a dream—I dream of breaking a cycle of repetition that reproduces the "status quo" and does little to contribute to social change.

At the end of each year, as a repeating ritual, in the research group where our teamwork takes place, we look at what we live, what we manage to accomplish— what we miss and what we want to renew of purpose for the new time we started. We seek to validate the knowledge we produce based on Prilleltensky's concept of psychopolitical validity (1994, 2008). Therefore, thinking about the scientific contribution and its consequences for the change of reality makes us always have in mind the meaning of our production—for what do we produce knowledge?

My contribution to Psychological science is related to the construction of projects that we fight for. I make my own the words of Paulo Freire (2000) when he develops pedagogy of indignation! He shows us that for the realization of projects it is necessary to face obstacles and this implies in advances and retreats, which makes the march delayed. Therefore, we should not be immediate. It is necessary to recognize present ingredients, imbricated in its environment, and therefore, it is necessary to think, to raise doubts, to point contradictions, to delineate paths, forms and contexts deliberate and unforeseen of walking. That is the purpose of my research trajectory. Paulo Freire marks the contradictory and procedural nature of the whole reality. If reality is contradictory, it means that things will never be static. In reality, there are contradictions. If the reality is procedural, it means that nothing happens as in a magic pass. Everything takes time, has phases and structure.

We live in a capitalist society, impregnated by neoliberal ideas of ever-greater achievements of something that is never attained and which we definitely never need. This process is an exclusionary sociability that accentuates social inequalities. We look around and see on all sides the injustice and lack of a social ethic capable of differentiating us between humans and subhumans. In so many years of capitalism, the field of the Brazilian public school is a stage where the great consequences of social inequality and injustice are revealed, which requires an exercise that is expressed in the certainty that change is difficult, but it is possible. And, this is what makes us refuse any fatalistic position, which attributes to a conditioning factor the determining power, before which nothing can be done (Cabrera 1990; Martín-Baró 1996a, b).

A possible way for life to be dignified for all is to nourish a person's ability to think, design, compare, discuss, choose, decide, reflect and evaluate. Before that,

there is no possible change. Paulo Freire went further—said that when the person recognizes himself conditioned and not fatalistically submitted to this or that destiny, the way is opened for his intervention in the world. These are the main forces that underpin my scientific contribution.

The Profession in Brazil and my Questions: For Whom and for What Brazilian Psychology?

Considering that Psychology is a science founded and developed in the nineteenth century and in countries of the northern hemisphere, its growth among Latin American countries, especially in Brazil, occurs in the twentieth century milestones with characteristics of a colonizing process, mimetic and without responding to the social demands, especially of the poorest and excluded of basic rights in our society.

During my graduation in Psychology, at the end of the 1970s, we lived a civil–military dictatorship that had great impacts on the determination of the professional profile with predominance in mental diseases and in the therapeutic processes for acting in clinical contexts. For many years, after graduation, I sought the meaning of a profession that was destined only to the elite. And in this search, I validated the psychological knowledge produced by authors who sought to establish the commitment of this science to the process of development of children and youth in contexts of vulnerability, violence and social injustice. During the 1980s, I completed my postgraduate training. As a researcher in the field, I formed a research group whose main objectives were the development of responses to this condition.

In recent years, after an important postdoctoral experience in the Center for Community Studies at the University of Rochester/ USA, along with Professor Emory Cowen and his team, I have learned the importance of critical perspective and prevention in the production of psychological knowledge. In addition, it was within a group of Latin researchers (Maritza Montero, Albertina Mitjans Martinez, Fernando Gonzalez Rey, Bernardo Jimenez Dominguez, Jorge Mario Flores Ozório, Ignacio Dobles Oropeza and Maurício Gaborit, among others) that I understood the meaning of Psychology for the Liberation of oppressed people and, at the same time, the power of Psychology as an ideological tool in the service of torture, domination and capitalist production. This group allowed me to know the work of several other researchers, throughout the world, who reflected on the role and meaning of psychology for the maintenance of the status quo, such as Ian Parker, Erica Burman, Mark Burton, Tod Sloan, Ernst Schraube, Athanasios Mavarkis and David Pavón-Cuellar, to name a few.

Impossible not to recognize in Brazil, researchers who built the area with responsibility and commitment inside the agencies of research promotion, showing legitimacy and respect, as well as fostering debate on issues relevant to social construction in the country. People like Sílvia Koller, Antônio Virgílio Bastos, Oswaldo Yamamoto, Paulo Menandro and Zeide Araújo Trindade, among others, left deep

marks in the way Psychology is organized in the country amid the chaos of the educational and scientific policies, which always give different conditions to the hard sciences instead the social and human sciences. Along with these, my career was marked by Brazilian professors such as Maria Helena de Souza Patto, Silvia Lane, Ecleia Bosi, Cecilia Coimbra, Ângela Caniato and Pedrinho Guareschi, and Maria de Fátima Quintal de Freitas who, starting from different theoretical perspectives, always sought a socially committed analysis of the unequal Brazilian reality, deeply questioning the ways of Psychology.

Since 2004, the research group *Psychosocial Evaluation and Intervention: prevention, community and liberation* has produced a body of knowledge from a critical perspective, seeking to foster necessary changes in the practice of the Psychologist in educational and community contexts by reviewing ontological, epistemological and methodological approaches that support the research. Still, and increasingly, public schools and communities in their surroundings are the scenarios of where and to where the knowledge produced in this group is constructed, aiming to change what is possible by the concrete action of people and groups in reality.

From 2002 to 2006, the focus was to seek a synthesis of what can be understood as risk factors and protection, both social and personal, in development processes, so that it would be possible to indicate ways for a preventive intervention in communities and schools. In these 2 years, the history covered and built by the research group, as well as the foundations that served as the basis for the reflections drawn from experience, constituted evidence of psychopolitical validity in relation to the proposed objectives. The main practical result, considered as technology in the service of professional practice, was the formalization of a manual for the evaluation and monitoring of children and their families, from the schools where we were inserted and from the surrounding communities also in prevention programs (Caro and Guzzo 2004; Guzzo 2003, 2005, 2006; Weber and Guzzo 2006, 2007; Wuo and Guzzo 2002; Lacerda Jr and Guzzo 2005). These studies pointed to the need for a critical movement in the conception of the psychologist's work, which, if it does not have a broad understanding of reality. The work of the psychologist comes, over time, repeating itself in the maintenance of the situation with few consequences of change in the social structure—root of the psychological problems. In the face of this finding, which is increasingly evident, whether by the insertion of the psychologist in educational and community contexts or by the difficulties present in the processes of constructing effective preventive intervention proposals, the path to be followed becomes, first and foremost, the one that includes human being as constituted from its social and historical condition. Considering risk and protection factors, from a dialectical logic incorporates, in an important way, other elements in the analysis of social contexts, their main characteristics and possibilities of change. Subjects are part of the development process and, therefore, their perspectives on what they live, feel and see, as reality should be included in the analysis.

From 2007 to 2009, a new step was taken with the investigation of elements of consciousness in different situations of daily life, in different contexts of community and preventive intervention, debating the objective reality and its impact on the conditions of development of children, adolescents and persons representing in the

case of certain social groups (Guzzo et al. 2006, 2007, 2009; Lacerda Jr and Guzzo 2008, 2009; Guzzo 2007, 2008, 2009a, b; Faria and Guzzo 2007, 2009; Euzébios Filho and Guzzo 2007, 2009; Silva and Guzzo, 2008; Sant' Ana et al. 2008; Costa and Guzzo 2007; Weber and Guzzo 2007, 2009). The idea of considering psychosocial processes of awareness, empowerment and participation in social change, as tools to combat alienation and fatalism in this short period of time, has led to a complex web of information and theoretical positions that needed to be clarified for the continuity of research. Thus, the search for theoretical and methodological frameworks and ontological foundations for the possible syntheses marked this period, and were necessary for the development of psychosocial intervention proposals in this field. The understanding of the processes of alienation and fatalism as social responses, which maintains the status quo and the social and political situation responsible for the difficulties experienced by a certain social class, was a fundamental element for the understanding of the role that Psychology plays in this process and its distance from a Marxist and liberating conception of social life. Gradually, it became clear the importance that Psychology has as a tool for the maintenance of social relations in the configuration of a capitalist society.

The next stage, period from 2010 to 2015, was used to investigate, in different contexts and groups (rural settlements, schools, social movements and parents group), the processes of awareness, as a first element for the organization and planning of emancipatory processes, which set people and groups in motion in the direction of their needs. We investigated the living and working conditions of children's educators in public institutions (Mezzalira et al. 2013), of people living in rural and urban settlements (Lacerda Jr and Guzzo 2012; Buoro et al. 2011). Also, we presented the results of the study of teachers, educators, psychologists and social workers in the context of work (Senra and Guzzo 2012; Penteado and Guzzo 2010). In addition, the presence of psychology professionals in communities and schools has been discussed, reviewed and proposed, under a critical perspective (Guzzo et al. 2012, 2013b; Ribeiro and Guzzo 2014; Mezzalira and Guzzo 2011; Sant' Ana et al. 2010; Mezzalira et al. 2014), as well as public policies in social and educational contexts (Guzzo et al. 2013a; Moreira and Guzzo 2013, 2014) among others. Moving through the path of critical psychology, the social psychology of liberation and the proposal of a change in the understanding of psychological phenomena and forms of intervention, through a critical revision of the ontological, epistemological and methodological foundations, it is still a task that requires the organization and the construction of knowledge committed to the analysis of elements of social conditions in the formation of subjectivity (Guzzo, 2011, 2014, 2015). In view of this increasingly evident observation, whether by the insertion of the psychologist in educational and community contexts and by the difficulties present in the processes of constructing effective preventive intervention proposals that provoke social changes, the path to be followed becomes, as a priority, which comprises the human being as constituted from its social and historical condition (Guzzo and Moreira, 2012).

The development of transformative actions is intrinsically linked to the analysis of reality in its concrete totality associated with a singular or collective capacity for

action. A materialist perspective of reality is that which is based on the daily and productive activity of humanity as opposed to the metaphysical elements of this same analysis (Novack 1975). Being, therefore, a synthesis of the conditions created by men in contact with nature, it is necessary that life be analysed taking into account the history and the social system in which it unfolds. It is in this relationship that development occurs (Pino Sirgado 2000) and an approach that considers these elements in the process of human and social development must build a new body of knowledge capable of responding to a different way of understanding social relations, historically constituted (Burman 2006, 2007).

The understanding of the processes of alienation and fatalism as social responses, which maintains the status quo, and the social and political situation that underpin the difficulties of a given social class, has shown the distance of psychology from a liberating conception of social life (Pacheco and Jimenes, 1990).

It is necessary to deepen the understanding of elements that represent processes of alienation and fatalism in people's lives, so that a qualitative leap is possible in psychosocial interventions in educational and community spaces. Alongside these, processes of illness and psychological problems, which are treated conservatively and predominantly within the medical model, may be associated with increasingly alienating the possibilities of a collective and organized involvement of the subaltern sectors of society in the search for solutions to the harshest social issues that affect them.

Some indicators show that, in the world, great differences have been accentuated between rich and poor, between those who have the means of production and others who live in misery, between those who accumulate wealth and those who beg for what to eat among those who work for building riches without enjoying them and those who concentrate the riches produced by exploiting the work of others. Inequality can be evidenced through different indicators. However, there is no real possibility of any change with this set of numerical indices if the analysis of how these elements affect the lives of concrete individuals is not realized.

The question posed as an object of research is related to the impact of power and oppression on the feelings of impotence, fatalism and alienation, which, in different forms, are present and not always perceived in the everyday life of the people of a certain social class.

The barbarism, as Mészáros (2003) points out, translates into a social state that is structured by the logic of domination from the weakest to the strongest. Capital is absolutely inseparable from this imperative. According to the author, competition, which leads to expansion, consumption and progress, becomes an ally of income concentration and exploitation, thus widening social inequality and laying the foundations for living conditions at levels of inequality, rights.

It is necessary to ask how these elements become part of the process of constitution of the personality that can be object of analysis of the psychology. For this reason, thinking psychology as a tool for strengthening individuals and groups, for building possibilities for action that sustain processes of social transformation and for the promotion of well-being, continues to be one of the contributions of our research projects.

Foundations that Propitiate the Construction of Another Psychology

My scientific contribution is therefore based on three sets of foundations: (a) the *construction of a counter-psychology*, especially through the interlocution with the Social *Psychology of the Liberation* formulated by Ignácio Martín-Baró (Martín-Baró 1989/2009, 1996a, b, 2004), the *Germany critical psychology* by Klaus Holzkamp (Holzkamp 1985; Maiers and Tolman 1996; Tolman and Maiers (1991); Painter et al. (2009); Tolman 1994, 2009; Papadopoulos 2009; Osterkamp 2009; Brockmeier 2009; Schraube and Osterkamp 2013); (b) *social and political partici-pation* as a way of coping with oppression and violence in community and educa-tional contexts, characterized by an active role of people in changing their social relations and contexts that have consequences on the social structure of spaces such as family, school and movements (Montero et al. 1996; Berger and Luckmann 1991; Martorano 2011); (c) Psychosocial Validity of Isaac Prilleltensky (1994, 2003, 2008) and the *everyday life* as a setting for social change, as well as for the construc-tion of reality including the perspective of the subject (Schraube and Hojholt 2016; Goffman 1990).

   The possibilities of building another psychology include the inclusion of con-cepts and methodologies in the formation of new professionals and also in the pro-duction of knowledge briefly presented here. The topics below are the foundations for the understanding of a new perspective for Psychology that responds to the current situation especially of the Latin American countries.

The Capitalist System and the Impossibilities of Fullness of Life for All

Social inequality prevents the fullness of life for all and is evidence of the barba-rism that is forged in the middle of a society of classes, ruled by the order of capi-tal. People increasingly feel helpless and powerless in the struggle for survival. Life within a capitalist system, based on a neoliberal ideology, creates a large number of unemployed, condemning many to stagnation as well as promoting a horizon of impossibilities for a society on different bases (Anderson 2000; Marsella 1998; Therborn 2000). The capitalist system ends up producing a con-text in which all dimensions of social relations are affected and subordinated to economic exploitation—social organization, popular culture, ethics and so on (Brown 1974; Comblin 1999). In this system, wealth production is concentrated in transnational corporations and in a small number of people producing and maintaining an insurmountable social crisis. The increase in the concentration of wealth makes the concentration of income increasingly structural and rigid, and this situation therefore relegates a palliative role to social policies of compensa-tion and income transfer. By the end of the 1990s, 1% of the wealthiest in Brazil

had 56% of the riches evaluated in different elements, such as private properties, assets, shares, etc. (Carcanholo 2005). Today, the situation is even more evident as a consequence of the increase of social inequalities. The global economic crisis increases hunger, poverty and unemployment, putting the country at high risk, which means conditions of miserability and all its consequences, especially violence.

The global economic crisis highlights the fragility of this system and demands, more than ever, a clear understanding of the elements that cause this situation and what impact they have on the daily lives of the poorest people, who end up being the most affected. Despite continuing to reaffirm the poverty reduction target set for 2008/2011, the UN continues to question economic outcomes with no prospect of transformation in the current framework (PNUD 2009). It is a crisis that is not temporary, but structural and sustained by the existence of a majority of the population living in precarious conditions (Santos 2000).

In this society, the State functions as an instrument of domination of one social class over another, translating, in everyday life, a set of policies that do not solve social conflicts (although it may cushion them), since they do not serve the interests and needs of a majority of the population struggling to stay alive (Anderson 2000; Tonet 2005).

Inequality thus becomes a trivial phenomenon that normalizes and naturalizes, as people become accustomed to these conditions as part of the unchanging everyday life and out of control. And, the impact of this naturalization on people appears as a feeling of impotence and fatalism, considered by Freire (2000) and Martín-Baró (1996b) as psychosocial processes that impede social transformations and open space for domination and exploitation of the most strong with the weak.

From the perspective of critical psychology, we seek to discuss how, from the subject's point of view, its "power of action" is related to its position in society (Osterkamp 2009), and the role of political and psychological power as possibilities of confrontation and resistance to oppression (Prilleltensky 2008).

The Daily Oppression and its Consequences for Fatalism and Alienation

For an effective transformation of this social state, it is necessary that people become involved and move towards breaking with fatalism, especially understanding the structural situation in which different social forces are confronted. For these forces to be understood, it is necessary to know the contradictions of each one of them and how they influence each other. This understanding is expressed by the degree of individual and collective consciousness and that, in psychology, constitute the subjective and social dimensions of the personality. These psychosocial processes, characterized by domination and subordination, can only result in resistance becoming conscious and the fruits of a revolutionary process (Fanon 1971; Freire 1972).

The human personality has always been the subject of many interests, and different theories were elaborated so that its constitution could be understood. Evidence of this is the variety one can find that of books and periodicals devoted to the subject. However, it is necessary that the theoretical bases for the understanding of the personality support a new perspective for the problem of the human individuality as a psychological phenomenon, fundamentally, social and historical. For Sloan (1984, 2000, 2002), the main question in the study of personality is the explication of its constitution within the bosom of the historical unity of science—individual and group phenomena, the relation between society and individual understood by a dialectical analysis of a concrete reality. As Sève (1979) also points out, the Marxist idea of social totality can serve as a basis for reflecting the individual's personal biography and emancipation. Sève (1979) and Vigotski (1929/2000, 1999) appear as two reference authors, as well as other researchers, whose productions contribute to the understanding of the personality from a Marxist perspective and the process of its constitution into social spaces of development, its interpretation and study (Pino Sirgado 2000; Góes 2000; González Rey 2000; Van der Veer and Valsiner 1991).

Within this perspective, processes of awareness become psychological processes that take into account the social and historical elements that constitute each life trajectory. Thus, the importance of dialectical thinking in the understanding of the contradictions present in the development of each phase of life, in the choices made, in decision-making, which, in other words, constitute historical forms of individuality (Pino Sirgado 2000). If human essence is the set of its social relations and the psychological theories and their practices affect and are affected by the social order (Prilleltensky 1994), one of the ways of seeking social change is to try to understand how the social world appears translated in individual life.

Emancipatory processes thus come to the realization that there is value in collective work, but it is a mistake to ignore the individual needs and mechanisms created to pursue their life projects. For Vigotski (1929/2000, 1999), this process is expressed by a dynamics that denotes the relation between the personal constitution and the relations with the others, as much of its immediate and mediating conviviality. Personality, according to this author, therefore, is constructed through a dialectical process considering external and internal, objective and subjective dimensions. And in this process, everything that is internal (subjective) was external (social) before. This means that the psychological nature, therefore, of complex behavioural problems, such as fatalism and alienation, must be understood by the investigation of consciousness (Vigotski 1999).

The importance of this formulation in my trajectory as a researcher can be translated into the understanding of human development as a process that involves the subjective appropriation of objective life conditions mediated by the relations established in the social context. To know, therefore, the structure of the human personality is to know the nature of its social relations and, through this analysis will be highlighted, next, three psychological processes present in the current conditions of life that prevent the involvement of the people in actions of social transformation: alienation, impotence and fatalism.

In order to understand these processes, it is necessary to clarify the elements present in the dynamics of power and oppression over social relations that affect the singular and collective interventions in daily life.

Oppression and Power

For Parker (1999, 2007) and Sloan (2000), power and interests affect human experiences, their understanding of people's choices and ways of acting to change and change them or to prevent them from acting. In this way, human relations are permeated with power and affect or impact life in different forms—they are pressures that repress, oppress or strengthen and favour resistance, they are different individual and collective responses to objective conditions of pressure—oppression or repression. These characteristics, in the dynamics of relations, need to be known. The pressures perceived in daily life can have different impacts: if they are oppressed, they can cause responses of resistance, manifested by individual or collective empowerment, or impotence and fatalism also in the same individual or collective dimensions.

Critical psychology as a subject science (Holzkamp 1985), in order to be truly scientific, must understand the power of individuals as a reflection of their productive activity, which in practice means that the individual is subject. Subjectivity here is understood not only as contemplation or self-reflection but also as an effective action lived in cooperation with others, that is, in historical and social relations. The origin of these foundations comes from a critique of the society and science underlying the movement of Germany, especially in East Berlin, whose aim was to replace the dominant psychology, which denies the subject, by a critical emancipatory alternative that takes the Marxist methodology as guideline—a methodology that gives account of the psychological subject. The most important guideline is that the constitutional essence of the concrete and historical object can only be understood from the logic of development that moves from the abstract to the concrete—what converges in the concrete individual are social and historical relations (Marx n.d.).

The actions of social transformation have as horizon the liberation of conditions of oppression for conditions of emancipation. This is the horizon placed by Martín-Baró (1996a) that means, in that the overcoming of conditions of oppression in which the majority of the population is immersed for personal and social liberation. And, this process implies resistance and empowerment in the face of oppressive forces that must be fully understood (Prilleltensky 2003; Prilleltensky et al. 2001; Prilleltensky and Nelson 2002). According to Moane (2003): "The psychology of liberation requires an analysis of the social conditions in which people live their lives, an understanding of internalized oppression and a set of practices or interventions that transform psychological and social patterns associated with oppression" (p. 92).

Fatalism and Impotence

This horizon requires analyses of psychosocial processes, such as impotence, fatalism, awareness, empowerment and social change. It is a question of basing the transformations on specific experiences and contexts of distinct groups to enable people to achieve their vocation as beings of praxis (of thinking and acting) and as subjects of their own history (Freire 1972) Categories like fatalism and impotence can denounce some aspects of psychology that, historically, assumed ideological components in their theoretical and practical formulations. For Prilleltensky (1994), there are concrete examples of how psychology operates as an agent of socialization in the direction of benefiting dominant segments of society, or discussing problems originating in the structure of the socioeconomic system such as psychological maladjustment or psychopaths. Albee (1986), in his preventive perspective, denounces the Calvinistic ideology of predestination in great currents of psychology that place remedial strategies, that is, strategies that support the status quo, as the only possible alternative.

Psychology has traditionally presented powerlessness associated with psychopathologies arising from individual defects, that is, blamed on the victims of a system of exploitation which, in reality, by living in such situations, feel unable to change their reality (Joffe and Albee 1981). In other words, "without power are usually exploited by powerful economic group" (Joffe and Albee 1981, p. 322).

Impotence (feeling of lack of power) is a psychosocial phenomenon that exists reciprocally with another: fatalism. For Freire (2000), fatalism paralyses man in the face of history and makes him relinquish his ability to think, to choose, to decide and to elaborate personal and collective projects. Faced with real restrictions imposed by society, man loses his sense of building and seeking the realization of his projects. He feels predestined to his destiny and incapable of acting on it.

Fatalism is a marked phenomenon in Latin America, where populations have narrow life chances and naturalize social reality. "Each object has its own predetermined cycle, and the only ones are those imposed by the minimal demands of evolution. Things are as they were yesterday, and thus will be tomorrow" (Martín-Baró 1996a, p. 199). Here too fits the idea of predestination, fate is inevitable; this understanding of the world is fatalism. Martín-Baró (1996a) stated that fatalism could exist as ideas, feelings and behaviours.

Fatalism has a political utility, which, for a long time, psychology has maintained, presenting in reality the internalization of social domination, as characteristic traits of personality (Martín-Baró 1996a). They are ideas and practices that arise and begin to legitimize asymmetric power relations—that is, ideology (Guareschi 1996; Sloan 2002). Fatalism brings meaning to the oppressed classes, but "the roots of fatalism lie not in the psychological rigidity of individuals but in the unchangeable character of the social conditions in which people and groups live and are formed" (Martín-Baró 1996a, p. 217).

Awareness Taking and the Awareness Process

In Brazil, Freire (1980) coined the idea of awareness. Freire considers awareness as a historical commitment, implies that men assume the role of subjects who make and remake the world. According to Martín-Baró (1996a), "awareness does not consist in a simple change of opinion about reality, a change in the subjectivity of each individual that leaves reality intact, consciousness assumes that people change in the process of changing their relations with the environment, his surroundings and above everything else with others" (p. 41). This concept is fundamental for the process of strengthening and, consequently, for social transformation.

For Freire (1980), one of the characteristics of human beings is that only they are able to distance themselves from the world to objectify it and with that, to act on reality. This, for Freire, is human praxis, that is, the indissoluble union between my action and the reflection I can make on the world. Awareness, therefore, becomes a process by which man surpasses the spontaneous sphere of apprehension of reality to reach a critical sphere in which reality takes place as something known and upon which an epistemological position is assumed.

Both Martín-Baró (1996a) and Prilleltensky (1994) proposed awareness as a necessary activity for the psychologist, based on Freire's ideas, as a gradual process in which man, insofar as he knows and acts in the world, transforms him and transforms himself, being an agent of his own history. The strength of Marxist thought lies precisely in the possibility it affords to the treatment of social contradictions and conflicts in which large sections of the population, especially those suffering oppression and exploitation, belonging to the capitalist system are immersed. One of the dimensions of this thought is the clear and objective understanding of reality. Understanding is permeated by the effects of ideology that cannot, according to Martín-Baró (1996a), be understood in individual terms, but rather from the social order. In addition, for the maintenance of order it is important that certain portions of the population naturalize their social condition.

The production and reproduction of ideology in daily life, according to Dobles (1999), impose on psychology an important role in understanding beliefs, attitudes and opinions, which become a first obstacle to understanding the world and then to its transformation. Prilleltensky et al. (2001) argue that knowledge of the social context in which conditions of oppression occur, what roles community or government play in these processes and how people perceive the relationship between everyday opportunities and threats to your well-being.

Montero (1980, 2003), in addition to this knowledge about reality, draws attention to the importance of processes that develop class-consciousness. Class-consciousness is precisely the form of consciousness in which the subject does not respond passively to history, but seeks to apprehend it in order to intentionally change it in order to free itself from oppressive and exploitative conditions present in society. A Marxist study should consider social classes and their conflicts, from the social relations in a capitalist society and, thus, the relation between the individual and the collective life taking into account the totality.

For Frederico (1979), the study of this relation must consider: the relation between the economic situation and the interests of each social class; how much each class feels interested in understanding reality and transforming it and the nature of what is thought as well as how this knowledge reflects reality. The idea here, brought by the author, is that different stages of consciousness are different moments integral and necessary to the process of the formation of class-consciousness. This process of formation of consciousness must put people in motion, in the quest for the apprehension of historical totality and for engagement in actions of social change.

It is, therefore, a process whose elements of the historical conjuncture provoke leaps or stagnation of consciousness towards the totality, and in this movement from action to experience and from experience to consciousness it can be considered as a process of liberation towards the emancipation (Martín-Baró 2004). Frederico (1979) and Santos (1982) discuss class-consciousness as a conscious representation of the interests of a given social segment in a given social system. The people who compose or personify the different social classes perform in practice, modes of social relations that reflect the dominant ideas in their culture and the way they have been educated. When these subjective impressions do not express the reality of these relations in a group of people, it can be said that if the level of consciousness is class-consciousness itself. However, when this set of people before a given social situation is able to elaborate a project of social existence suited to their collective interests can be said that the level of consciousness of its members jumped into class-consciousness for themselves.

This process, according to Martín-Baró (2004), is one of the main objectives of social psychology, most notably, the psychology of liberation: "… social psychology should aim to make social and individual freedom possible. Insofar as the object of study is action as ideological, that is to say, as determined by social factors linked to the class interests of the various groups, it is intended that the subject becomes class-conscious of the various groups, it is intended that the subject becomes aware of these determinisms and can take them (accepting or rejecting them) through a consistent praxis" (p. 48). For this author, the commitment of psychology must be to create the conditions to promote social and individual liberation, insofar as it considers its object of study as determined by class interests, therefore ideological. Thus, in order to understand the psychological mechanisms present in different social classes, it is necessary to be aware of these ideological determinisms and to assume them, making a decision to accept them or reject them in a consequent practice.

For this reason, my scientific contribution has been, over the last 17 years, to support the idea that the psychologist, as a social professional, should be sensitive and prepared for community and collective action with the majority of the population, and also a professional who understands personality as a social construction (Freitas 1998) and who is able to incorporate the concepts of psychology of liberation and of psychosocial trauma developed by Martín-Baró (1996a). For this author, psychosocial trauma represents the crystallization or materialization in individuals of aberrant and dehumanizing social relations such as those that prevail in a situa-

tion of war and that, in Brazilian reality, are camouflaged by a neoliberal ideologization of a free and democratic society. Thus, our work should provide an understanding of the obscured reality in processes of awareness and the strengthening of people and groups that are translated by participation in transformative actions characteristic of the preventives' movements and promoters of individual and collective well-being (Bloom 1996; Albee and Gullota 1997; Weissberg et al. 1997a, b; Durlak 1997).

Strengthening: Personal and Collective Power

The idea of strengthening, according to Montero (2003), began in the late 1970s in Latin American countries as a fundamental path of action of community psychology to achieve the development and desired social transformations. In this work, the author also carries out an important critical analysis of this process, its definition, its components and phases of development, as a model of intervention, from the needs of overcoming despair, fatalism and alienation, apathy and paralysis, the reality, the indifference and the insecurity present in populations in the most different societies. In his analysis, Montero discusses the need for these ideas to be representative of an effort to conceptualize an important process in community and psychosocial action.

This process comes with the realization that man/woman is a political being, whose impotence arises in contexts of injustice and oppression (Kieffer 1984). For Kieffer (1984), empowerment is a continuous and long-term process of adult development, with actions that allow people to be subjects of their own history and necessarily depend on three interrelated dimensions: the development of a strong and positive image of a critical understanding of the social and political conjuncture, and the promotion and organization of collective and individual resources for action. Serrano-Garcia (1984), in developing and evaluating activities that sought to strengthen in a colonized (as well as Brazilian) reality, stresses that the objectives of strengthening are the search for contribution so that people have greater control over their lives, develop skills and feelings of competence then those objectives were fulfilled. However, according to the author, strengthening colonized or neocolonized social contexts can become an illusion if it does not allow the development of a critical consciousness. Still evaluating strengthening processes, Serrano-Garcia and Bond (1994) point out that strengthening efforts have sought much more individuals than groups, such as: women, non-whites, immigrants and so on. The strengthening of oppressed groups, according to the authors, depends, in principle, on the recognition of oppressed groups, but in addition, it is fundamental to respect the constructions of these groups, such as their values and world views, finding diversities and similarities capable of broadening the understanding of how these people are formed from the way they live.

The idea of strengthening, developed with groups and based on Freire's ideas, can be a method that seeks to identify problems, analyse and critique them and to develop activities that positively change their lives and their communities in three

phases: listening, dialoguing and acting (McQuiston et al. 2001). For Rappaport (1995), the goals of empowerment are improved when people discover, create or voice a collective narrative that positively supports their own life stories. This process is therefore reciprocal, since many individuals in turn create, change and sustain group narratives and vice versa.

To promote, therefore, the strengthening is one of the different means that the Psychology can dispose, to promote not only the well-being but also the social change. As Martin-Baró (1996a, b) affirms, promoting empowerment is to choose a strategy within the urgent tasks of the Psychology of Liberation: to promote the popular virtues, to recover the historical memory of the population and to process the de-ideologization of daily life, develop class-consciousness.

The Psychopolitical Validity to Understand, Resist and Overcome Oppression

A psychopolitical understanding of power, oppression, well-being and liberation considers that the sources of human suffering must be considered from a materialist, historical and dialectical analysis of reality in which both political and psychological elements are considered, in other words, neither psychological explanations and policies alone account for understanding and minimizing human suffering. At the same time, psychological or political interventions alone are not able to improve conditions of oppression because they live the majority of the population (Prilleltensky 2003, 2008; Prilleltensky and Nelson 2002).

The concept of psychopolitical validity presented by Prilleltenski can be clarified as being the unity of meaning, which is evidenced by the correct analysis of reality for the development of community intervention plans. In these elements are involved the processes of awareness about power, oppression, liberation and well-being with impact on the personal, relational and collective level, as well as a plan of action that must be validated by its consequences. Psychopolitical validity requires the establishment of priorities, focus of intervention and analysis while different elements are considered for this process. The author's proposal is that the criterion of validity in the psychological and political analyses carried out, both by research and community intervention, be concretized by the unit discourse and practice, that is, by breaking the dichotomy between theory and practice suggesting the consideration of two elements: the epistemic validity and the transformative validity. By epistemic validity, he considers the importance of conceptual clarity on the elements, such as well-being, oppression and liberation in the collective, relational and personal domains. By transformative validity clarity occurs in the process, in the accompanied and analysed transition of categories change and their dimensions. The idea is that the different conceptual and procedural elements of the impacts *ON* each category in the psychosocial processes of fatalism, impotence and oppression, resistance and liberation *MUST* be investigated with the participation of those who suffer at dailylife circumstances of oppression, and emancipation.

Final Considerations

Having presented some fundamentals and questions that permeate and sustain my trajectory as a researcher, in these final considerations I tried to answer the questions formulated for the chapter by summarizing what it means to be a researcher in Brazil. The greatest contribution I could make to Psychology training in my country is to bring elements to the process of decolonization of Psychology (Guzzo, 2015), in such a way that it can respond more effectively to the real social demands, in addition to the care and treatment of mental problems. My contribution is focused on the processes of development of children in collective spaces, such as communities and school in a preventive perspective. Since this is not the predominance of Psychology in Brazil, we have an immense challenge ahead of us that is not exhausted by academic–scientific production, but which leads us to a militancy in the area, participating in spaces for the exchange of knowledge, establishing international cooperation networks and, very importantly, bridging scientific production and practice in the contexts of communities and schools.

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Looking in History for Novel Integrated View on Psychological Science and Method

William Barbosa Gomes

Abstract The field of psychology in Brazil characterizes by a multivariate and pluralistic understanding of science and profession, by influences received at different times from Europe and North America. Brazil was a pioneer in the recognition of psychology as a profession, although a research-supported education occurred more slowly. My career developed in the period between the pioneering effort of the first Brazilian psychologists from the first half of the twentieth century and the new generation of highly qualified professionals and researchers from the beginning of the twenty-first century, forged in postgraduate studies. I could describe my career as being direct to help consolidate postgraduate studies in the last three decades of the twentieth century. My interest was to increase the publication of journals according to international scientific standards, to insist on indexing of national journals, and to reinvigorate the study of the history of psychology, considering its philosophical and cultural influences. In research, I looked at a combined and reversible interplay between qualities and quantities, guided by four logics: abduction (the power of creativity), induction (the exercise of invention), deduction (the rigor of analyses), and adduction (the critical necessity).

Psychological science stems from a long history in philosophy, developing in the midst of bitter theoretical disputes, but bringing advances in research methods along with advances on application effectiveness. Many misunderstandings persist about psychological science among students, anti-scientific segments, and people in general. Thus, it is easy to understand why Stanovich (2004) begins his popular book *How to Think Straight About Psychology* stating: "There is a body of knowledge that is unknown to most people...Surprisingly enough, this unknown body of knowledge is the discipline of psychology" (p. ix). This situation is even more serious in Brazil, where the profession grew rapidly, in contrast to the science that had a slow

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and suffered development. Brazil was the first country to recognize psychology as profession in 1962, but scientific training through master's and doctoral programs only consolidated around the 1990s. Therefore, the vast majority of psychologists comes into the job market with a basic training of 5 years, obtaining professional license by diploma registration to a Regional Council of Psychology. The government defined the instructions to university training for practitioners and academics in the 1960s. However, only recently did educational policies begin to encourage the insertion of doctors in the practitioner market, hitherto oriented to remain in universities and develop academic careers. In Brazil, the conception of higher education followed the French university model that privileges professional training and not the German model that encouraged academic training and creative research.

Catching a glimpse of all these challenges, I understood at the beginning of my career that my scientific task in the field of psychology would move onto three fronts: (1) organizing a qualified postgraduate training program and a scientific journal according to international standards; (2) redefining the function of history teaching in the scientific training of psychologists; and (3) increasing methodological training in research, contemplating first- and third-person perspectives. In view of these three aspects of my career, my objectives for this chapter are: (1) to point out the context and influences of my training in psychology, (2) to indicate the demands of the field that guided my career, and (3) to highlight my endeavors for improving academic and professional training and methodological innovation in research.

Context and Influences

I come from a humanist tradition under the influence of Professor Lúcio Flávio Campos (1923–1988) at the *Universidade Católica de Pernambuco*. Campos graduated in Philosophy from the Jesuit Seminary of São Leopoldo-RS, Brazil; in Theology from Fordham University in New York; and in Psychological Counseling from Washington University in St. Louis, Missouri. He used to describe the development of personality from a humanistic perspective, highlighting the aspects that led to psychopathology and what psychological treatments could aid in well-being and mental health. In his approach, he emphasized the concept of an integrated psychological science, despite its many contrasting theories. In this sense, his "Introduction to Psychology" (Campos 1968) brings a well-connected exposition of psychological science, with strong didactic and conceptual influence of Gestalt theory. Certainly, it is through this book that I began to think and develop my systematization on the ontological unity of psychology.

Licensed as a psychologist in 1972, I was transferred to São Paulo where there was a huge demand for psychology services. The new psychology profession was beginning to show its contributions. Certainly, the great demand for psychological services had generated much interest in professional training, leading the universities to quickly offer undergraduate programs, even without a properly qualified faculty. With only 1 year of professional practice and without having completed a

master's degree, I was approved in an entrance examination as instructor of psychological counseling and group dynamics by the *Fundação Educacional de Bauru*, a medium-sized city in the state of São Paulo.

I was lucky to have gone to teach at the *Educational Foundation of Bauru*. The institution was structured in accordance with the new conception of higher education and academic career, hiring instructors on a work shift (20 or 40 h a week), and encouraging the immediate entrance in postgraduate studies, the term used in Brazil for programs that offers master's and doctoral degree. Therefore, a year after arriving, I was enrolled in a master's degree program offered by the *Pontifícia Universidade Católica de Campinas, São Paulo*.

At the Master's program in Campinas, I studied with Professor Miguel de la Puente, who had just returned from his doctorate work at the *Université de Strasbourg*, France, with the thesis published under the title of *Carl R. Rogers: De la Psychothérapie à L'Enseignement* (Puente 1970). Under his supervise, I thoroughly studied Carl Rogers theory (1902–1987), and began a counseling audio recording research for rigorous analysis and evaluation of the therapist–client dialogue. Unknowingly, I was outlining my master's thesis and doctoral dissertation that I would accomplish years later at Southern Illinois University, Carbondale.

Some chapters of *Becoming a Person* (Rogers 1961) were decisive for my scientific project. In particular, Chapter "A Process Conception of Psychotherapy" (pp. 125–182), which Rogers emphasizes the changes in the client's narrative verbal structure, and in the three Chapters of Part Five (pp. 199–270) titled "Getting at the Facts: The Place or Research in Psychotherapy" that brought the author's dilemmas between the logical positivism and the emerging existential sense of his experience as a psychotherapist. In Chapter "A Process Conception of Psychotherapy", he took the verbal expression as an indicator to the alliance and narrative flow in psychotherapy, ranging from fixity in beliefs and values to fluidity in openness to experience. He characterizes the psychotherapeutic process in seven phases that could go from the refusal of personal communication to full communication, evidenced by a self-expression free of restriction and by an immediate reference to oneself using singular first person. In the introduction to the section reporting empirical studies, "Getting at the Facts" Rogers referred to the confrontation he felt existed between subjective clinical experience and objective factual reality "not without some philosophical puzzlement as to which 'reality' is most valid" (Rogers 1961, p. 197). This same perplexity went through my entire scientific training and continuous experience as researcher.

In both the conceptual ("The Process Conception of Psychotherapy") and the empirical ("Getting at the Facts") parts of *On Becoming a Person,* language was taken as *empeiria* for qualitative analysis in a human sciences style and measurement in a natural science methodology. The tension between first-person and third-person perspective was obvious to me and would occupy my attention years later. The quantitative evaluation of Rogers' client centered psychotherapeutic process culminated with Barrett-Lennard's elegant doctoral thesis, defended in 1959 and published in 1962, on the impact of the therapeutic relationship in the psychotherapeutic progress. Barrett-Lennard had developed an inventory that measures the

progress of psychotherapy using Rogers' attitudinal indicators to the therapeutic positive consideration, empathic understanding, congruence, unconditional consideration, and the perception of these indicators by the client. The study provided evidence on the actual results to the client-center treatment style.

My studies under the direction of Prof. Puente explored the thinking of psychologist and philosopher Eugene Gendlin (1926–2017) about Rogers theory. Gendlin (1962) introduced the concept of experiencing as a more accurate way of describing the ambiguous and oscillating flow of the therapeutic process. In fact, Gendlin suggested that the phenomenological theory would more adequately explain psychotherapeutic changes. My master's program in Campinas was interrupted when I accepted a scholarship to move to the USA and study at the Southern Illinois University, Carbondale (SIUC). However, La Puente's proficient supervision outlined what became my master's thesis and doctoral dissertation.

At SIUC, I met Godfrey T. Barrett-Lennard who became my master's advisor, and I was able to explore the measures used in the person-centered approach to study how relational bonds are formed and become effective in families with one and two children (Gomes 1981). The results showed both the formation of subsystems between parents, siblings, and parent–child, and the differences between them. It also suggested that these subsystems did not compromise the perception of the family unit. Difficulties in these relationships stem from emotional instabilities and attitudinal uncertainties regarding positive consideration and unconditional acceptance. Practicing measurement techniques was a good opportunity to work with a third-person perspective.

For the doctorate, I was accepted into a program called Higher Education. It was a remnant program of the great and modern reforms introduced at SIUC by the memorable President Delyte Wesley Morris (1906–1982), who transformed SIUC from a teacher's college, to the second-ranking public comprehensive research university in Illinois. President Morris long stay in office was from 1948 to 1970. One of the strategies he used in university renovation was to invite recognized newly retired professors to teach and research at SIUC. A program benefited by this strategy was Higher Education. Many of its faculty had worked in university administration, and they had experience in research management, teaching, services, and student living. The Department Chair was John E. King (1913–2008), a former president of the Emporia State University (1953–1966) and the University of Wyoming (1966–1967). He was a visionary educator, a specialist in college campus life and coexistence, and a pioneer on implement physical accessibility for people with special needs. He offered me an assistantship for the doctorate program and allowed me to compose my own interdisciplinary program of courses, including education, psychology, philosophy, and communication.

To account for this venture, I worked under the direction of two mentors: the educator Emil Ray Spees, a scholar on philosophical conflicts in higher education (Spees 1989), and the philosopher Richard L. Lanigan, a scholar on human communication (Lanigan 1992). Interdisciplinarity has given me both a deepening exploration of my research interests and a comprehensive view of university mission and visibility. For my dissertation (Gomes 1983), I returned to my tradition in humanistic psychology and was able to advance my research involving Gendlin's experien-

tial philosophy (Gendlin 1962). The purpose was to expand upon Gendlin's theory by punctuating the implicit semiotic phenomenological structure within its development. Therefore, I placed psychotherapy in a semiotic phenomenological context by examining examples of psychotherapies that make an applied use of phenomenology, semiotics, or both. Examples of mentioned psychotherapists influenced by phenomenology were Ludwig Binswanger (1881–1966), Medard Boss (1903–1990), Viktor Frankl (1905–1997), and Rollo May (1909–1994). Psychotherapists influenced by semiotics were Jurgen Ruesch (1910–1995), Harley Shands (1916–1981), and psychoanalyst Jacques Lacan (1901–1981).

In this context, Gendlin's experiential psychotherapy, mainly the concept and application of Focusing (Gendlin 1981), appeared to have three basic semiotic phenomenological proprieties: (1) a theory directed to the creation of meaning, (2) a praxis sustained by the exercise of putting crucial questions between brackets to clarify circumstances, situations, and relations, and (3) a methodology that although based on questionnaires and scales was potentially qualitative in its essence. The instruments necessary for preparing the dissertation were theoretical structure analysis (Lanigan 1979), and the newly arrived qualitative research, which presented itself as a promising methodology for studies in psychotherapy (Giorgi 1975). My work was complemented by a visit to Eugene Gendlin at the University of Chicago in 1983, where I was able to attend a workshop on Focusing. Focusing is a phenomenological technique that helps the person's ability to deal with their issues, withdrawing them from themselves and placing them in temporary and simulated repositories, guided by the bodily strength of a felt sense, a sense of what all of the problem feels like. The same year, I visited Amedeo Giorgi at the Duquesne University to learn his proposals for qualitative methods.

Some clarifications on the terms mentioned so far are required. Semiotics and phenomenology are theories that complement each other for the understanding and explanation of self-consciousness. Phenomenology is concern with human intension (comprehension, meaning structure) and semiotics with human extension (gesture, behavior) (Lanigan 1994). Therefore, phenomenology is a philosophy and method about embody consciousness, and semiotics is a logic and method about sign systems. Embodiment is the role that the body plays in shaping consciousness, which is where perception begins (see Damasio 1999). In that sense, the body is a kind of intentionality itself, which is the direction of consciousness to the objects of attention. Human intension (not to be confused with intention that means an attentional direction for a given object) traditionally refers to all the qualities and properties a concept signifies (Sullivan 1983). Thus, intension is the phenomenal capability to understand or generate signs, to make meaning, to construct structures, and to constitute rules (connotation). Human extension traditionally refers to the application of a concept (Catt 2015). I would say that human extension is, in fact, human behavior. For example, discourse (Descombes 1979), a semiotic concern, is the observable behavior in itself, statements in gesture and conversation (expression).

The phenomenological and semiotic concepts seemed to me convergent to Gendlin's (1962) experiential philosophy. His theory distinguished two dimensions associated with personal discovery and creation of meaning. Meaning emerges as a function of experience (human intension, structure of understanding) and as a

function of symbols in relation to each other (human extension, observable behavior). Therefore, meaning is a semiotic interplay of signs (things, symbols) in a given system (internal logical structure not necessarily rational) as manifest in conscious experience. Gendlin clarified these relations among symbols (what appears as perceptual structure and factual objectivity) and consciousness (what emerges as a felt sense subjective understanding) in four concepts: (1) experienced meaning (felt sense, felt meaning, which is embodiment and intension); (2) articulated meaning (symbols, concepts, which is extension and discourse); (3) experiencing (the attention to the moving relation between felt-sense and symbols); and (4) the creation of meaning (novelty) as transformation in the relationships between felt meaning and symbols.

My interdisciplinary program gave me a solid insight into the construction of theories, signaled the possibility of working on research with first- and third-person perspective, and a rigorous, empirical, humanistic view. Then, I was ready to return to Brazil, continue my psychotherapeutic practice, and spread the phenomenological research method. However, the development of my scientific project would depend on the infrastructure of a public comprehensive university and the development of Brazilian scientific policies. Thus, the need to have a proper structure for research and an articulate scientific field in psychology redirected my professional activities upon arriving back in Brazil.

Demands of the Psychological Field in Brazil

Returning to Brazil, I worked initially in the Philosophy Department at the *Universidade Federal Santa Maria* (UFSM). The UFSM was a young growing institution, but the area of psychology was still to be developed at that time. So, in the following year, I got a position at the Department of Psychology at *Universidade Federal do Rio Grande do Sul* (UFRGS), an institution with a long tradition, strongly engaged in research, and interested in expanding its postgraduate programs. UFRGS had the conditions I needed to develop my two projects: establishing a journal that met international standards in publishing research and a qualified postgraduate studies.

At that time, the general conditions for work in public universities were disturbing, as these institutions suffered much political pressure and budget reduction by the military dictatorship that ruled the country from 1964 to 1985. A large number of qualified researchers in the most diverse areas had been banned from universities by the military government. Faculty salaries were low, working conditions were poor, leading faculty and staff to a long strike in 1984. Protests also clamored for democracy. At the same time, universities encouraged faculty to complete postgraduate education, since most of them had only a bachelor's degree or a professional license. All these difficulties presented themselves as challenges for new times, which occurred the following year with salary increases and faculty career expansion with more vacancies for hiring full-time faculty and, most of all, for democracy return.

Despite criticism, the military had been concerned with teacher training, strengthening CAPES, *Coordination for the Implement of Higher Education,* and CNPq, *Brazilian National Research Council.* In the second half of the 1960s, undergraduate education, which in Brazil leads to professional license, was regulated, as well as instituted master's and doctoral programs, following the US model, which in Brazil was called as postgraduate studies. However, the implementation of these reforms was timid, partly because of the mistrust of military government initiatives. Even so, CAPES and CNPq had a scholarship program for postgraduate studies in the country and abroad and for research funding. Many university instructors benefited from these programs. Anyhow, new times for higher education and research training seemed to be coming in Brazil.

My first project for Brazil was greatly facilitated by a decision from the dean of the College of Human Sciences to create four journals, one for each of its departments: philosophy, social sciences, history, and psychology. The decision also exemplifies the Brazilian tendency to have scientific journals mostly linked to university institutions rather than to scientific associations. Thus, Department of Psychology created a new journal entitled *Psicologia: Reflexão e Crítica*—PR&C (Psychology: Reflection and Criticism). The journal scope focused on publications of empirical research, according to international standards. In addition, it encouraged debate among the many ideas circulating in the psychology community, many of which were clearly opposed to science. Hence the use of the term Reflection in the title of the journal. Thanks to the collaboration of competent and dedicated editors, the journal has grown and is today one of the most recognized publications in psychology in Latin America. Recently, it reshaped its title to Psychology: Research and Review (see Feres-Carneiro et al. 2018), accepting only articles in English, presently being published by Springer Open.[1]

The project for the creation of a postgraduate program was more complex. Although master's and doctoral programs had been instituted in the late 1960s, universities had not yet assimilated the new format, conceiving a core of basic and specific disciplines and prequalify exams. The few programs founded in the 1970s introduced disciplines, but without links to a curricular structure. Many of these disciplines of study were based on the professors' doctoral dissertation. In other words, the disciplines goals were to study the professors' dissertation. For a long time, higher education programs, mainly in the areas of medicine and law, granted a doctoral degree through thesis defense but did not offer a structured program for this purpose. Thus, Brazil underwent a major reform in the granting of master's and doctorate degrees. A few programs were already adapting to the new rules, but my idea was to propose something new, consistent with the new regulations, attentive to the training of university teaching and researchers.

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[1] PR&C editors since the creation of the journal: William B. Gomes (1986–1996), Silvia Helena Koller (1996–2002), Cleonice Alves Bosa (2002–2004), Lisiane Bizarro (2005–2008), Silvia H. Koler (2009), Denise Ruschel Bandeira (2010–2013), Débora Dalbosco Dell'Aglio (2013–2015), and Eduardo Remor (2016–present).

The chair of the Department of Psychology at UFRGS, Prof. Claudio Hutz, endorsed the plans for the new postgraduate program. He had recently completed his Ph.D. at the University of Iowa and had the same aspirations as me for the creation of a master's degree program. The university community lived through a period of controlled management at that time. The long authoritarian period developed an eagerness for freedom, participation, and equality. The notion of authoritative was confused with authoritarianism and competence with power. Early in the dictatorship, there was a strong-armed reaction with bank robberies, and with foreign diplomat kidnappings. In the Amazon jungle, there were guerrillas and armed struggles. The military government managed to control all these affairs, but not the regime resistance, which appeared in the most different forms. Resistance continued through students and professors wearing worn and faded clothes, and the idea that administrative and academic decisions should come from the bottom, especially from students and staff. Faculty could participate, but equally. In the human sciences, the resistance turned against positivistic methodology and scientific experiments, which were considered as a control strategy of the ruling elite.

The university circles were dominated by the ethics of resistance, especially in the field of human sciences, where the Department of Psychology was located. Hutz and I had to move carefully so as not to encourage, under these circumstances, a resistance to our postgraduate studies project. In our favor, we could count on the timely collaboration of Prof. Angela Biaggio (1940–2003) who had received her doctorate from the University of Wisconsin–Madison. Biaggio was a professor in the Postgraduate Program in Educational Psychology at the College of Education, familiar with the new rules for the postgraduate studies and recognized by her scientific production in developmental psychology.

Thus, Biaggio, Hutz, and Gomes were appointed to the planning committee for the postgraduate studies. The first committee act was to organize a national meeting with renowned Brazilian researchers, all interested in discussing new ideas for postgraduate studies. They were researchers who had previously been coordinators of postgraduate programs at their universities, many of whom had already been committee coordinators in the field of psychology at CAPES and CNPq. The meeting agenda was simple and straightforward: how to organize a good postgraduate program in psychology, what errors should be avoided, and what goals should be sought.

The meeting held on October 3–4, 1986, was rich in debates and fertile in suggestions. The main recommendations were: (1) curricular structure with emphasis on methodological training, (2) clear definition of research lines, (3) inclusion of the English language among the criteria for student acceptance, (4) full-time dedication of professors and students, and (5) absolute coherence between the master's thesis theme and the postgraduate research lines. Currently such suggestions may seem obvious, but they were novelty for the first postgraduate programs. Therefore, the concept of research line or program of research was a great novelty, because until then students were completely free to choose their research topics. The foreign language requirement was generic, being Spanish, French, English, or German, and proof of proficiency could be made throughout the course. Our project had placed

the lack of English-language skills as an admission elimination criterion, because students should be able to read international journals and major books published on psychology. Existing programs did not require full-time dedication, which would be a fundamental requirement for our program.

These new concepts for Brazilian postgraduate studies were taken rigorously forward and the advances were considerable. In 1988, we received the first students into the new master's degree program. In 1995, the first students for the doctorate degree were admitted. In 2006, CAPES evaluated the program with the highest rating, on a scale of 1–7. Few psychology programs have achieved the position that our program has maintained until the present. The program currently has a group of young and innovative faculty, continuously confirmed by the allocation of research grants by CNPq and CAPES and by the publications in the US, European, and Latin America journals. Our postgraduates are now serving as faculty researchers at several universities or as highly qualified professionals in several countries.

However, another important project was also need, the creation of a Brazilian Psychological Abstract. Without one, we did not know what our colleagues in other programs and universities were researching and what was being published in what journals. The number of articles published in English was small. The problem had already been raised by the development agencies, to the point of inducing the creation of scientific associations that could facilitate the relationship and exchange between researchers. The National Association for Research and Postgraduate Studies in Psychology (Associação Nacional de Pesquisa e Pós-graduação em Psicologia—ANPEPP) was a prosperous result of this induction. The first ANPEPP Symposium on Research and Scientific Exchange took place in 1988.

The ANPEPP meetings were growing successfully, but a proposal for an abstract system was yet to be carried forward. At the ANPEPP Symposium in 1992, I coordinated a working group on psychology publications in Brazil. Two issues dominated the agenda: the internationalization of Brazilian research and the creation of an abstract system for the literature produced in Brazil. The working group members were divided between two proposals: (1) ANPEPP could create an English-language journal to disseminate Brazilian research abroad; (2) ANPEPP could create an abstract indexing system to promote the consultation and citation of psychology scientific works produced in Brazil. At the following symposium, in 1994, I presented a proposal for an abstract journal, modeled on the Psychological Abstract of the American Psychological Association. The Assembly approved the project, but I could not get funds from the development agencies to implement it. Thus, ANPEPP was not able to take the project forward.

Fortunately, years later the Brazilian Federal Council of Psychology become interested in the Brazilian Psychological Abstracts and a collaboration between psychologists Silvia Koller and Marcos Ferreira (Koller 2011) restructured the proposal, broadening its bases and scope. The project was completed with the creation of the *Index Psi Periódicos*, powered by a newly created network of psychology libraries. The project continued its expansion (Sampaio 2005), attracting Latin American countries, after the creation in 2002 of the Latin American Union of Entities of Psychology, Ulapsi. Presently, the periodical referral system of the psy-

chology departments provides the most relevant services to research through the following systems: (1) Bibliographic Basis (Index Psi Periódicos Técnicos-Científicos, Index Psi Divulgação Científica, Index Psi Teses, and Index Psi Livros); (2) Full Text Bases (PePSIC, SciELO, Index Psi Electronic Books, Index Psi TCCs, Biographical Dictionary of Psychology, Annals and Summaries of Congresses, RedAlyc, and Latindex); and (3) the Digital Video Library of Psychology, and Bases in Health Sciences and related areas.

I was fortunate to be in the right place at the right time and to have the foresight and intuition to act on the available opportunities. I believe that these factors provided for the launching of these two great projects, the journal (Psychology: Research and Review) and the Postgraduate Psychology Program of UFRGS. Of course, none of this would be possible without the joint work of my UFRGS colleagues and the Brazilian research community. The proposal to create the Brazilian Psychological Abstract apparently failed, but soon resurfaced as open access system (see BVC Psi).

Efforts for Improvement on Teaching Training and Research Methodology

In this last session, I will bring some aspects of my innovations on teaching and research. In my master's and doctoral programs at SIUC, I attended both the statistical and qualitative research classes. Statistical methods were taught with rigor and much demand under the care of the Department of Educational Psychology. In contrast, qualitative methods were a promising novelty introduced by the Department of Speech Communication. In my master's degree, I worked with scales and measures (Gomes 1981), but my doctoral training led me to semiotics, phenomenology, and qualitative research (Gomes 1983). Semiotics and phenomenology were peripheral themes for psychology mainstream, which led me to be cautious not to turn it into indoctrination, a common practice in Brazilian psychology. Thus, I will present, first, a psychology theoretical synthesis, what I have called of synoptic theory, based on the semiotic logic of American philosopher Charles Sanders Pierce (1839–1914). The theoretical synthesis brings three conceptual triads, each triad defined in three central concepts. The synthesis contrasts the classical approach that led to experimental psychology, with evolutionary and romantic approaches, which came later. Then, I pass on my innovations in scientific methodology, with emphasis on the reversal relations between qualitative and quantitative research that I learned with my findings, during successive investigations. In this sense, I emphasize the pertinence of first- and third-person perspective, and the indispensability of being attentive to abductive and adductive logics, which means, respectively, the creative power of intuition, and the need for certification through different methodological paths that my findings do not follow from my idealization of fictional objects, or random mathematical combinations.

Teaching

The theoretical field of psychology characterizes by macro- and microtheories, which, on the one hand, inform the most varied aspects of human and nonhuman animal mental life. On the other, they weaken the understanding of the apparent contradictions inherent to the psychic and biological condition of human and non-human animals. Fragilities arise in the confrontation between epistemological choices as which method (how) and which logic (why), not always accompanied by clear justifications or ontological descriptions (what is). Epistemological and ontological choices stem from a long history of modern philosophy, going through the Germanic tradition of seventeenth and eighteenth-century faculty psychology, and the Anglo-Saxon tradition of nineteenth-century associationist psychology. The physiological or experimental Germanic psychology (second part of nineteenth century) emerges to know how concepts, which came from faculty psychology (sensations, consciousness, attention, perception, imagination, memory, and thought), were experimentally associated (psychophysics methods). Concepts that afterward came to be understood as function, influenced by evolutionism, and later explained by behavior conditioning (first half of the twentieth century).

In the first half of the twentieth century the introductory textbooks to psychology adopted in Brazil were distinguished between philosophical (synoptic) and scientific (segmented) approaches. Germanic and North American scientific approaches were characterized by topics of empirical research, but they did not provide the reader with an integrative vision, indicating the substantiated advances of theory supported by their basic components. In contrast, French-influenced philosophical approaches provided a logical set for the basic components of mental life and its interconnections, but with less support of experimental data. Thus, scientific approaches offered the state of the art in empirical research topics, while philosophical ones taught how to think psychologically, free from interference from a specific school, for example, associationism or functionalism (Gomes and Alencastro 2011).

Psychological diversity and pluralism were interpreted by theory ascendancy, for example, experimentalism and morphology in Germany, evolutionism and measurement in the UK, psychopathology and psychotherapy in France, pragmatism and functionalism in the USA, and physiology and neuropsychology in Russia (Gomes 2003). Latin America has received in part all these influences, having the privilege of looking to the various contributions with some distance. Foreign contributions came from Brazilians who studied abroad, and from foreigners who visited or moved to Brazil. The ramifications of these influences are easily verified in consultation to the Biographical Dictionary of Psychology in Brazil (Campos 2001).

As for European influences, we had the Brazilian Manoel Bomfim (1868–1932) who studied with Alfred Binet (1857–1911) and George Dumas (1866–1946); the Russian Helena Antipoff with Henri Piéron (1881–1964) and Édouard Claparède (1873–1940); the Polish Waclaw Radecki (1887–1953) with Claparède; and the Italian Ugo Pizzoli (1863–1934) with Giulio Cesare Ferrari (1867–1932) who in turn studied with Binet. Brazil received from France, by suggestion of Antipoff, the

visits of Claparède, Theotore Simon (1873–1961), and Leon Walther (1889–1963) who came for lectures, courses, and laboratory demonstration. Piéron was also in Rio de Janeiro and São Paulo for lectures and courses in the 1920s, as well as Wolgang Kölher (1887–1967), who lectured in São Paulo at Universidade Presbiteriana Mackenzie, in the early 1930s (Penna 1992). At the University of São Paulo, founded in 1934, the first institution of higher education focused on research, the chair of psychology was occupied by the French philosopher Jean Maugüé (1904–1990), coming to Brazil by suggestion of George Dumas. Maugüé followed the French tradition and taught psychology as a section of philosophy, with emphasis on critical thinking. He remained at USP between 1934 and 1944.

As for the USA, the influences first came from Presbyterian and Methodist missionaries in the late nineteenth century, with impact on the field of early childhood education (Massimi 1990). Next, the influences arrived through Brazilians who went to study in the USA. Thus, we had Isaias Alves (1888–1968) who studied with Edward L. Thorndike (1874–1949), Anísio Teixeira (1900–1971) with John Dewey (1859–1952), Noemy S. Rudolpher (1902–1988) with William Heard Kilpatrick (1871–1965), and Annita Cabral (1911–1991) with Kurt Koffka (1886–1941) and Max Wertheimer (1880–1943), the Gestalt school psychologists who had moved from Germany to the USA. At the University of São Paulo, the Canadian social psychologist Otto Klineberg (1899–1992) replaced the French philosopher Maugüé in the chair of psychology, introducing experimental research. Klineberg taught at USP between 1945 and 1947. Later, Fred Simmons Keller (1899–1996) introduced behaviorism in Brazil. He taught at USP in 1961 and at University of Brasilia in 1964.

Psychoanalysis exerted a strong influence on Brazilian psychological thinking. Medical education in Brazil use to follow very close what happened in France and Germany. Until World War II, French was the most widely spoken foreign language by Brazilian elites. Medical students and doctors read French fluently, and many read German. In this way, Brazilian studied psychoanalysis since Freud early works. Brazilian psychoanalysts such as Durval Marcondes (1899–1981) and Júlio P. Porto-Carrero (1887–1934) corresponded with Sigmund Freud (1856–1939), and Brazil was the first country in Latin America to receive a psychoanalyst from the Institute of Berlin Psychoanalysis (*Berliner Psychoanalytisches Institut*) (Perestrello 1988). That way, psychoanalyst Adelheid Lucy Koch (1896–1980) arrived in São Paulo in 1937, and the first generation of Brazilian psychoanalysts did didactic analysis with her. The other Latin American countries were greatly influenced by Argentina, which in 1938 received its first psychoanalyst, the Basque Spanish Ángel Garma Zubizarreta (1904–1993), also formed by the *Berliner Psychoanalytisches Institut* (Marín 1995). Recall that Freud and his assistants Karl Abraham (1877–1925) and Max Eitington (1881–1943) founded the Institute in 1920. The Nazis closed the institute by the Second World War, but psychoanalysts reopened it in 1950. Ernest Jones (1879–1958), president of the International Association of Psychoanalysis in the 1920s and 1930s, was the one who indicated the psychoanalysts that came to Brazil and to Argentina.

Applied psychology in Brazil was greatly encouraged in the first half of the century by two Europeans psychologists: the Polish Waclaw Radecki (1887–1953) and

the Spanish Cuban Emilio Mira y López (1896–1964). In 1924, the Radecki founded a laboratory of experimental psychology in a psychiatric hospital at Rio de Janeiro (*Colonia de Psicopatas do Engenho de Dentro*), whose work encouraged the development of psychological assessment, being even use on the selection of candidates for the newly created School of Military Aviation (Centofanti 1982). In 1945, Mira y Lopes visited São Paulo and Rio de Janeiro for lectures, eventually establishing residence in Rio de Janeiro, where he worked for several organizations. He was the first director to the Institute of Selection and Professional Orientation in the Getúlio Vargas Foundation, one of the first references to applied services and to the creation of Psychology Courses in Brazil (Rosas 1995).

In short, the influences received by psychology in Brazil in its most varied segments required a comprehensive and historical approach. It has to be capable of clarifying the fundamental properties of psychological thinking over time and its relations with the topics studied on experimental psychology, theoretical systems, and professional applications. The challenge was how to approach the central components of mental life, its interfacings, and its many interpretations. Ribot (1923/1924) defined it as the study of the psychic facts, their description, their classification, the search for their laws, and their conditions of existence. Therefore, the challenge was to present a psychological field scope that would fit, for example, to experimental psychology and psychoanalysis. Such an undertaking requires differentiating content and container, even if the content variations confused the boundaries of the containers or structures. This differentiation should start with a description of ontological levels, a metaphor widely used to circumscribe strata of knowledge about nature (Gnoli and Poli 2004) and with a historical notion of mental life basic components (Hilgard 1980).

Now, I will present my way of introducing psychological science by using three diagrams. Figure 1 provides a synoptic view of how psychology has been designed over time, which remains as an important basic structure to theoretical understanding (Gomes 2009). Figure 2 resumes the ontological levels that distinguish the various fields of science, highlighting the central position occupied by psychology (Henriques 2003; Gomes 2018; Wiley 1994). Figure 3 brings my synoptic synthesis of psychological theories major axes, distinguished by ontological levels (Wiley 1994) and organized on according to Hilgard's (1980) trilogy of mind and Peirce's (1931–1958) semiotic triad.

The complex Fig. 1 is organized into four keys, each one representing a psychology dimension (ontology, epistemology, logics, and ethics). The word psychology stands out in the center, between the two largest keys: A and C. The analytical reading of Fig. 1 should start from the left side, with attention to the unfolding between the keys A and B conceptual information. Key A highlights the trilogy of mind as taken up by Hilgard (1980): cognition, conation, and affection. Key A should be examined from the bottom up. Thus, the first concept refers to affection (emotion and feelings) that constitutes the bodily force that awakens the intellect and activates individual deliberations (will). At the top is the concept of thought or cognition, the human capacity of knowing, thinking, and reflecting (which may direct the will or not). In the middle is the concept of will that when converted into action
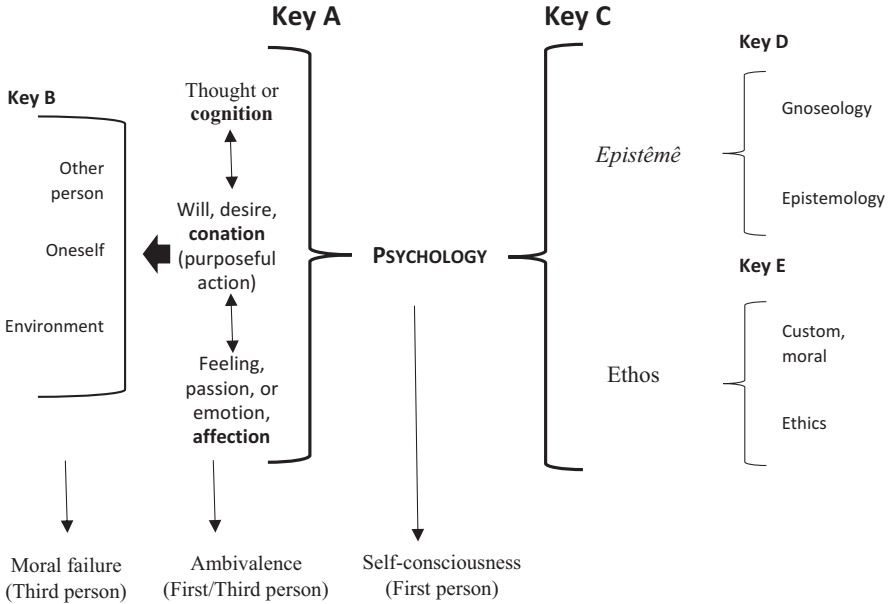
Fig. 1 Basic general structure of psychology theory
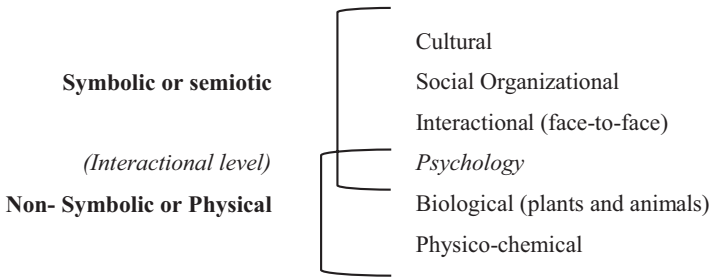
Fig. 2 The ontological hierarchical levels as suggested by Wiley (1994, p. 135)

(conation) has three serious implications (key B): (1) upon other person (social coexistence and society organization); (2) upon oneself (goals, self-evaluation, sense of oneself or the absence of these specifications, and relationship with one's own body); and (3) upon environment or ecosystem (relationships with subsistence sources and protection against climatic difficulties and natural disruptions, and human or nonhuman predatory attacks). The Hilgard's trilogy of mind synthetizes the psychological core par excellence, since without mood (affection) there would be no strength to think (cognition) and no direction to act (conation). Therefore, key A describes the psychology ontological dimension.

Continuing the analysis on Fig. 1 left side, at the very bottom, there are two concepts: ambivalence and moral failure. Ambivalence is characterized by the simultaneous occurrence of opposing ideas and feelings that defy deliberation and

Second Correlate (Column 1) (Sign)	**First Correlate** (Column 2) (*Representamen*)	**Third Correlate** (Column 3) (Interpretant)

3.Symbol   **Agency**   **Language**
(Psychology as human science – communicational logic: Both/And)

      (Intellective)   Reason
       Perception   Imagination
1.Experience   **Consciousness**   **Behavior**
        (Sensitive)
       Affection   Memory/Habit
         (Nutritive)   (non-consciousness)
                     Irrationality

(Psychology as natural science – informational logic: Either/Or)
2.Environment   **Body**   **Adaptation**

Fig. 3 Psychology theoretical structure in a semiotic triadic relation perspective

will, with consequences on action, being it in the internal sphere of thought or external manifestation of behavior. The consequence would have greater or less success in internal or external management, and in the resulting moral implications: positive coexistence (living according to social conventions, even in a spectrum that may indicate greater or lesser conformity), or negative coexistence (subjective discomfort, other person damages, impaired social coexistence, and environmental aggression).

In the center, the arrow below the word psychology points to the self-consciousness concept. With this concept, the structural outline for psychology generic theory assumes an evolutionary perspective, recognizing self-awareness as the distinctive mark for human social and cultural development. Self-consciousness synthesizes the manifestation of a subject body, being consciousness of the total whole organism apprehension (embodiment) that when moving in space creates the sense of time. Self-consciousness is the manifestation of first-person perspective, the ways one's see oneself, the other, and the world.

Moving to the right side, key C specifies two essential psychology dimensions, knowledge and action, here designated by the Greek words Episteme and Ethos. The concepts of Episteme (key D) and Ethos (key E) indicate the two major poles of psychological studies. Episteme refers to the fundamental ontology of psychology, defined by the question of what is the intellect, that is, the human capacity to feel, think, and deliberate, knowing what one is feeling, thinking, and deliberating (self-consciousness). The study of this human capacity is called gnoseology, a relation the object and the subject maintains among themselves in the act of knowing (Gomes 2009). Gnoseology studies what are the bodily and environmental conditions that enable the subject to knowledge. In contrast, epistemology is the study of knowledge and justified believes. It concerns with the postulates, conclusions, methods, and limits of knowledge. The difference between gnoseology and epistemology was lost over time, and these distinctions do not appear in psychology textbooks. By the English-language influences, the term epistemology has come to be used in both senses, referring both to the natural human capacitation for knowledge and to the

fundamentals and veracity of knowledge. For example, Jean Piaget's genetic epistemology metaphor is actually a gnoseology. The most appropriate would be to use epistemology to designate the study of sciences and gnoseology to the human capacity of knowing (human psychology development involving affection, cognition, and conation). Thus, psychology as science (epistemology) studies the cognitive act of knowing, including the affective impulse and personal deliberations (gnoseology).

Ethos refers to what characterizes and distinguishes an individual's attitudes, habits, behaviors, beliefs, feelings, and expressions and the manifold manifestations of a community or culture. Ethos appears associated with two other concepts: moral and ethics. In fact, moral and ethics derive from the same term, *mos, custumbre*, used interchangeably sometimes. Why are such concepts so necessary to understand the psychological field? Because psychological services came from moral and ethical demands. The difficulty of understanding and expressing oneself in social life, or of presenting the expected abilities in a certain time or situation, triggers the need for psychological intervention. An issue that may be illustrated by queries such as why a child cannot learn at school, why a child became delinquent, why an adult has strange behavior and thoughts or feel permanently persecuted by mysterious beings, and why between two brothers raised by the same family one becomes meritorious and another delinquent.

At this point, the relations between the psychology dimensions and the ways in which our glances and methods for exploring, understanding, and modifying them become clear. The scheme outlined in Fig. 1 highlights the main aspects of the psychological theory but does not assume any position to explain the causes of moral failings, difficulties in learning, revolt to social consensus, or propositions of new behaviors and costumes (ambivalence or moral failure). Such theoretical diversity and extension led to the necessary concentration of outbreaks and approaches, with positive results for both propaedeutic and therapeutic psychology, but they overshadow the whole picture. There are those who argue that a whole spectrum concept is over, irrecoverable (Gardner 2004), or even a return to armchair philosophy (Allport 1940). In addition, some of the terminology used in Fig. 1 may be considered pre-scientific. However, it is being rescued by science at the beginning of this century (Zhu 2004). Exercises such as conceptual drawing or concept maps can help us understand psychological field extent and unity, and the specification and diversity.

Summing up, key A points to the psychology ontological dimension in the trilogy of mind. Key C brings both the psychology dispositional, epistemological and logical dimensions in the problem of how to know, specified in key D, and the ethical dimension, specified in key E. The first- and third-person perspectives (key B) are epistemological dimensions (cognition), and moral failure and ambivalence are ethical dimension (conation). However, the balance of everything, in the health or disease, is in affection (key A).

Figure 2 brings a classical ontology exposition, which may be divided in two parts, the symbolic or semiotic, and the non-symbolic or physical. In this hierarchy, psychology occupies the intercession level. With this figure, the sociologist Norbert Wiley (1994) helps to visualize an integrated understanding of the psychological field, without disregarding its multiple views and perspectives.

At the symbolic level, relationships are mediated by interpretations that bring the perspective of the one who feels, perceives, and understands. They are contextualized in a variety of group relations, which emanate practices, knowledge, beliefs, habits, customs, morals, and law. The links differ in hierarchical relationships based on an underlying subjectivity as culture (extra-subjective, "it"), collectivity (generically subjective, "we" to "they"), inter-individual ("we"), and the self (intrasubjective, "I"). In contrast, the non-symbolic level refers to observed objective relations supported by natural and mathematical principles and findings. Impressively, the psychological field encompasses both symbolic and non-symbolic levels, including interferences and interfaces among these levels, being that one level can regulate the other, and reversibly. In addition, it is easy to point out a psychological specialty for each level. Thus, if Fig. 1 focuses on the core of psychological functioning, Fig. 2 defines and expands the ontological scope of psychology, even without hierarchizing its multiple and numerous parts.

Figure 3 shows how the major psychological systems fit between the symbolic and non-symbolic levels. Three horizontal lines and three vertical lines (the three main columns, with the words in bold) compose the diagram. They represent three well-defined systems of psychological thought. Horizontal line 1, in the middle, shows the philosophical conception of psychology with the triad *experience, consciousness*, and *behavior*. This triad was practically abandoned in the first half of the twentieth century. Fortunately, cognitivists in the second half of the twentieth century retook part of it in a confluence between the remnants of Gestalt psychology and behaviorism, revitalized by computer science, and now flourishing as cognitive neuroscience. Horizontal line 2, below, brings the relation between *environment, body*, and *adaptation*, the basic functionalist paradigm that also served to behaviorism, classical psychoanalysis, and even genetic epistemology. Horizontal line 3 above presents the triad *symbol, agency*, and *language*, whose influences come from romantic arts and literature. It refers to French psychoanalysis, structuralism, and existentialism. Phenomenology psychology came and remained in the centerline (line 1), influencing and being influenced by the upper and lower lines.

The words nutritive, sensitive, and intellective, between columns 1 and 2, refer to the concepts used by Plato and Aristotle to define the human soul. For Plato (2003) (Theaetetus, 151D-E) there was a division between souls, on one side were the nutritive and sensitive souls, and on the other the intellective soul with its remnants of past lives. In contrast, Aristotle (2016) (De Anima, Book II) talked about the existence of a continuum among souls that function in harmony. With St Augustine (2002), the concept of consciousness as inner life and personal truth takes shape (*On the Trinity*, book 10, ch. 10–11). For him, consciousness manifests itself through intentionality, intermediated by intelligence, memory, and will. In this concept, the relation between consciousness, experience, and behavior is already given.

Columns 1–3 present an extraordinary ontological affinity among them. Column 1 shows the ontological connection among environment, experience, and symbol that is the function of perception; column 2 with body, consciousness, and agency that is the function of phenomenal structure; column 3 with adaptation, behavior, and language that is the function of expression. In the semiotics of Peirce, the first

correlate corresponds to column 2 that is the *representamen,* the perceptible object, functioning as sign (CP 1910: 2.230). The second correlate corresponds to column 1 that is the *sign*, the world material objects with which we have perceptual acquaintance (CP 1903: 2.330). The third correlate corresponds to column 3, the *interpretant* that is the proper significate effects of signs (CP 1907: 5.9). Figure 3 structural correspondence with the semiotics of Peirce is a logical validation to the present formulation.

The three figures are introduced and deepened in the context of the history of psychological thinking, taking into account the French (Mueller 1960), British (Hearnshaw 1987), North American (Hilgard 1987), and Brazilian (Massimi 1990) perspectives. This effort to present a psychology global and pluralistic view, specifying the main concepts, helps in understanding the various theoretical tendencies and philosophical origins. In addition, the graphics enhance the use of different methods and inter-theoretical dialogue. For example, in Fig. 3, the explanation begins with the concept of experience that is widely used but rarely defined in textbooks of history or introduction psychology. The APA Dictionary (VandenBos 2007) provides three definitions for experience: (1) an event that is actually lived through, as opposed to one that is imagined or thought about, (2) the present contents of consciousness, and (3) a stimulus that has resulted in learning. The three definitions are consistent with the exposure of Fig. 3; however, experience is a much broader concept. It means apprehension of reality by the knowing subject, a way of being, a way of doing, or a way of living. The interpretation of reality comes from experience, may or may not be influenced by reflection or thought, and may or may not be strongly influenced by subjectivity. Still experience brings in a history of knowledge, opinions, and actions, which when reformulated it opens a channel for the creation of new situations called experiments (Mora 1988). The concerns that led to the preparation of these figures or diagrams have facilitated both the understanding of psychology conceptual core and its changes throughout history. Fortunately, contemporary scholars as Henriques (2011) also advocate this more integrated view to the psychological field.

Researching

Neo-Kantians of the Baden or Southwestern School, late nineteenth century, resumed the theory that knowledge differed by conceptual characteristics of their objects. They were concerning with the function of phenomenon (*capta*) and noumenon (*data*) for understanding knowledge in its various forms and substances, as illustrated in the contrast between physics or biology with history or culture. This theoretical understanding led to two methodological views, implying idiographic methods for the study of *capta* and nomothetic methods to the study of *data*. A century later, Richard Lanigan (1988, 1992, 1994), in order to compare theory and methodology in the human sciences, reaffirmed the difference but resized the

relationship between objects and their conceptual characteristics. According to Lanigan (1992), theory implies in the conjunction between an eidetic model (realization) and an empirical model (actualization). Thus, the eidetic model would be analytical (deduction, sufficiency) and critical (adduction, necessity); and the empirical model would be experimental (induction, actuality) and experiential (abduction, possibility). In turn, methodology would imply in the combination and contrast between quantity (what is given) as the true condition method (probability); and quality (what is taken) as a necessity and sufficient condition method (possibility).

Lanigan's (1992) epistemological view had anticipated what is now recognized in neuropsychology as first- and third-person perspective. The first-person brings back the experiential and subjective perception of a living experience, and the third-person allows standardized and shared observations for induced actions in predetermined situations. In this design, the experimenter himself lives both perspectives when he reverses the order of experience to the order of analysis, also being able to recognize the second-person perspective, that is, the clear demarcation of a theory as consensual criteria of judgment (intersubjectivity). Thus, my research (see Gomes 2018), which I call of experimental phenomenology, attends the logic requirements of abduction (it is experiential), induction (it is experimental), deduction (it is analytical), and adduction (it is critical).

The methodology that I could develop and expand is based on Lanigan's epistemology (1988, 1992). I began to realize the logical continuity and discontinuity between qualities (*capta*) and quantities (*data*) in a series of three studies on psychotherapy effectiveness. At first, my collaborators and I interview 10 psychology students who were in psychological treatment. The idea was to know about their experience of being in psychotherapy (Gomes et al. 1988). Two years later, I interviewed the same students to find out how they were and, if so, how the end of psychotherapy occurred (Gomes 1990). I was impressed with the narrative confluences and the way they anticipated our interview items. Then, I decided to confront our qualitative interpretations with the Strupp's Rate Questionnaire (Gomes et al. 1993; Strupp et al. 1964). The results were surprising. The quantitative study showed that psychotherapy is an intensely emotional experience. In contrast, the qualitative study contextualized the emotion in the particular sense of each case. The quantitative study defined the important elements of the therapeutic relationship and its treatment impact. In contrast, the qualitative study pointed to relationship contradictions, showing interviewee difficulties in taking what they lived in psychotherapy to their daily lives. Finally, the quantitative study showed that most of the 133 people who answered the questionnaire acknowledged that there had been major changes in their lives. In contrast, the qualitative study specified these changes, showing that despite great satisfaction they could be very restricted.

Souza et al. (2005) investigate the same quantitative and qualitative reverse in public and private self-consciousness, a theory and assessment proposed by Fenigstein et al. 1975). Souza and colleagues compared *data* (what is given) of the self-consciousness scale (Scheier and Carver 1985) and *capta* (what is taken) of narratives about life events, assuming the implicit manifestation of public and pri-

vate self-consciousness in those narratives. To go further with the quanti/quali-comparison, the ontological question was formulated as follows: What are public and private self-consciousness? Are they induced constructs from a Likert-type scale or abducted intuitions from each one perspective of oneself? Likert-type questionnaires are valuable instruments used in psychological research, and their psychometric properties have been thoroughly investigated. However, discussions on their epistemological condition are negligible. What is a Likert-type questionnaire? The straight and short answer is that such questionnaire means a context of constrained choice, a choice by excluding other. The epistemological assumption behind the Likert-type scale is based in information theory (digital logic: Either/Or), that is, probability differentiation (i.e., reduces uncertainty). In contrast, a life-event account offers an open context to be filled out. The epistemological assumption behind the life-event account is rooted in communication theory (binary analogue logic: Both/And), which asserts certainty by combination—that is, possibility differentiation. The results indicated that the Fenigstein et al. (1975) evaluated levels of self-consciousness, while the significant life-event account provides a self-consciousness profile. The authors (Souza et al. 2005, p. 212) concluded that:

> Quantitative or qualitative data alone are incomplete to verify a concept or to establish reversible relations between each other. The need to establish a complementary relationship and to verify a construct is a necessary first step in psychological research. Establishing this relationship is a function of the adductive analysis of semiotics, which in different contexts (scale and accounts; Rule), through an external comparison (quantitative or qualitative; Result) establishes the identity of two phenomena (self-consciousness classifying and profile; Case).

The epistemological conception of Souza et al. (2005) is an auspicious evidence that the scheme presented in Fig. 3 also applies to empirical research. The ontological complexity of psychology appears in the contrast between qualitative approach, a conceptual influence of psychology as human science, with quantitative instruments, a historical and successful effort to conceive psychology as natural sciences. Fortunately, this fact is now recognized by psychology historians (Wertz 2014) and by the American Psychology Association guidelines for publication on qualitative research (Levitt et al. 2018). Presently, combinations of qualitative and quantitative methods are increasingly used in advanced research as indicated on the guidelines for quantitative and qualitative studies of sensory substitution experience (Kalwak et al. 2018).

Using the same methodology, Silveira (2011) studied self-consciousness, examining the function of internal conversation in deliberative situations. She used data from self-reports, in which participants responded various questionnaires, and problem-solving tasks, in which participants verbalized aloud what they were thinking. The two methods were able to distinguish internal conversation flow between pre-reflection (conscious experience) and reflection (experience of consciousness). The conclusions point out that those styles of deliberative actions appear both on the self-report measures factorial analysis (see DaSilveira et al. 2015) and on the verbalized inner speech qualitative analysis (see DaSilveira and Gomes 2012).

Given the complex methodological implications involved on those comparisons, I will briefly review the doctoral thesis of Benites (2010) on personal journal blogs

(see Benites et al. 2016). The idea was to explore paths that opened different angles to observe inner conversation manifestations. The study started looking at the qualitative style bloggers use to write their posts (first-person perspective; *capta*) and concluded with a meticulous and quantitative analysis of what words they used into their posts (third-person perspective; *data*). The investigation crossed the four logics indicated above. Each logic defined into three terms: Abduction [Rule + Result = Case (particular, a posteriori)], Induction [Case + Result = Rule], Deduction [Rule + Case = Result), and Adduction [Rule + Result = Case (universal, a priori). Following, I present the function of each logic, illustrated by Benites study.

Abduction is a doable conjecture, a hypothesis, or an intuition that can be fulfilled or not. It makes part of any research being one of its richest creative moments. Remember that the point remains the same as the previous mentioned studies: to find different ways of external manifestation to study internal conversation. Thus, Benites (2010) brought the idea of taking texts from personal blogs, which in that year were spread out on Internet. Such kind of records have existed for a long time in the form of personal diaries, notes, or letters, as a free and intimate way of talking about oneself. With the advent of personal journal blogs, contents leave anonymity and become public, even if they continue to be understood and respected as private events. Therefore, Benites came to an Abduction Rule: records like personal journals, notes, and letters could reveal facets of the inner conversation. The decision to study personal blogging was the Result, and the study of personal journal blogs would be a Case. Obviously, such a procedure does not require description or specification in a research report, but it recognizes an important moment in the problem routing and sophistication one wants to study.

Induction is the invention of a case, exemplified in scientific investigation by the defined situation to serve as object for questionnaires, interviews, observations, or experiments. The invented Case for this study was the recurrent patterns of expression on personal journal blogs. The focus was on transformative self-expression in the blogs, as a public movement toward change, meaning self-innovation. Therefore, Benites (2010) mined a specific blog domain for posts from random bloggers that would present self-referent terms such as "I feel," "I think," "I believe," "my life," etc. By this process, she selected those posts with dense self-descriptions and expression of disparate personal thoughts and feelings. This process, mining plus qualitative selection, was performed until she achieved a sample size capable of offering a descriptive picture of the expressive patterns for thematic analysis. Approximately 150 posts were analyzed, resulting in a final sample of 12 homogeneous posts from a heterogeneous group of bloggers, nine females and three males, all native English speakers (Result). This collected material circumscribed the parameter posts as being a self-innovation exemplar (Rule).

Deduction refers to the theory (methodology) that guides the analysis (Rule). Benites (2010) used a qualitative thematic approached based on the semiotic phenomenology (Lanigan 1988, 1992). As already mentioned, semiotics phenomenology is characterized by its four axes: *embodiment,* our psychophysical situatedness, our contact to experience; *intension*, our way of structuring, understanding, shaping experience in consciousness; *extension* (behavior) our way of directing our experi-

ence consciousness to the world, others, and our self; and *discourse*, our way of chaining and substantiating our consciousness with written and spoken arguments.

According to that Rule (semiotic phenomenology), the 12 self-innovation parameter posts presented an overall narrative organization. In the first stage of analysis (Case 1), Benites distinguished and punctuated particular themes using words from the posts, but preserving the general structure, to know what does characterize self-innovation (applying Rule). Examples of native words were the titles' analysis: "lost between my computer and myself"; "trying to betray my happiness." The titles composed by the posts' words were suggestive indicators for the problems exposed and the resolutions sought. The general structure was those one of a narrative: setting, description, conflict, openness, confusion, and conclusion. The second stage went further. It provided a longitudinal account for the 120 posts, formed by five posts, respectively, preceding and succeeding the self-innovation parameter post (Case 2). The procedure punctuated the narrative sequence that characterized the back and forth movement to self-innovation, in order to know what were the changes in the posts. The semiotic phenomenological analysis interpreted self-innovation as a self-evident inner experience that promotes personal positive change. Indeed, those diary writers were seeking to understand themselves and the surrounding circumstances and to move themselves toward self-innovation. The internal conversation was evidenced in the dialogues presented, as if they were two people talking.

The qualitative comparison between the five previous and the five subsequent posts classified the narratives in four stages: contact, monitoring, self-narrative, and self-innovation. Contact was a report of specific perception about oneself, others, and/or external world, as opinion and evaluation. Monitoring was a description of self-related inner and/or outer aspects and evaluation of those aspects according to personal feelings and emotions, which appeared in a sequence of brief exposures. Self-narrative was the straight exposition of self-referred inner and outer aspects, followed by descriptions of related feelings, emotions, opinions, and self-evaluations. Self-innovation was the openness to change, to take a decision. As expected, the stages were differentiated by the space they occupied in the five preliminary posts sequence. It started with a long contact, to finish to an absolute self-innovation discourse, a decision to make a change. Thus, the preceding five posts showed the self-innovative dialogue in progress through four stages. Benites (2010) had her hypothesis confirmed.

Adduction is the critical analysis. It is critical because it is able to show that "in different contexts (Rule), an external comparison (Result) establishes the identity of two phenomena (Case)" (Lanigan 1988, p. 217). Benites (2010) did a qualitative analysis in the deduction, and now she moves to a quantitative analysis. For that, she used the Linguistic Inquiry and Word Count (LIWC) (Pennebaker et al. 2007). The LIWC is a software that furnishes the relative percentages of more than 70 linguistic categories used in a text. She performed an exploratory analysis with 28 of them, of which the three most important were: (1) *linguistic process*, the pronouns, articles, verbs, adverbs, and prepositions, which points to the direction of the dialogue, that is, who speaks to whom; (2) *affective process* with words like worried, fearful (interpreted as anxiety), nervous, hate, worthless, and enemy (interpreted as nega-

tive emotion), which defines what one wants to achieve; and (3) *cognitive process*, with words as insight (think), causation (because), discrepancy (should), and tentative (perhaps, guess), which expresses reflexivity. The preceding and succeeding five posts were, respectively, aggregated in two groups, according to their position to the self-innovation parameter. Repeated measures analyses of variance (ANOVAs) were performed for each linguistic category (2 groups of analysis × 6 post sequence × 28 linguistic categories), being obtained a significance level from 0.001 to 0.005. Thus, linguistic analysis to the preceding five posts points to an increase of insight and self-concern, and the focus was to the present. On the other hand, there was a decrease of social interest and interpersonal dialogue. By its turn, the linguistic analysis to the succeeding five posts showed that anxiety had a higher increase, self-concern remained high, and social interest returned. The focus was the past. Returning to the logical demonstration, the adduction, using a different method (Rule), identifies the movement for self-innovation (Result) in the continuous writing personal journal blogs (Case). It highlights the fluctuation of feelings and cognitions that accompanies the movement for self-innovation.

Summing up, Benites (2010) used two methods to examine and understand the object under study (self-innovation). The first approach was qualitative and named the steps toward self-innovation specifying the verbalization objects that characterized the self-narratives. The second approach was quantitative and the examined phenomena was self-narrative linguistic word count. The movement toward self-innovation associated with the words used in the posts underscored the feelings and insights that accompany the changes. The conclusions point out to the two phenomena identity: what was taken (*capta*) in qualitative analysis, the manifest internal dialogue toward self-innovation, and what was given (*data*) by the words used in these conversation.

Final Remarks

My purpose in this chapter was to review the context and influences of my psychology training and the directions I followed to respond the Brazilian demands. Considering the historical conditions for introducing psychology in Brazil, as science and profession, I decided to dedicate myself to teaching and research, paying attention to the means of scientific training propagation. These reasons led me to work toward the creation of a Journal (*Psicologia: Reflexão e Crítica/Psychology: Research & Review*) and a postgraduate program capable of offering a qualified master's and doctoral degree. The two proposals were successful and today are among the best-qualified Brazilian scientific journals, and among the three best-ranked postgraduate programs by CAPES, the Agency that instructs, regulates, and evaluates postgraduate studies in Brazil.

Regarding teaching, my attention was to the role that history offers for understanding what psychology is. Unfortunately, teaching the history of psychology in undergraduate and postgraduate courses tends to focus anecdotal aspects on the

great historical figures and highlight the differences in systems that flourished in the mid-twentieth century. I argue in this chapter that history of psychology goes much further, demarcating field characteristics, defining professional identity, and, above all, teaching how to reason psychologically. A logical thought that is at the root of the many facets in which the science and profession present themselves. In countries where the basic training is area oriented (development, clinical, social, education, and experimental), the problem may not be as crucial. Even so, the student will leave school without a field comprehensive vision. In countries such as Brazil, where the basic training leads to a generalist professional licensing, and where different theory representatives try to seduce students with their doctrines, a historical overview is crucial. This is the mainstay of my arguments. This is therefore the purpose for the historical graphics presented in this chapter.

Regarding researching, my focus has been on the interface psychology occupies between different ontological levels (Cultural, Social Organizational, Interactional for Symbolic Ontologies; Biological and Physico-chemical for Non-Symbolic Ontologies) which is a privileged position for the continued dialogue with symbolic and non-symbolic ontologies. My argument was illustrated with a study on the external manifestation of internal conversation, having as material for analysis the personal journal blogs. In this chapter, the emphasis was on the joint use of first (subjectivity) and third (objectivity) person perspective, and for the necessary reversal relationship between qualities and quantities. These movements were guided by a sequence of four logical steps (abduction, induction, deduction, and adduction) capable of studying the same problem by different methods.

Glimpsing the future, I would like to see the teaching of psychology heavily backed by evidence and research clearly understanding its ontological singularity as a natural and human science. Such a vision necessarily includes inter-theoretical dialogue and the basic training in scientific methodology, considering the perspective of first and third person, and the sources of creativity (abduction), invention (induction), analyses (deduction), and critique (adduction).

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A Post-Constructionist Approach to Social Psychology

Mary Jane Paris Spink

Abstract Over the years as a teacher and researcher I have invested considerably in both theoretical development and creating a network of fellow travelers. From a theoretical standpoint, my main contribution has been to introduce a way of doing research that might be nominated a "post-constructionist approach". This approach has at its foundation: a non-realist ontology; a political stance in dialogue with Foucaultian theorizations on governamentality and a dialogical approach to language use. This triangulation has led to a variety of research projects concerning local processes of meaning production in daily life as an integral part of networks of heterogeneous associations of human and non-human actants, in tune with the work of authors aligned with Actor-Network Theory. Both research and theoretical developments have been intrinsic parts of the work carried out in the research group led by me that includes past and present graduate students. The long past of supervision of thesis and dissertation projects (132 by 2017) has resulted in an extensive web of young researches now active at various institutions throughout the Country. It has also resulted in an ethical-political manner of research with contributions outside the boundaries of academic psychology.

Over the years, as a teacher and researcher, I have invested considerably in both theoretical development and in creating a network of collaborators. From a theoretical standpoint, my main contribution has been to introduce a way of doing research that might be nominated a "post-constructionist approach." This approach has at its foundation: a nonrealist ontology, a political stance in dialogue with Foucaultian theorizations on governmentality, and a dialogical approach to language use. This triangulation has led to a variety of research projects concerning local processes of meaning production in daily life as an integral part of networks of heterogeneous associations of human and nonhuman actants (anything that has action), in tune with the work of authors aligned with actor–network theory.

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Research and theoretical developments have been intrinsic parts of the work carried out in the research group led by me[1] at the Pontifical Catholic University of São Paulo (PUCSP) that includes past and present graduate students. The long past of supervision of thesis and dissertation projects (a total of 132 by 2017) has resulted in an extensive web of young researches now active at various institutions throughout the country. It has also resulted in an ethical-political approach to research with contributions outside the boundaries of academic psychology.

Given this long trajectory, writing this chapter was an opportunity to present the theoretical frame in a historical vein, stitching together the slow evolution from a constructionist to a post-constructionist approach[2] to the core problematic of discursive practices in everyday life. For this purpose, the chapter has been structured in four parts: (1) the turn to research on everyday life, (2) the ontological perspective, (3) working with discursive practices, and (4) language as a governmental strategy.

However, this long trajectory was not a lonely venture, and the last part of the chapter brings forth the collective side of the theoretical development and research program, as well as the reverberations outside the academic setting.

The Turn to Research on Everyday Life

Many changes have come by as research experience, and new theoretical approaches have been incorporated into the theoretical frame, but something holds the fort together, and in retrospect, this "something" has been a continued interest in everyday life as a research setting. If starting points are required, I would mix and match, ethnological observation at undergraduate training in Psychology with a fascination about the Anthropological literature. At the Institute of Psychology, University of São Paulo, in the 1960s, under the leadership of Professor Walter Hugo Cunha,[3] we

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[1] Núcleo de Estudos e Pesquisas sobre Práticas Discursivas no Cotidiano: direitos, riscos e Saúde (NUPRAD).

[2] Constructionism is used in many ways in different settings. In Developmental Psychology, it is usually associated with Piagetian theory of learning to emphasize how children's way of thinking evolves over time. However, the term constructionism is also used, introduced by Seymour Papert as a way of focusing on the context of learning (Ackerman 2001).

In Social Psychology, the more usual term, following Berger and Luckman's 1966 book, is "social constructionism" which is strongly associated with Kenneth Gergen's work, and emphasizes the historical, collective, and relational aspects of knowledge construction. Conversely, for those who relate to the philosophical discussion on the intricate relation between knowledge and reality, constructionism is a movement and an epistemological position that takes a nonrealist turn on the issue of the production of knowledge. In both cases (social constructionism and constructionism), language use has prominent place. In contemporary Social Psychology, "post-constructionism" moves on beyond these assumptions to engage with critical feminist theory and symmetrical sociology as proposed by authors associated with actor–network theory. A position, therefore, that considers nonlinguistic phenomena as well as power issues concerning what counts as valid knowledge (Iñiguez 2008).

[3] Through his research and teaching at the Instituto de Psicologia, USP, Professor Walter Hugo de

followed the intricate behavior of a huge anthill. It provided simultaneously training in observation, an insight into "cultural diversity," and an approximation to Darwinian theories which has provided a protection against determinism. As for Anthropology, my first recollection was reading, when I was 15, Sir James George Frazer's abridged edition of the *Golden Bough* and reading about different cultures provided the reason for defining myself, very early on, as a social psychologist.

Later, as a graduate student, in England, I was deeply engrossed in the turn to critical social psychology and the invitation to leave the laboratory and doing research in what was then called "natural settings": institutions, neighborhoods, urban groups, etc. Inspiration no longer came from Anthropology, but rather from urban sociology (Whyte 1943/1993), social interactionism (Goffman 1959), and conversation analysis (Garfinkel 1967).

The presence of everyday life has become so central to my research and writings that various books organized by me (Spink 1993, 1999, 2004) as well as some widely quoted articles and book chapters (Spink 2007a, 2016) have the word "quotidian" in the title. Theoretically, it can be best justified by a fascination with the ongoing flux of activities in different contexts. The acceptance of this fluidity also led me away from hegemonic realist epistemology. Flux, fluidity, and volatility are not compatible with generalizations and formulation of laws of behavior.

The Ontological Perspective: From Constructionism to Ontological Multiplicity

The 1960s were full of exciting questionings regarding science and, hence, what is taken to be "reality." Influential writings within Social Psychology include Berger and Luckman's book "Social Construction of Reality" (1966) which can be considered as a first building block of my approach to social constructionism. This was later, in the 1970s, followed by Kenneth Gergen's articles on Social Psychology as history and on constructionism (1973, 1985) and Tomas Ibañez' goodbye to Tajfel and Moscovici (1990).

Social Constructionism, in the 1970s, was part of a worldwide movement of a turn to a more critical Social Psychology. Ibañez, in retrospect, in a text entitled *Why a Critical Social Psychology?* (1997, p. 29) states:

> On a very general level, this 'different' social psychology assumed a 'constructionist turn' (in the realm of ontology), a 'language/interpretative turn' (on the level of methodology) and a 'non-foundationalist turn' (on an epistemological plane, even though the most radical of critics challenged the very concept of 'epistemology').

These sources were further fueled by a continued interest in science as a social practice which also leads to readings on the new approaches to science studies

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Andrade Cunha introduced Animal Psychology and Ethology in the country (Carvalho 1995). Further information can be found in: http://www.etologiabrasil.org.br/homenagens/walter-hugo-de-andrade-cunha/

(Knorr-Cetina 1981; Woolgar 1988) and on philosophy where Michel Foucault and Richard Rorty occupy a special place.

Foucault's work will be mentioned later, but for this moment it suffices to say that Rorty's book "Philosophy and the Mirror of Nature" (1979/1994) was a definite turning point towards a nonrealist approach. His questioning of a foundational place for epistemology was certainly a guide to an approach to knowledge compatible with the fluidity of daily life, as well as the continued questioning of the hegemonic place occupied by science in defining what counts as knowledge.

The constructionist approach to knowledge was fertile as it allowed connecting various personal interests: history, cultural diversity, evolution based on contingency, and chance (as in Gould 1989). According to Lupicinio Iñiguez-Rueda (2005), if one looks for a main characteristic of constructionist approaches, it would be their critical stance translated as a continued questioning of that which appears to be obvious, correct, natural, or evident. It is both, an anti-essentialist, and a relativistic position regarding knowledge as a product of specific cultural and historical contexts in which they are produced. Although there is a diversity of constructionist approaches (Danziger 1997), they share the premise that language has a central role in the social construction of reality.

This was a fertile approach generating many discussions and experimentations in research methods within the research group which have resulted in the publication, in 1999, of an edited book, *Práticas Discursivas e Produção de Sentido no Cotidiano*.[4] This book is still a basic reading for those that want an introduction to a constructionist approach, especially the first four chapters that outline the epistemological basis, the centrality of language, and questions of method.

Yet, science studies have remained a focus of interest and soon we were reading laboratory studies such as Bruno Latour's *Science in Action* (1987). Latour was a stepping stone into the world of actor–network theory (ANT) and among the many authors who connect to ANT one created new turbulence on what, around 2010, seemed to be a formalized theoretical approach. I refer to Annemarie Mol, whose writings I have been following greedily. Mol (1999) introduces an ontology based on multiplicity. In her view, there have been attempts to respect diversity, such as perspectivalism and constructionism. However, "perspectivalism broke away from a monopolistic version of truth. But it didn't multiply *reality*" (p. 76). It only multiplied the eyes of the beholders. Constructionism tells us how "a specific version of truth got crafted" (p. 76), but plurality is therefore projected back into the past. Hence, Mol defends that reality is multiple; it is about intervention and performance.

> In performance stories, fleshiness, opacity and weight are not attributes of a single object with an essence which hides. Nor is it the role of tools to lay them bare as if they were so many *aspects* of a single reality. Instead of attributes or aspects, they are different *versions* of the object, versions that the tools help to enact. They are different and yet related objects. They are multiple forms of reality. (p. 77).

This has been the most recent theoretical reformulation. And, working with the multiplicity of versions has required importation of other notions central to ANT:

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[4] Now available as an open access e-book (Centro Edelstein de Pesquisas Sociais, www.bvce.org).

the idea of a symmetry between human and nonhumans and the task of research to track associations throughout heterogeneous networks (Law and Hassard 1999; Latour 1987, 2005). This reformulation called for new ways of referring to the theoretical approach, hence the use of "post-constructionism." However, this is not entirely satisfactory as the word post situates something that came before as done and abandoned; it falls into the essentialization trap. But, it does signal that the process is ongoing, even if one eventually will have to multiply the prefix "post," as reformulations come by.

Working with Discursive Practices: A Brazilian Version of Discursive Psychology

From Israel and Tajfel (1972) through to Harré and Secord (1972), I landed first on Moscovici's Social Representation Theory (Moscovici 1961/1976) as it was congenial with my focus on everyday life. But not for long as I was interested in the rather messy process of the production of meaning in everyday life. SRT was too structured for this task and I soon found myself approaching the various strands of Discursive Psychology (Potter and Wetherell 1987; Antaki 1988).

The focus on everyday practices, and the fluidity of the processes of meaning production in interaction have required a repositioning with regard to the status of language. Following the many strands of the Philosophy of Language formulated in the aftermath of the Second Word War (Wittgenstein 1958; Austin 1962; Rorty 1967; Searle 1969), attention turned to language as a means of construction of realities. This has been characterized as a "linguistic turn": from language as a means of expressing our understanding of the world, which remained as the ultimate verification of the truth of our interpretations, to language as a means of constructing social reality.

Language, thus, is action; language use positions people in interactions, be it face-to face or mediated by various media. Language as action became instrumental in research based on everyday encounters, especially in the context of health services, an important focus of studies carried out by our group.

Imported from Discursive Psychology, the notion of "interpretative repertoires" then became central to analyzing linguistic exchanges in various settings. Based on Potter and Wetherell (1987), we consider interpretative repertoires, a notion which was already in use by Gilbert and Mulkay (1984), as the basic units of discursive practices: a cluster of terms, descriptions, and figures of language that mark the possibilities of discursive constructions considering the context of language use.

Given the continued interest in history, one of the tenants of the approach developed by our research group was that these repertoires circulate in different time frames, opened to reinterpretations derived from lived-in experiences. Partly due to Mikhail Bakhtin's influence (small time and great time), and partly through Braudel's formulations of the long time (*long dureé*, 1992), we proposed a three-tier approach to the relationship between repertoire and time frames. The *long time*, accordingly, concerns cultural contents of a given era that remain in circu-

lation through a variety of cultural products: literature, iconography, and scientific texts among them. *Lived-in time*, concerns the resignification of these contents through processes of socialization (primary and secondary). Both long-time contents and their resignification through socialization processes are put into action in the processes of dialogical communication (*present-day time of interaction*), which forms the basic dynamics of meaning production in everyday encounters.

Thus, repertoires concern the content of exchanges, but these are always context-bound because of interaction processes. Therefore, two notions were necessary to complement "content": the dialogical nature of language exchanges, and the processes of positioning ourselves and others in dialogue. Dialogical aspects of communication were incorporated from Mikhail Bakhtin's theorizations, especially in his writings on speech genres (1986). For Bakhtin, the utterance is the basic unit of communication and each one "is a link in a very complexly organized chain of other utterances" (p. 69). Communication is possible because "We speak only in definite speech genres," i.e., "relatively stable *forms of construction of the whole*" (p. 78). Although genres, if mastered, can be manipulated, different areas, as in medical discourses or juridical speech, have their own specific genres. Equally, different contexts of use adopt different genres, as in writing this chapter or writing an account of an event for a newspaper.

Bakhtin's approach, having dialogicity as a base, is a defense of the active role of the other in the process of speech communication.

To further this point, we included, in our discursive approach, Rom Harré's theorizations on "positioning." In an early text, in collaboration with Bronwyn Davies (Davies and Harré 1990), positioning was proposed as a contrast to the more formal and ritualistic aspects of encounters highlighted by the notion of "role."

> An individual emerges through the process of social interaction, not as a relatively fixed end product but as one who is constituted and reconstituted though the various discursive practices in which they participate. (p. 46).

Therefore, positioning "is the discursive process whereby selves are located in conversations as observably and subjectively coherent participants in jointly produced story lines" (p. 48).

These elements—repertoires, time frames, speech genres, positioning—formed the basic framework for understanding meaning production in a variety of settings. More recently, this framework had to accommodate the idea of versions, as proposed by Annemarie Mol (1999, 2002). It certainly is not a perfect fit as Mol's focus is on performativity, or, more precisely, on a praxiology. However, for our purposes, practices, whether described by practitioners or observed by a researcher, are translated into language, preferably, to language as used. Therefore, versions have linguistic connotations, and practices are carried out through technologies that include specific vocabularies: repertoires used in context, bound by speech genres.

Language as a Governmental Strategy: The Foucaultian Influence

Foucault has been a longtime companion. My approach to health, for example (Spink 2010a, 2018a), was heavily influenced by various of his writings, such as the birth of the clinic (Foucault 1963/1977), the history of madness (Foucault 1972/1987), and the rise of social medicine (Foucault 1984). However, the issue of government came about because of an equally long dialogue with Collective Health, an outshoot of public health that is interdisciplinary and extends explanations of the process of health-illness to include social and economic dimensions. Health is of concern to governments not only because of the contemporary duty to care for the ill, but also, for reasons that include financing considerations (Rose 2007; Spink 2007b, c), and hence the prevention of illness.

With the participation in the coordination of the socio-behavioral dimension of a large cohort study carried out in anticipation of a vaccine for HIV/Aids,[5] I became engrossed in the literature on risk. This was a time when the more open-minded and socially committed medics and social researchers were questioning the use of the epidemiological concept of risk in the HIV/AIDS context. Many, therefore, following on the footsteps of Mann and Tarantola (1996) migrated to the more socially operable concept of vulnerability.

However, from a constructionist point of view, it was necessary to understand how the prevailing use of risk in contemporary societies, especially in "risk management," came about. This led me to what can best be described as a "program of research" on risk in contemporary life that has been carried out with funding by the National Council for Scientific and Technological Development, CNPq since 1998.

This research program comprised a series of investigations that had as a focus governmentality strategies and their effects on person positions which have become legitimized through social practices, including the use of a diversity of technologies. This set of studies began in 1998 with analysis of the different traditions of discourse on risk in various areas of knowledge/power such as: Economics, Epidemiology, and technological risks and the way they migrated to other areas, such as Psychology and Health Education. For this purpose, bibliographic research and analysis of media were carried out (Spink 2001).

The second phase (2000–2003) was focused on the meaning of risks in everyday life, based on theoretical propositions by Ulrich Beck (1993) and Anthony Giddens (1998). "Risk workshops" (Spink et al. 2015) were used to understand the diversity

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[5] The Bela Vista Project was established by UNAIDS in collaboration with the Brazilian Ministry of Health as part of the process of development of a vaccine for HIV/AIDS. Three research centers were selected in São Paulo, Minas Gerais, and Rio de Janeiro where investigations were being conducted on the four areas that integrated the National Plan for HIV Vaccines: epidemiological, behavioral, clinic, and laboratory. The Bela Vista Project was focused on the epidemiological and behavioral components and has as its main objective to determine the incidence of HIV infection in a cohort of men who had sex with men. It was financed by UNAIDS from 1994 to 1998 and maintained with resources from the Ministry of Health and State Secretary for Health until 2000.

of interpretative repertoire about risk in different segments of society. The workshops allowed for further understanding of the traditions of risk discourse, including the possibility of "desired risk," or, as explored in the next phase of the risk research program, risk as adventure.

This positivity through the lenses of adventure was explored in the next phase of this program (2003–2006) that was specifically aimed at understanding the construction of the person position as an "adventurer." For this purpose, a longitudinal analysis of VEJA, a magazine of large circulation in Brazil, was carried out. Analysis focused on the use of interpretative repertoire in text and image in a sample of 212 issues of VEJA to comprehend the metaphoric use of risk adventure to talk about new forms of person positions as well as new modalities of management of risk based no longer on probability, but on imponderability (Spink 2008).

The following phase (2006–2009) had at its core the issue of risk communication taking as a case study contemporary strategies for the control of the use of tobacco. This involved tracking the emergence of the sanitary concern with the use of tobacco, as well as the reasons for the continued use of cigarette smoking by students, teachers, and administrative and operational staff at PUC-SP (Spink et al. 2009; Spink 2010b).

Closing this cycle, the investigation carried out between 2012 and 2017 focused the issue of risk management from the point of view of the disorderly occupation of areas in the periphery of the city of São Paulo. Taking as a starting point recent legislation instituting the policy for the management of risk of disaster by the Civil Defense System, this research was carried out in the southern outskirts of São Paulo, in a region prone to landslide and inundation (Spink 2014). The results of this study involved various aspects, such as lack of urban planning, housing shortage, forced removal of the population for urbanistic or risk reasons, and was recently published as a book (Spink 2018b).

Theoretical development incorporated many aspects concerning discursive practices in the triple-time framework already described. Familiarity with the literature on risk (Bernstein 1996; Beck 1993; Douglas 1992) and results from research on the everyday experience of risk led to the development of a glossary of terms used to refer to risk in three different traditions of risk discourse (Spink and Menegon 2004):

- Risk as danger, i.e., words used before the emergence of the word risk in indo-European languages in the fifteenth century. For example: Fatality, danger, destiny, fortune, and threat.
- Risk as probability: The vocabulary which connects to the development of risk management as from the sixteenth century. For example: Gamble, chance, safety, and prevention.
- Risk as adventure, a set of words that relate to the emotions of confronting risks of various kinds, as in radical sports. For example: Adrenaline, audacity, challenge, and radical.

Conversely, the risk framework was also a useful strategy for government purposes and Michel Foucault's work on governmentality fitted the bill perfectly. Specially in the courses held at the College de France in 1975–1976 (In Defense of

Society, Foucault 1999), 1977–1978 (Security, Territory and Population, Foucault 2008a), and 1978–1979 (The Birth of Biopolitics, Foucault 2008b). It certainly does not synthetize Foucault's approach as it spans so many different dimensions of person positions in contemporary societies. But, the contributions derived from three of his courses in the College de France have been important for the research carried out by our research group.

Governmentality is not an easy concept, and perhaps is best summarized in the lecture held in February 1st, 1978, where Foucault states that by this word he means three things (Burchell et al. 1991, p. 102):

1. The ensemble formed by the institutions, procedures, analyses, and reflections, the calculations and tactics that allow the exercise of this very specific albeit complex form of power, which has as its target population, as its principal form of knowledge political economy, and as its essential technical means apparatuses of security.
2. The tendency which, over a long period of time and throughout the west, has steadily led towards the preeminence over all other forma (sovereignty, discipline, etc.) of this type of power which may be termed government, resulting, on the one hand, in the formation of a whole series of governmental apparatuses, and, on the other, in their development of a whole complex of *saviors.*
3. The process, or rather the result of the process, through which the state of justice of the middle ages, transformed into the administrative state during the fifteenth and sixteenth centuries, gradually becomes "governmentalized."

This three-pronged definition of governmentality enabled us to integrate the minimalist approach derived from the focus on meaning production in everyday life, with the public sphere, providing a framework for understanding how public policies impact on conducts within institution and among institution–users and vice versa. From the point of view of research procedures, field work was expanded to include Peter Spink's notion of a theme field (campo-tema 2003), the long process of familiarization with the object of research. This process usually leads to critical incidents in the field, which become entry points into the extensive network of heterogeneous actants, human and nonhuman, allowing for connections between the microlevel of interactions and the wider field of institutional and governmental spheres.

Knowledge as Collective Enterprise

The theoretical framework described so far is, I hope, a contribution to the field of Social Psychology. But, theory is only a small part of this contribution. The lively discussions carried out in the research group extrapolate immediate objectives, such as the successful completion of thesis, dissertations, and research grants. They result from shared views on an approach to research which has a political commitment to social transformation and mitigation of vulnerabilities that are endemic to Brazil.

This collective aspect of the work carried out so far can be gaged through the intersection of networks. The starting point has certainly been the research group at the Graduate Program of Social Psychology (NUPRAD), at the Pontifical Catholic University of São Paulo. It is long lived, starting in 1988, and has been instrumental in the qualification of many master and doctoral students. Some of these ex-students have remained long-standing collaborators and are part of the CNPq Research Group "Práticas Discursivas e Produção de Sentidos." Others, more loosely connected, come together in events that are open to researches from other institutions that carry out research in similar modes, some in collaboration, and meet at the biannual meetings of the Association of Graduate Programs in Psychology, ANPEPP. This networking strategy has helped to introduce our theoretical framework to other parts of the country specially because the ex-students are now lecturers at various universities, public and private, among them: Brasilia (UNB), Belém (UFPA), Fortaleza (UFCE), Recife (UFPE), Maceió (UFAL), Goiás (PUC-GO), Cuiabá (UFMT), Londrina (UEL), Rio de Janeiro (FIOCRUZ), Pouso Alegre, MG (UNIVAS), and São Paulo (UFSCAR, USP, and PUC-SP).

Theoretical development has also derived from international collaboration through exchange as visiting professors and supervision of doctoral students predominantly with the Autonomous University in Barcelona, the Catholic University at Valparaíso, Chile, and the University of the Republic of Uruguay.

Last, but not least, considerations regarding ethical aspects of socio-psychological research have led to an approach to research that borders on action research, but takes into its stride the dialogical implications of being "in the field." As usual, there are introspective moments on the research process when attention to theory and bibliographic research is required. But, on the stages of familiarization with the "field" and in the production of information, the lessons learned from an action-research mode of conduct come to the fore. Information is a two-way process: we ask, they also ask; we learn, they also learn, and in this circular manner information is coproduced.

The recently concluded study on living in risk areas provides an example of this circuitous manner of producing information that is both, an intrinsic part of scientific research and a way of being useful to the community. The study was carried out in M'Boi Mirim, a district located in the headwaters of the Guarapiranga reservoir in the southern periphery of the São Paulo municipality. The aim was to understand why and how people live in areas that are at risk of flooding and slippage in the municipality of São Paulo. There are 470 such areas according to the survey conducted in 2009/2010 by the municipality. Fifty of these are in the local regional administration where field work was carried out.

Having decided that the M'Boi area would be the locus of research, my entry point was the Forum in Defense of Life (*Fórum em Defesa da Vida*) that, since 1997, meets every first Friday of the month at the *Sociedade Santos Mártires*, *Jardim Angela*. The Forum is a meeting place for residents, civil society organizations, and researches from various universities. It soon became obvious that the various studies that were being carried out in the region could provide better return to the community if they could be put in dialogue and if more effective ways of making them available

were devised. For this purpose, a forum of researchers was created with participation of academic scholars as well as researchers from the community.

The vast amount of data produced was then centralized on a site—the Estação de Pesquisa Urbana M'boi[6]—located at the Centre of Studies on Public Administration and Government (CEAPG), EASP-Fundação Getulio Vargas. The information includes legislation, governmental data, technical reports, master and dissertation thesis as well as working documents of various types and is easily accessed by whoever has interest.

This extension of the notion of field work has other implications, such as responding to demands that are not immediately linked to the research objectives. In the research on risk areas in the periphery of São Paulo, this enlargement has led to responding to needs of the groups that were involved, or rather, that accepted our presence in their midst: organizing data, writing up their histories, and helping with their own research procedures.

This is a time-consuming manner of doing research, but it integrates our own view of responsibility (Spink 2000).

Take-Home Message

Six questions were proposed as a way of organizing contents in this book and they have all been addressed in this manuscript, although not in the same order. I started by explaining what I consider my most important scientific contribution, describing the theoretical development carried out in the context of the research group I direct at the Pontifical Catholic University of São Paulo. The description included the theoretical influences as well as collaboration by students and colleagues, past and present, at local, national, and international levels. It has been a long trajectory and the resulting publications have helped to strengthen a network of researchers that have as core a constructionist approach to knowledge and an interest on discursive practices in everyday life. As I approach retirement, I hope that the seeds I have planted will grow, beautiful and plentiful. My main message, therefore, is that the future belongs to this network of young researches and it depends on their continued contribution to this theoretical legacy and most specially to the ethical-political approach to research that we, collectively, have been developing.

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[6] http://ceapg.fgv.br/m-boi/sobre-estacao

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Understanding Human Development as a Product of Our Evolutionary History and Situated in Cultural Context: A Personal Trajectory

Maria Lucia Seidl-de-Moura

Abstract Influenced by Vygotsky and contemporary sociocultural authors, I have aimed to understand the genesis of development in context. I have studied mother–infant interactions and proposed that they are the origin of "construction zones" (M. Cole). The "development niche" (S. Harkness and C. Supper) of Brazilian children was the next focus of interest and a series of investigations dealt with mothers' beliefs and practices. The main contribution in this set of studies was to include different contexts of the country, in contrast to cross-cultural research that compares small groups of different countries. The need to understand further the context in which development occurs leads to the search of an integrated evolutionary and sociocultural perspective, and a theory of trajectories of development. Furthermore, we have argued that Brazil is a good laboratory to test some hypothesis of Kağitçibaşi's theory, and we have conducted studies that have identified in Brazilian groups a trajectory of development of the self, named by the author as "related autonomy." Future studies need to deal with measurement difficulties, and the ontogenesis of related autonomy, but the most important is to pursue theoretical discussions to understand development as both a phylogenetic and a sociocultural product.

> We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time.
>
> T. S. Eliot

A Genetic Focus and a General Trajectory of Studies

This chapter aims at presenting a personal trajectory of studies and research as a Brazilian developmental psychologist. Although it may not be an original or significant contribution to the area, this report of the search for understanding

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development as a biologically cultural process may be useful for young researchers. One parallel and inseparable path to my studies is my commitment as a professor and advisor of undergraduate and graduate students to promote their academic development, and I will share some of this experience in the chapter.

I should begin by saying that I never had a proper advisor, and this was a major influence in my career. My Master Thesis' advisor at the University of Wisconsin (UW) confused academic supervision with nondirective therapy. In our supervision sessions, he would stare at me silently for interminable minutes, and I would be paralyzed and incapable of speaking, even if I was well prepared and had done my job. As a foreign student, with my own handicaps, I was very insecure. This whole process was a torture, with many lost work hours. He would let me make choices and engage in processes that were dead ends. When I reported my failure, he would tell me he knew it would not work, but that I had to discover it by myself.

At the doctorate program, in Brazil, the absence of supervision was also the tone. Everything I decided to do, my advisor would say it was fine. I knew it was not, and I struggled to do a good job, but it was much harder than it would be if I had at least some kind of guidance. The consequence was that I was not able to have the complete Dissertation work published in an international journal at the time.

Shocking as it may appear, I had neither a model nor a direct mentor, and I did not have the opportunity to belong to a research group. I applied to be a research assistant at UW during the Master's program, but I was not the selected candidate. The interview was collective, at a beer house. I was very shy and I did not drink beer… Thus, I had to be very resilient to become a researcher and a professor, making all my theoretical and methodological choices by reading and searching in as many sources as I could find. It was solitary and hard work. Later, fortunately, I had many colleagues I could learn from and with whom I could develop good collaborative work.

It was in this scenario that I discovered Vygotsky's theory. I found one of his books in a used bookstore while I was doing my PhD. I had never had courses about him, neither in my Psychology undergraduate studies nor in my Master's. Having read it, I found it fascinating and I took it to my advisor. He dismissed it, by saying he was not an important author. Nonetheless, I started reading all of his other books, and it was the beginning of a lifelong theoretical relationship. I can say that the role models in my career were Vygotsky and Bruner.

Bruner I discovered a little latter, also by myself, and I read most of his publications. I was able to follow the most important contributions he has offered through his exceptionally long and beautiful career, and these contributions have influenced my work. His intellectual biography, published in 1983, In Search of Mind, was a special source of inspiration for me. I deeply identified with his description of himself as having a style of a fox, instead of a hedgehog in the academic life. Curiosity moves me, and I have spent all my work years in search of mind. For me, developmental psychology is an instrument to understand human mind.

Believing in the fundamental importance of theories, falsifying hypotheses fascinated me. My doctoral dissertation aimed at discussing Piaget's proposal that the constructions in the sensorimotor period of development are necessary and

sufficient for the development of language. Understating language as involving not only speech but also language understanding, I conducted a longitudinal study with two babies from eight to 18 months of age. In this study, I observed the onset of language understanding at 10 months, when babies were at intermediate stages of sensorimotor development (Seidl-de-Moura 1988, 1990, 1992, 1993a). The studies at this time motivated me to comprehend the "initial state" of knowledge construction and human development. The discussions between Piaget and Chomsky, in 1975 at the Centre Royaumont des Sciences de l'Homme, in Paris, published in 1980 (Piattelli-Palmarini 1980), were very instigating. Later, this interest in the "initial state" of mind development was rekindled when reading Pinker's *The blank slate: the modern denial of human nature* (Pinker 2002).

Vygotsky's (1984) concept of zone of proximal development (ZPD) intrigued me. It seemed to me that the importance of ZPDs goes beyond the formal educational implications for which it is most widely known. M. Cole gave a contribution to this notion, discussing what he called construction zones (CZ). The difference is that he talks about a process of partners' coconstruction. Differently from Vygotsky's ZPD, it is not the most experienced partner who influences the development of the one less developed, but they both engage in exchanges that promote cognitive change.

In studies with Newman and Griffin (Newman et al. 1989), Cole introduces the notion of construction zones. These, for him, constitute spaces conducive to development, where partners exchange, share, and negotiate meanings. Inter-psychological forms of organization gradually change into intra-psychological processes. Each individual elaborates and internalizes their exchanges in a particular way, through a process of appropriation, discussed by Leont'ev (1981). The indeterminacy of discourse is the key concept in the formulation of the notion of construction zone for Newman et al. (1989), because it would partly explain the process of cognitive change. For these authors, when interlocutors interact in conversational exchanges, diverse perspectives are at stake, because there are different interpretations of the context. Each of these interlocutors acts as if the other had the same frame of reference, appropriates what the other says, and interprets it in his/her own way.

Those ideas seemed fertile to me and, at first, I have conducted studies on interaction mediated by computers as ZPDs or CZ, and problem solving. The computer language Logo, which children could use, was a good instrument to observe such process (Seidl-de-Moura 1991, 1993b, 1994, 1998). I was soon attracted to the *genesis* of ZPDs or CZs. Thus, I started to study mother–infant interactions, and proposed that they are the origin of "construction zones" (Seidl-de-Moura 1999). In order to be able to hypothesize this, it was necessary to understand early human development and the capacities of newborn babies (Seidl-de-Moura and Ribas 2004).

Because I understand that there is no genesis without context, the "development niche" (Harkness and Supper 1996, 2005) of Brazilian children was my next focus of interest, and a series of investigations dealt with mothers' beliefs, goals, values, and practices. The main contribution of this set of studies was to include different

contexts within the country, in contrast to cross-cultural research that compares small groups of different countries.

The need to understand further the context in which development occurs leads to the search for an integrated evolutionary and sociocultural perspective, and for a theory of developmental trajectories. The work of Keller (Keller 2002, 2007, 2012; Keller and Kärtner 2013; Keller et al. 2006) and Kağitçibaşi (2007) were theoretical starting points. Furthermore, we have argued that Brazil is a good laboratory to test some hypotheses from Kağitçibaşi's theory, and I was pioneer in studies that have identified in Brazilian groups the trajectory of development of the self, named by the author as "related autonomy," which will be later described. Future studies need to address measurement difficulties, and the ontogenesis of related autonomy, but the most important is to pursue theoretical discussions in order to understand development as both a phylogenetic and a sociocultural product.

Social Interaction as Constitutive of Human Development

Human development is a process resulting from the interaction of biological, species-specific characteristics (such as brain size; prolonged immaturity of human babies and their dependence on adults; high levels of parental investment, etc.), and particular cultural organized environmental conditions, or "developmental niches."

My assumption is that interactions are constitutive of development from the gestation. The partners at first are very different in terms of developmental level, one adult (the mother), a fetus, and a small baby later. How can there be interactions in asymmetrical relationships such as those? Interactions mean *actions between*— inter-actions. The literature on infant development indicates that babies at first have only a limited repertoire, but they can respond to mothers' actions, or they can act and have the mothers respond to them. Babies' ability to engage in these exchanges comes from a set of propensities (open programs), selected throughout our phylogenetic history. These propensities allow the human baby to know him/herself, the world, and his/hers cospecific, and to build with them a matrix of relationships (one of the first ontogenetic tasks) (Ribas and Seidl-de-Moura 1998, 1999; Seidl-de-Moura and Ribas 1998, 2000, 2004).

This interest in genesis and early interactions leads me to invest in observational procedures (Seidl-de-Moura and Ribas 2007). The observations were video recorded in natural environments and later coded. The focus was in interactions, and not socially directed behaviors. Mother and their babies were the target. We developed a protocol that is useful for other studies in the area.

Based on our definition, an interaction starts when one of the partners directs a social behavior and the other responds within 5 s. When one or both of the partners fail to direct social behaviors to the other for a time interval longer than 5 s, it characterizes the end of the interaction episode. Episodes with a duration of 5 s or less are not coded as interactions. Thus, the minimum time to characterize an instance of interaction is 6 s. This definition has led to many discussions and decision-making

processes. In case of doubts, we do not code the event as an interaction, seeking to avoid distortions of overidentifying exchanges between mother and infants.

According to the adopted perspective, what characterizes an interaction is interaction. Thus, it is not enough for the mother, for example, to smile, to touch, or to speak with the baby. It is necessary that the baby respond within the time indicated in the definition, with a social behavior directed to the mother. Thus, interaction is defined by a sequence, which cannot have less than two behaviors, one of the mother and the other of the baby. In the simplest case, it would be a two-turn interaction, with one behavior for each partner.

Mothers or babies can initiate interactional sequences by emitting behavior that deflagrates a response. There must be some reciprocal engagement. When the mother is performing some activity not focused on the baby, which occupies her attention (such as watching TV, for example) and emits a behavior that seems to be associated with an action of the baby, one cannot refer to it as an interaction. However, the mother may be doing something (like washing dishes, for example) and at the same time being attentive to the baby by talking to him/her. In this case, if there is a response of the baby within the conditions of the definition, it would be possible to consider that there was interaction.

Using this methodology, we have observed interactions that involve reciprocity and coordination very early in development. This is possible because of newborn babies' capacities (Seidl-de-Moura and Ribas 2004) mentioned above. In the study of infants of 1 and 5 months old, we found that the interactions are predominantly face-to-face when infants are 1 month, and stimulated by objects at 5 months old, thus indicating a trend observed in Western urban groups (Keller 2007), different from early exchanges in other cultural contexts.

Our studies have confirmed the possibility of early mother–infant exchanges when infants are 1 month old. The role of affectivity in the interactions is evident (Seidl-de-Moura et al. 2004a, b). We have also observed the relationship between mothers' cognitions and their behaviors in interactions (2004b). This was our first investigation of one aspect of the babies' developmental niche, namely mother's cognitions. We have also analyzed the development of self-regulation in small infants by observing the coconstruction process in which the baby depends not only on his/her neurological maturation but also on the presence and action of the mother to modulate states of consciousness (Seidl-de-Moura et al. 2011).

The interactions observed in our studies presented differences in their complexity and in the manifestation of reciprocal affectivity between partners at 1 and 5 months old. The ages of both the baby and the mother are important aspects for the constitution of the interactions. At 5 months, the adult partner—in this case, the mother—responds to the increase in the infants' repertoire, and the exchanges become more complex. They become gradually longer and more complex: partners establish "proto-conversations" of more turns at 5 months old.

Since those early observational studies, affective manifestations and the presence of interactions involving the body contact system have led to the hypothesis that a pattern of related autonomy is present in mothers' care of their babies, as I will discuss later in this chapter (Kağıtçıbaşı 1996, 2007, 2012).

We have concluded that social interactions occur since birth and even before. They are the stage for the development of human species' typical characteristics, selected throughout evolution by their adaptive value. They are a game that involves synchronization and mutual engagement. In addition, they allow the baby to develop the capacity to communicate and relate their state to that of their social partners, through the expression of emotional states. Their emotional and affective dimensions influence perceptions, behaviors, and the possibility of each partner understanding him/herself and others (Seidl-de-Moura, Mendes, Pessôa & de Marca, 2009). The initial development task is to build a matrix of social relationships.

Interacting with others and with the environment allows the acquisition by human babies of the ability to take the perspective of others and to understand them as intentional beings. To know more about the nature of these exchanges is fundamental to the understanding of ontogenesis and of human mind.

I was one of the editors of a book with two of my (then) doctoral students (Seidl-de-Moura, Mendes & Pessôa 2009)—Social Interaction and Development. This book synthesizes many of the studies and theoretical reflections on this theme.

Developmental Psychology and the Majority of the World

Besides understanding the basis of the ontogenetic process, a fundamental question for researchers in developmental psychology is to define what is universal, and what is circumstantial or culturally specific. In general, those ontogenetic processes have been studied with certain biases. For example, priority has been given to certain forms of interactions (e.g., face-to-face), certain developmental goals (e.g., autonomy and separation), and to what is considered safe attachment. Henrich et al. (2010) criticize this limitation in psychological studies. Kağıtçıbaşı (2007) points out that psychological studies often focus on Western, Anglo, industrialized contexts, which represent the minority of the world. Non-Western and developing countries, which are what she calls the "majority of the world," are understudied contexts.

One significant example of this bias is about the basic or universal nature of early interactions. According to LeVine (1989), Stern proposed that the observed interaction between mothers and babies in New York involving reciprocal play and proto-conversations represented "… a biologically planned choreography necessary for normal emotional development" (p. 62). However, studies from linguistic anthropologists have found no evidence of this kind of interaction in populations of Papua, New Guinea. In this culture, as Cole (1998a, b) also points out, mothers hold their babies by positioning them to look in other directions rather than at them, and they speak about them (infants), rather than to them. Based on this evidence, according to LeVine (1989), Stern modified his hypothesis regarding the universality of these patterns of interaction, and presented a model consistent with the idea of cultural variations in early development environments. The limits between cultural variations and universals in behavior development is a question that empirical research

should address. These cultural studies motivated me and I found in Keller's (2007) proposal of different universal parental systems and their differential cultural organization a good model to test empirically. Keller takes into account the universal evolutionary basis of behavior, as well as the cultural forms it can assume.

I have discussed the importance of adopting an evolutionary perspective in studying the human mind (Seidl-de-Moura 2005a). In an effort to understand what is universal and the cultural variations it assumes, I published the chapter "Bases for a Socio-Cultural and Evolutionary Developmental Psychology" (Seidl-de-Moura 2005b), in which I present a perspective for studies of ontogenesis which, without denying the biological basis of our behaviors, contemplates the interaction between biology and culture.

I found resonance in the studies of Kağitçibaşi (2007), who claims that there are no single or standardized paths of development, and that we can observe diverse trajectories in varied contexts. In Carvalho et al. (2014), we discuss the different perspectives that had influenced our research work (by Patricia Greenfield, Çiğdem Kağitçibaşi, and Heidi Keller).

Their models have the common objective of understanding the trajectories of the development of the self, based on the dimensions of autonomy and relation, structured according to specific aspects of the environment. Greenfield (Greenfield 2002, 2009; Greenfield et al. 2003) emphasizes the role of sociodemographic variables and their relation to social change. Keller (2007) contributes to the understanding of the biologically cultural nature of development in its ontogenetic and phylogenetic aspects. Finally, for Kağitçibaşi (2007), the family plays a fundamental role in the development of the self and undergoes transformations according to changes in society, especially regarding schooling and urbanization. This author proposes a two-dimensional model that includes agency and interpersonal distance. The intersection of these two axes makes explicit four models of family and of self, among them the related autonomous. With these models as a starting point for reflection, I started to conduct some studies in Brazilian contexts.

The Importance of Intra-Cultural Studies

Studying development in context is a challenge. First, a clear theoretical basis is often lacking in cross-cultural studies. In addition, there are not many discussions in the literature about the evidence-based contributions to the different theories. Often, cross-cultural research is conducted comparing restricted samples from two or more countries. This is problematic because there can be culturally diverse groups in the same country, or even within large cities, such as New York or Rio de Janeiro. The conclusions of comparative studies using very limited groups of participants frequently shocked me. Even in 2015, at the ISSBD conference in Shanghai, I have seen an oral presentation in which the author compared Chinese children living in cities to "minorities." When I questioned the presenter at the end of the session about the great variety of minorities in China, she answered me that "they are all the

same" (!). The observation of many studies with this outlook, and the analyses of the literature in the area led to the interest in doing comparative studies in Brazil.

A review of the literature indicated the absence of intercultural studies exploring Brazilian contexts (a part of the majority of the world—Kağitçibaşi 2007). This has triggered diverse initiatives to explore the beliefs and ideas of parents and other caregivers in different contexts of the country since 2002 (Seidl-de-Moura et al. 2004b). These studies were guided by the assumption that cross-cultural research with small groups of diverse contexts (e.g., American and Chinese mothers), or prototypical groups (e.g., traditional and urban cultures) may not represent the best methodological option to know developmental trajectories, because studies with this approach presuppose intra-cultural homogeneity. Later, taking the model of Kağitçibaşi, we studied diverse developmental trajectories in Brazilian contexts (Pessôa, et al. 2016; Seidl-de-Moura et al. 2008b, 2014; Vieira et al. 2010a, b).

Seidl-de-Moura, Carvalho & Vieira reviewed and synthetized the set of studies conducted on that theme. They have focused on aspects related to mothers' beliefs and values. One study focused on toddlers' development, with the assumption that it reflects the prevalent socialization trajectory in that specific context. Data was obtained on what mothers desire for their children in the future; how they want their children to turn out (socialization goals); what they think is important in caring for them (beliefs about practices); what they highlight in their description of them (ideas about their children), and the way they talk to them (narrative envelope, which is a part of Keller's model). Finally, we have studied children's social-emotional development. Our assumption is that data on mothers reflect somewhat the trajectory they favor in the orientation of their children's development, and are part of the context of development (Seidl-de-Moura et al. 2015).

The results of this set of studies indicate that autonomy and relatedness are not opposite dimensions, being present in specific dynamics in different contexts. Brazil is a large and diverse country of the "majority world," it has undergone important social-demographic and economic changes in the last years, and we consider this country especially appropriate to study these dynamics.

Our results indicate that, in general, Brazilian mothers value both autonomy and relatedness in the conceptions of their children, their narrative styles, their socialization goals, and their practices. However, this model of related autonomy does not present a fixed or unique form, and it is influenced by social-demographic and cultural variables. Parental educational level is one important example of these variables. As observed in the studies, women with higher educational levels tend to value their children's autonomy. They have self-maximization goals for their children, and they want them to succeed and be happy. At the same time, it seems that this increase in educational level does not decrease some of the relatedness tendencies that may have cultural origins, and be associated to our African and Indigenous heritage.

Mothers' educational level is associated to another important variable: urbanization. Although the country has a vast territory, most of its population lives in urban centers. Population size of mothers' cities seems to be another factor that can modulate the importance attributed to autonomy and relatedness. Larger cities present

typical conditions of postindustrial complex societies, which lead to goals of autonomy: increase in the number of potential insertion in-groups and of competition, decrease of loyalty among individuals of any of these in-groups, less social support from extended family, more isolation, etc. (Velho 1987; Simmel 1973; Triandis 1989). In these contexts, individuals have the opportunity to focus on their own personal goals, rather than on the goals of any groups they might belong (Triandis 1989).

Our three basic origins—Portuguese, Indigenous, and African people—have been mixed with people from different immigration waves across the centuries. First-, second-, and third-generation immigrants married Brazilians and new mixed families form Brazilian society. Thus, the influence from these different cultures, many of them oriented towards autonomy and independence (e.g., Germans), has been complemented by the relatedness tendency of our ancestors, in varying degrees and forms. The studies indicated differences in the products of the relationship between autonomy and relatedness according to varying levels of urbanization (size of population), diverse predominant cultural influences, and educational levels.

We believe that the findings not only present evidence supporting Kağitçibaşi's theoretical model, but also contribute to the understanding of aspects of Brazilian developmental contexts. They can also contribute to developmental science and the relation between universal characteristics and the cultural forms they assume. We also think that Brazilian mothers' childrearing beliefs and practices, which include autonomy and relatedness, illustrate Kağitçibaşi's (2012) integrative synthesis proposal. This author has discussed how the development of related-autonomy and social-cognitive development can be universal and desired healthy developmental goals. Our study about cooperation and altruism in toddlers and mothers' beliefs and practices (Pessôa et al. 2015) is another example of the relation between mothers' beliefs and practices and children's social-cognitive development.

Although understanding cultural orientation towards interdependency in rural or traditional groups, and being aware of tendencies for autonomy goals in urban educated contexts, we can aim at developing persons who have the best of both tendencies. They would have the benefits of formal education, the opportunities for self-maximization, and, at the same time, would be able to relate, to be close to others, and to cooperate. Thus, as shown, we support the hypothesis that autonomy and relatedness are not mutually exclusive, and they seem to be two aspects of the parenting models from all over this large country. The studies had participants from urban centers of different population sizes in all the country's regions, from 16 contexts, which is not usual in the literature.

Another positive characteristic of the studies conducted is the variety of methodological strategies for data collection: inventories, scales, interviews, and behavioral observation. Data was analyzed with both qualitative—with coding systems for video recordings, and interviews—and quantitative methods.

Instruments construction and adaptation was also one of my contributions. Some of the scales translated and adapted are: Knowledge of Infant Development Inventory (KIDI) (Seidl-de-Moura et al. 2004b); Social Desirability Scale from Marlowe–Crowne (Ribas et al. 2004); Scale of Parental Beliefs and Care Practices

(E-CPPC) (Martins et al. 2010); Scales of Self-Autonomous, Interdependent and Related Autonomous of Ç. Kağitçibaşi (Seidl-de-Moura, Ziviani, Fioravanti-Bastos & Carvalho 2013); Family Allocentrism—Idiocentrism Scale (FAS) Seidl-de-Moura et al. 2013).

Aiming at understanding the development in Brazilian contexts from a sociocultural and evolutionary perspective, we conducted a study on different parental investment models (Seidl-de-Moura et al. 2012a). Participants were 315 mothers from different contexts in the country, who had at least one child younger than 6 years old. They answered scales on Allocentrism, Social support, Adult attachment, and Practices of childcare. Mothers' characteristics, the type of context (capital × small city), and reported childcare practices were used in a Tree analysis. A Correspondence analysis was performed using the four clusters obtained and mothers' answers regarding their youngest child. Univariate GLM analyses allowed the comparison of mothers' scores in the different scales. The analyses identified four maternal profiles presenting distinctive patterns of association between mothers' characteristics and care practices. Maternal care is a multi-determined phenomenon, and the method employed in this study can give insights into how the combination of diverse social-biological factors can result in a set of different childcare practices.

Back to the Study of Genesis

The intra-cultural Brazilian studies have indicated that there are some universal developmental pathways, but they can assume different forms, and the development of self can be in the direction of constructing a notion of autonomy and of relation with others in this Western Latin culture. We are back with the original dilemma of finding out how related autonomy is constructed in the ontogenesis, using the ideas of construction zones and development constituted by social interactions. The exploratory study of Seidl-de-Moura et al. (2011) provides some hints of this process, but there is still much to be investigated.

Aiming at relating the developmental trajectory expressed in mothers' beliefs and practices to their children's development, we investigated the early development of self-recognition and self-regulation in toddlers (Seidl-de-Moura et al. 2012b). The initial process of development of self involves interaction with others and the establishment of relationships taking different paths depending on the sociocultural context. Self-recognition and self-regulation are considered manifestations of this development between 18 and 24 months of age. Participants were 94 mothers of different educational levels and their children were of 17–22 months of age from two Brazilian cities. Socialization Goals Inventory and Parental Practices in the First Year Inventory were used to collect data on mothers' beliefs. Children performed tasks related to self-recognition (the rouge mirror test) and self-regulation (compliance to requests). The group of mothers studied valued both autonomy and

interdependence. Children's responses are consistent with a perspective of relational autonomy.

In order to observe the genesis of related autonomy, we analyzed some of our videos of longitudinal studies of mother–infant interactions: two with babies from 2 to 6 months old and four from 13 to 24 months old (Mendes and Seidl-de-Moura 2013; Pessôa and Seidl-de-Moura 2011). We focus on the narrative envelope, or the language the mothers used with their children. This concept is formulated by Keller (2007), and is one of the parental systems in the model of components proposed by the author. According to her, the narrative envelope presents different styles and contents according to cultural models.

Mendes and Seidl-de-Moura (2013) and Pessôa and Seidl-de-Moura (2011) verified that during the periods studied mothers' speech was marked by agency expressions and mental states attributed to the baby, and a statement of needs. Both of these categories are associated with a model that privileges autonomy. On the other hand, we observed the significant presence of categories of social rules and coagency, associated to a trajectory that aims at interpersonal proximity and interdependence. This indicates the presence of tendencies to promote both autonomy and relationship. New longitudinal and observational studies are necessary to further investigate this tendency.

Fostering the Growth of Developmental Psychology in Brazil

The organization of a cooperative network of researchers from different parts of the country, and from diverse institutions was an important byproduct of the collaborative studies that I coordinated. I consider this to be one of my most significant contributions to developmental psychology in Brazil: to promote collaboration between a group of researchers from many institutions across the country. How to compromise and accept differences, and how to administer time and resources were lessons learned from this experience. With the cooperation between researchers, their students also benefitted, by forming new partnerships and engaging in collaborative work.

I was one of the main persons responsible for obtaining funds from different agencies for the development of those studies, for the travelling of professors and students (graduate and undergraduate) within Brazil and to other countries, for technical visits and participation in conferences. We have also organized national and international conferences, and we were able to invite and to finance Brazilian visits of colleagues from other countries. These exchanges with international colleagues were very important for the development of our research programs and of our students.

I am pleased also to have had the first initiative in 1996 to organize a symposium of researchers on developmental psychology that gave origin to the Brazilian Developmental Psychology Association in 1998, of which I am one of the founding members.

I feel it has been a rewarding career in general and that my work has been well received by the academic community in Brazil. This can be evaluated by the grants I have received along the years, the discussions promoted, and the repercussions of several of my talks at conferences. This support from the colleagues and funding agencies has been encouraging and very important to keep me motivated to pursue my endeavor. As I look at this trajectory, I feel satisfied and fulfilled.

A Chosen Path: To Teach, Advise, and Mentor Young Researchers

Looking back at my career, I can see that my personal difficulties to become a researcher because of lack of proper supervision led me to dedicate extensively my time to be the opposite of my advisors. I thought that it was necessary to create an environment that could foster academic growth. Thus, I have founded a research group called Social Interaction and Development—ISDES (www.desin.org) at the State University of Rio de Janeiro, where I have been a Full Professor for 25 years. This group includes undergraduate and graduate students.

From the beginning, in 1993, I was determined to provide opportunities for students to develop research skills, by engaging in actual research studies coordinated by me. We developed theoretical and methodological training, and students are always encouraged to be active participants as research assistants at different levels. They do not work for me, but they were coauthors and learned by doing research to answer some of their own questions, and presenting it at conferences, and writing articles with other members of the group.

The recruiting process to be a member of ISDES is quite hard (but not in a beer house!), and the standards to continue in it are high. Through the years, each beginning of semester we would decide on personal theoretical, methodological, and publication goals, and we would evaluate at the end of the semester how these goals were achieved.

The group atmosphere is of cooperation and not competition. The more experienced (such as the PhD students) supervise undergraduates. The ones who knew a methodological instrument (such as a statistical procedure) would teach it to others. I truly tried to promote the development of autonomous-related professionals. Dozens of students have participated in the group through the years. I have advised 19 PhD students, 25 Master's students, and more than 50 undergraduate students. Several of them are now teaching at universities. What I am proudest of are not the Thesis or Dissertations the members of the group produced, or the publications we have done through the years, mainly in coauthorship, but of the values and attitudes of intellectual honesty, cooperation, curiosity, and hard work that I have encouraged. I believe that academy needs those values, with more emphasis on cooperation, search for knowledge, and reflection, and less on the number of papers published and competition.

Final Considerations

As the reader has been warned, this chapter does not intend to present an original or significant contribution to developmental psychology. It aims at presenting a personal trajectory in search of understanding the genesis of human mind as product of a biologically cultural process. Some things have been learned. The most important of them is the need for good theories of development, theorization, and hypothesis testing, and using theories as instruments and not as cages or canes.

Vygotsky's advice is still valid. We should not look at psychological phenomena as fossilized. We need to understand their history in different planes: microgenetic, ontogenetic, phylogenetic, and cultural. Thus, we cannot neglect the search for the biological and the cultural entwined, for the universal and the diversity of forms it assumes in cultural contexts. In this direction, I believe that the line of work we have conducted and the results of our studies add up to the literature on human development, highlighting the importance of taking into account the context.

Besides all that, in the end it was possible, in my personal path, to give opportunity for the development of a fine group of young researchers who will certainly bring a good contribution to developmental psychology. This makes me happy, and to be happy is very important.

Maybe some final words should be added about how the contribution of my studies is reflected in the world outside academic psychology. I believe that this is mainly through the work of my former students. Several of them, based, in part, on what they learned in our research group, are working on developing programs to promote health across the life span, working with parents, children, teachers, etc.

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Psychology, History, and Culture: The Field of the History of Psychological Knowledge

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Abstract The text will focus on my most significant scientific contribution: in addressing the study of the history of psychology in Brazil, I have deepened the interfaces existing between psychology and cultures throughout history. My research was motivated by the requirement to contextualize the production of psychology in the two dimensions of space (cultures) and time (history). I specifically focused on the case of Brazil, reconstructing the history of psychological knowledge and scientific psychology, from the colonial period until the beginning of the twentieth century.

This contribution is significant as it provides an extension to the domain of psychology by including not only the production of psychological science of the last centuries but also the study of concepts and practices produced in different cultures and expressive of each of their visions of the world and man. This field is called the history of psychological knowledge. In the case of Western culture, the most important concepts used by scientific psychology (psyche, person, individual, body, mind, and psychic processes such as sensation, perception, memory, imagination, cognition, affect and will) were generated in a long-running past and by several genres of knowledge (philosophy, medicine, literature, theology, rhetoric).

The possibility of conducting studies from this perspective was based on some biographical factors regarding my formation and the significant meetings that guided me and stimulated me to follow this path. This will be reported in the text. The knowledge of collections and the finding of documents were also important; with it being necessary to study contemporary historiographic methodologies.

Finally, two topics will be discussed. In the first place, I will address the insertion of my contribution in the panorama of international scientific knowledge, specifically within the context of the current trends of the historiography of the sciences and psychology, regarding the extension of those areas of research that today focus on the specificity of cultures and the processes of appropriation and transmission of knowledge. Secondly, I will discuss the role of my contribution in the training of professional psychologists who are attentive to the cultural processes of the lives of their clients, and who seek to strengthen the rooting in their interventions and

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consolidation of their own ways of being, linked to cultural diversities. I intend to contribute to the constitution of psychology suitable for a multicultural world. In this sense, it seems to me important to expand the content of the history of psychology teaching programs and to increase the growth of research in the areas of psychology in the interfaces with memory, history and culture.

The Expansion of the Areas of Historical Studies in Psychology

My research was motivated by the requirement to contextualize the production of psychology in the two dimensions of space (evidencing the diversity of cultures in different areas) and time (analyzing the historical pathway). I specifically focused on the case of Brazil, reconstructing the history of psychological knowledge and scientific psychology, from the colonial period until the beginning of the twentieth century. The distinction of the field of historical studies in psychology into two parts—the history of psychological knowledge and the history of scientific psychology—dates back to the recent historiographical positions, stimulated by the studies of Professor Josef Brožek (1913–2004) and in turn inspired by advances in the historiography of the sciences, especially through the investigations of A. C. Crombie (1915–1996). This historiographical concept provides an extension to the history of psychology domain to include not only the production of psychological science of the last centuries, but also the study of concepts and practices produced in different cultures and expressive of the view of the world and man of each of them. This field was called the history of psychological knowledge. In the case of Western culture, the most important concepts used by scientific psychology (psyche, person, individual, body, mind, and psychic processes such as sensation, perception, memory, imagination, cognition, affect, and will) were generated in a long-running past and by several genres of knowledge (philosophy, medicine, literature, theology, rhetoric). In addressing this domain, I have tried to highlight, throughout history, the interfaces existing between knowledge and practices inherent to psychological processes and cultural processes.

The Expansion of the Areas of the Historical Studies in Psychology in the Brazilian Culture

In investigating the process of the construction of psychology in the Brazilian culture, I came across a "duality." On one hand, I was able to evidence the elaboration of psychological knowledge and practices by the communities of intellectuals and scientists who constituted institutional knowledge and who retained the means to do so. These productions are available in libraries and other collections around the country, their transmission occurring through writing in the form of books, articles,

essays and theses, etc. The study of these products has been the object of several studies, some of which can be found in the book *Psychological knowledge in Brazil. History, psychology and culture* (Massimi 2016a)*.* On the other hand, studies in the areas of community and cultural psychology conducted by Brazilian researchers (Mahfoud 1999, 2001a, b, 2003, Mahfoud and Massimi 2007, 2009) have shown that subjectivation modalities can be evidenced in traditional communities, indications of processes of elaboration of psychological knowledge, and practices in communities that were characterized by an oral culture (at least in their origin) and by a reference to diversified traditions and the cultural subjects that comprise the multifaceted face of Brazilian society. The historical research I carried out on this basis, especially with documents originally constituted from oral sources, such as the sermons preached in Brazil throughout the colonial period, enabled me to apprehend the cultural matrices underlying these modalities of subjectivation (Massimi 2005, 2007, 2009a, b, 2012a, b).

This duality seems to be a characteristic of Brazilian culture, as highlighted by Ariano Suassuna. This Pernambuco author thematizes the existence of "two Brazils": on the one hand, there is an expressive Brazilian culture of a "particular, different, singular and unique Brazil" constructed by popular traditions in the various geographical realities that make up the extent of the territory of the country ("in the Forest, in the Sertão and in the Sea"), incarnated in particular human types like "the Singers, the Cowboys, the Peasants, the Fishermen and the Storytellers" (2003, p. 24). This is the Brazilian culture transmitted and elaborated predominantly through oral sources. On the other hand, Suassuna refers to the culture produced in Brazil by the "urban and cosmopolitan bourgeoisie": the modern Brazil of academia, an intellectual elite that transmits its culture predominantly through writing and through the availability of access to and management of cultural transmission media such as publishers, journals, and general media. (2003, p. 23). According to Suassuna, the cultural duality present in Brazil can be articulated in a harmony understood in the Baroque fashion as a composition of opposites: this capacity for articulation would be "the great lesson for the current traditional Brazilian, from the colonial Baroque and mestizo up to the present day" (2005, p. 26). This would result in receptivity to the dissonances inherent in the country's cultural universe and its originality, "a popular Brazilian and Baroque characteristic, of harmonious union of antinomic terms" (idem). Such would be the root of deep unity that permeates all the, apparently highly diverse, Brazilian works of art and literature over time.

The issue raised by Suassuna and other scholars of Brazilian culture, such as Luis Câmara Cascudo (2004), suggested that the reconstruction of the history of psychological knowledge in this context would require attention to the duplication of processes of re-elaboration and transmission of culture, in order to consider the constitution of psychological concepts and practices according to the two dimensions of oral and written sources.

The historiographical perspective proposed by De Certeau (2000) helped me with this attention. De Certeau argued that historians have often been antagonistic regarding aspects of historical reality that are both essential: the universe of the thinkable, connected with writing, and the universe of social practices, connected

with orality. Frequently, the study of these two diverse sectors requires different research methods: one based on the apprehension of concepts and literary genres; the other derived from the social sciences, especially sociology and anthropology. However, according to De Certeau, these two universes cannot be reduced one to the other, which would mean disregarding the changes in the systems of reference according to which each society and culture reorganizes its actions and thoughts in time. The French historian proposed a multidimensional model that allows us to conceive the two dimensions (the universe of the thinkable and that of the social practices) as articulated and complementary, obeying, however, their own logics and different rhythms of growth; as distinct and combined systems. In this way, the content of the historical sources may appear with different types of organization: from the point of view of the universe of the thinkable, that is, of what it was possible to think and write at the time; and from the point of view of the universe of social and cultural practices that express a certain type of knowledge. These are interwoven universes, so that the traditional separation between history of the ideas and sociological history is unsustainable.

From this perspective, I studied the practices of oratory, which were very widespread in the colonial period (especially the field of sacred oratory), focusing on the articulations between the rhetorical art that guided the composition of sermons and the knowledge about the psychological processes mobilized by the word (Massimi 2005; Massimi and Gontijio 2015). The access to the pieces of oratory is through writing, because only sermons transcribed and printed have been passed down to us; however, their function was originally conceived to be effective in terms of oral transmission. Reports of religious or civic festivals were also included in order to apprehend practices in which the function was the transmission of beliefs, values, and ways of life (Conde and Marina Massimi 2008; Bizinelli Júnior and Massimi 2015). In other studies, I attempted to highlight the psychological knowledge present in novels, essays, treatises, and other written works of the same historical period (Massimi 2012a, b, 2017).

When considering the multifaceted composition of Brazilian society and the existence of diverse traditions in this context, it was possible to identify different cultural protagonist subjects of the history of psychological knowledge in diverse historical periods. A very important subject of this process is the Company of Jesus—the action of which was particularly significant in the context of Brazil in the sixteenth and seventeenth centuries. Present in Brazil since 1549, the Company was charged with "translating" the anthropological and psychological concepts of the Western tradition into a method of human formation, whether in its evolutionary journey from childhood to maturity through education or with respect to the acculturation of Amerindian, African, and Eastern peoples through the process of Christianization. Regarding the contribution of the Jesuits to the History of Psychology, the creation of forms, methods, and justifications for a kind of knowledge of human subjectivity and behavior that would give rise to modern psychology should be highlighted. This does not mean knowledge of a purely philosophical nature, having an exclusively speculative function, but an approach to psychic phenomena that aims to achieve understanding and practical applications according to

the missionary purposes and the demands of the individual and social life. Practices, such as spiritual guidance or the examination of conscience, systematically constructed and used by the Jesuits in their schools can be considered fundamental tools in the process of elaborating the type of skill, which would later be called psychotherapy. Examples of the process of appropriation and transmission of psychological knowledge, promoted by the Jesuits, are found in the text *Studies on the contribution of the ancient Company of Jesus for the development of knowledge about the psyche* (Massimi 2009a, b).

Contribution of Historical Studies in Psychology for a more Comprehensive View of Psychology

The expansion of the area of historical studies in psychology, in my view, contributes to a more comprehensive view of the realm of psychology itself. In the first place, it leads to the plurality of subjects and experiences present in the same geographic space in a given historical period to be considered in the theories and practices of psychology.

Contemporary cultural historiography shows that the complexity of modern societies is made up of a multiplicity of groups (social, ethnic, cultural, religious), so that there is an "intermingling of plural pluralities in the same complex space" (Dosse 2004, p. 141). Modern societies (and this is remarkable when considering Brazilian society) are composed of a set of "strata imbued with a unique knowledge to recover, always open to creativity and new forms of actualization" (Idem, p. 142). In these, the present is the fruit of a historical process that gathers in itself diverse regimes of historicity, that is, a "plurality of ways in which human communities experience their relationship with the time" (idem, p. 109). The concept of a historicity regime, introduced in contemporary historiography by F. Hartog, is essential for the understanding of historical periodization: an operational concept that serves to "design the modality of self-consciousness of a human community" (2003, p. 11–12), being an instrument for comparing different types of histories, but also for illuminating modes of relationship to time: forms of the experience of time, here and there, today and yesterday. Man's ways to be in time (Hartog 2003). Different regimes of historicity can coexist in the same space, in the same geographic or sociocultural universe, according to Dosse (2004). Of course, these different modalities of experiencing time are mirrored, not only in the field of psychological knowledge, but also in the actual occurrence of psychic processes and in the form of the structure of disorders and diseases linked to the psyche, as highlighted by modern psychopathology, especially that of E. Minkowski (1885–1972). The Russian psychopathologist and phenomenologist, author of the book *Lived time. Phenomenology and psychopathology* (1933/2014), among others, affirmed that the temporal distortion of experiences prevents the vital momentum necessary to look to the future. Psychic illness is thus manifested by particular perceptions of time and organizations

of temporality. The memory of the past and the expectation for the future determine continuities, or discontinuities, in the self-perception of the person as well as in his/her social relationships. One can therefore experience possibilities caused by a feeling of time that is flowing and productive, or, on the contrary, a sense of impossibility and impotence caused by a feeling of time that is motionless and sterile. These reflections on temporality lead us to discover an important aspect of the study of history which is that of human formation: it is a question of opening oneself to the experience of different ways of experiencing time, and in this, of experiencing the world.

Therefore, my research aims to show that the plurality of personal and social subjects that compose the Brazilian social fabric carries different modalities of elaboration of psychological experience submitted to various regimes of temporality. Thus, for example, the demand for a science-based psychotherapy and the use of other resources derived from cultural or social practices can coexist together to satisfy the search for self-knowledge and for knowledge of others or to solve certain personal or relational problems. Dialogue and solidarity relations, the participation in events that are expressive of a given community tradition, such as celebrations or ritual ceremonies, provide experiences of elaboration of important psychological experiences (such as loss and mourning, joy and satisfaction, memory and imagination, a sense of one's own corporeality, etc.). There are forms of "therapies" and "remedies" derived from cultural traditions prior to the advent of scientific psychology: for example, interpretive modalities of dreams, natural remedies for dealing with emotional or neurological problems such as herbal teas with known properties, ludic or religious events having a cathartic function for affections or promoting processes of individuation, etc. In general, academic culture is only concerned with the consideration, study, and transmission of theories and practices of scientific Psychology and rarely attributes heuristic and gnoseological value to the other areas of knowledge and practices which, however, in many cases, prove to be effective and widespread in the population.

I believe, therefore, that the value of the historical approach lies in the possibility of apprehending the diverse psychological knowledge present in a particular culture with its own different regimes of historicity, not only in a diachronic way but also in a synchronic way. At the same time, the historical approach allows a critical appraisal of the artificial and manipulative forms of pseudocultures and pseudopsychologies disseminated in our contemporary society. In many cases these present themselves as carriers of novelties, originality, and capable of synthesis, however, in reality they are the fruits of mystifying operations that erase the specificities of cultural identities and social groups and aim to achieve consensus and, above all, to stimulate consumption.

Finally, from the historical studies performed, I realized that the historical approach provides a useful way to answer the questions: what is Psychology? What are the phenomena that it deals with? Where does the study of the phenomena that it deals with start? In fact, by reconstructing the long road through which people in their various cultures sought to confront self-knowledge and knowledge of the other, of the mental life, and of behavior, we can investigate the answers to those

questions elaborated over time in diverse geographical contexts. We can therefore recognize that, beyond the multiplicity of the perspectives of psychology and of the possibilities of defining it, there is, however, a specific meaning for terms and concepts of this scientific domain that, through a long historical pathway, has been consolidated as the patrimony common to the past and the present and the foundation of modern psychology. Throughout my research, I have demonstrated that the history of psychological knowledge accompanies the process of development of some of these fundamental concepts of psychology, such as psyche and psychology, person, individual, mind, behavior, emotions, memory, cognition, will, and psychosomosis (Massimi 2009a, b, 2010, 2012a; Gontijo and Massimi 2003; Santana et al. 2013: Massimi and Silva 2001). This development initially took place in other fields of psychology, especially: philosophy, medicine, literature, and theology.

The Origins of My History with the History of Psychology

The origins of my interest and performance in the area of historical studies in psychology started in the years as a university student of the undergraduate course in Psychology at the University of Padova in Italy. The meeting with Sadi Marhaba, the professor responsible for the "History of Psychology" discipline, was decisive for me: he used, in his classrooms, a very useful historical–epistemological reference for the discussion of the scientific *status* of modern psychology. It was in his company that I began my journey towards the History of Psychology. In 1980 Professor Josef Brozếk arrived in Padova. At the time, as the Senior Lecturer at the Massachusetts Institute of Technology, Brozếk was one of the most productive contemporary historians of psychology. In 1980, he was touring Europe in search of news about an interesting intellectual figure of the past: Marcus Marulus (1450–1524), a sixteenth-century humanist writer, author of the first text ever known in Western culture who used the word "Psychology" in its modern form: *Psychologia, de Ratione Animae Humanae*. The encounter with Brožek was decisive in my professional career, with the contact and friendship with his extraordinary person enabling me to "discover" a new world for the historical studies in Psychology: the world of the archives and libraries of Europe, above all regarding the sources of the medieval and humanist epoch contained therein. This discovery was related to his background historiographical hypothesis: the possibility of reconstructing a History of Psychological Ideas (as Brožek defined it), covering the knowledge in this area spread in various sectors of the world of medieval and humanist Western culture. This knowledge was significant for the understanding of the concepts regarding subjectivity and the behavior characteristic of these historical epochs. It was, in short, the discovery of a new universe of "objects" and methodological approaches that aimed to construct the History of Psychology from an unexpected perspective, surpassing the positivist origins, in dialogue and fruitful collaboration with historians and researchers of other areas of the history of culture and society. It was from this first meeting with Professor Brozêk and under his supervision that I developed

my first research in the field, based on the study of the literary production of Marcus Marulus, preserved and encountered in some Italian libraries, seeking to understand the psychological ideas contained therein and in the reading and critical analysis of the manuscript *De Animorum Medicamentis* (1491), the author of which, Tideo Acciarini, was the master of the aforementioned Marcus Marulus (Massimi 1984).

At the end of 1981, my personal history was marked by an important event: the decision to transfer to the city of São Paulo, Brazil. In this new environment of life, it was possible to continue to pursue my interests in academic research in the historical area. In these circumstances, it seemed appropriate to use the historical approach to understand the new context in which I found myself and, in a particular way, the configuration and functions of Brazilian Psychology which, at least at the first contact, presented characteristics that were profoundly different from those of European Psychology. I found an opening for these concerns in Professor Dr. Isaías Pessotti, a keen and versatile researcher already active in the area of historical studies in psychology, and under his guidance, I decided to confront the challenge. In order to start the study, I chose to assume the origins of Brazilian culture documented through writing, namely the colonial period, beginning in the sixteenth century, as a starting point for the investigation. This choice was based on studies previously developed in Italy in the company of J. Brožek, previously described; and on the fact that the most recent historiography of the sciences indicated the historical relevance of types of documentation hitherto little considered as indicators for the historical knowledge of a given sociocultural universe. I also sought to understand the possible elements that would mark the originality of Brazilian culture in the context of the Western world and the possible aspects of innovation by it suggested from a psychological perspective, from a broad perspective and from its deepest historical roots. The demand for this vision was in addition to the personal need I had, as a foreigner, to know my new environment of life and, if possible, to share, even indirectly and partially, in its history. The results of the first attempts made in this respect were proposed in the Master's dissertation "History of Psychological Ideas in Brazil in works of the colonial period" (1985); and in the Doctoral Thesis "Psychology in Brazilian teaching institutions in the nineteenth century" (1989). The dissertation showed the presence of knowledge inherent to the psychic life in works of Brazilian authors of the colonial period, in the areas of Medicine, Moral Literature, Theology, Politics, and Pedagogy; while the doctoral research indicated an evident and structural discontinuity in the historical route: during the nineteenth century, the teaching of psychological contents was developed in institutions of higher and secondary level and was constituted conforming to the models of French Psychology before and of American psychology later (especially from the 1940s onwards). In any case, it was evidenced that, in a period prior to the advent of scientific psychology, in the context of Brazilian culture, psychological knowledge occupied its own space, although not in the form of an autonomous discipline, but rather as a specific sector of several areas of knowledge, assuming different characteristics in each of them. The tendency to imitate foreign cultural models is accentuated by the fact that the national society of the time tried to structure itself as a modern Western nation, laying the economic, political, and cultural

foundations of a process that would lead to the realization of this political project. From this perspective, the colonial past was evaluated negatively and as far as possible it was sought to erase its traits, which in our view represents one of the reasons for the evident discontinuity between the psychological ideas of the colonial era and the psychology taught and developed in the nineteenth-century schools.

After these first studies, I discovered the need to define the theoretical characteristics of a line of research that could give organicity and open new perspectives to the pathway that had been followed until then. At first, seeking to clarify the general object of these studies and making it clear that such an object would not be restricted to scientific psychology, I defined the field as the history of psychological ideas. The label was then used to name all conceptual elaborations and all intervention practices with individuals and groups, generally definable as "psychological" but formulated and applied in times prior to the advent of scientific psychology, by different cultures and in various geographic and social contexts. The historical reconstruction of Psychological Ideas meant approaching them within their context of production, not as mere intellectual products but as expressions of life experiences structured in mentalities, which in turn would be specific to different human collectivities in different space–time domains. This requirement led me to establish links with some areas of historiography, especially the History of Sciences and Cultural History; and this occurred not only by reading productions in these areas, but also through contacts with researchers. Very important and encouraging for me was the acquaintance with the historians of the Brazilian sciences: among them, I would like to mention professors Carlos Alberto Filgueiras, Roberto A. Martins, and Ana Maria A. Goldfarb.

In the context of cultural history, the concept of "worldviews" formulated by L. Goldman in 1955 and taken up by Chartier (1990) was illuminating, according to whom:

> the worldview notion allows us to articulate, without reducing them to one another, the meaning of an ideological system described by itself on one hand, and, on the other hand, the sociopolitical conditions that make a particular group or class, at a given historical moment, to share, more or less, consciously or not, this ideological system (Chartier 1990, p. 49).

From this concept, a more precise definition of the History of Psychological Ideas was possible for me: its field would be those specific aspects of the "worldview" of a certain culture, related to concepts and practices that at the time could be generically understood as psychological. The definition of what is psychological in this case should remain necessarily undetermined and vague, almost as a conventional and provisional term to be replaced in the course of the research by the terminology and demarcation of the field, personal to the specific sociocultural universes studied. It would be, for example, a study of nineteenth-century "moral therapy," or the "remedies for mood" of the fifteenth century, or the "passions" of the sixteenth century.

Another decisive element for the maturation of my studies and my supervisions was the methodological indications provided by Alcir Pécora, in his work *Teatro do*

Sacramento (1994)—a careful analysis of the sermonistic work of Antônio Vieira. I refer to the methodological proposal in the introduction of the book: the mode of analysis of texts based on the search for "basic logic" that permeates them and inserts them into their production universe, seeking to detect the systematic recurrence of some essential topics (common places) among those articulated. Following this view, the categories or topics cannot be defined in a preconceived way prior to the reading of the text (which would necessarily lead to anachronisms and presentisms), but rather apprehended (almost as in a phenomenological analysis) by careful reading of the text, evidencing the recurrences of *topoi*. From this reading, we established a direct and profitable contact with Professor Pécora, a contact that has been maintained from 1998 to the present. The reading of this text led me to recognize the problems inherent in the use of the term "psychological ideas": there would be the risk of previously defining and labeling as psychological themes, the meaning of which could be broader, encompassing various other dimensions. To exemplify, the categories of "memory," or of "perception," although today are concepts inherent in psychology, could appear in ancient texts as part of a discourse of an ethical, theological, or aesthetic nature. Furthermore, the use of the category of subjectivity would be totally anachronistic if applied to the understanding of the human being in the medieval or classical Western world or in the Eastern culture. Therefore, we understand that the use of a certain terminology should be specified each time within the specific research project to be carried out, so that the concepts discussed can be analyzed according to the complexity they assumed in the historical period studied.

Accompanying recent developments in the historiography of science, I have noticed that the use of the label *history of knowledge* is often used to define research on objects located in periods of the history of science prior to the advent of modern science. I considered, therefore, that the expression "history of psychological knowledge" could more pertinently replace the history of psychological ideas, and in the later works I began to denominate my line of research thus.

I therefore owe the consolidation of the approach I propose regarding the historical studies of psychology in Brazil to these encounters (and others that I cannot relate due to space limitations). I cannot fail to also mention the constant support of colleagues and friends of the work group on History of Psychology of the National Association of Post-graduation and Research in Psychology, with some of whom we founded the Brazilian Society of History of Psychology, in October 2013.

For the development of the line of research with which I work, the knowledge of collections and the finding of documents were also important; with it being necessary to study contemporary historiographic methodologies. I researched several archives and libraries in Brazil and abroad; and throughout these activities, I perceived the urgency for a policy of preservation of the historical–cultural memory of the country, seeking to contribute to this with my research.

My Contribution to the Horizon of International Knowledge in the Area

My contribution is inserted in the panorama of international scientific knowledge, specifically within the sphere of the current trends of the historiography of the sciences and psychology, which, as we have seen, promote the extension of those areas of research that today focus on the specificity of cultures and the processes of appropriation and transmission of knowledge.

The expansion of the reconstruction of the history of the sciences and of the knowledge within the horizon of cultural differences is today much discussed in the scope of the historiography of the sciences and in the historiography of psychology. For example, the concept of "indigenization of psychological knowledge," that is, "the local construction of knowledge and psychological praxis," originates from the assumption that "any successful psychology owes its cultural/national success to its degree of naturalization or indigenization" (Pikren and Rutherford). In the human sciences context, Canclini (2001) suggests the term "hybridization," to designate a set of processes of interchanges and mixtures of cultures, or cultural forms, including racial or ethnic miscegenation, religious syncretism, and other forms of fusion of cultures, such as musical fusion. The author assumes that, historically, there has always been hybridization, in that there is contact between cultures and one borrows elements from the other.

In the history of the sciences, the importance of the processes of transmission and appropriation of knowledge and practices within specific spatial–temporal contexts is emphasized. Safier (2008) and Raj (2013) recently indicated the need to overcome a reading of the circulation of scientific knowledge according to the center-periphery model, beginning to understand the process of appropriation of science within the context of the local cultural histories considered to be legitimate sources knowledge. Thus, for example, in focusing on the subject of relationships between the Old and New World in the 17th and 18th centuries, one can understand the process of appropriation of knowledge, either in the sense of recognizing what has been changed in the practice of the empirical sciences of Europe when they began to operate in the New World; both in the sense of evidence and what was altered in the local cultures where European scientists transited.

The concept of appropriation used by Safier and Raj was introduced in historiography by R. Chartier, when addressing the history of reading: "appropriation aims for a social history of uses and interpretations," turning the attention "to the conditions and processes that, very concretely, sustain the operations of production of meaning" (1991, p. 180). Thus, for example, when considering the practice of reading, one must take into account the social area (often composite) in which a *corpus* of texts circulates and take into account the fact that "reading is not only an abstract operation of intellection," but it is inscribed in a space and in social relations among readers, constituted in interpretative communities (p. 181).

Raj (2013) highlighted the relevance of the changes that take place in the circulation of knowledge by virtue of the interconnections between subjects, practices, and

ideas in encounters between cultures when borders become fluid: there is a true reconfiguration of forms of knowledge and practices.

I believe that the research carried out by me in the context of the Brazilian culture is included in this perspective. Throughout the reconstruction of the psychological knowledge that circulated in the Brazilian territory during the colonial period, organized by literary genres, we can observe that, in receiving and conveying concepts derived from the European tradition and extracted from different domains, such as philosophy and medicine, the authors sought to insert it into the problems, customs, and languages of Brazil of the time (Massimi 2016b). Likewise, by using sacred oratory, methods, and concepts derived from the context of Western Christianity, the Brazilian preachers accommodated the requirements of the local recipients, using, for example, metaphors derived from the daily lives of the listeners (Massimi 2005).

My Contribution to the Training of Psychologists

The historical studies in psychology, in which context I situate my contribution, are useful for the training of professional psychologists who are attentive to the cultural processes of the life of their users and, in their interventions, seek to strengthen rooting and consolidation of modes of being, linked to cultural diversities. With my work, I intend to contribute to the constitution of a psychology suitable for a multicultural world. In the context of the present history, marked by a great development of the specialized areas in psychology and, therefore, by a multiplicity of perspectives of theoretical and practical approaches, the history of psychology is the only area of psychology where a panorama of the entire field of this science is proposed. In this sense, the history of psychology is a precious resource against the possible pulverization and dispersion of psychological science, as well as it providing a global and unitary view of this, to students in the process of formation. Therefore, it seems to me important to expand the content of the history of psychology teaching programs and to increase the growth of research in the areas of psychology in the interfaces with memory, history, and culture.

The history of psychology provides the psychologist with a competence that relates to the domain of its entire field of knowledge and performance, this competence resulting in the ability to discern the intellectual and practical demands faced and considering the challenges of the context of scientific production and social intervention, the most opportune pathway among the many possible pathways provided by the field. At the same time, the knowledge of the history of psychology makes the psychologist capable of critical self-evaluation, with respect to the methodological procedures and the techniques employed and, in this sense, always open to questioning and, above all, to new learning. It makes the psychologist, therefore, the agent of construction of a psychology consistent in the present and in constant advance towards the future.

Concerning the importance of the training in historical studies for the contemporary world, I would like to quote from E. H. Gombrich (1979, p. 93–94):

> Our past is moving away from us at a frightening speed, and, if we want to keep open the communication channels that allow us to understand the greatest creations of humanity, we must study and teach the history of culture in a deeper and more intense way than it would have been done a generation ago, when it was still legitimate to expect many of these resonances to settle down. If cultural history did not exist, it would have to be invented now.

We find ourselves today in a sociocultural climate that facilitates forgetting, or censoring memory in young people and adults, which in turn implies a weakening of awareness of one's own cultural identity in individuals and societies, as well as an impoverishment of the critical capacity. I think of historical studies in psychology as a pathway that helps to "keep this channel of communication open," essential for the personal and social life to be authentically human.

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The Study of Childhood and Youth in Brazil: Dilemmas and Choices of a "Southern" Academic

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Abstract The present contribution seeks to unravel the personal, institutional and ideological underpinnings of an academic career devoted to the study of childhood and youth in Brazil. One of the main themes is in what ways an academic career in Southern countries should bear the conditions of its own production: how the singularities of the academic work in the periphery of western countries are (or, should be) reflexively reckoned and incorporated in theory, research and practice. In this vein, looking backwards and allowing that the present can illuminate and provide some sort of coherence to past dilemmas and choices, my motivations, ideals, as well as life-events will be foregrounded to account for my involvement in the area of childhood and youth. Other themes in this contribution will tackle the daily involvement and social practices with students and colleagues in Brazilian universities and the role they played in the construction of my academic career. As this contribution unfolds, a balance of what goals were possible to achieve and how, what was abandoned and why, and what else moves one towards finalizing one's career before retirement will be discussed.

Introduction

In the exercise of looking backwards and reconstructing one's own academic career there is the inevitable risk of assuming the present as the enigmatic condition to be deciphered by past events and choices. Somewhat bewildered by the status quo which keeps asking—how is it that things are as they are? how come has one's life taken such a course? one is triggered to find out missing connections in order to integrate discrete (maybe discrepant!) personal events in a whole consistent history. However, the narrative thus obtained can flatten out discrepancies, ambiguities and misfortunes giving the false impression that one's life unfolds as a linear and

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harmonious sequence of planned choices and is fully and truly accountable. Nevertheless, the path one takes in life is more hazardous and erratic than the one resulting from the effort to backwardly frame it into a coherent narrative and, possibly, other different narratives might as well been possible depending on what type of questions one is searching for. My attempt here was rather to "refigure the past in the present" (Boulaga 2014, p. 155) as the past seems as enigmatic as the present.

In my contribution to this book I will attempt to highlight some key issues in the intellectual pursuit that I have taken along the decades of my academic career. In delineating this intellectual trajectory will not only stand as significant the academic questions and problems to which I have dedicated my attention, but also I will also try to show how the construction of my intellectual pursuit is indebted to the social encounters—colleagues, mentors, students—that I was fortunately, or not, able to have. Also, as part and parcel of the vicissitudes of my academic opportunities and realizations, stands of importance the institutional setting of academic careers in Brazil that take place mainly in universities, public and private. This institutional setting concurs to model, both in constraining and enhancing ways, the possibilities of research endeavours and dedication to intellectual tasks.

The Study of Children and Youth in the Guise of "Development"

A major aspect of my academic career consists in the lifelong dedication to the study of children and youth. From the 1970s when I graduated as a psychologist in the Catholic University of Rio de Janeiro to this day this subject matter has been not only the most important topic of intellectual interest for me, but also as time elapsed, a major arena of advocacy and institutional action.

The political climate in Brazil in the 1970s has been labelled as that of "years of lead" because Brazil was then under a military dictatorship which had banned civil liberties and all institutional means of democratic opposition to the regime. The Parliament (both the House of Deputies and the Senate House) had been closed down. Persecution of supposed opponents was rife and university life was kept under vigilance. Even if coercion and persuasion were instrumentalized for the legitimation of the military autocracy, resistance, albeit alive, was constrained by the permanent menace of imprisonment. Thinking about those initial university years, I feel a great regret for the two long decades of military rule (1964–1985) which meant a severe political retrogression for the Brazilian society in its way to construct and consolidate its fragile democracy. This is especially grievous for the youth because university years present a formidable opportunity to enter and fully participate in the political debates and momentum and, thus, in the destiny of society in all aspects. Consequently, constraints on the freedom to think and to act in those years, especially in universities, have also had the effect of postponing and disarticulating projects with regard to the construction of both an indigenous scien-

tific knowledge and a free society. In this vein I would like to foreground the political climate in Brazil in the 1970s and articulate it with the possibilities of producing scientific knowledge about children and youth in Brazilian universities in general, and, specifically, in my own career.

In the scope of the discipline of Psychology the study of children and youth was at this time subsumed under the paradigm of development, ontogenetic development. A biological and evolutionary perspective on the individual was of paramount importance of conceptualizing psychological development. The apparent naturalness provided by the sheer empirical observation that children and youth "grow" and "develop" constituted inspiring directions to construe the psychological version of development. In sum, *children were developing creatures and to develop was their existential condition*. Therefore, the answer to the "child question" (Alanen 1992) was searched in terms of understanding how individuals developed and what end-states (Peters 1980) should be attained. As a matter of fact, the notion of development was at the time a most conspicuous and ubiquitous idea. Post-war economies struggled to reconstruct their economic growth, accelerate industrialization and improve living standards, aspects which materialized the aims and points of arrival towards which they should strive for, as the supposed "universal" destiny of modern societies. The latter were accordingly classified as developed, developing and underdeveloped as measured by indexes of level of industrialization and *per capita* income. This was an era of intense debates on economic and social development, both internationally (Gunnar Myrdal's *Economic Theory and Underdeveloped Regions* was published in 1957) and nationally (Celso Furtado's *Desenvolvimento e Subdesenvolvimento* was published in 1961). But it was Psychology, among human and social sciences, that took up the task of mapping out what human development was about resonating at the level of human biography the foremost importance of universal end-states for individuals.

The regulation of the professional activity of psychologists in Brazil which took place in 1962 (Autuori 2014) favoured the creation of undergraduate psychology courses. The first existed since from 1954 in the Catholic University of Rio de Janeiro and another was created at the Federal University of Rio de Janeiro in 1964. I entered as an undergraduate student of Psychology at the Catholic University of Rio de Janeiro in 1971 when in Brazil there was an enormous on-going investment in the training of university staff at the postgraduate level. At the Catholic University I had the opportunity to study under the guidance of one of the foremost pioneer mentors in the area of Development Psychology, Professor Biaggio (1975), who had been trained in the USA, having obtained her Ph.D. at the University of Wisconsin in 1967. Angela was a passionate researcher and I attribute to her my first not so casual encounter with Developmental Psychology.

As an undergraduate I collaborated with her in different ways: as a tutor of undergraduate courses in Developmental Psychology and as an assistant researcher in this area. It was under her supervision that I and my colleague Ruth Naidin, still as undergraduates, published our first paper in an international journal (de Castro and Naidin 1978). Despite the major significance of this encounter for my academic career, I reckon that my academic endeavours were to go astray from the scientific

perspective on children and youth that Angela passed on to me. I was deeply dissatisfied with a vision of children and youth supported by the developmental perspective which purported to be universalist but was clearly made in the USA. A case in point was the study of moral development, a topic that deeply concerned Angela (Biaggio 1976, 1988, 1997). Although the claim of universalism in psychological theories was not quite so problematical as it is now, for me it seemed insufficient; the way the specificities of the social and cultural context were articulated to produce generalizable theories about the way children chose to act and why. Another aspect of the developmental paradigm that aroused my discomfort and doubt was its entrenchment in an individualistic framework of understanding human subjectivity: on the one side, the individual as a self-contained whole, on the other side, the "outside" corresponding to the "environment", the "social context", or, the "not me", both of which were taken as separate and opposed realities. Notwithstanding the malaise, I still would have to wait some time in order to envisage what appeared to me as better answers for these theoretical discomforts.

The Shortcomings of Development: Ways Towards "Finding" Children and Youth

The decade after I graduated was significant in different ways: politically and academically. It was the period of time when I carried out my postgraduate training in the United Kingdom, University of London; before going to London I occupied a job position as Visiting Lecturer and Fellow, at the University of Asunción, Paraguay, two very different places which deeply affected my worldview and my academic experience. The training in London for the M.Sc. and the Ph.D. was significant in providing acquaintance with a well-established and firmly grounded institutionalization of scientific activities in universities which demanded from the student discipline, autonomy and full dedication. The dominant expectation that one should do one's best and work hard came hand in hand with the sense of pursuing a most valued and important social activity whose investment was long range and difficult. On the other hand, the postgraduate training in London acquainted me with the armour of academic social relationships and the veiled negative prejudice against South American students both of which needed to be understood as part and parcel of the British scientific establishment.

Work in Paraguay put me again in close contact with the impasses and difficulties of university life under a military regime. I had many students who disappeared from one day to the next and all knew they had been detained by the police. Nevertheless, it was in Paraguay, as I taught a postgraduate course and carried out a community project together with the students, that we had ample and long discussions about the relevance of psychological theories with regard to local social demands. I have good remembrances of those days when, many a times gathered around *parrilladas* (barbecues), quite often at the students' tiny residences, we had

good discussions on Psychology, Politics and how to be and work as a psychologist in Paraguay, and in Latin America.

These two very different scenarios, pregnant with quite diverse social and affective relationships and academic inspiration, as I recall now, were important to determine major personal commitments along my academic career: firstly, a very worldly view that academic activity should make itself relevant to society, academics should not think too highly of themselves; secondly, an interest in articulating Psychology and Politics in a way that at that moment did not yet seem quite clear to me.

Back to Brazil I began my academic career at the Catholic University of Rio de Janeiro and very soon I was in charge of the course of Developmental Psychology. The military regime in the beginning of the 1980s showed signs of ineptitude in improving socio-economic indexes (the rate of inflation was very high, the GNP had fallen down) leading to increasing dissatisfaction controlled by intense and violent repressive forces against strikes and popular manifestations. Other military regimes in many Latin American countries, besides Brazil, were also doomed to crisis and collapse along this decade. "Development" in Latin America, as a destiny to be fulfilled much in the way that other Northern countries had succeeded in doing, seemed at odds with the political history of the subcontinent. Development began to sound like a highly problematic notion, both at a macro and at an individual level (Marini 1973).

To find children and youth as an object of scientific inquiry, in their own terms and not under the guise of development, became a tortuous endeavour. I got immersed in the contributions of Critical Theory of the Frankfurt School, specially the works of T. Adorno, M. Horkheimer, H. Marcuse, W. Benjamin and their commentators, like Martin Jay, Peter Dews, Miguel Abensour, Olgária Matos and others. These authors provided me with the critical ground to spell out the fundamental tenets of "traditional theory" (Horkheimer 1974) that had modelled the way that scientific psychology had constructed its object. Such a critical provision helped me to revisit the way the subject of knowledge and its object were paradigmatically constructed (Adorno 1984), the notion of the sovereign rational subject and of western rationality itself (Adorno and Horkheimer 1985), the impasses about modern culture as entertainment rather than criticism and the reconciliation of the individual in the consumption society (Adorno 1962; Benjamin 1984; Marcuse 1969). Therefore, my theoretical move at that moment was to create a critical distance in relation to the notion of development which had for almost a century conformed the theoretical perspective on children and youth in psychology. To be in charge of the course Developmental Psychology at the Catholic University from the beginning of the 1980s enhanced the opportunity to deepen my reflexion on the topic (de Castro 1990, 1992, 1993).

Two fortuitous encounters consolidated this initial movement towards envisaging new theoretical possibilities in the study of children and youth in psychology. I happened to come across some working papers of John Morss, a New Zealand child researcher with whom I established a long academic interaction during the following years. Morss was also very much concerned with foregrounding a critical appraisal of the notion of development and its impact on the psychological study of

children (Morss 1990, 1992, 1995). I never met Morss personally but we exchanged papers and were able to have very productive, though distant, interaction. Together with Morss, a key reading at that moment was the book edited by John Broughton, *Critical Theories of Psychological Development,* published in the late 1980s (Broughton 1987). The collection of authors that Broughton brought together in this book and the discussion they provided on major aspects of children's and youth's lives have made this book an outstanding and distinctive contribution to any scholar interested in forwarding "the child question" in non-conventional ways. Interestingly, many contributors to this book were not child scholars as such, but were able to explore theoretical issues that deeply concern the understanding of children and youth. Some of these authors, like Jessica Benjamin and Susan Buck-Morss, to quote just two examples, have been my companion authors since then for other topics of interest that have emerged later on in my academic life.

The other encounter to which I feel indebted in my pursuit to consolidate an inflection of my initial viewpoint on children was the acquaintance with a group of Nordic scholars, mostly of sociological background, who happened to be organizing themselves around the research topic of children. In 1988 I was invited to deliver a key speech at the first International Interdisciplinary Childhood Conference organized by the Norwegian Centre for Child Research recently established in Trondheim (de Castro 1988). This Conference gathered a group of scholars who, in the years to come, were to play a significant role in institutionalizing most important academic and scientific networks on childhood, which renewed and expanded what was considered mainstream knowledge about the subject. Jens Qvortrup and Leena Alanen, both sociologists, were there, as well as scholars like William Corsaro, Barry Thorne, Marjatta Bardy and others who, since then, acted as key persons in consolidating this new area, eventually called, New Studies of Childhood. This event, and others that the Norwegian Childhood Centre organized, contributed to enhancing international scholarship on childhood and established a worldwide forum of discussion. Furthermore, Jens Qvortrup and Leena Alanen were to lead the institutional establishment of a Working Group in "Sociology of Childhood", in 1994, and eventually, a Research Committee in 1998, at the International Sociological Association. Qvortrup admits that "the 1980s was the decade for discovering childhood as an interesting sociological category" (Qvortrup 2015, p. 4), as one looks at the profusion of contributors to this "new" field in this decade, such as Heinz Hengst, Chris Jenks, William Corsaro, Viviana Zelizer and Barrie Thorne.

From the 1988 Conference in Trondheim to the other meetings organized by the ISA along the 1980s and 1990s I participated in all of these scientific encounters which nucleated scholars interested in discussing new theoretical and methodological approaches on children and childhood. Besides that, I also have had an active role in the Scientific Board of this Research Committee, twice as Executive Board Member and at present as Newsletter Editor. The significant fact is that this group of scholars, trained in the social sciences, proved to be good companions in my quest of other pathways to the study of children and youth since my interlocutors within the field of psychology were very few and did not constitute a solidarity network. The construction of this dialogue across disciplines, Psychology and the

Social Sciences, namely Sociology and Anthropology, entails constructing a complex and multi-faceted academic and scientific relationship, and most importantly, it also gives visibility to theoretical impasses to be explained. This group of scholars took off as very critical of the psychological perspective on children based on development, though they also provided fresh theoretical ground for the "child question". However, as I will later on explain, my theoretical affiliation to this new paradigm does not lose sight, and remains critical of, the very frail theory of the subject that these new studies of children and childhood generally presuppose.

This group has had a worldwide impact in the consolidation of new theoretical perspectives on childhood and youth: it has had, for instance, a major influence in the area of education in Brazil so that Brazilian educationalists today are not conversant with Piaget as they used to be, but rather with Qvortrup, Corsaro, Jenks and so forth. The institutional organization of this area also unfolded into the publication of a most important international journal—*Childhood,* launched in 1993, of which I am a member of the Editorial Board, and it has been since then a main forum of research exchange on children.

If children and youth could then be scientifically investigated other than from a developmental point of view, the problem was to construct an institutional basis from where research, academic exchange and training according to this new way of understanding could be carried out.

Researching Children and Youth in Their Own Terms and the Construction of an Institutional Basis for Scientific Activities

During the 1980s some colleagues and I joined efforts to establish an academic network for discussing *contemporary modes of subjectivization in childhood and youth* at the Catholic University of Rio de Janeiro. It was a difficult battle to progress because the study of childhood and adolescence in Psychology was not only named as Developmental Psychology, but to understand otherwise and not to think about children and adolescents in developmental terms sounded at least bizarre. Thus, not to acknowledge adherence to the development concept was a daily struggle. To teach a course in Developmental Psychology, for instance, was most challenging since the deconstructive discussion of this notion often caused fierce opposition and doubt on the part of students. However, to be in companionship with those who shared the same views and commitments was of paramount importance. My good friend and colleague, Solange Jobim e Souza, whom I had met in England, both of us in our Ph.D. training, was a partner in discussions, projects and publications at this time (de Castro and Souza 1995; Souza and de Castro 1998). Despite being academic *gauches* in the mainstream discussion of children and youth, both in the local and national contexts, we managed to set up a group of undergraduate and graduate students to discuss how contemporary social and cultural conditions,

especially consumption culture, media and informational technology, modelled children's and adolescents' subjectivities (de Castro 1996, 1998). This network prospered attracting many eager for a renewed debate on childhood allowing us to ground our work firmly in the collective modus operandi whereby students played a foremost role. We succeeded in obtaining the approval of a joint research project by the National Council of Scientific Research and Technological Development in Brazil (CNPQ). This was rewarding and reassuring and stimulated other academic activities such as the organization of local and national events. One of them, a National Conference on Childhood and Contemporary Cinema, held at the Modern Art Museum in Rio de Janeiro, resulted in a publication titled *Infância, Cinema e Sociedade (Childhood, Cinema and Society)*, one among the very few that to this day exist on this topic (Garcia et al. 1997).

During the 1980s the political regime under the military dictatorship showed prospects of releasing the constraints and coercion upon civil life which did eventually occur. Already in 1984, about 1.5 million people occupied the streets of the city of São Paulo to campaign for direct free elections. In 1987 a National Constitutional Assembly was installed in charge of elaborating a new Federal Constitution, and in November 1989 the first free elections for president since 1960 took place in Brazil. The feverish political climate during this decade also impacted on university life which was now much more capable of exploring the unforeseen pathways of free thinking and engaged action. For those interested in childhood and youth, it was also the time to problematize the enormous social inequalities that characterized the diverse social, cultural and ethnic groups of children and youth in the country in terms of how theories about childhood could, or could not, account for such a diversity and their social and educational demands. Many Brazilian writers who had been banned and exiled under the military regime began to come back, reviving the impoverished public debate of the earlier period. An important figure was Paulo Freire, who published his *Pedagogia do Oprimido (Pedagogy of the Oppressed)* in Chile in 1970 though it was not allowed in Brazil till 1974. During this decade in preparation for the drafting of the Federal Constitution a rich debate with different social sectors evolved on the subject matter of the rights of children, which was to constitute an important aspect of this Constitution.

The National Movement of Children in Streets that was created in 1982 called attention to the engrained injustices—social destitution, lack of access to good educational and health services, abandonment, inflicted violence—of poor children's lives that seemed a flagrant contradiction with the cherished ideals of a progressive nation. For me, this was a fertile opportunity to look at the glaring contradictions of the country's history wherein exogenous ideals for development had been pursued throughout our republican history whilst at the same time the State had been unable to fulfil very basic republican ideals of social equity and justice. These concerns were beginning to assume for me an important status directing my research interests in two complementary directions. One which wondered about the partiality of any scientific account being it conditioned by major aspects of its own production, be it the subjective formation of the scientist and scholar (her historical, territorial, cultural background), or the objective institutional framework of scientific activi-

ties. The other source of interest was related to theory construction in the field of childhood and youth: in what ways available theories, being a product of the Northern industrialized and "developed" countries, reflected an enunciative point of view conditioned by those places and agents from where these theories were themselves a product.

In 1995 I was approved in a public selection and entered the Institute of Psychology of the Federal University of Rio de Janeiro looking forward to a novel institutional climate and fresh challenges. One important task ahead was to set up a new network of academic collaboration among colleagues and students which had to wait till 1998 to take place when, together with two other colleagues, we founded the Interdisciplinary Centre of Research and Scientific Exchange on Contemporary Childhood and Youth (NIPIAC). This Centre has provided the institutionalized academic framework in this federal university for research, training and community services activities, in the area of childhood and youth at a local, national and international level from then to this day. As co-founder of this Centre and its general director from 1998 to 2011 together with colleagues and students we were able to initiate and consolidate academic activities to foreground relevant scientific issues of childhood and youth and their importance in the national public agenda and debate. Collaboration with the public sector—the state and the municipal government—was also included in the programmatic agenda of the Centre not only in the direction of informing public policies but also of enhancing the academic relevance of the area of child and youth studies combining training and research activities (de Castro and Correa 2005a).

The first international congress on Brazilian youth, called JUBRA, was held in Rio de Janeiro in 2004 bringing together almost 1,000 participants organized by NIPIAC (de Castro and Correa 2005b). The JUBRA congresses have become since then part and parcel of the academic agenda of national events taking place every 2 years in different parts of Brazil, co-organized by NIPIAC. Such an enormous institutional effort to construct a nationwide interdisciplinary network of scientific discussion on youth has allowed the very recent foundation of the National Association and Network of Brazilian Researchers on Youth (REDEJUBRA) at the 7th JUBRA in August 2018 of which I have the honour to be the current president. The multifarious activities undertaken by NIPIAC are based on an understanding that scientific activities based at universities should maintain permanent capillary links with societal demands and issues, in this case, issues that affect Brazilian childhood and youth. The vision that a science of childhood and youth in Brazil must evolve to critical knowledge and relevant contribution entails an "organic"[1] awareness and partnership with these actors, most specially those who constitute the majority of such group, and has been a main principle and directive of our academic motivations and actions.

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[1] In the sense A. Gramsci employs the term in his well-known expression of an "organic intellectual".

From "Development" to "Action" and to "Politics"

The study of children and youth from a developmental point of view has focused on individual change patterns that are considered relevant to the attainment of desirable end-states of human capacities in western industrialized societies. Therefore, instrumental rationality, capacity to decide and select a course of action, to act independently and autonomously, to be able to decentre cognitively and morally, to control one's impulses and emotions and to assume responsibility for oneself were seen as the quintessential hubris of the modern individual. The study of individual development should then account for the process of how children would develop towards these full capacities taking into consideration the relevance of key aspects of the social environment.

The interrogation of the provinciality of end-states taken to be universal and adequate for all children problematized the kernel of the developmental paradigm, viz. the univocal, linear, sequential and teleological way of mapping biographical as well as historical trajectories. Accordingly, if children were taken as the baseline of human evolution, then by interrogating development, their destiny and statute—the "child question"—had to be revisited. My own and other colleagues' studies of contemporary modes of subjectivization in childhood and youth foregrounded the contribution of children, *qua* children to present day culture and society: as co-partners in everyday culture and consumers (Zelizer 1985; de Castro 2006), as competent users of TIC devices (Buckingham 2000), as part of the working labour force (Qvrotrup 1985; Nieuwenhuys 2005), as soldiers in wars (Honwana 2005), as claimers of better education, health and leisure (Solberg 1994), as co-partners in caring (Becker et al. 1998; Orellana 2001), as co-producers of the urban environment (de Castro 2000, 2001b) and in a plurality of situations that had been veiled as they were made mere school learners and future beings. Children's destiny and statute could not be framed in the scope of their future lives but rather had to be spelt out as part of the complex production of different subject positions among different generations in the present. Following this line of thought, the concept of action seemed to me the cornerstone towards an understanding of children as makers, co-partners and contributors to the present cultural and social worlds (de Castro 2001a). Long before social and human sciences had foreseen other subject positions for children other than the "waiting child" (Qvortrup 2004), world cinema had already highlighted the acute, sensitive and innovative ways whereby children made their presence significant and singular in the making of society.

The theoretical notion of action needed further inquiry in psychology, a science which had prioritized the key notion of behaviour. However, this notion seemed unsatisfactory to me because of its clear individualistic bias and self-centred focus. The reading of Hannah Arendt and her masterpiece *The Human Condition* (Arendt 1995), followed by a deep inquiry into her outstanding contribution as a social and political philosopher in contemporary culture, instigated me to pursue the examination of the notion of action whilst approaching it to the study of childhood and youth. This consists of a major intellectual task with many and diverse theoretical

offshoots and lines of inquiry which, to this day, has been a source of inspiration for my own research and my students' dissertations and theses.

Arendt has been a major intellectual companion since then and her concerns about politics as a human activity in modern societies have discussed the enormous transformations of the public arena under recent economic developments. It was with Arendt that I could envisage the theoretical possibility of the notion of action, both in its radical social (and political) nature and in its subjective singularity. However, human action, differently from human labour, was destined to take place in arenas where at stake was the discussion and decision about where to go, what paths to choose and what common goods to pursue as human societies. From those public arenas of struggle, interlocution and decision children *should* be kept apart (Arendt 2004, 2005). Thus, notwithstanding Arendt's inspiring and major contribution to my own work and engagement, I was to depart from her on this point. Paradoxically, I owe Arendt this first *rapprochement* of action to politics, only to refuse her conventional way of thinking about children as not yet political subjects on account of their incapacity to cope with the hardships of public life.

The interrogation about the statute of children in contemporary societies could not dodge the issue of the relationship between children and politics. After all, on what basis had children been considered not yet full citizens and political subjects? Conventional political science was grounded on a specific notion of political subject whose subjective profile was couched in an adult male, white, literate, westernized version already criticized by feminist scholarship. The horizon of inquiry that was opened up by problematizing this specific imbrication between politics and adulthood has instigated the past 15 years of my own research activities, my students' and of colleagues', in Brazil and outside, whose work is interested in spelling out the complex and unorthodox interfaces between politics and childhood.

This task counted on other important companions whose work contributed to revisit the notion of politics and of the political: Jacques Rancière, Chantal Mouffe, Alain Badiou and Ernesto Laclau, to quote some of them. Although these authors did not have a specific interest in childhood and youth, their theoretical discussion about politics, political action and contemporary culture allowed fresh insights about "the" political outside its institutionalized and statist reference.

An important academic network developed on this account was in charge of carrying out a national project on "Youth and Politics" bringing together different research leaders of universities all over Brazil and their research groups. This national project was supported by the National Scientific Research and Technological Development in Brazil (CNPQ). Along 5 years research leaders and their students met periodically to discuss empirical findings and theoretical issues concerning political and social participation of youth and childhood, citizenship, social movements in youth and childhood and the production of political subjectivities. A main publication ensued from this national partnership (de Castro et al. 2012) and a number of other publications of my own (de Castro 2007, 2010a, b, 2012), of my research group (de Castro 2010a, b; de Castro and Nascimento 2013; de Castro and Grisolia 2016) and colleagues'. The partnership of this wide national group has evolved into other forms of scientific interaction and collaboration within other

academic institutional settings, such as the National Association of Postgraduate Training in Psychology (ANPEPP) and the Brazilian Association of Political Psychology (ABPP).

An important turning-point was reached along this project which provided me with the opportunity for an intense and instigative discussion with colleagues, such as Jaileila Araújo Menezes, Claudia Mayorga, Marco Aurélio Maximo Prado, Katia Maheirie and Andrea Zanella. It became evident the role of Brazilian politics, history and culture in contextualizing our debate and in indicating particular key aspects relevant to grapple with the issues of political participation of Brazilian children and youth. This was also felt whenever I happened to present my own work and discuss it in an international audience, specially with colleagues from the "North". It became increasingly pressing the (internal) demand for theories that accounted in some way for the specificity of the political produced under the very particular conditions of the periphery of developed western countries.

Theories of Childhood and Youth: In Search of a Point of View from the "South"

The past can have recurrently different forms to be in the present. Back in the 1970s I felt extremely uneasy about carrying out my Ph.D. training in England as I thought that it was a too large amount of Brazilian public expenditure to be sent and spent abroad; another reason was that I would be doing research on a topic that would concern more directly my host country rather than my own. Different forms of uneasiness concerning what an academic life in "underdeveloped", or periphery countries of the globalized capitalist economy, should concern itself with recurred in different ways in my academic life. Back in the 1970s I decided to leave England and carry out my research work in Brazil, which resulted in serious shortcomings—financially and personally—in finishing and submitting the thesis back in England. More recently, the recurrent theme of being an academic in the "South"—and what distinguishes it—seems to have taken on a more theoretical slant pushing my interests towards what is named as "Third World criticism", in the words of (Dirlik 1994), or, decoloniality of knowledge, as Quijano (1992, 2000), Escobar (1996) and others have named it. This consists of the process of making an epistemological turn (the decolonial turn) not only in terms of the critical deconstruction of Eurocentric logic, syntax and rationality but also in terms of the process of personally working through one's own "double consciousness" (Du Bois 1990) of being a non-European scholar. European modernity and its colonizing/civilizational mission has produced in periphery countries the experience of colonial difference in that whatever other forms of living and rationality became scrutinized and compared, being rendered subaltern, inferior and mute. Therefore, the institutionalization of academic life in the South is prone to engender a "white creole consciousness" (Mignolo 2011) which tends to affirm the geopolitical, cultural and epistemological affiliation and

adhesion to eurocentrism whilst maintaining a prudent distance in relation to indigenous values and forms of living. To make explicit such an unacknowledged duplicity means to admit the longing to be what one is not. In this vein, Dirlik affirms about the Indian context: "Colonialism created a new class of cultural hybrids, the 'babus', to use the term from the Indian context, alienated from their own cultures in their feelings of superiority toward their societies, and yet despised by the colonialists with whom they strove to identify" (2000, p. 262).

The social movement in scholarly circles towards a postcolonial or decolonial turn is wide ranging encompassing a variety of epistemological, political and cosmologic visions from Southern Asia, Africa and Latin America. This perspective informs where I stand concerning my present scientific research. To "navigate towards the South" in order to re-position myself as a scholar and an academic consists of an open-ended project for which I cannot envisage a point of arrival. This project has entailed so far a decolonial agenda concerning the study of children and youth. Theories of childhood and youth whose scientific conditions of production are based in the authority centres of Northern countries have widely circulated in the South faring at most to be empirically tried out. A wide range of concepts currently and mimetically employed such as the concepts of children's rights, agency and social competence have earned dogmatic acceptance notwithstanding their specific eurocentric conditions of production. Thus, theorizing about children and youth from a Southern standpoint seems required in a world whose encroaching global economy seems to leave no space for alternatives, be they economic, ideological or existential.

In this vein, theories of children and youth from the South face a number of challenges. One seems the naturalization of the process of globalization as such, to be seen by the proliferation of expressions such as global South or global North, as if the effects of the global economy were not irrevocably different around the world (Chomsky 1998). In childhood studies scholars seem to have adhered to the idiom of globalization and to its inexorability in determining life conditions, so that in a homogenized world such as ours what is at stake relates at most to the examination of global/local intersections that produce children's lives (Punch and Tisdall 2012). I see this as highly problematic as, in the South, globalization processes, speeded up by neoliberal governmental policies, have had a tremendous negative impact on the disaggregation of local cultures producing rural exodus, urban poverty, unemployment, social violence and anomie. This overarching rationale engenders, as far as childhood studies are concerned, a reverse double image of the child: either the "universal child" depicted in the international and national conventions of the rights of the child, the schooled and normalized child, or, the exotic child of the periphery, miserable, deviant, unschooled and "in the streets" (de Castro et al. forthcoming). If the former image depicts childhood in Northern countries, but not most children in the South, it follows that the latter image would not serve the South as well.

The international forums of the Sociology of Childhood Research Committee of the International Sociological Association have hosted scientific sessions on the topic of theorizing "other" childhoods, and post- and decolonial childhoods, proposed by myself and other colleagues. Other similar forums were also held at the

Committee of Childhood and Youth of the International Union of Anthropological and Ethnological Sciences (IUAES). A decolonial agenda for the study of children and youth is a long-standing project and one which entails national and international collaboration. In view of such a programmatic agenda the group of researchers of NIPIAC launched in 2013 the scientific journal *DESIDADES,* an electronic international bilingual (Portuguese and Spanish) refereed journal of childhood and youth.[2] Working as Chief Editor since then with a host of colleagues' and students' collaboration, this has been for me a most Stimulating Challenge in many frontiers. Firstly, it has called for the need to revisit the orthodoxy about what consists a "scientific" journal, its material and normative basis. Secondly, the challenge of moving forward a Latin American research network about children and youth has met the enormous difficulties of communication and knowledge circulation among Latin American researchers whose scientific networking seems fragmented, disperse and polarized either towards North America or Europe (as much as trade exchange, it seems!).

An international collaboration with the eminent Indian scholar Ashis Nandy was initiated in 2011 when I was a Visiting Scholar at the Centre for the Study of Developing Societies, Delhi, where Nandy is an Honorary Fellow and ex-Director. Nandy is a political scientist and clinical psychologist whose academic interests range on a great variety of topics, including the production of subjectivities in contemporary culture, domination, resistance, development, Gandhian cosmology and politics, secularism and childhood. I was able to organize the translation and publication of a collection of his works which had not been published before in Brazil (Nandy 2015). The stay in India was important to enlarge my references about postcolonial literature and discussion. The issues of domination and resistance, which reverberate with my past readings of Adorno and intellectual incursions in political theory, came again to the fore with respect to the position of children in modernity. Maybe to some it can be an overstatement to say that children's position in modern societies suffers from entanglements that can be subsumed under theories of domination. Nevertheless, to look at children's relationships in modern societies from the specific vantage point of theories of domination (de Castro 2013) allows for a radical questioning of adult-centric institutions such as schools, democracy and institutional politics and modern social division of labour.

Social and political participation of children has continued to be a present topic of research interest for me. However, the *rapprochement* between childhood and politics demands multifarious theoretical investments: not only that the notion of development in child theories be overcome and more promising theoretical notions, such as that of children's social and collective action be worked out. It seems also necessary that other key concepts, forged in the particular conditions of European societies, be problematized. The notion of public sphere, as contrasted to the private, has been attributed a key role in the constitution of the political. What constitutes public-ness in societies in the periphery of globalized capitalism should be a

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matter of inquiry given the enormous differences to be found between Brazil and Europe with regard to the constitutive soil upon which this notion lays: the constitution of the modern individual, of the modern State, the statute of the law in modern states, to quote a few. Furthermore, to inquire about public action and the "public man" entails to articulate, if possible, the presence of those who have stood apart from any public-ness in modern society—children (de Castro 2016). This subject matter has been undertaken as one of the key features of my recent research projects: to analyse children's public subjectivities and their construction of a "common" world (de Castro 2017). This has generated a wide gamut of theoretical and methodological challenges which have been shared and intensively discussed with students and colleagues. We do hope that these discussions will be shared soon with a wider public through forthcoming publications that are in preparation now.

Final Words

Looking forward I feel that there is still some time left before I definitively quit the university and retire. At the moment I live in a contradictory sentimental mood experimenting both a sense of finitude and loss and of sureness about the next steps ahead.

As a Brazilian scholar I face the daily struggle of the incommensurability of demands of academic life in Brazil. Firstly, the must of the "development" complex of former times has been now re-phrased as the must of "internationalization" demands—hard and many. However, the material conditions of federal and state universities—our public universities—have deteriorated enormously. We face a huge turnover of students, specially those worse off who cannot afford not to have a full-time job while studying. Furthermore, the agenda of internationalization was not based on an exhaustive debate among academics of different research areas in order to spell out what should constitute its tenets and modes of operationalization. Again, we seem to be facing an ordeal for no good cause. Tenure schemes have greatly changed in the past years and more is to come as I write these lines. Recent neoliberal policies urged by IMF and other international agencies are slowly suffocating public universities with clear intentions of privatization. In this context, the future seems sombre and uncertain.

Nevertheless, the present offers a hectic and, many a times, exciting agenda. I feel most grateful to my daily conviviality with students, under and postgraduate. They are companions with whom intellectual work and political discussion has been shared and enjoyed. This has been a most extraordinary experience of educational transmission whereby education goes truly in both ways and tries out unforeseen pathways. Many colleagues, turned personal friends, have been those essential human beings for anyone to continue to hope when in distress, and to continue to struggle when worn out. Without this affective network intellectual tasks and academic demands seem sterile and pointless. Therefore, along these decades I was able to learn that scholarly work demands the hard toil of research, reading and

transmission but that it must be moved by shared beliefs that knowledge thus produced can respond to societal demands and lead us towards better alternatives to the present.

If one's trajectory can depict a scenario of changes and movements in the pursuit of one's convictions, it must also show how permanence is also acquired by virtue of experience. In times of high speed and obsolescence, many aspects of our lives, including scientific endeavours, run the risk of becoming superficial and fast-made. To resist alacrity, fame and celebrity one has to recall and firmly grip one's passion to learn and to know. But this horizon of novel contradictions calls for new ways to construct this institution named university with its tensions, possibilities and limitations. This is a task ahead of us to be carried out looking back to our tradition and culture and forth to society's most cherished values and imagined destiny.

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On Becoming a Brazilian Full Professor in Psychology

J. Landeira-Fernandez

Abstract The present chapter starts with a description of my early identification with psychology and how it led me to good educational training at different universities. It follows with a brief overview of my teaching activities as well as a discussion of the major basic and applied findings from my research in behavioral neuroscience and cognitive neuropsychology. The chapter also presents some leadership actions that contributed to developing the field of psychology in Brazil. Finally, it underlines how international interactions represented a significant element of my personal and academic achievement. All of these activities were driven by external and especially internal motivations, the mainstay for becoming a Brazilian Full Professor in psychology. The chapter concludes by recognizing the importance of my students in my career.

Prologue

About 50 years ago, two tragedies shocked the world: the murders of Robert Kennedy and Martin Luther King, Jr. The year of 1968 also has personal historical importance for me because it marks one of my oldest memories. I was 5 years old. On Friday, June 21, my father had to quickly close his restaurant in downtown Rio de Janeiro earlier than usual because of the "Bloody Friday," a student demonstration against the Brazilian military decree that overruled the nation's Constitution. The conflict ended with 28 dead, 100 injured, 1000 prisoners, and 15 police cars burned. I remember my father and I ran desperately on the streets with great fear of the truculent action of the police, who advanced with their horses through the haze of smoke of the moral effect grenades.

It was also in 1968 when I first went to school. I have several good memories from my kindergarten and elementary years in two small schools. At the beginning

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of high school, I moved to a larger school where I suffered my first educational disappointment—I failed in mathematics. Despite this disastrous beginning, high school represented a very important landmark in my life. Over the course of 7 years, I was fortunate to have very talented and experienced teachers who contributed to my academic achievement. Various cultural and sports activities that were offered at the school gave me intense moments of extracurricular interaction. I had many friendships during that time, some of which remain to these days. However, in the last year of high school, I suffered another academic disappointment—I had to move to a different school because of disciplinary problems. In fact, I was a very hectic student, which in turn reflected in my school behavior.

Students who finish high school and want to pursue higher education in universities must pass a competitive entrance examination, known as vestibular, for their specific course of study. At that time, I was still undecided about my professional destiny. Consequently, I applied to different courses, such as Medicine, Advocacy, Architecture, and Psychology, at several universities.

My Brazilian Psychology Education

I started the Psychology course at Pontifical Catholic University of Rio de Janeiro (PUC-Rio; Portuguese acronym for *Pontifícia Universidade Católica do Rio de Janeiro*) in 1981 without the slightest idea of what I would find. However, my identification with what was taught was such that, for the first time, I actually enjoyed going to class. It was impossible not to be enthralled with university life where I could participate in what was taught. Psychological knowledge sounded very important, and we could contribute to advancing this knowledge. During this period, my calling to the research vocation was awakened. My 5 years of academic training at PUC-Rio were decisive in both my professional and personal lives.

In 1982, I had the chance to attend a class with Octávio Soares Leite. He played a pivotal role in my education and was an important mentor in my academic life. I enjoyed his class. At the end of the semester, he invited me to participate in a research project that sought to establish sexual differences in the acquisition of operant responses in albino rats. I still remember the great pleasure I experienced with the small discoveries and understanding some psychological phenomena through an animal model. My enthusiasm for this type of research was so great that it prompted me to look at other laboratories at the University of São Paulo (USP; Portuguese acronym for *Universidade de São Paulo*). There I met Maria Lucia Dantas Ferrara, who directed the Laboratory of the Experimental Analysis of Behavior, where studies were conducted with pigeons (*Columba livia*). Maria Lucia Dantas Ferrara told me about the possibility of obtaining a student fellowship through the National Research Council (CNPq; Portuguese acronym for *Conselho Nacional de Pesquisa*) to perform experiments with animals.

A year later, I became the first student in the Psychology Department at PUC-Rio to win this fellowship to investigate Mowrer's two-factor theory as an explanation

of the phobia in an animal model of avoidance behavior. We started a new laboratory with electromechanical programming and recording equipment, including many wires, relays, timers, different types of conditioning boxes, shockers, and sound generators. Surprisingly, some of this equipment was used to train animals in the landmark Apollo space program and was donated by the US government, a real historical treasure that we simply did not know could exist in our department.

The success of this laboratory was so tremendous that we quickly formed a group of students with intense research activity to develop the project that was approved by CNPq. We worked every day, even on Saturdays and Sundays, with great enthusiasm. There was also time to develop new friendships through social interactions and parties. That was when I met my wife Rosane Zylberberg Landeira. During this time, I also met my best friend, Pedro de Mello Cruz, currently a Professor at the University of Brasília (UnB; Portuguese acronym for *Universidade de Brasília*), who won the second CNPq fellowship of the department the following year. We worked together during our undergraduate studies at PUC-Rio and published our first paper together that showed some problems with Mowrer's two-factor theory as an explanation for the acquisition of an active avoidance response (Landeira-Fernandez and Cruz 1987).

I started my Master's degree in Experimental Psychology at USP in 1985. Under the supervision of Maria Teresa Araújo Silva, I continued to investigate active avoidance behavior. Teresa was always available to discuss theoretical aspects of the interaction between psychopharmacology and the experimental analysis of behavior. She taught me several concepts in this field and important experimental procedures in psychopharmacology. I also had the opportunity to develop some studies in the field of the experimental analysis of behavior with pigeons under the supervision of Maria Lucia Dantas Ferrara. Finally, I performed ethological studies with spiders (*Argiope argentata*) under the guidance of César Ades.

I was also interested in the neural and pharmacological pathways that are involved in pain processing and the possible involvement of conditioned analgesia in the acquisition of an active avoidance response. This theme resulted in my Master's dissertation, which investigated the processes of conditioned analgesia that were likely mediated by endogenous opioids in a signaled avoidance procedure.

Since the beginning of my Master's degree, I was very interested in the work of Michael Fanselow, an American researcher who at that time was at Dartmouth College. He had written an article that caught my attention on the discovery of endogenous opioids and their possible relationship to fear and pain (Bolles and Fanselow 1980). He did his doctoral dissertation under the guidance of Robert Bolles, who had written a classic article on avoidance learning that was extremely important for my understanding of active avoidance behavior (Bolles 1970). I maintained contact with Michael Fanselow, who accepted to be my doctoral advisor as long as I passed the exams and had financial support to cover the expenses of my studies at Dartmouth College because the costs of studying at an Ivy League university are notoriously high.

My American Psychology Education

The year of 1988 was extremely important for me. I married Rosane, finished my Master's degree at USP, was accepted into the Psychology Ph.D. program at Dartmouth College, and was granted a scholarship from CNPq to obtain my Ph.D. abroad. When I was about to go to Dartmouth, Michael Fanselow wrote me a letter saying that he had just accepted a position from the University of California, Los Angeles (UCLA). Consequently, I remained at Dartmouth with Robert Leaton as my advisor. During this time, I continued to investigate the participation of endogenous opioids in conditioned analgesia with Fred Helmstetter, a former student of Michael Fanselow who was still at Dartmouth. This work resulted in my first international publication (Helmstetter and Landeira-Fernandez 1990).

Because I wished to work with Michael Fanselow, I decided to join him in his new laboratory at UCLA. During my 4-year Ph.D. studies, I was engaged in a series of projects that resulted in several publications. Michael Fanselow, together with his graduate student Jeansok Kim and postdoc Joe DeCola, was interested in the neural mechanisms of the acquisition of new aversive memories. I joined this group, and we were able to demonstrate that N-methyl-D-aspartate excitatory amino acid receptors are important in the acquisition of the conditioned fear response. This paper established a parallel between memory formation and the phenomenon of long-term potentiation and is my publication with the highest number of citations (Kim et al. 1991).

UCLA is a massive university that continuously offers opportunities for interactions with other professors to develop projects in their laboratories. For 2 years, I was involved in the laboratory work of Charles Woody at the Brain Institute of the Department of Biophysics at UCLA. He was the only one at that time who performed intracellular recordings in conscious cats. Together with Xiao Feng Wang, his graduate student, we found that the dorsal portion of the cochlear nucleus, the first auditory station of the central nervous system, presents electrophysiological changes in response to auditory stimulus after a classical conditioning learning process (Woody et al. 1992).

During my last 2 years at UCLA, I developed a series of studies with Carlos Grijalva who served as my Ph.D. advisor. He showed that electrolytic lesions of the lateral hypothalamus produced stomach ulcerations that were very similar to those that are induced by stressful situations. However, in addition to ablating lateral hypothalamus cell bodies, the electrolytic lesions also eliminated the axons that crossed that area. This problem of passage fibers is particularly important because a very large variety of axonal bundles crosses the lateral hypothalamus. One way to avoid this problem is to employ neurotoxins as lesioning agents, which selectively destroy the neuronal body of a structure and leave intact axons that travel there. This work resulted in my doctoral dissertation, which was later published in the form of three articles (Landeira-Fernandez and Grijalva 1999a, b, 2004).

My psychological educational training in the USA was a personally enriching experience. I learned the importance of publishing our results as rapidly as possible,

even when they represented rather small discoveries. The discipline of publishing was one of the great lessons I learned during my Ph.D. training. Today, I try to pass this message on to my students. I am convinced that the work during doctoral training is a continual research activity, and the final dissertation represents only a report of the final studies that the student performs.

What I Teach and What the Students Learn

After finishing my Ph.D., I returned to Rio de Janeiro and started to work at PUC-Rio, first as a postdoc and then as an Assistant Professor. It was gratifying to return to the place where I had wonderful moments during my first educational training in psychology. One of my main activities in this new phase of my life was to teach basic psychological concepts to undergraduate students.

There is a large ongoing discussion on how the teaching–learning process occurs in Brazilian psychology courses. The professor's ability to teach a psychological course is an important issue. However, this is only one ingredient in this extremely complex process. I believe that it is also important to evaluate what the students learn in a particular discipline. This evaluation process ultimately represents a psychometric procedure, namely the measurement of mental faculties, and the interpretation of this measurement.

Unfortunately, Brazilian psychology professors do not commonly evaluate what their students learn in their respective disciplines. I disagree with this position and always try to evaluate my students through a fair system of measurement. There are two ways to assign a grade to a student. One way is to evaluate whether students acquire the subject matter that is defined in a discipline. The second way evaluates students according to their performance relative to the grade distribution of the other students in the class. I always employed the second system through exams that could generate the highest variability in the students' grades.

Another important aspect of my experience of teaching basic disciplines in psychology is related to the implementation of laboratory practices. In addition to smaller classes, the laboratory environment allows students to perform classic studies in psychology and eventually stimulate their vocation for research. This is exactly what happened to me when I was an undergraduate student at PUC-Rio. Today, many of the laboratory experiments can be performed with computers. Moreover, disciplines that are considered relatively difficult by psychology students, such as Quantitative Methods, Statistics, and Psychometrics, can become more attractive with the use of computer software for the analysis and interpretation of data.

My interest in motivating students in basic disciplines led me to look for clinical examples of mental disorders. Since I have no clinical experience, I had the idea of using films to exemplify some clinical cases that are associated with basic psychological processes. The use of this teaching tool had such a tremendous impact on my students that I invited Elie Cheniaux, a psychiatrist who works at State University

of Rio de Janeiro (UERJ; Portuguese acronym for *Universidade Estadual do Rio de Janeiro*), to write a book on the subject (Landeira-Fernandez and Cheniaux 2010). This book was a tremendous success and was a finalist for the Jabuti Award, the most traditional and prestigious literary prize in Brazil. To date, this publication has seen very good sales, and we are constantly receiving praise from our colleagues who say that it is a valuable teaching resource.

To be a psychologist in Brazil, it is necessary to complete an undergraduate course in psychology. There is no need for any type of exam to become a licensed psychologist. However, the Brazilian federal government, through the Ministry of Education, developed a system to evaluate higher education. One of the elements of this system is the National Exam of Student Performance (ENADE; Portuguese acronym for *Exame Nacional de Desempenho dos Estudantes*) that evaluates several Brazilian undergraduate courses and points out possible deficiencies in academic education. The first Psychology ENADE occurred in 2000. I had access to these data and noticed that there was a high correlation (0.69) between the rank that was attributed to each university course and its vestibular application/openings ratio (a higher ratio indicates more difficulty getting into the university course). This result indicated that the Psychology ENADE that was employed to rank all Brazilian psychology courses was sensitive to general student differences that are imposed by the university entrance exam. To verify this possibility, I had the idea to ask first-year psychology students (freshmen) to take the Psychology ENADE. The freshmen were distributed among four courses that were selected according to their course rank (A, B, C, and E).

I invited Ricardo Prime, a colleague from San Francisco University in Itatiba, São Paulo, to help me with the data analysis. An item analysis revealed different degrees of validity among the 39 multiple-choice questions. We found that only 20 items that presented good validity indicated the absence of performance differences among freshmen. An analysis of the specific contents of each of the 39 items of this Psychology ENADE revealed a deficit in academic education among senior students in basic psychology subjects that were related to Experimental Psychology, Scientific Methodology, Measurement and Psychological Evaluation (Landeira-Fernandez and Primi 2002). In another study with Ricardo Prime and Cilio Ziviani from Gama Filho University in Rio de Janeiro, we discussed several problems with the ENADE and proposed some possible solutions (Primi et al. 2003). Based on this study, some of our suggestions, including the comparison between freshmen and senior student performance, were incorporated by the Brazilian Ministry of Education.

In Search of the Neural Circuits of Anxiety Disorders

One of the reasons why I chose to work at PUC-Rio was the fact that I could perform research with animal models of anxiety. The Psychology Department had an animal facility and equipment to set up a laboratory. It was rewarding to find much of the equipment that I employed in my initial experiments several years ago.

My main research motivation was to investigate the neural mechanisms that are involved in anxiety disorders, the most prevalent mental health problems across an individual's lifespan. One of the main characteristics of anxiety disorders is the experience of highly subjective discomfort. However, the pathophysiological mechanisms of these disorders will unlikely be understood exclusively on phenomenological grounds. According to an evolutionary perspective, an anxiety disorder reflects the dysfunction of neural circuits that are responsible for detecting, organizing, and expressing adaptive defensive reactions. Humans and nonhuman mammals share approximately the same behavioral defense strategies, reflected by the activation of similar underlying neural circuitry. Accordingly, defensive reactions in the laboratory rat (*Rattus norvegicus*) have been employed as a model of human anxiety.

Freezing responses that rats express in response to contextual cues that are previously associated with footshock are likely one of the most popular animal models of anxiety. This is a simple behavioral protocol, known as contextual fear conditioning, that involves acquisition and test sessions. During acquisition, each animal is placed in the observation chamber for a habituation period. Afterward, three brief, unsignaled electric footshocks are delivered. Three minutes after the last footshock, the animal is returned to its home cage. The test session occurs approximately 24 h after the acquisition session. This test consists of placing the animal for 8 min in the same chamber where the three footshocks were delivered the previous day. No footshock or other stimulation occurs during this period. A time-sampling procedure is used to evaluate fear conditioning in response to contextual cues. Every 2 s, the animal is observed, and a well-trained observer records episodes of freezing, defined as the total absence of movement of the body or vibrissa, with the exception of movements that are required for respiration.

Since the time I was at Michael Fanselow's laboratory, I was interested in investigating the participation of the midbrain periaqueductal gray (PAG) as an important structure in the neurocircuitry of conditioned fear. The PAG is located around the cerebral aqueduct. In one study, we discovered that destruction of the ventral PAG (vPAG), located below the aqueduct, caused a reduction of conditioned freezing. In another study, damage to the dorsolateral PAG (dlPAG) enhanced the amount of defensive freezing that was produced by two procedural variations that usually precluded the amount of conditioned fear (Fanselow et al. 1995). These results suggested that these two subregions of the PAG might have opposing functions in controlling conditioned freezing.

In another study, now at PUC-Rio with Daniel Vianna, my first undergraduate student, together with Frederico Graeff and Marcus Brandão, both at USP—Riberão Preto (USP-RP), São Paulo, we employed electrical stimulation to gradually activate these two areas of the PAG. Stepwise increases in electrical stimulation of both the vPAG and dlPAG produced initially freezing and then active escape behaviors. Freezing that was induced by electrical stimulation of the vPAG decreased when the stimulation was terminated. Electrical stimulation of the dlPAG induced long-lasting freezing behavior that remained at high levels after stimulation. These results suggested that the vPAG and dlPAG are involved in defensive freezing, likely

through different neural circuitries. The vPAG appears to be involved in the motor aspect of the freezing response through descending projections to the spinal cord, whereas the dlPAG activates this defensive posture through ascending projections to forebrain structures that are related to the sensorial processing of aversive stimuli (Vianna et al. 2001a).

Further studies by our group indicated that the vPAG is a critical structure for the expression of conditioned fear. In contrast, the neural substrate of dlPAG stimulation-induced freezing is likely involved in the elaboration of unconditioned fear responses, which have been implicated in panic disorder (Vianna et al. 2001b, c). We also demonstrated that destruction of the amygdaloid complex, a brain structure that is involved in contextual fear conditioning, did not affect freezing or escape reactions that were induced by electrical stimulation of the dlPAG (Oliveira et al. 2004). Therefore, the organization of defensive behaviors in the dlPAG does not appear to depend on the integrity of the amygdala, whose projections to the vPAG are crucial for contextual fear conditioning.

Carolina Irurita Ballesteros, another former graduate student, investigated the participation of the dorsal hypothalamus (DH) and ventral hypothalamus (VH) in defensive behavior (Ballesteros et al. 2014). Electrolytic lesions within these two areas disrupted contextual fear conditioning, but only lesions of the VH disrupted freezing behavior immediately after footshock. Lesions exclusively in the VH also increased the thresholds of aversive freezing and escape responses to electrical stimulation of the dlPAG. Neither DH nor VH lesions disrupted post-dlPAG stimulation freezing. These results indicated that only the VH mediated defensive behavior that was induced by footshock and dlPAG electrical stimulation, whereas both the VH and DH played a role in contextual fear conditioning.

In two pharmacological studies, we demonstrated that serotonergic receptors in the dlPAG play an important role in unconditioned defensive responses that are triggered by electrical stimulation. Drugs that activate serotonergic receptors produced an antiaversive effect, whereas drugs that blocked these receptors produced a proaversive effect (Jacob et al. 2002; Oliveira et al. 2007). These results suggest that the activation of serotonergic receptors in the dlPAG may have beneficial therapeutic effects for the treatment of anxiety disorders that involve unconditioned fear, such as panic disorder.

Interestingly, in two pharmacological studies that were performed in collaboration with Pedro de Mello Cruz, the activation of postsynaptic serotonergic receptors in the VH produced an anxiogenic effect (Alves et al. 2004), whereas the blockade of this receptor in the basolateral amygdala (Cruz et al. 2005) produced an anxiolytic effect (Cruz et al. 2005). These results indicated that serotonergic receptors within different neural circuitries are involved in distinct forms of anxiety disorders.

In a review paper, we described different neurocircuitries that are responsible for at least four different kinds of defensive freezing behavior that might be associated with different forms of anxiety disorders. The freezing response that is induced by stimulation of the vPAG, which is also involved in the conditioning of contextual stimuli that are associated with electric footshocks, appears to be isomorphic with

generalized anxiety disorder (GAD) in humans. Freezing that is induced by stimulation of the dlPAG serves as a model of panic attacks, whereas post-dlPAG stimulation-induced freezing is a model of panic disorder. We also proposed that freezing that is triggered by electrical stimulation of the dlPAG in a context that is previously associated with footshock might represent a model of panic disorder with agoraphobia (Brandão et al. 2008).

The Carioca High- and Low-Conditioned Freezing Rats

The bidirectional selective breeding of a defensive response or any other phenotypic characteristic is a technique in which animals are bred to modify the frequency of the genes that underlie a particular phenotype. The development of bidirectional lines of animals with high and low levels of emotional reactions that are associated with a threatening situation began in the middle of the twentieth century; since then, a relatively large number of different genetic models that are based on this strategy have been developed.

Since I started to work at PUC-Rio in 1997, I began to develop two lines of rats using a bidirectional selective breeding procedure that employs conditioned freezing in response to contextual cues that are previously associated with footshock as the phenotype criterion. We tried several times to develop these two lines of animals without success, especially because of the lack of human resources. In 2006, with the arrival of Vitor de Castro-Gomes, one of my first graduate students who is now at Federal University of Juiz de Fora (UFJF; Portuguese acronym for *Universidade Federal de Juiz de Fora*), we were able to properly begin this project with great success.

The basic protocol consists of mating male and female albino Wistar rats with the highest and lowest conditioned freezing in response to contextual cues of the observational chamber where the animals were exposed to three unsignaled electric footshocks on the previous day. We found that after three generations, reliable differences between these two lines were already present, indicating a strong heritable component of this type of learning. Males consistently exhibited more conditioned freezing in response to contextual cues than females (Castro-Gomes and Landeira-Fernandez 2008). The lines were named Carioca[1] High-conditioned Freezing (CHF; i.e., high anxiety-related response) and Carioca Low-conditioned Freezing (CLF; i.e., low anxiety-related response).

The two lines of animals were well accepted in the literature and are one of the most recent rat models of GAD in humans (Castro-Gomes et al. 2011). The Carioca rat lines are currently in their 32nd generation. In a review paper, we pointed out that these two lines of animals have excellent validity relative to other lines of rats that have been bred to investigate anxiety disorders (Castro-Gomes et al. 2013).

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[1] Carioca is the name given to those born in Rio de Janeiro.

We have been able to employ this animal model of anxiety in different studies. For example, Laura Andrea León, my former graduate student who is now at University Sergio Arboleda in Bogota, and Fernando Cardenas, a colleague from the University of Los Andes in Bogota, employed Fos immunocytochemistry to investigate changes in neural structures in CHF and CLF animals that were exposed to contextual cues previously associated with footshock (León, 2014). Both lines presented an increase and decrease in different brain structures compared with randomly selected control rats (CTL). The CHF line exhibited an increase in Fos activity in the periventricular nucleus of the hypothalamus (PVN), locus coeruleus (LC), and lateral portion of the septal area (LS) and decrease in Fos activity in the dentate gyrus (DG), medial portion of the septal area (MS), and prelimbic cortex (PL) compared with CTL animals. These results indicated that two neural pathways might be responsible for the high PVN activity among CHF animals. One associated with the increase of excitatory projections that the PVN receives from LC and the LS. The LC might also activate the sympathetic autonomous system. The other pathway might be associated with a decrease of inhibitory projections that the PVN receives from the DG. The DG, in turn, receives weak excitatory projections from the MS and PL, since the activity of these two regions is also reduced. Figure 1 presents a schematic drawing of a sagittal section through a rat brain summarizing the excitatory and inhibitory projections of the brain structures, which presented an increase or decrease in Fos activity among CHF animals.
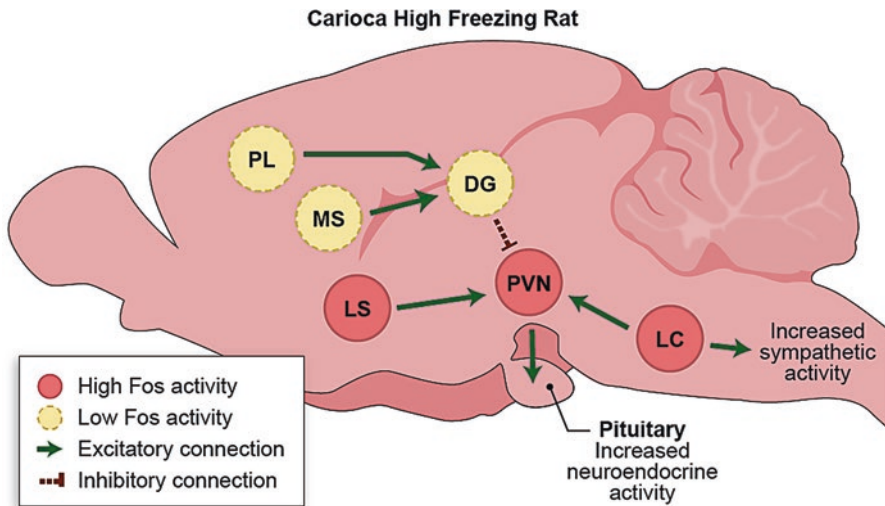
Fig. 1 Proposed neurocircuitry that comprises brain structures with high (closed circles) and low (dashed circle) Fos activity associated with high freezing behavior in the Carioca high freezing line. Filled lines represent excitatory connections. Dashed lines represent inhibitory connections. *PVN* paraventricular nucleus, *LC* locus coeruleus, *LS* lateral septal nucleus, *DG* dentate gyrus, *MS* medial septal nucleus, *PL* prelimbic cortex

The CLF animals exhibited a decrease in Fos activity in the PVN, basolateral nucleus of the amygdala (BLA), and PL, and an increase in Fos activity in the anterior cingulate cortex—subregion 1 (CG1), and perirhinal cortex (PR). These results suggest that there are also two different neural pathways might mediate the decrease of PVN neuronal activity in CLF animals. One associated with the decrease in important structures involved in contextual fear conditioning, such as the BLA and the PL. Accordingly, the BLA sends weak excitatory projections to the PVN and also receives weak excitatory projections from the PL, since the activity of these two regions are also reduced. The other pathway might be related to the increase in the activity of the CG1, which sends inhibitory projections to both BLA and PVN as well as excitatory projections to the PR. Figure 2 shows a schematic drawing of a sagittal section of the rat brain that summarizes the excitatory and inhibitory projections of the brain structures that presented a decrease or increase in Fos expression in CLF rats compared to CLT animals.

These proposed neural circuitries suggest that both CHF and CLF lines might present a dysfunctional activity of the PVN, which is responsible for the hypothalamic–pituitary–adrenal (HPA) axis function, the main neuroendocrine system involved in the maintenance of homeostasis after stressful stimuli. The increase of the HPA axis function among CHF animals has been reported in other studies from our laboratory (Dias et al. 2014; León et al. 2013). In one of these studies, we showed that CHF animals presented an impairment of the endocrine and metabolic functions, which characterizes the development of metabolic diseases. This work
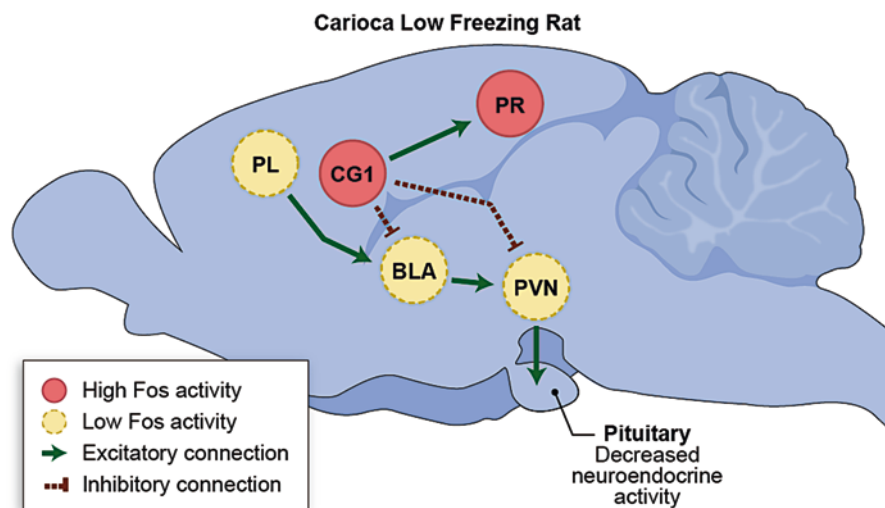
Fig. 2 Proposed neurocircuitry that comprises brain structures with high (closed circles) and low (dashed circle) Fos activity associated with low freezing behavior in the Carioca low freezing line. Filled lines represent excitatory connections. Dashed lines represent inhibitory connections. *PVN* paraventricular nucleus, *BLA* basolateral amygdaloid nucleus, *PL* prelimbic cortex, *CG1* anterior cingulate cortex—subregion 1, *PR* perirhinal cortex

was on the cover of an issue of the prestigious journal *Physiology & Behavior* (Mousovich-Neto et al. 2015).

An interesting finding from the Fos immunocytochemistry study described above is the fact that CLF animals presented a high neural activity of the PR, probably indicating an overload of multisensorial information processing, a characteristic that may be involved in attention-deficit/hyperactivity disorder (ADHD). Therefore, if CHF animals present an extremely high anxious response to a mild aversive situation, then CLF animals might also present a dysfunctional coping strategy because of their extreme reduction of the anxiety reaction to this mild aversive situation. Accordingly, we believe that the CLF animals might represent a model of ADHD. This new approach in our laboratory prompted Silvia Maisonnette and I to initiate studies of the characteristics of CLF animals compared with CTL animals, and new studies are currently being planned.

In another study, we found that CHF animals had a higher dlPAG electrical stimulation aversive threshold for producing freezing and escape reactions than CLF animals. However, CHF animals exhibited more freezing behavior immediately after dlPAG electrical stimulation at the escape threshold compared with CLF animals (Galvão et al. 2011). These results suggest that anxiety disorders are a complex and multidimensional phenomenon that involves both excitatory and inhibitory processes. Accordingly, the manifestation of GAD had an inhibitory effect on the expression of panic attacks but facilitated the pathogenesis of panic disorder after the occurrence of a panic attack.

We also performed pharmacological experiments with these two lines of animals. Daniele Cavaliere, a graduate student for whom Pedro de Mello Cruz and I served as advisors, recently found that the benzodiazepine receptor agonist midazolam produced the same anxiolytic effect across these two lines (Cavaliere 2018). However, the results with the serotonin receptor antagonist ketanserin indicated that the same drug had an opposite effect on anxiety reactions in these two lines of animals. The CHF animals exhibited an anxiolytic-like effect, whereas the CLF animals exhibited an anxiogenic-like effect (León et al. 2017). These results suggest that the effects of pharmacological interventions are dynamic and involve both environmental and genetic factors. The anxiolytic effect of benzodiazepines appears to have a linear effect, whereas the effects of serotonergic intervention appear to be more complex. The same serotonin receptor antagonist drug reduced anxiety reaction in animals bred for high anxiety trace, but decreased anxiety in animals bred for low anxiety trace. This is a very exciting finding showing that the same drug can have opposite effects in individuals with different genetic profiles.

The Carioca rat lines have also provided critical insights into the psychological treatment of anxiety disorders. The extinction of contextual fear conditioning represents a laboratory analog of studying exposure therapy for anxiety disorders. Our results with the Carioca lines indicated that long contextual fear conditioning extinction training abolished differences in freezing behavior between the CHF and CLF lines, but the divergence between lines was restored after just one fear reacquisition training session (Castro-Gomes et al. 2014). Therefore, the attenuation of an anxiety disorder by exposure therapy appears to be mediated by an inhibitory learning mechanism, suggesting that the disorder might persist in a latent form.

Starting a New Line of Research with Humans

It is not an easy task to be a Brazilian researcher in psychology who uses animal models to study the relationship between the brain and behavior. This difficulty motivated me to expand my research activities and start a new line of human research in parallel with animal models of anxiety. My plan was to translate our preclinical research findings to patients who suffer from anxiety disorders.

The first problem that we faced was how to quantify multiple anxiety conditions using psychological tests. Ana Carolina Monnerat Fioravanti-Bastos, one of my first graduate students who is now at Fluminense Federal University (UFF; Portuguese acronym for *Universidade Federal Fluminense*), performed several studies to validate a short version of the State-Trait Anxiety Inventory (Fioravanti-Bastos et al. 2011) and helped Maria Escocard, another graduate student from my laboratory, to validate an instrument that evaluates different factors that are related to panic disorder (Escocard et al. 2009). Cristian Castilho, my graduate student who was enrolled in an engineering graduate program, validated another instrument that is associated with GAD (Castillo et al. 2010).

My experience with psychometric techniques opened a new area of research that allowed me to collaborate with new colleagues, such as Mauro Mendlowicz working with posttraumatic stress disorder patients (Woodruff et al. 2011), Eli Cheniaux working with bipolar disorder patients (Cheniaux et al. 2009), and Alberto Filgueiras, my former graduate student who is now working at the State University of Rio de Janeiro (UERJ; Portuguese acronym for *Universidade Estadual do Rio de Janeiro*) in the area of the neuropsychological evaluation of athletes (Melo et al. 2017).

At the same time, I started to be involved in neuropsychological evaluations through collaboration with Helenice Charchat-Fichman, a colleague from my department who works with neuropsychological assessments of the elderly (Borges Lima et al. 2017). My interest in aging processes began to grow in recent years because of my collaboration with Daniel Mograbi, another department colleague who works with metacognition processes in dementia patients (Bertrand et al. 2016). Employing structural neuroimaging techniques, Elodie Bertrand, a graduate student for whom Daniel Mograbi and I served as advisors, who is now at Gran Rio University (UNIGRANRIO; Portuguese acronym for *Universidade do Grande Rio*), found an association between metacognition and right-sided midline regions of the brain, specifically the medial prefrontal cortex and posterior cingulate cortex, among healthy adults and patients who suffer from mild cognitive impairment (Bertrand et al. 2018).

Child neuropsychological evaluation has also been one of my main interests. Emmy Uehara, a former graduate student who is now at Federal Rural University of Rio de Janeiro (UFRRJ; Portuguese acronym for *Universidade Federal Rural do Rio de Janeiro*), developed a computerized psychological test called the "Magic Card Game," which has a circus layout that is based on the Dimensional Change Card Sort task, to measure executive functions in young children (Uehara et al. 2016). I have devoted much effort to validate instruments to evaluate the development of different psychological functions in children to foster public policies in Rio de Janeiro childcare centers.

Where It All Begins: The Impact of My Research on Public Policies

Much evidence indicates that early life experiences can have a major impact on cognitive, emotional, behavioral, and social development later in life. Although most of the brain structures in early childhood are already present, they are still extremely immature and thus subjected to a wide range of environmental factors. These early experiences represent the main underpinning of brain development that determines the strength and function of several neural circuits (Gilmore et al. 2018). Social deficits that are generally associated with poverty and environmental degradation might lead to the disruption of normal brain development in children.

These findings have important implications for political and economic decisions with regard to public investments in early childhood development programs. The efficiency of these programs for low-income families, such as government-funded child daycare centers, is a dynamic process that depends, among other factors, on continuous evaluation. Assessing the development of children who are enrolled in public daycare centers represents one aspect of this evaluation process and might contribute to program enhancement and guide policy decisions. The developmental assessment of child daycare centers might also help identify children who might need early intervention.

In 2010, Ricardo Paes e Barros, who did his Ph.D. with the Nobel Prize winner in economics, James Heckman, invited me to be part of a group who investigated the impact of Rio de Janeiro public child daycare on child development. This was an important project because about 25% of all children within this age range attend public child daycare centers in Rio de Janeiro. They need a fast and reliable assessment instrument that can be used to evaluate public child daycare programs and screen children up to 5 years old for possible developmental delays. We decided to adapt the Ages and Stages Questionnaire (ASQ-3) and Ages and Stages Questionnaires: Social–Emotional (ASQ:SE) to the public daycare center environment. These scales assess various aspects of child development, such as cognition, language, communication, motor skills, and social–emotional skills, in preschool children.

I invited Silvia Maisonnette, my former postdoc who is now at PUC-Rio, and Alberto Filgueiras to help in a large study that validated the ASQ-3 and the ASQ:SE. More than 45,000 children (6–60 months of age) who were distributed in almost 500 public daycare centers in the city of Rio de Janeiro were evaluated with the ASQ-3 in 2011 and both ASQ-3 and ASQ:SE in 2012. In our first study, we found that all of the ASQ-3 questionnaires were psychometrically sound developmental screening instruments that could be easily administered by child daycare staff (Filgueiras et al. 2013).

In another study we analyzed the ASQ:SE data with the collaboration of the developer of the ASQ-3 and ASQ:SE, Jane Squires of the University of Oregon, together with Chieh-Yu Chen, her graduate student, and Luis Anunciação, my former graduate student who is now at Federal University of Rio de Janeiro (UFRJ;

Portuguese acronym for *Universidade Federal do Rio de Janeiro*). The results indicated that all the ASQ:SE questionnaries also presented good psychometric properties and could be easily administered by primary caregivers (Chen et al. 2017).

Although the Education Secretary of the city of Rio de Janeiro incorporated these results into governmental public policies, this public child daycare system evaluation was discontinued in 2013. Nonetheless, we continued to examine these data. Our findings suggested that children who are enrolled in these public daycare centers are achieving the expected emotional or social milestones that are appropriate for their age (Anunciação et al. 2018). Currently, Luciene Rocinholi, a colleague from UFRRJ, and I are interested in developing programs that can improve infant cognitive stimulation and parenting interactions that might have a beneficial effect on children's long-term development so that they might be included in public child daycare centers.

Head of PUC-Rio Psychology Department

A Jewish proverb says that the two most important things a mother can give to her child are "first roots and then wings." Since I started to work at PUC-Rio in 1997, I have devoted myself to creating a research group and framework for conducting my research activities and publishing the results. Fifteen years later, I was elected as head of the Psychology Department. It was time to fly without fear of academic detours as my research activities already had strong roots.

My first challenge was to discuss with my departmental colleagues the importance of developing a project to renew almost half of our faculty members. We needed to hire new professors with clear-cut basic research activities, as the department had a large number of professors with a strong psychoanalytic background. The development of this project was only possible thanks to long discussions in different collegiate organs. We have been able to conduct this renewal process in an extremely successful way. With the renewal of several faculty members, we enriched our graduate program with the creation of two new lines of research. We also recently implemented a new curriculum for the undergraduate course with significant changes in the academic conception of the course. New teaching and research laboratories were created, and new lines of clinical training in our University Psychology Clinic were implemented.

In addition to the renewal of our faculty members, we hired new staff who helped facilitate the transmission of information and solve computer problems among several other activities. Finally, a number of structural reforms were implemented in various facilities in our department, including a complete refurbishing of our University Psychology Clinic building to improve the conditions and capacity of this unit.

Launching a New Journal: *Psychology & Neuroscience*

One of the main issues in an academic career is publishing. Brazilian psychology journals have undergone important changes during the past several years because of many factors, including the internationalization of graduate programs, qualification of the scientific community, and implementation of a journal evaluation system that was developed by the Brazilian government.

In 2006, a group of psychology professors with strong experience in basic and applied areas of neuroscience decided to launch a journal in the area of psychology and neuroscience. The idea arose during a relaxing conversation between Pedro de Mello Cruz and I. The purpose of the journal was to improve the impact of neuroscientific knowledge in psychological education. The intersection between psychology and neuroscience in Brazil and other Latin American countries was very incipient at that time. Therefore, a neuroscience journal that comes from the perspective of psychology would certainly underscore the importance of housing neuroscience research in psychology departments.

Pedro de Mello Cruz and I invited Dora Ventura from USP to work with us on this project. As we moved forward, we noted that although there were a few neuroscience journals in Brazil, they were not devoted to publishing experimental and theoretical research papers in the interdisciplinary fields of psychology and neuroscience. Thus, we decided to create *Psychology & Neuroscience* as an international journal using English as the main language of publication. In 2008, we published the first issue (Landeira-Fernandez et al. 2008). *Psychology & Neuroscience* saw impressive growth during its first year. In the second year, the journal was already incorporated into different databases that are recognized by the Brazilian Federal Agency for the Improvement of Higher Education (CAPES; Portuguese acronym for *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*), the agency that is responsible for Brazilian journal evaluation (Landeira-Fernandez et al. 2010).

Publishing a journal represents one of the greatest challenges in the process of scientific publication in Brazil. In addition to the high cost, a set of tasks that is not directly related to the editor role needs to be fulfilled. Over the course of 7 years, we have gone through all such difficulties. At the end of its seventh year, *Psychology & Neuroscience* became the first journal in the field of psychology in Latin America to be published by the American Psychological Association (APA; Landeira-Fernandez et al. 2015). This change represented a paradigm shift in my experience as a founder and editor of a scientific journal. The process has become extremely professional, and we no longer have to worry about how the journal is published or spend time applying for funding to support publication.

Currently, *Psychology & Neuroscience* is at the top of the Brazilian psychological journal evaluation system, although its impact factor is still low. Over the last 10 years, I have been very enthusiastic about publishing *Psychology & Neuroscience*, inspired by its rapid growth and broad recognition by the academic community. Last year, Pedro de Mello Cruz, Dora Ventura, and I moved away from the editorial functions of the journal, and Daniel Mograbi became the sole editor of the journal (Mograbi, 2018).

Founding a New Scientific Association in Neuropsychology and Behavior

Science is a social enterprise, and scientific congresses are important occasions for exchanging ideas and developing science. In Brazil, most researchers who use animal models to understand brain–behavior relationships did not usually attend congresses in the area of psychology. Scientific events that were promoted in the areas of neuroscience and neuropsychology occurred separately. To overcome this dissociation between these two areas, I had the idea of creating a scientific society that could bring together people who were interested in these two fields of knowledge. It was in this context that the Brazilian Institute of Neuropsychology and Behavior (IBNeC; Portuguese acronym for *Instituto Brasileiro de Neuropsicologia e Comportamento*) was founded in 2009. I invited Dora Ventura, Alcyr Alves de Oliveira from the Federal University of Health Sciences of Porto Alegre (UFCSPA; Portuguese acronym for *Universidade Federal de Ciências da Saúde de Porto Alegre*), and Izabel Hazin from the Federal University of Rio Grande do Norte (UFRN; Portuguese acronym for *Universidade Federal do Rio Grande do Norte*) to become Vice President, Secretary, and Treasurer, respectively, of the newly created scientific society.

The formation of IBNeC was a very successful initiative, establishing an important identity to study the relationship between brain and behavior in the Brazilian psychology community. The purpose of this scientific society is to convene researchers, professionals, and students who are interested in various aspects of neuroscience and neuropsychology and their intersections with psychology. Since 2010, IBNeC has been holding annual meetings in different Brazilian cities, bringing together different regions of the country, integrating psychology and other areas of neurosciences, and joining basic and applied research.

I was the president of IBNeC since its foundation until 2015. During this time, I had the opportunity to organize six of these meetings in different cities (Rio de Janeiro, Recife, Florianópolis, São Paulo, João Pessoa, and Gramado). More than 400 people participated in each of these annual meetings. Izabel Hazin, the current president of IBNeC, has already held three annual meetings, one in Belém, one in Natal, and one in São Paulo.

Another important role of IBNeC was to bring together the APA and the journal *Psychology & Neuroscience*. Under this agreement, which began in January 2015, IBNeC became the owner of the journal, and through its editors continued to retain editorial control of the journal. IBNeC granted to APA the exclusive right and license to publish, market, and distribute the electronic version of the journal for the next 7 years. Daniel Mograbi and I were responsible for this agreement, with full support from Pedro de Mello Cruz and Dora Ventura.

President of the National Association for Research and Graduate Studies in Psychology

The National Association for Research and Graduate Studies in Psychology (ANPEPP; Portuguese acronym for *Associação Nacional de Pesquisa e Pós-Graduação em Psicologia*) is the most important scientific society within the scope of Brazilian graduate programs in psychology. Its main function is to promote working groups that comprise researchers from different universities and regions of the country and from abroad, with the purpose of promoting the investigation of themes and issues that concern the vast field of psychology.

I had the opportunity to serve as President of ANPEPP from 2014 to 2016, with Marilene Proença from USP as Vice President, Charles Lang from the Federal University of Alagoas (UFAL; Portuguese acronym for *Universidade Federal de Alagoas*) as Executive Secretary, Elder Cerqueira-Santos from the Federal University of Sergipe (UFS; Portuguese acronym for *Universidade Federal de Sergipe*) as Treasurer, and Mariane Lima de Souza from the Federal University of Espírito Santo (UFES; Portuguese acronym for *Universidade Federal do Espírito Santo*) as General Secretary. This was a fantastic experience, especially because we implemented several activities during our 2-year term to promote ANPEPP.

On November 11–13, 2015, we organized the IV Seminar "New Horizons of Graduate Studies in Psychology" in Rio de Janeiro. Figure 3 presents a picture of our board of directors during this event. This was an important forum for discussions on Brazilian graduate programs in psychology. The meeting also discussed strategies to improve our graduate education system and increase the international competitiveness of our research. Finally, there was an opportunity to discuss the evaluation process of Brazilian graduate programs, scientific journals, academic books, and basic education in Brazil.

Fig. 3 Picture taken during the ANPEPP IV Seminar "New Horizons of Graduate Studies in Psychology" in Rio de Janeiro. From left to right: Elder Cerqueira-Santos, Marilene Proença, Charles Lang, Mariane Lima de Souza and me

On June 7–10, 2016, we also organized the XVI ANPEPP Symposium in the city of Maceio. This was a large event with more than 1500 attendees who participated in 74 working groups. Before the symposium began, we also held an event called "ANPEPP-Society Dialogues." On June 6–7, a total of 19 events were held at various locations throughout Maceio, as well as at different universities, public schools, and private institutions, including the Regional Council of Psychology, Alagoas Autistic Friends Association, and Rei Pelé football stadium.

In addition to organizing these two events, we were able to standardize the fiscal and administrative activities of ANPEPP, which previously had serious problems. The corporate address for ANPEPP at the Brazilian Federal Revenue Office was in the city of São Paulo, although the registration of ANPEPP at the public notary was in the city of Campinas. Moreover, the accountant, who had worked for ANPEPP since 2000, lived in the city of Rio de Janeiro. After lengthy discussions, we unanimously decided to move the corporate location and its registration at the public notary to the city of Rio de Janeiro. To implement these changes and solve these problems, we elaborated a new statute for ANPEPP and transferred the headquarters of the society to the Department of Psychology of PUC-Rio.

We also started a long discussion on the possibility of buying office space to serve as the headquarters for ANPEPP in the city of Rio de Janeiro. This discussion occurred during the XVI ANPEPP Symposium, and we decided that our academic community should further discuss this issue.

One of the main initiatives of our Board of Directors was the creation of a scientific journal with unique characteristics of publishing review articles in three languages: English, Spanish, and Portuguese: *International Journal of Psychological Reviews*, *Revista Internacional de Revisiones em Psicología*, and *Revista Internacional de Revisões em Psicologia*. The journal was to include graphic and layout innovations and a list of three to seven sentences that highlighted the central points of the article. We also planned a glossary with 6–12 keywords that were included in the text, and explanatory tables on the theoretical concepts and technical aspects of the paper. Another innovation of the journal was that each article would include the name of the editor who handled the manuscript and the names of the reviewers who opted to disclose their names in the article. The journal would have three editors: William B. Gomes, Marilene Proença, and I. The journal was already immersed in the full editorial process when the new Board of Directors decided to end this initiative (for review, see Gomes 2017).

One of our biggest accomplishments was to win the bid to hold the 33th International Congress of Psychology, promoted by the International Union of Psychological Science (IUPsyS), which will be held in Rio de Janeiro in 2024 (ICP-Rio-2024). The bid was presented during the 31st International Congress of Psychology, which occurred in Yokohama, Japan, in July 2016. Two other countries, Australia and South Korea, also submitted their bids. We succeeded in the first round of votes with an absolute majority of votes. Figure 4 presents a picture at Yokohama after we win the ICP-Rio-2024 bid. I had the honor to be President of the bid proposal. Ricardo Gorayeb, a colleague from USP-RP, who was President of the Brazilian Society of Psychology (SBP; Portuguese acronym for *Sociedade Brasileira de Psicologia*), was the Vice President of the bid, and Silvia Koller, the

Fig. 4 Picture taken at Yokohama after we win the ICP-Rio-2024 bid. From left to right: me, Silvia Koller, Rosane Zylberberg Landeira and Ricardo Gorayeb

editor of this book and a colleague from the Federal University of Rio Grande do Sul (UFRGS; Portuguese acronym for *Universidade Federal do Rio Grande do Sul*), was the Chair of the Scientific Committee.

This is an extremely important congress not only for the Brazilian academic community but also for all of Latin America. Convening the international psychological community in Rio de Janeiro is a unique opportunity for several Brazilian psychological organizations to be part of the most important international event in psychology and contribute to the development of research and practice in our field. A mature Brazilian scientific psychological community, combined with a large number of licensed psychologists and undergraduate and graduate students who are enrolled in several psychology courses, will ensure a memorable event that will have positive impacts at several levels. I have no doubt that this event will be an opportunity to showcase the tremendous development of psychology in the Latin American region and an opportunity to integrate with the psychological community around the world.

Contributions to the Brazilian Society of Psychology

The SBP holds a very special place in my heart. It was created in 1991 to succeed the Society of Psychology of Ribeirão Preto, founded in 1971. Since I was an undergraduate student, I have attended each annual meeting of SBP. The only exception was when I was a graduate student in the USA. I remember my first presentation, in 1984. Pedro de Mello Cruz and I had a videotape that showed some interesting animal behaviors. Since it was very difficult at that time to show a videotape, our presentation ended at night in the house of Luiz Marcellino de Oliveira, a professor of USP-RP, with the presence of great personalities in Brazilian psychology.

In 2014, I was invited to serve as the First Secretary of SBP. Since then, I have been on the Board of Directors. Among the activities of SBP, it is worth mentioning my participation in the organization of five annual meetings (Ribeirão Preto, Belo Horizonte, Fortaleza, São Paulo, and São Leopoldo). I also participate in the internationalization of the journal *Temas em Psicologia*, a quarterly publication of SBP. My suggestion to change the name of the journal to *Trends in Psychology* was well accepted by the Board of Directors.

In May of 2018, there was a meeting in Rio de Janeiro with Saths Cooper, IUPSyS's liaison to ICP-Rio-2024 and different Brazilian scientific associations. It was decided during that meeting that SBP will be the main scientific association that is responsible for signing the contract with IUPsyS to organize ICP-Rio-2024. A group of five people—Ricardo Gorayeb, a colleague from USP-RP, Vice President of SBP and recently elected to the IUPsyS Executive Committee, Silvia Koller, as already mentioned, the editor of this book and a colleague from UFRGS, Liziane Bizaro, a colleague from UFRGS and General Secretary of SBP, Andréia Schmidt, a colleague from USP-RP and First Treasure of SBP, and I—is developing strategies to bring together several Brazilian and Latin American psychology societies to help with organization of the congress.

Indeed, Germán Gutiérrez, a colleague from Colombia National University, and I noticed in a recent book chapter on psychological research in Latin America (Gutiérrez and Landeira-Fernandez 2018) that psychology is a strong area in Latin America. Scientific societies in this region play an important role in the growth of psychology, in addition to mitigating poverty and improving many social indicators. As Saths Cooper stated in the foreword of this book (Cooper 2018), "there is an undeniable nexus between the level of development of psychology and the stage of national development of a country." For these reasons, I believe that a collaboration in a common project, such as ICP-Rio-2024 , will leave lasting scientific, professional, and social legacies for Brazil and other Latin American countries.

Closing Remarks

Becoming a Full Professor is a moment of academic maturity. It represents an opportunity to review several milestones in my professional activities, which began 38 years ago when I had my first contact with psychology. It is also an opportunity to recognize and thank the people who have positively influenced my career. This exceptional feeling gives wings to my imagination, furthers my dreams, and tones the muscles necessary to plan and perform new actions.

It was at PUC-Rio where I met Octavio Leite (one of my main mentors), Pedro de Mello Cruz (my colleague and best friend), and Rosane (my wife with whom I have a daughter and son). PUC-Rio is also the place where I have engaged in my professional activities. I even have the chance to play the guitar in musical events in the university. I have a rock band and occasionally play with my son Victor and my former graduate student Alberto Filgueiras.

I have learned that my best decisions were those that fostered human interactions while looking forward to future actions. I always try to create opportunities to encourage the exchange of ideas that can be transformed into projects and finally into actions, with the goal of building something in common. That is why I have always sought consensus, avoiding situations that can lead to division or conflicts between or within groups.

I am also convinced of the importance of collaborative work at the local, regional, national, and international levels. Internationalization is the word of the day and involves cooperation between people from different countries with a common goal. Internationalization is a significant way to nurture personal development by fostering interactions between diverse cultures. Lev Vygotsky, one of the leading developmental psychologists, created a concept known as the "zone of proximal development" to explain the potential mechanism that is responsible for our ability to acquire the cognitive resources that are necessary to solve problems (Vygotsky 1978). Interactions with cultural diversity, learning the customs of various cultures, and learning new languages increase our zone of proximal development, which in turn shapes the structure of our thinking (Vygotsky 1987).

Internationalization also allows discussions of different approaches to the study of psychology, letting people share theoretical and applied knowledge while considering regional differences with regard to knowledge that is produced in different countries. This perspective encourages multidisciplinary research initiatives, increases knowledge in psychology, and decreases regional social contrasts. I believe that one of the main purposes of internationalization is to promote the contextually and culturally bound development of science and the practice of psychology around the world.

To conclude, I would like to recognize the importance of all of my students throughout my academic career. It would have been simply impossible to achieve all of these good things without them. I believe that preparing new students for academic life is one of our most important missions in the university. I am proud to see that most of my students have succeeded in academic life. I hope that each of them adopts a positive and optimistic attitude toward challenges that they may face. To all of you, thank you very much for being part of my history. Have a productive life and work toward solidarity and a socially fair society. Be persistent and ethical in your goals, and never forget that "nothing is heavy to those who have wings"![2]

[2] "*Alis Grave Nil*" ("nothing is heavy to those who have wings") is the motto of PUC-Rio.

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Advancing Facet Theory as the Framework of Choice to Understand Complex Phenomena in the Social and Human Sciences

Antonio Roazzi and Bruno Campello de Souza

Abstract Social and human phenomena are typically extremely complex due to the large amount of variables involved and to the intricate multiple intercorrelations between them. The relationship between variables A and B almost always seems to depend on the relationship between each of them and other variables, which interact in a similar fashion with yet other variables and so forth. For any researcher in the field, the major challenge is to find overarching patterns in a broad and convoluted set of observations so as to inspire and/or put to test scientific models regarding mechanisms and processes that could be proposed to explain how people function. The prominent Israeli-American mathematician, sociologist, and psychologist Louis Guttman developed a theoretical–analytical framework, called Facet Theory, which was designed to address precisely such issues. His mathematical approach allows for the intuitive visual representation of multiple interactions between variables at once, and for the interpretation of the result in terms of structures with theoretical meaning. The authors of the present chapter have, since the 1980s, been making use of Facet Theory to study multiple topics in psychology, sociology, anthropology, management, and economics, among others, finding patterns in complex datasets through which the understanding of the phenomena under investigation could be improved and, at the same time, immensely simplified. Eventually, work was done comparing the efficacy of this approach to more traditional methods such as Factor Analysis, Cluster Analysis, and Structural Equation Modelling, invariably finding Facet Theory to be superior. More recently, some contribution has been made to the advancement of Facet Theory itself by means of the identification of the need to more rigorously address uncertainty in Smallest Space Analysis diagrams and the proposal of a specific procedure to achieve this. Throughout these more than 30 years, numerous students, both at graduate and undergraduate levels, have been trained in the use of Facet Theory. Also, a large number of scientific

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papers, book chapters, and conference lectures using the method have been published in Brazil and abroad. All of this contributes to the dissemination of Facet Theory and its potential in the local, national, and international spheres.

Introduction

The present chapter aims to present the contributions that our research group at the Federal University of Pernambuco (UFPE) has made in the last two decades towards the dissemination and adoption of a new approach to research. Having acknowledged the limitations of the traditional methods for the planning of investigations and for analyzing evidence, we have embraced and promoted a way of thinking of science based on Louis Guttman's Facet Theory (FT)—an unorthodox, innovative, and thought-provoking theoretical and methodological contribution to the theory of measurement and data analysis (Guttman 1954a, b, 1968, 1970, 1982; Guttman and Levy 1991; Levy 1994, 2005).

In the traditional way of doing research, there is a strong tendency to study phenomena in an isolated and comparative way. Inspired by the successful mechanical and biomedical models of the early twentieth century, conventional methods generally view variables as discrete and passive entities, ready to be affected by external forces, that can be understood piece-by-piece through a simplistic "billiard balls" approach where "a" affects "b," "b" affects "c," and so forth, in a serial manner that is monotonically additive. A great deal of mainstream research and statistical analysis was created based on this way of thinking. Facet Theory, on the other hand, deals with complexity instead of avoiding it, all the while using robust mathematical methods that need a minimum of assumptions and provide intuitive results that are easy to understand. It manages to integrate research and content design, data collection, and statistical analysis in a consistent manner. Essentially, it is a metatheoretical approach to research that provides a formal frame of reference for theory construction, hypothesis building, and multivariate data analysis.

Thus, Facet Theory comprises a representation of multidimensional phenomena that is, at the same time, broad, rigorous, sensitive, and intuitive, providing a powerful logical paradigm of particular use to human and social sciences, especially complex psychological mechanisms and processes. Indeed, the structure of individuals' perceptions and conceptions about themselves and others, interpersonal relationships, perception and judgment, political behavior, social structure, social episodes, self-concept, intelligence and creativity, mental representations, moral values, and emotional dynamics are all examples of multivariate phenomena that involve numerous elements interacting in various ways with synergistic effects. In this context, FT becomes an extremely important instrument and an excellent alternative to traditional ways of performing both quantitative and qualitative research (Roazzi and Dias 2001).

We aim to outline here the general principles of scientific inquiry and basic conceptual framework of Facet Theory as they were embraced, developed, and applied in Brazil by our research group and collaborators.

Origins and Background of the NEC Research Group in Brazil

For over two decades now, the authors of this chapter have been leading an active research group—the Center for Research in Experimental and Cultural Epistemology (*Núcleo de Pesquisa em Epistemologia Experimental e Cultural*—NEC) at UFPE. This group emerged from the need to bring together investigators from several disciplines and fields to work together in exploring the complex nature of the mind and to study social and cognitive processes. A brief narrative of the historical context underlying its creation and development can provide a perspective from which to understand its characteristics, interests, and guidelines.

The mid-1980s was a period of bustling critical questions regarding the validity of psychological research, particularly in the field of Social Psychology. In fact, this had already been the subject of discussion and reflection since the 1970s (Argyle 1969; Armistead 1974; Bruner 1976; Gergen 1973; McGuire 1973; Levine 1974). The "crisis" was fundamentally due to a disappointment and loss of confidence in approaches that seemed too closely linked to the laboratory and not close enough to the everyday situations in which psychological processes function. The reason for this was due to the fact that Psychology in general (and, therefore, Social Psychology in particular) began to be seen as a set of complex and multifaceted phenomena, one where the different dimensions cannot be isolated without incurring the significant risk of substantial inaccuracies in the study. Consequently, there was the emergence of a dissatisfaction with the more traditional reductionist paradigms and analytic tools. This type of discontent is seen in the words of Simon (1976):

> The variance analysis paradigm, designed to test whether particular stimulus variables do or do not have an effect upon response variables, is largely useless for discovering and testing process models to explain what goes on between appearance of stimulus and performance of response. These traditional methods are particularly inappropriate when both stimulus and response are complex ... (p. 261).

The point was to consider the psychological processes and their representations not as simply a reflection of a social world, but to regard them as being socially organized in the individual's mind in such a complex way that it is impossible to decompose even the simplest of them. This intrinsic complexity of social phenomena implies that a better understanding of how social stimuli are perceived, processed, represented, and acted upon will require new methodological procedures arising from a theoretical structural model capable of handling such intricate systems.

The excessive artificiality of certain laboratory situations, from which the social psychological approach had received many of its theoretical and produced explanatory models, began to be contested (Israel and Tajfel 1972). This challenge was not limited to purely methodological aspects but includes as well the very epistemological basis of research in Social Psychology (Harré and Secord 1972). This can be seen as the consequence of an emerging "emic" view that perceived each component

of a culture or group as interconnected and functioning within a larger structural setting (Pike 1954, 1957, 1966; French 1963).

One approach proposed as a means to overcome the crisis called for a more "naturalistic" type of investigation with a greater emphasis on a more descriptive and pre- scientific process. Eventually, however, there also came a more sophisticated debate concerning what forms of data analysis were needed in order to overcome the constraints of the traditional, compartmentalized, and frequently parametric statistics. This is when multidimensional scaling (MDS) and related techniques, which allow for the examination of the empirical relationships between multiple variables of interest through a spatial organization, were created and implemented in statistical packages (e.g., Canter and Monteiro 1993; Roazzi 1994; Roazzi and Monteiro 1995; Roazzi, Wilson and Federicci 1995). Their main advantage is the ability to quantify and describe extremely complex psychological phenomena that could not be evaluated (or even glimpsed) through traditional methods of analysis. The central assumption underlying the psychological use of MDS techniques is that the similarities between judgments, concepts, personality traits, social episodes, stereotypes, political behavior, and self-concept, as well as a myriad of other variables and constructs, can all be represented and subsequently analyzed in terms of Euclidean distances (Davidson 1983; Kruskal and Wish 1978; Schiftmann et al. 1981). Forgas (1979) pointed out that these tools are extremely important for scientific discovery and constitute an excellent alternative to the descriptive and journalistic qualitative methodologies embraced by some critics of the traditional approaches to psychological research. Indeed, they can be considered as new and emerging research strategy in Social Psychology (Forgas 1982, 1986).

It was precisely during the mid-1980s that the first author of this chapter was at the Department of Experimental Psychology at Oxford University pursuing his doctorate. This is when he came into contact with a group focused on Environmental Psychology that was led by Professor David Canter, from the University of Surrey, in Guildford. This group offered exciting new theories for the study of environment and its relationship with people. The challenge they had to face was how to better integrate complex theoretical and methodological issues in human and social sciences, something that required that they use innovative methodologies and sophisticated multidimensional data analysis techniques, including FT. The interaction with this group led the doctoral candidate to reapproach the questions and evidence he had obtained from an investigation done prior to his enrollment in Oxford, i.e., a study involving impoverished areas of the Metropolitan Region of Recife. This renewed effort yielded a long series of important new findings and insights (see for example, Ceci and Roazzi 1994; Roazzi 1986, 1987a, b, c, 1989, 1990, 1996, 1999a; Roazzi and Bryant 1992, 1997; Roazzi et al. 2000a, b; Roazzi and Dias 1987, 1992 for a more detailed revision of the literature, see Roazzi et al. 2015a, b). Thus, upon returning to Brazil in the end of 1988, after attaining his doctoral degree, he created the NEC research group, which, immersed in the aforementioned *zeitgeist* and in direct contact with multiple researchers in the UK working with FT, eventually adopted a new way of carrying out research based on the emerging new paradigms.

A key theoretical paper from the NEC proposing this new direction was published in 1995 and had as its title: *Categorização, formação de conceitos e processos de construção de mundo: Procedimento de classificações múltiplas para o estudo de sistemas conceituais e sua forma de análise através de métodos de análise multidimensionais* (Categorization, concept formation, and processes for the construction of the World: Multiple classification procedures for the study of conceptual systems and their form of analysis through multidimensional methods). Its basic argument is that, given the complexity of the world, it seems reasonable to assume that an individual's way of perceiving, understanding, representing, and interacting with it involves qualitative similarities and differences in much more than a single dimension. This implies that the reduction of social and psychological phenomena to unidimensional bipolar processes, as was frequently done in the past, is open to severe criticism for not allowing the discovery of non-presupposed forms of categorization (Roazzi 1995).

In its first few years of existence the NEC embraced the tenet that the assessment of the categories constructed and used by the subjects is essential to the understanding of the meaning that they attribute to the world. It also incorporated the viewpoint that a methodological approach to analyze mental and social representations must be free of presuppositions about the content of said representations and their structures; otherwise, the analysis may be biased or misrepresented. The Multidimensional Scalogram Analysis (MSA) and Smallest Space Analysis or Similarity Structure Analysis (SSA) are central components of the application of Facet Theory that constitute ways of overcoming the limitations of the traditional methods and allowing one to achieve the goal of identifying complex representational structures with a minimum of a priori assumptions (Guttman 1954a, b, 1958; Lingoes 1973; Lingoes, Tucker, Shye 1988; Schlesinger and Guttman 1969; Shye and Elizur 1994; Zvulun 1978). The NEC illustrated how this could work through examples from an investigation on the social representation of fear, using the method of free association to raise the semantic field and employing multiple classificatory procedures to capture the structure underlying the representational field (Roazzi et al. 1995, 2001). The proposed Multiple Sorting Procedure (MSP) met the necessary scientific requirements for the study, since both quantitative and qualitative aspects were used to understand the representational system of individuals (see also, Canter and Monteiro 1993; Roazzi 1999b; Roazzi et al. 2002, 2003; Roazzi and Nunes 2006). Other Brazilian investigations cited in the theoretical paper (Roazzi et al. 2001) are Roazzi and Monteiro (1995), Roazzi and Santana (1995), Roazzi et al. (1995), and Monteiro and Roazzi (1987).

Based on the aforementioned assumptions about the nature of the psychological and social processes as complex phenomena, for the last two decades the NEC has used FT as a foundation for studies on socio-cognitive development, attachment, hyperculture, self-awareness and consciousness, people management, organizational functioning, urban violence, environmental issues, cognitive, social and imaginary processes, education, and many other topics (an updated list can be found at the following link https://www.researchgate.net/project/Facet-Theory/update/5ad5331ab53d2f63c3c63073).

This structural approach can be seen as a methodological legacy inherited from Guttman that allowed the research group to train researchers in the field of methods and techniques of knowledge production that allow them to generate knowledge for the construction of useful scientific models.

The Challenge of Human and Social Sciences

All human and social sciences, such as Psychology, Sociology, Anthropology, Economics, Management, Law, and others, typically study very complex phenomena, particularly when compared to the fields of natural science or technology. This is mainly due to the fact that intrapersonal and interpersonal mechanisms and processes:

- Are based not only on primary principles from Biology, Chemistry, and Physics but also on their higher-order interactions that create new systems that often display totally different dynamics;
- Tend to involve a large number of variables with widely different distributions, usually measured in different scales, that relate to each other in frequently non-linear ways;
- Present a great deal of covariance and multiple conditional interactions, with the relationship between two elements almost always depending on the behavior of a third, this happening recursively for multiple variables.

These three facts, along with the relative youth of the scientific study of human and social phenomena (this has only been occurring for about 150 years or less), make it very difficult to create overarching models. This is why one is hard-pressed to find in this field laws and principles as broad and powerful as Newton's Laws, Thermodynamics, Natural Selection, Conservation of Energy, and so forth.

When building a scientific model, one must often create abstract concepts that are, by definition, fictitious and unobservable, but that are useful in predicting and/ or controlling observable phenomena, i.e., have practical value. This is the case of the notions of "force," "mass," and "energy," which refer to things that cannot be measured except indirectly, through their assumed interaction with phenomena that can be directly observed. Their value is not in their inherent existence, for they have none, but rather in the fact that one can use them to deal effectively with the experiential world. In human and social sciences, such abstract concepts are referred to as "constructs," examples of which include "intelligence," "personality," "emotion," "values," "conscience," and "culture."

A "construct" refers to an abstract dimension, considered to be underlying the behavior of a set of observable variables. Its validity is determined by how closely such variables are interrelated and covariate, i.e., by how much of their behavior displays the same pattern. This is taken as a sign of the intensity with which the construct can be seen as governing the dynamics of said variables, as well as a form of estimating its quantitative value in a given situation. Its meaning can be empirically

inferred by understanding the common aspects of those variables and building an adequate label for the subjacent causes of their similarity. Its usefulness is assessed by how strongly it associates to observable events that one seeks to predict and/or control.

The complexity of the human and social sciences represents a major challenge for the creation and validation of constructs in the field, thereby hindering the construction of powerful models. This does not mean that those in the field of human and social sciences should not strive to produce broad and powerful models, for they would not be scientists if they did not attempt to do so. It is, however, a matter of overcoming significant obstacles.

Facet Theory

Nature and Origins

Facet Theory is a systematic approach to the coordination between theory and research created by the American-Israeli psychologist, sociologist, mathematician, and statistician Louis Guttman (1916–1987).

Guttman was born on February 10, 1916, in Brooklyn, the third of five children. He earned his bachelor's and master's degrees at the University of Minnesota in Minneapolis and received a Ph.D. in Social and Psychological Measurement in 1942. After working as an Expert Consultant to the Secretary of War, Research Branch of the Information and Education Division of the U.S. Army, and in post-doctoral research positions at the Universities of Chicago and Cornell, he moved to Jerusalem, Israel. There, he founded, in 1947, the Israel Institute of Applied Social Research and became its first Scientific Director. Later it was renamed as the Guttman Institute before finally becoming the Guttman Center (part of the Israel Democracy Institute). Afterwards, he became a Professor of Social and Psychological Assessment at Hebrew University of Jerusalem. Guttman is also well known for having devised, in the 1940s, a widely used technique for measuring and analyzing public opinion that is called the Guttman scale analysis. The development of this scaling theory has been recognized by Science Magazine (American Association for the Advancement of Science) as one of 62 major advances in the social sciences in the period 1900–1965 (Deutsch et al. 1971). He also produced several key advances in Matrix Algebra, Factor Analysis, and, especially, Multidimensional Scaling. Louis Guttman died in 1987, at the age of 71, of melanoma in the city of Minneapolis, while on a visit to the USA to deliver lectures and get medical treatment.

Guttman was a recognized genius who accumulated multiple and well-deserved acknowledgements throughout his life, including the Rothschild Award (1962), the University of Minnesota Outstanding Achievement Award (1974), the Israel Prize in the Social Sciences (1978), and the Educational Testing Service Award from Princeton (1984) for distinguished service to measurement. His vast *opus* includes

the publishing of numerous papers and books regarding mathematical and statistical topics, many of which are cited as of fundamental importance for the state of the art in these fields. Many of his discoveries and creations have been incorporated in statistical packages for over 30 years, including Smallest Space Analysis (SSA), Multidimensional Scalogram Analysis (MSA), and Partial Order Scalogram Analysis (POSAC). A central theme in his work is that measurement is not merely the assignment of numbers but must also include the construction of structural theory (Guttman 1971a, b; Shye 1997).

Guttman (1954a, b, 1958, 1959) initially proposed FT as a solution for his dissatisfaction with the constraints of Factor Analysis and rating scales as a means of selecting appropriate items in test construction. This is very significant, for he was a refined mathematician with a thorough knowledge of the mathematics of Factor Analysis (Guttman 1982), having made significant contributions for the understanding of the indeterminacy of factor scores (Guttman 1955). Indeed, he obtained his Ph.D. in Sociology in 1942 from the University of Minnesota with a dissertation on the algebra of Factor Analysis and later published several works regarding its relation to Multiple Regression (e.g., Guttman 1940, 1944, 1952, 1954a, b, 1956, 1957, 1958). Therefore, he created a multivariate and non-metric approach that does not assume a linear mapping between similarity ratings and distances. This allows one to avoid the constraints and imperfections of traditional methods, making FT applicable to virtually all areas of human knowledge (Borg 1979; Borg and Groenen 2005; Canter 1985; Canter 1983a, b; Canter and Kenny 1981; Dancer 1990; Donald 1985; Feger and von Hekher 1993; Guttman 1965; Levy 1985, 1993; Levy and Guttman 1974, 1975a, b).

Fundamentals

FT is based on using MDS techniques that can be either metric or non-metric, such as SSA, MSA, and POSAC, in order to produce a geometric representation of the multiple empirical associations between the variables under study. The resulting diagram is comprised of a set of abstract orthogonal axes (usually two or three, but could be more) that define a mathematical space where each variable is a point and the distance between these points is inversely related to the degree of association between them according to a chosen metric or non-metric measure. This constitutes a synthetic and intuitive depiction of a multivariate space in terms of its relations, making it particularly valuable as a graphic aid in facilitating the visualization of underlying orders present in the data.

A key MDS technique used in Facet Theory is the SSA, a mathematical method that belongs to the family of non-metric multidimensional scaling procedures developed by Guttman and Lingoes (Guttman 1968; Levy 1994, 2005; Lingoes 1973, 1979). Here, the measures of association between variables are projected on a multidimensional space in order to have the distances between each pair of variables

- Dimensions 1 and 2 define the multivariate space.
- Variable X_1 is weakly or negatively associated to X_2 and X_3.
- X_2 and X_3 are strongly and positively associated to each other.
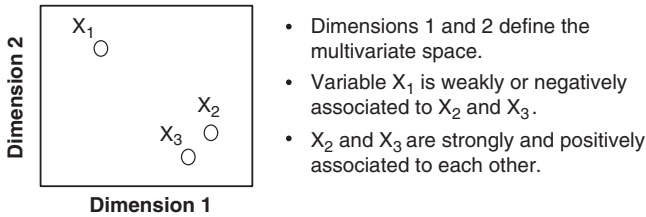
Fig. 1 An example of an SSA diagram for three variables (X_1, X_2, and X_3)

reflect the degree of association between them as closely as possible. Figure 1 shows a *generic example*.

If the number of dimensions of the space in a SSA is equal to the number of variables, a perfect projection is always possible, with the distances representing the associations exactly. However, if the number of dimensions is smaller than the quantity of variables (which is what one desires, ideally, with only two dimensions and, preferably, with no more than four), a perfect projection may become geometrically impossible, making it necessary to calculate the solution with the smallest possible error. The algorithms used for that purpose are the Amalgamation Schedules, and the degree of distortion they introduce when producing the diagram is measured by means of the Coefficient of Alienation. Originally, Guttman established that an Alienation of 0.15 was the upper limit for an acceptable SSA (Guttman 1968), but this guideline was eventually revised so as to be able to reach higher values (usually up to 0.30) in cases where a large number of variables is involved (a few dozen or more). Regardless of the cutoff point that is adopted, however, the basic rule is that the smaller the coefficient of alienation, the better is the fit. Later on, the Coefficient of Stress was introduced as a more accurate measure of the error introduced by the amalgamation, though it is a very similar index, one which is usually around only 0.01 to 0.02 points below the score for Alienation (Borg and Groenen 2005).

A contiguous portion of the SSA can be interpreted as being a clustering of variables that is also indicative of an underlying latent dimension. In other words, it is a "slice" of the space that comprises variables that refer to a single construct. By dividing the multivariate space into partitions according to a logical categorization of proximal variables, one can identify patterns that convey the conceptual structure of the phenomenon that involves the variables under analysis. Such a pattern is indicative of the mechanisms and processes involved, so that its identification can be used to either test the validity of an a priori model or to inspire the creation of a new one. The relationship between partitions is, therefore, a logical structure that indicates the associations between the constructs they express, that is, their semantic relations. This is the concept of a "Mapping Sentence" that defines a "Facet," usually expressed in a statement such as:

Phenomenon A is comprised of Partitions P_1, that includes $\left[\begin{array}{c}\text{Element } P_1\, 1 \\ \cdot \\ \cdot \\ \cdot \\ \text{Element } P_1\, n\end{array}\right.$,

P_2 that includes $\left[\begin{array}{c}\text{Element } P_2\, 1 \\ \cdot \\ \cdot \\ \cdot \\ \text{Element } P_2\, n\end{array}\right.$, ... , and P_q that includes $\left[\begin{array}{c}\text{Element } P_q\, 1 \\ \cdot \\ \cdot \\ \cdot \\ \text{Element } P_q\, n\end{array}\right.$
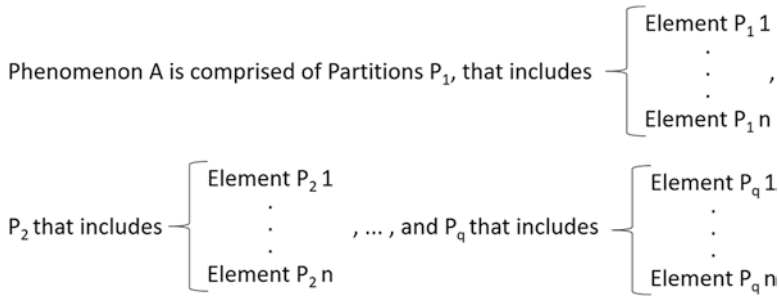
Such logic can also be applied recursively, so that an element inside a partition can be, itself, a partition containing different elements of its own.

From the perspective of a two-dimensional space, there are three basic geometric patterns that can be used to partition an SSA diagram, each corresponding to a specific mapping sentence, i.e., to a specific relational structure between constructs: axial (parallel straight lines), polar (straight lines at an angle from each other that intersect all at the same point), and modular (concentric elliptical rings). Two or more of such patterns can be superimposed upon the same SSA, which can have two dimensions or more, producing complex combinations that represent using different, but complimentary, frameworks simultaneously.

Each structure can be interpreted as both identifying constructs and expressing the relationships between them in a way that can be briefly described as follows:

- *Polar*: The constructs defined by each triangular "slice" are interpreted as being all in the same hierarchical level, with juxtaposed partitions representing closely associated concepts and opposite partitions representing antagonistic ones.
- *Modular*: There is a hierarchy where the construct defined in the center ellipse is seen as of higher importance, such importance decreasing as one takes "rings" that are progressively further from the center, with juxtaposed partitions representing strongly or directly associated concepts and separate partitions corresponding to weakly or indirectly associated concepts.
- *Axial*: There is no hierarchy, with each rectangular partition representing a construct, with juxtaposed partitions representing strongly or directly associated concepts and separate partitions corresponding to weakly or indirectly associated concepts.
- *Complex*: The constructs and relationships expressed in the basic structures combined all coexist as complementary interpretations and produce subsets of concepts and relations. Some of the more common ones are:

  - Radex: A combination of a polar and modular partition structure in a plane, the two having a common center.
  - Duplex: A superimposition of two distinct axial partition structures, usually at an angle of close to 90°.
  - Triplex: A superimposition of three distinct axial partition structures at an angle to each other.

Fig. 2 Some different types of SSA partitions
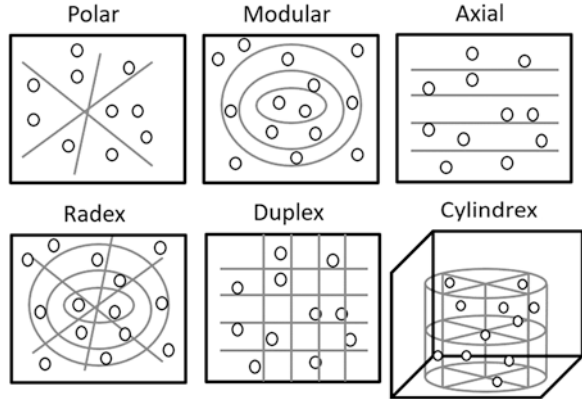
- – Cylindrex: A Radex with the addition of an axial facet in the third dimension.
- – Spherex: Polar partitions in three-dimensional space, i.e., concentric spheres.
- – Conex: Similar to the Cylindrex, but with Radexes that shrink in diameter as one moves along its axial facet.

Figure 2 shows a visual depiction of some of the main structures that are more commonly encountered in practice.

A simple example of all the Facet Theory concepts described here can be obtained in the analysis of the performance of eighth grade students from a private school in Brazil in various subjects as measured on a 0–10 scale. Considering the inverse of the numerical difference between grades as a measure of association, one can produce the diagram showed in Fig. 3.

One can see in Fig. 3 a multivariate space that has been divided into three partitions according to a polar structure, defining the existence of three constructs through which one might understand academic performance: Language and Expression (Portuguese, English, and Literature), Social Studies (History and Geography), and Science and Mathematics (Physics, Chemistry, Biology, and Mathematics). Given the polar structure, such constructs are interpreted as having no intrinsic relational hierarchy.

As established by Facet Theory, the logic of the partitions of an SSA has both conceptual–theoretical and statistical–analytical implications.

Conceptual–Theoretical Implications

The essence of Facet Theory is the logical-mathematical view of phenomena in terms of the structure of the relationships between variables, between variables and constructs, and between constructs. Such a view is expressed through the Mapping Sentence and the partitioned SSA diagram. This is not just a way of representing
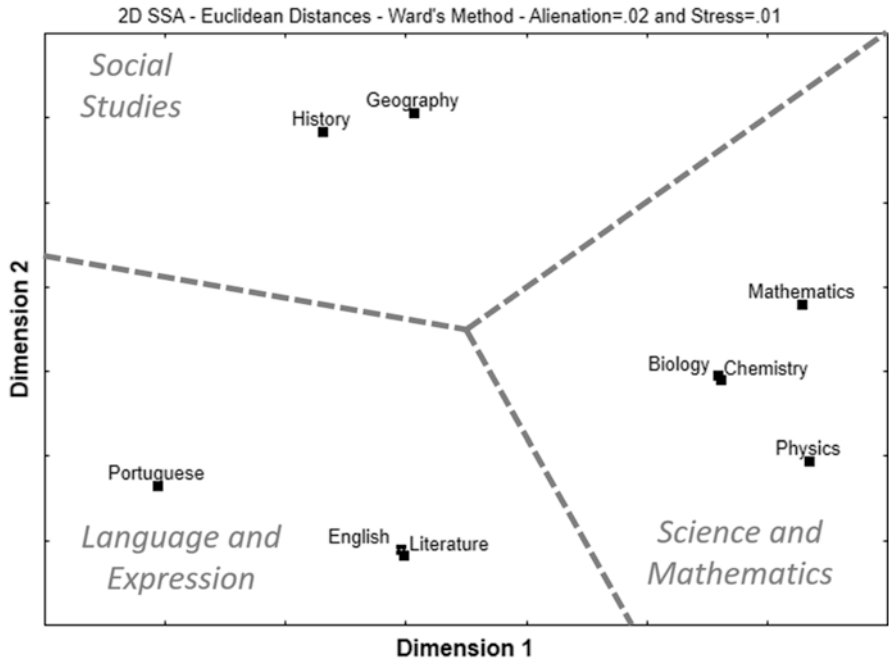
Fig. 3 SSA of the performance of eighth grade students ($n = 906$) in various subjects

mechanisms and processes, but rather a whole new form of thinking with direct implications for scientific theorization and for the design of research.

According to Guttman, in order to carry out accurate scientific investigations, one must define concepts in terms of either observations or operations on empirical data. The level of scientific usefulness of such definitions is determined by the extent to which they match the empirical observations. This constitutes a framework for defining a construct and for directly relating that conceptual definition to empirical observations.

Hackett (2016) indicates that, qualitatively speaking, the FT approach provides logical coherence (hermeneutic consistency), explication based on fundamental categorical components (structured meta-ontology), and the understanding of part-whole-context relationships (structural meta-mereology). In fact, it actually forces one to conceive models with concepts that are coherent and structurally organized (Yaniv 2011; Hackett 2016), providing a framework that can guide the construction and validation of psychometric instruments (Rost and Carstensen 2002), as well as the design of research (Bilsky and Janik 2010; Moore and Marans 1997).

It is clear, therefore, that the relational structure emphasized by FT constitutes a useful logical-mathematical template for model building, creation of instruments, and research planning. In other words, it provides a strategy for conceptualizing a study, formulating its variables in terms of its purposes, systematically sampling said variables, and formulating hypotheses, thereby facilitating cumulative knowledge,

and opening new perspectives and possibilities for the discovery of new laws in social and behavioral sciences.

Data–Analytical Implications

Facet Theory and SSA comprise a set of tools and techniques that, when applied to data analysis, allow one to:

- Deal with a large number of variables and explicit their covariance;
- Make use of literally any measure of association;
- Treat any type of association between variables, be it linear, non-linear or other;
- Treat variables in any numerical scale and distribution;
- Identify both variable clusters and latent dimensions;
- Suggest and/or test individual constructs;
- Suggest and/or test the structure of a set of constructs;
- Simultaneously express different theoretical models in the same dataset;
- Use intuitive visual representations that simplify understanding and interpretation.

These capabilities represent a powerful approach for the treatment and interpretation of empirical data in the context of complex multivariate phenomena, such as those one finds in the human and social sciences.

In fact, FT presents some important advantages when compared to traditional multivariate analysis techniques. This is particularly true in the case of Principal Components Analysis (PCA)/Factor Analysis (FA), as well as for Cluster Analysis.

PCA and FA use linear regressions to identify, based on observed variables, "latent dimensions" that would correspond to constructs. This means that they have underlying assumptions regarding scale, normality, homoscedasticity, multicollinearity, and independence that limit their practical application, particularly in the human and social sciences (Guttman 1954a, 1982). Furthermore, the Factors or Components found in these methods do not always include all the variables in the analysis, for some are discarded due to lack of a significant impact on the explanation of variance, meaning that no support is offered for dealing with them. Facet Theory, on the other hand, has none of the limiting assumptions or can easily avoid them through the choice of an association metrics not based on Pearson's r or linear regression, such as those based on Spearman Rho, Tetrachoric Correlation, Jacquard's Index, Manhattan Distances, Frequency, and infinitely many others (Borg and Lingoes 1980; Borg and Groenen 2005). It also always includes all the variables in the analysis, even if only to clearly display that some of them belong to different constructs than those of most of the other variables.

Cluster Analysis, especially Hierarchical Clustering, identifies groupings and subgroupings of variables based on their observed associations, sharing with FT the advantage of allowing for any measure of association and thus also avoiding many of the limitations of PCA and FA. However, once a specific clustering method is

defined (e.g., Connectivity, Centroid, Distribution, Density, Subspace, Graph), there is only one solution in terms of the groups and subgroups that are identified. In that regard, the Factors or Components of PCA and FA likewise have a single possible composition once a form of rotation is chosen (e.g., Varimax, Quartimax, Equamax). Facet Theory, however, allows for multiple simultaneous partition structures for the same SSA, i.e., different groupings of variables, so that one same dataset can receive parallel valid interpretations. This significantly expands the possibilities for the empirical testing or suggesting of hypotheses.

It is important to note that the advantages of Facet Theory in relation to PCA, FA, and Cluster Analysis do not mean that FT cannot be used in conjunction with these other techniques. Indeed, in exploratory research, for instance, where there is no a priori structure to be empirically tested, it is perfectly possible to run a SSA and then use PCA, FA, or Cluster Analysis to help identify the best way to partition the multivariate space. Nonetheless, it is clear that FT offers fewer limitations and, therefore, greater possibilities.

Room for Continuous Improvement

Even with all its value as a theoretical–empirical scientific tool, Facet Theory is far from a finished set of methods and procedures. In fact, one can argue that it will never truly be "completed" but will continuously evolve in tandem with the developments in science, mathematics, and even computing. Rather than a limitation, this actually represents limitless potential for improvement.

Training, Qualification, Dissemination, Publications, and Events

The NEC contributes to the consolidation of exchanges with research centers in Brazil and abroad, such as the universities of Oxford, Harvard, Coimbra, Evora, Minho, Rome, Munster, as well as having researchers that participate in national and international scientific associations (e.g., Facet Theory Association). Because of space constraints, the extensive literature produced by our research group using a FT approach and the applications of MDS to the study of complex phenomena in the social and human sciences will not be detailed here.

In addition to performing research and training researchers, the NEC includes other modes of action, namely: (1) explore new technologies in data research and analysis, as well as in the transmission of generated knowledge; (2) organize symposia, courses, and round tables at scientific events in Brazil and abroad in partnership with researchers from centers that interact with the group; (3) invite visitors to give lectures, conduct collaborative research, and participate in the oral defense of master and doctoral dissertations; and (4) produce scientific publications with the

participation of both lecturers and students, as well as of investigators from other research centers in Brazil and abroad.

Specific Implications of Facet Theory for Human and Social Sciences

Argument for the Ubiquitous Use of SSA and Facet Theory

When doing research in human and social sciences, there are many traditional ways of dealing with the large number of variables involved, including multivariate techniques such as Principal Components Analysis, Factor Analysis, and Cluster Analysis, as well as Linear/Non-linear Multiple Regression Models, MANOVA, and a myriad of other methods. However, as already pointed out, these traditional methods tend to have relevant assumptions that significantly limit application and relatively little room for alternative explanations. Furthermore, their results tend to be mathematically complex, making it difficult or impossible for the uninitiated to understand and interpret.

Facet Theory usually obtains the same results as, or better than, the traditional aforementioned procedures, but with a much broader scope of application. Plus, the findings are not only amenable to multiple interpretations in terms of constructs and structure but are also expressed through a very synthetic and intuitive visual representation, making it much easier even for those with virtually no scientific or mathematical background to interpret them. One might add that there are many widely available software tools that have SSA algorithms that can easily run fairly large databases, with a great number of variables, using a fairly accessible interface (e.g., IBM SPSS, Statistica, Systat, SAS, Hudap, FSSA, Stata, JMP, "R" Platform).

It follows that, as a rule, investigation in human and social sciences should consider the use of SSA and Facet Theory as the default approach to research planning, data analysis, and theorization, with the goal of arriving at fundamental laws of human behavior. Indeed, most, if not all of our scientific explorations over the last three decades, including those done in collaboration and the work of graduate and undergraduate students that we advise, employ FT and SSA in some way or another. This practice has been adopted without the need to sacrifice the use of any other techniques or methods.

New Paradigm for the Evaluation and Validation of Instruments

The construction, validation, and study of intelligence tests were the reason for the original development of Factor Analysis by Charles Spearman, which also lead to the development of the factorial models of intelligence, including important

constructs such as "fluid" and "crystalized," as well as "verbal" and "performance." Eventually, this approach lead to breakthroughs in other areas of psychology, including personality, where it is the key element in the identification of the "Big Five" dimensions of Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. As a result, the current default method for evaluating and validating a psychometric instrument involves performing a Factor Analysis of its items to determine whether they present latent dimensions that are in agreement with theorized constructs. Yet, this deeply rooted praxis is not without implications.

The limitations of Factor Analysis regarding its assumptions and, therefore, applicability, along with the relatively "fixed" or "rigid" final configuration that is obtained once one chooses a form of calculation, can be a significant obstacle in the identification of constructs even when they are fairly robust. This is particularly true when the variables involved are non-Gaussian, have non-linear associations, are heteroskedastic, and/or are non-independent. Facet Theory, however, can overcome such problems, succeeding in detecting constructs in situations where FA cannot. This includes the possibility of correctly identifying overarching patterns that conform to scientific hypotheses in contexts where traditional methods yield nothing. Very similar statements could be made regarding Reliability Analysis and the use of the Cronbach Alpha score.

Over the years we have done multiple studies involving the psychometric validation of psychological tests using both Factor Analysis and Facet Theory. In practically all of them, the results of FT are equivalent to or better than those of FA when it comes to identifying relational patterns between variables that are consistent with scientific constructs. In some of them, a complementary and synergistic effect between the two approaches produced richer results than did either of them alone, usually with FA and Cluster Analysis suggesting ways to partition a given SSA. There are also times when a SSA can suggest how to create indexes and construct statistical models through Multiple Regression, Structural Equation Modelling, and similar techniques.

It has become quite clear to us that the construction and validation of psychometric instruments, as well as the creation and evaluation of indexes, can benefit greatly through the use of Facet Theory in addition to the usual Factor Analysis and Reliability Analysis. Consequently, it has become a standard practice within the realm of our students and also our collaborating colleagues to perform an SSA as part of any attempt to validate an instrument, form or set of indexes. As a result, significant advances have been produced that would have been otherwise impossible.

A New Scientific Approach

Facet Theory invites a whole new way of thinking about complex phenomena, particularly (but not exclusively) in the case of the human and social sciences, providing a clearly defined theoretical framework. It encourages one to embrace dealing

with a large number of diverse variables with intricate associations by providing an effective systematic approach. Beyond that, it provides a novel form of cognitive support that addresses variables, constructs, and their interrelations in a very explicit and visual form.

From the viewpoint of exploratory investigations, it is possible to contemplate a SSA in terms of how groups of variables might correspond to constructs and then in terms of how such constructs might relate to one another. The results can then be expressed in the form of Concept Maps that express possible mechanisms and processes for the phenomenon under study. From this, one has the possibility of building theories inspired by multiple empirical associations that are taken into account all at once.

In regards to hypothetical-deductive studies, it is fairly easy to express hypothesized mechanisms and processes, including constructs, in the form of a Concept Map that is the equivalent of an SSA that can be partitioned in a specific pattern. With this, one can submit a hypothesis to falsification by means of a, aprioristic Mapping Sentence that is either consistent or not with a SSA derived from a posteriori empirical data. This offers a flexible and easy-to-understand method to establish the elements to be considered in a given empirical study.

In either hypothetical-deductive or exploratory scientific research, one has in Facet Theory a powerful tool for the construction and validation of models by directly comparing theory and observations in complex phenomena, and doing so using methods that express the findings in a way that is at the same time rigorous and easy to understand. In fact, the attempt to detect a potential correspondence between concepts and empirical observations is central to Guttman's seminal scientific contribution. Indeed, this need for a joint formalization of theory and investigation in Psychology and Sociology is addressed in his definition of a scientific theory: "A theory is an hypothesis of a correspondence between a definitional system for a universe of observations and an aspect of the empirical structure of those observations, together with a rationale for such an hypothesis" (Gratch 1973, p. 35; Guttman 1982). Thus, Guttman's main concern was not with statistical or data analytic procedures as such. Rather, he aimed "to combine such procedures, and the aspect of empirical data they invoke, with conceptual-definitional framework of a substantive domain of research, in order to discover lawfulness, and contribute to theory construction in social and psychological domains of research" (Shye 1997, p. 114). The emphasis is on outlining the universe of observations to be studied and implying that the definitional system should be in a form that enables identifying correspondences with aspects of the empirical data. In this new perspective, FT can be seen as a research strategy that integrates formal analysis of research contents with intrinsic data analysis using the tool of the mapping sentence, a basic technique that allows to carefully define the universe of observations in a form that aids perception of systematic relationships with the data. This approach in the last couple of decades has been disseminated to our students and collaborators in ways that have deeply influenced the form through which they think and test scientific theories.

Challenges and Future Developments

Limited Dissemination

At least until March 2018, there are some clear signs that FT is still far from being widely used in research. When searching for "Facet Theory" on Google Scholar, one finds only around 3750 results, with "Smallest Space Analysis" returning roughly 4740 and "Structural Similarity Analysis" a mere 623. This is in stark contrast with what one obtains for the names for the more traditional techniques and approaches, such as "Factor Analysis" (2,860,000 results), "Principal Components Analysis" (630,000 results), and "Cluster Analysis" (1,790,000 results). There is also no retrievable Wikipedia page on FT, with SSA being mentioned only in passing in the page on Multidimensional Scaling. Indeed, the Facet Theory Association (FTA), created in 1991 for the advancement and dissemination of FT worldwide, has never surpassed the figure of 100 members, many of which have reported experiencing cases where there was difficulty in having their work using FT and SSA understood by reviewers and readers in conferences, scientific journals, and books.

Such a low level of dissemination of FT and SSA throughout the international scientific community is practically impossible to rationally justify, given that:

- FT and SSA both have solid mathematical foundations and demonstrable advantages to traditional approaches, there being no room for opinion or disagreement regarding this;
- There is an abundance of readily available popular software tools that can support their use, including SPSS, Statistica, Stata, Systat, and the R platform, as well as dedicated software such as HUDAP;
- The results obtained through FT and SSA are fairly easy to interpret even by those with little or no mathematical, statistical, and/or scientific training;
- The first paper on FT was first published in 1954, with the approach being widely presented in prestigious conferences, journals, and books in the last 64 years;
- Louis Guttman was a highly reputable thinker and researcher who received a myriad of important awards throughout his life, having made fundamental contributions to Measurement Theory, Statistics, Psychometrics, and Psychosocial Research, being acknowledged as one of the most important social scientists of the twentieth century;
- Throughout its 27 years of existence, the FTA has garnered members from 17 different nations, besides holding 16 international conferences in a dozen countries with the presentation of hundreds of scientific papers including not only applications but also new developments in FT.

Without specific research, one can only speculate as to the causes of such a paradox. Perhaps it is due to the timing of the availability of computational tools (hardware and software), with prior, traditional, techniques, and approaches having an earlier support, something that might have contributed to a promotion of a "culture" that is more favorable to such earlier methods. There is the fact that the rationale

underlying FT is peculiar, departing from the more traditional thinking regarding hypothesis testing, something that might make the concepts and terms involved more difficult to understand and accept. Another possibility is a lack of interactions between the adoption of FT and the use of other approaches, i.e., a conceivable "excessive self-sufficiency," unwittingly or not, leading to distancing and isolation. It could be that those that are the most savvy in FT, perchance due to a direct academic relationship with Louis Guttman and/or with his closest associates, have not been doing a good enough job in disseminating FT worldwide. There may be other reasons and/or a combination of the ones already presented.

Due to the absence of clear knowledge of the causes of the limited adoption of Facet Theory worldwide in face of its clear advantages, it is difficult to propose a specific solution or set of solutions. Since the late 1990s, the strategy from NEC has been to introduce more and more students, colleagues, and other collaborators to FT, to produce and publish the best research using the approach, and to participate in the meetings and other initiatives from the FTA, with the authors of the present chapter serving as, respectively, president and executive secretary of the association for the 2012–2013 term, having organized the fourteenth International FTA Conference in Brazil.

Regardless of everything, it is worth observing that the adoption of FT is steadily increasing, with the mean number of publications per year found on Google Scholar mentioning "Facet Theory" going from 2.2 for the 1954–1959 period to 4.7 in 1960–1969, 17.4 in 1970–1979, 39.6 in 1980–1989, 60.1 in 1990–1999, 113.0 in 2000–2009, and 156.3 in 2010–2017. This suggests the existence of a strong growth trend.

The Treatment of Uncertainty

The position of each variable in a SSA diagram is assigned through calculations performed on the values present in the distance matrix. When one is dealing with data analysis, the distance values on the matrix are statistical estimations based on a finite sample of empirical measurements. This means that these estimates must have a degree of uncertainty originating from errors in sampling and measurement, as well as randomness.

As mentioned before, FT has many means to measure the distortion produced by condensing n variables into p dimensions when $p < n$, i.e., when one has numerous variables and wants to express their relational structure within a space with just a few dimensions. Such a fit can be assessed for the SSA configuration as a whole through the indexes of Alienation and Stress, as well as by using Permutation Tests on the distance matrix. One can also analyze the effect of individual variables through Stress-per-point calculations. Procrustes transformations can help make the final configuration more similar to the relationships that were initially measured. However, none of these things measures the uncertainty of the estimates of the values in the distance matrix.

Resampling methods, such as Jackknifing and Bootstrapping, can help determine margins of error for the values in a distance matrix. However, this does not actually reflect just the inherent uncertainty of these values but rather produces estimates for the probability distributions based on arbitrarily chosen sample sizes and resampling functions that tend to introduce biases of their own (Afanador et al. 2014; Garrido et al. 2016). They can also produce large errors due to the problem of the data lacking adequate case numbers for some combinations of variables, something known as the "sparse data bias" (Greenland et al. 2016).

Also, there is currently no overall probability distribution that is calculated for the positions of the variables in a SSA or for a partitioning structure (i.e., a Mapping Sentence).

Traditionally, the issue of uncertainty has been dealt with by the community of FT users by a couple of informal practices. One of them is the deformation of the straight and elliptical lines that characterize the SSA partitions as an allowance for error or chance in the identification of a hypothesized structure. Another is to consider that, when just one or very few of the variables that one would assume to be inside a certain partition are actually located outside of it, this is not a significant violation of the presumed Mapping Sentence. These highly subjective ways of dealing with uncertainty leave much to be desired in terms of establishing the conditions and limits for their use, as well as the confidence one may have in the results (Souza et al. 2015).

We have developed a method for dealing with uncertainty that incorporates confidence error margins into the positions of each variable in a SSA when the associations are estimated by a coefficient of correlation (Pearson, Spearman, Tetrachoric, etc.). Essentially, the confidence interval for every correlation is used to establish a geometric region around each variable to represent the possible "true" locations given the uncertainty in the estimation. The result is an SSA where a polygonal convex hull is drawn around each variable representing the possible locations for a given confidence interval (Souza et al. 2016).

Figure 4 shows an example of the use of confidence intervals in a SSA for the self-evaluation of 10 leadership traits in a 0–4 Likert Scale for a sample of 784 Brazilian adults.

From the diagram on the left, one can conceive an enormous amount of possible partitions, each representing a different relational structure. Based on the diagram on the right, however, it is clear that certain pairs of variables have overlaps in their probable locations in the space (Pragmatism–Intelligence, Delegation–Appeasement, and Eloquence–Charisma), indicating that it is not very reliable to assume that there is a Mapping Sentence that classifies the variables in these pairs into different partitions. In fact, for Eloquence and Charisma the overlapping is so great that it is not unlikely that their actual positions might be the reverse of what is depicted in the diagram (Souza et al. 2016).

Future developments in the new approach introduced here involve the determination of methods to measure confidence intervals for distance metrics other than those based on correlation (Euclidean, Manhattan City-Block, etc.) and to geometrically delineate the areas of confidence in ways other than simply drawing polygons,
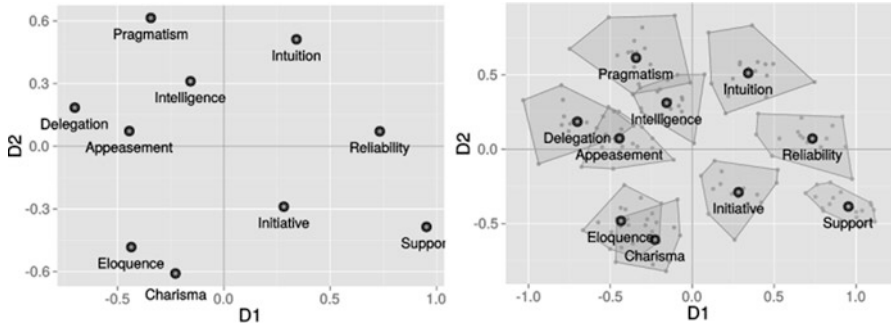
Fig. 4 Traditional SSA (left) versus one with 95% confidence intervals (right)

such as elliptical circumscription, spline, and kernel density estimation. In addition, one can use the areas of confidence to create indexes for the power of discrimination of SSA plots (e.g., the sum of the areas of intersection divided by the total sum of areas), the reliability of partition structures (the line integral of the segments of the partition lines that cross areas of confidence), best-fit structures (partition structure with the least overall uncertainty), and more. Far from closing the subject, the present work intends to open a new line of endeavor in the field.

Asymmetrical Relationships

The SSA algorithm assumes the existence of a reflexive property for the associations between the variables involved, meaning that the association between A and B is the same as the one between B and A. This is a mathematical *sine qua non* requirement. It is not a relevant restriction for a wide variety of phenomena, but there are some important contexts where the assumption simply does not hold. This is the case of the Sociogram.

A Sociogram is a graphic representation of the social links that exist or not between the various individuals within a group. The links can be of any specific type, such as communication, negotiation, identification, selection, like, dislike, command, obedience, and so forth. In the resulting diagram, the individuals are represented by geometric shapes (squares for males and circles for females), and the existence of a specific type of relationship between them through an arrow linking one to another. The strength or degree of the relationship can be represented through the thickness of the line. This is a visual expression of the structure of interpersonal relations in a group situation.

One is tempted to use SSA and Facet Theory in sociometric data considering each individual as a variable. This is because of the ability to produce a diagram that is far less cluttered than a traditional Sociogram, particularly for large groups, and due to the fact that a Mapping Sentence would represent the overall social structure of the group by defining subgroups and their interrelations. This would significantly

facilitate model building and theorizations regarding the psychological and socio-cultural forces governing human relationships.

A key element of the social links between two individuals, however, is that they can be either symmetrical or asymmetrical. Individual A may like individual B, while, at the same time, B may like A. This means that, in the Sociogram, there might be an arrow starting from A and going to B and another starting from B and going to A, indicating symmetry. On the other hand, A may like B but B may not like A back, a situation in which the Sociogram would show an arrow going from A to B but none going from B to A, indicating an asymmetry. This is true for any type of social relationship, which constitutes a major obstacle for the application of SSA and FT to sociometric data.

One solution to the problem is to use Unfolding Models or Coombs Scaling, where a non-symmetrical distance matrix can be folded so as to become symmetrical, though the method is somewhat complex, particularly regarding ordinal or non-metric data (Borg and Groenen 2005). The alternative proposed by our group is to split the sociometric data into two halves: one pertaining to the relationship of an individual towards others and another regarding the relationships of others towards an individual. Each of these halves represents a relationship that is symmetrical in the sense that A chooses B and B is chosen by A, i.e., sociometrically, it is the same "arrow." Thus, there is one SSA for how individuals relate to the other group members and another for how individuals are treated by the other group members.

The scientific implications of this new approach are that the structure of social interactions within a group should be seen from two perspectives, one being from the individual to the group and the other from the group to the individual. Of course, one tends to consider that such perspectives are interrelated, for how one relates to a group is likely to be influenced by how one is treated by that group and vice-versa, but that does not imply that the structure of the network of relationships is identical in both cases or driven by the same forces. Therefore, a consequence of this approach may very well be the creation of a new type of sociological theorization that uses two levels of analysis simultaneously.

Final Considerations

In this chapter, we have shown how Facet Theory provides an outstanding framework for structuring of scrutinized relationships and provides investigators with a powerful tool for analysis and interpretation of empirical data. Consequently, it has obvious repercussions for academia, as it can be used as a basis for theory construction or as a framework for assessing theory-based predictions about psychological behaviors. It also allows for both broader and deeper ways of understanding complex phenomena in any context, but especially human and social sciences. Nevertheless, it also impacts psychological counselling, organizational management, creation and implementation of public policies, education, and many other so-called "practical activities." As famously stated by Kurt Lewin, "there is nothing

so practical as a good theory," meaning that, to be effective, one's actions must be guided by a knowledge of how things work. Good theories are, by definition, of practical value, otherwise, they are simply not good.

Our group has made some relevant contributions through the use of Facet Theory by modelling human and social phenomena in various contexts, as well as creating and validating psychometric instruments. We also have helped to further FT itself by improving its foundations and expanding its scope of application. Most importantly, we have promoted in Brazil the dissemination of a powerful and ever-evolving approach for the integration of theorization and empirical investigation.

It would be desirable to have Facet Theory become a widespread form of scientific thinking, mainstream research practice, and a default approach to data analysis and interpretation. This would not only improve the production of knowledge both in academia and in applied settings but would also create an environment and a culture where FT would be continuously discussed and developed, yielding even more benefits for humanity. It is our sincere hope.

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Psychology, Mental Health, and Primary Care

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Abstract This chapter aims to present the main contributions coming from a professional and academic path, located in the interface between Psychology and Public Health, focused on the discussion and intervention in the field of Mental Health in Primary Care. In this sense, these contributions are evidenced around two axes: (1) Professional training, focusing on aspects of epistemological and methodological order; (2) Insertion and performance in Public Health Policies, particularly in the Psychosocial Care Network, in the scenario of deinstitutionalization and anti-asylum movement. It highlights in the first axis the problematic points of the formation and professional culture of the psychologists and the necessity of a paradigmatic change in line with the conceptual and operational marks placed by the Primary Attention in world-wide level that generated a new agenda in terms of doing and managing work in mental health. The second axis emphasizes the affective adhesions instituted and the mode of action of the various "psi" technologies of subjectivation, its regulatory and control mechanisms, which make it difficult to formulate an ethical–political commitment with the production of a universal health system, associated with the idea of citizenship, as well as the construction of participatory, inclusive, and collaborative action/intervention strategies toward the integrality and territoriality of mental health care.

Introduction

This chapter's aim is to present the main contributions coming from my professional and academic career, located in the interface between Psychology and Collective Health, focused on the discussion and intervention in the field of Mental Health in Primary Care. I bring some of these trajectory movements that built a singular architecture marked by the shared sense in becoming a psychologist, researcher and teacher, and self-production. In this sense, my professional and

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academic practices reflect a process of subjective and existential production, and they cannot be understood in any way outside this condition.

The theme of Mental Health in Primary Care is part of my professional trajectory in the Unified Health System/SUS, and as a lecturer in the Department of Psychology and the Graduate Program in Psychology of UFRN. Over the last few decades, I have been accumulating experience in this field. I have been dedicated to the research and bibliographical production across a national and international level on issues related to Psychiatric Reform in Brazil and the formation of the Psychosocial Attention Network/RAPS, especially in the context of Primary Care. I intend to present this journey, highlighting what I consider to be my most important scientific contributions, how they were created, what they add to the production of international scientific knowledge, their importance outside the academic world, as well as future projects that will arise from what has been constructed until the present moment.

Academic and Professional Trajectory: The Unusual Always Finds Us

I started the undergraduate course in Psychology at the Federal University of Pernambuco (UFPE) in 1982. By the end of 1986, when I finished the course, we lived in Brazil's effervescent re-democratization period, the struggle for direct elections, the questioning of the social and economic crisis, as well as of the immense poverty that plagued the country; it was a context that instigated heated discussions in the classrooms and mobilizations on the streets, which undeniably had an impact in my interest in Public Health and in the creation of a socially responsible role. In spite of the limitations in terms of the disciplines, research groups, and internship opportunities offered to the UFPE to Psychology students, I finished graduation strongly invested in following up this training. Thus, contrary to the trends of moving to the private field as a professional, as most of my colleagues did, I chose to go through another path that was still foggy and undefined.

I joined the UFPE Specialization Course in Clinical Psychology in 1987, as a professional training strategy, where I developed a study on the metamorphosis of hysterical symptoms, by articulating the different cultural contexts, fruit of a clear interest in the fields of Ethnopsychiatry, Transcultural Psychiatry, and Cultural Anthropology, which started throughout the graduation. However, mid-1987, life began to moving toward unimaginable changes that led to the fracture of oneself and to the beginning of new existential territories and elements, such as motherhood, marriage, and starting a career in an unknown context, thus, forcing me to overcome an old world in which everything seemed to be a given, predictable, and controllable.

Even without knowing what Nietzsche talks about in *Tragedy* (Nietzsche 1871), with the determination to start small experimental states in the self, to conquer of a vital axis of mobile reference that is capable of welcoming life in all its multiplicity

and diversity, operating in a wisdom anchored in the invisible, instead of only in already constituted forms, I unfold to invent sustentation spaces amid the abundance and plurality of emotions and uncertainties. In 1988, I was selected in the first public selection process for psychologists, which was promoted by the Municipal Health Foundation of Teresina, and, one year later, I was accepted in another public selection process, which was carried out by the State Department of Health, so that I could fill the position of a psychologist at the recently inaugurated Institute of Social Perinatology in Piauí. This institute is linked to the Maternity Dona Evangelina Rosa, a maternity reference in the state.

My professional life began at two public health institutions, one at the municipal level, with a primary health care unit and the other at the state level, whose mission was to provide multi-professional assistance to pregnant teenagers. This insertion is an important milestone in my professional orientation, which has impacted me in ways that still reverberate to this day. At first, however, it came to me as a sharp spear that disfigured the knowledge and operational model which were hegemonically put into practice by psychologists and were deeply rooted in me, sustaining mine so-called professional identity.

It is important to point out that these ruptures and the sacrifice of this identity, and the certainties laboriously conquered, have taken place over a number of years of work in a favorable context to changes in the field of public health. The country's return to democracy, joined by social movements such as the one for Sanitary and Psychiatric Reform, was decisive. The bases of these movements were founded in 1986's VIII National Conference of Health and the promulgation of the 1988 Federal Constitution, which instituted the Unified Health System (SUS) as a national public policy, and was made effective by Law 8.080, in 1990. There was also a tendency, specially in Latin American countries, to orientate health services from the point of view of the Primary Care paradigm, which had its conceptual landmarks in the Declaration of Alma-Ata (1978) and the Ottawa Charter (1986). Both shaped a dynamic field of forces which pushed the privatized care model, focused on doctors, hospitals and the production of procedures and consumption of inputs, and encouraged the reformulation the health sector.

In a Basic Health Unit located in a popular neighborhood in the capital of Teresina, my day-to-day work was marked by the accomplishment of psychotherapeutic consultations, fruits of spontaneous demand, or the referral of other professionals as gynecologists and pediatricians. I followed the traditional logic of medical specialties, with scheduling of appointments according to my convenience and availability, waiting list, time of service delimited according to the privatist logic, individualized monitoring, without any articulation with the territory and other professionals of the team.

Even occupying a peripheral position in the organization of the health unit, a situation understood at that moment as favorable to work, because it supported the logic of privacy and superiority of the modus operandi of Psychology; even facing the non-adherence of the users to the therapeutic proposals offered; even with the evident difficulty of establishing partnerships with the other devices in the unit's area of coverage, none of this was a problem.

First, because such elements were not considered prerequisites for health work. Second, because this model met the expectations of the health institution about a psychologist's work, of my training, and of what I considered to be "psychological performance." In addition, I worked with freedom and autonomy, despite having to make some concessions regarding what would ideally be the psychological setting. The evaluation of the process and the results of my work were: I am operating technically within the conceptual and technical tools learned and the failures observed are due to a lack of understanding of the function and modes of operation of Psychology, either by managers or by the user population. It made me sail in a sea of tranquility, secure, and with a sense of fulfilled duty.

The scope of my reflections at this point in my career did not go so far as to identify the psychological, individualizing, and objectifying reductionism, the universal, stable, and internalized subject, the liberal model of actuation, biomedical rationality, and the fundamentalisms present in my development. Nor did it recognize the historical character of people and collectivities, operating a denaturation of collective and individual life; the events of everyday life as the focus of analysis and intervention, deconstructing the tendency to privilege life in the margins of society and history, much less did it invest in building participatory, inclusive, and collaborative action/intervention strategies. My criticisms kept me from knowing myself, the instituted affective adherences, and the mode of action of the various "psi" technologies of subjectivation and their regulatory and control mechanisms.

It does not take much effort to understand the deterritorialization that has been applied in my life through the experiences related to the implantation of SUS and reorganization of the health care network, coping with the AIDS epidemic with actions of early detection, testing, and treatment in the state prison system, as well as the monitoring of high-risk cases among pregnant adolescents. The new social, cultural, political, and existential realities that I came across; the knowledge and skills that were required for me to act in a contextualized way and in a team; the need to establish links, take responsibility, and get involved with work; they were experiences that produced a series of powerful micro-assemblages that forced the decomposition of the organization plan in which I was structured. Thus, I came across the strength of positivist thinking, of belief in rational categories, of a-historical and neutral knowledge, of technicalism, with iatrogeny, ethnocentrism, and with the deep limits and imprisonment of Psychology as a field of knowledge and practices in articulation with public health. It made me profoundly bewildered. What to do with it? How to affirm another world, another politics, another life?

In that period, toward the end of 1991, it was time to start the engines toward a new adventure: to lean over myself, to question my own professional culture, to distrust the fundamentals that promised stability, security, and offered me a world with safety nets, a world without pain as Nietzsche (2006) said in his "Posthumous Fragments." The master was advertised as a power, a fertile area of problematization of practices, capable of offering knowledge that would broaden the scope of my reflection, because as Bedran (2003) says, the way to go through a problem can perpetuate its intractability. For me, at that moment, it was imperative to know the multitude of deceptions to which we are thrown, making us a herd, to escape the

institutional pacifications and to affirm loud and clear: I do not want to exist in bondage!

Postgraduate and Machinic Assemblies at University[1]

My arrival at Rio de Janeiro dates from the beginning of 1992, after being approved on the Master in Clinical Psychology program at Pontifical Catholic University. I returned to the topic of the specialization seeking to advance in terms of an anthropological and culturalist approach to mental health, discussing the supposed universality and validity of diagnostic categories of psychiatry.

In order to carry out this study, I cannot fail to mention the fundamental role played by some course teachers. First, Sérvulo Figueira, who presented to me the discussions on "Psychoanalytic Culture," that is characterized by the massive diffusion of "psi" discourses, psychologization and pathologization of everyday life, proliferation of therapeutic ideologies, unbridled consumption of psychotherapies, and hypervaluation of professionals " psi" in Brazil, a discussion anchored in authors of the field of Sociology and History such as Richard Sennett, Anthony Giddens, and Christopher Lasch, whose criticisms revolved around topics such as the emptying of public life, urban life, modernity, globalization, and the production of contemporary subjectivity marked by the explosion of a competitive individualism, constituting a narcissistic culture of pursuit of happiness through the intense value of intimacy, private life, personal development, and survival ethics in which social justice, community, and citizenship made no sense.

Second, I was profoundly affected by Professor Monique Augras, because with her intermediation I resumed contact with cultural anthropology, a meeting that led me to the Graduate Program in Social Anthropology at Federal University of Rio de Janeiro. There, I had access to the field of health anthropology with the work of Professor Luis Fernando Duarte, which deals with the experience of nervous disease, a category located between the individualistic contribution of the psi knowledge and the old physical–moral conceptions about person, body, and disease. Through the work of Gilberto Velho, I had contact with the worldviews and lifestyles of the middle classes, especially in relation to deviations and transgressions. I immersed myself in authors, such as Luc Boltanki, George Devereux, François Laplantine, Louis Dumont, to problematize the body–class–social–psychiatric nosography relationship. It was with this knowledge that I developed my research the dissertation entitled "Hysteria and Representation of Women: A Study on the Historical Construction of a Clinical Category," the results of which were published in scientific journals.

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[1] Concept used by Deleuze and Guattari (2010). The assemblage should be understood as a complex arrangement of heterogenic elements, whether they are social, cultural, biological, technical, that combine in a productive and functional way, never as a whole but as multiplicity.

In the period of writing my Master's, I also attended the classes of the Post-Graduation Program in Public Health of the Institute of Social Medicine of the State University of Rio de Janeiro/UERJ, especially those that focused on the formulation, implementation, and evaluation of public policies. I have been in direct contact with many of the formulators of the Sanitary Reform, with the most up-to-date discussions on health and social protection systems, as well as on the multi-determination of the health-disease process, epidemiological profile, health needs and demands pattern, inequalities in Brazil, and the State's intervention patterns. Meeting researchers, such as Madel Luz, Jane Russo, Benilton Bezerra Júnior, Jurandir Freire Costa, Joel Birman, and Kenneth Camargo Jr., was absolutely enriching and helped qualify my discussion on the field of Collective Health, by learning more closely about the attempt to create health services for the public sector in a decentralized, regionalized, and hierarchical way.

As part of these changes, Primary Care was gaining more prominence with the first teams of Community Health Agents/ACS and later, the Family Health Program/PSF. Being completely immersed in the struggle for quality public health systems, including with ABRASCO (Brazilian Association of Collective Health), involved with reflecting on professional practices in this context, dedicated to problematizing the contribution of Psychology to the field of collective health, there was no alternative except to propose a project that investigated the way of insertion, practices, and the working context of the psychologist in Primary Care. This was the proposal presented to the Institute of Psychiatry (IPUB) of the Federal University of Rio de Janeiro/UFRJ.

Doctorate in Psychiatry and Mental Health

The arrival at UFRJ in the beginning of 1995 inaugurates another stage of my academic-professional career. Unlike PUC and UERJ, the Institute of Psychiatry had another configuration that did not look like the previously attended academic spaces. It was an heirloom of the old hospice incorporated to UFRJ in the 1940s with the purpose of developing teaching, research, extension, and assistance activities in the field of Psychiatry and Mental Health, currently with SUS funding. It had wards and clinics architecturally remodeled to fit the new guidelines of mental health policy and opening up dependencies such as assisted living. It was a place where teachers, undergraduate and graduate students, residents, technical-administrative staff, users, and family members circulated daily in their different spaces. It was not uncommon to observe the presence of users and/or residents in classrooms, the library, the canteen, the gardens, as well as an intense traffic between the IPUB and the Phillippe Pinel Institute.

During this period, my most direct and intense encounter was with the Psychiatric Reform and the Antimanicomial Struggle. Circulating daily in the spaces of the IPUB provided me with not only the acquisition of knowledge about the national mental health policy and its proposals from the point of view of care, epistemology,

and law, but also especially the direct contact with the concreteness of the life of users, family, and technicians. It was when the insane asylums ceased to be a mere concept or theoretical formulation and gained materiality, form, color, and smell.

The Brazilian Psychiatric Reform was born in a context of strong criticism of the private-curative care medical model, oriented in terms of profitability and excluding large portions of the population that dominated the country. Until the 1980s, the hospital-centered model (asylums, colonies, and acute hospitals) was predominant, and care was provided by private hospitals that had a large financier in the State, characterizing a situation of commodification of madness (Delgado 1992). A number of criticisms regarding the asylum model and proposals for dehospitalization of medical-psychiatric care were formulated due to the detrimental effects of prolonged stay, questioning its technical efficacy and ethical legitimacy (Lougon 1993).

Thus, the political and social project of this movement, inspired by the experience of countries such as Spain, Portugal and Italy, sought the development of integrated and coordinated services that would meet the needs of people in mental suffering. It aimed to implement processes of psychosocial rehabilitation and labor integration, residential care and support to families. The purpose of these strategies was to avoid processes of deterioration of the capacities and social functioning of people with mental disorders, which are intensified in situations of abandonment and exclusion. In addition, to foment possibilities of autonomy and of participation in the community life.

Such a perspective implied in the implementation of a new logic of care for people with mental disorders and in overcoming the asylum mode that is deeply rooted in our society, as well as in the psychiatric hospital as the main reference in mental health care. In this sense, we opted for the diversification and expansion of the network of extra-hospital services, but mainly, in an attempt to create care in the user's territory, near his home, in order to guarantee continuity of care. The investment in actions in Primary Care with the Family Health Strategy/ESF and Community Health Agents Program/PACS, actions of matrix-based strategies and home care, support to the teams of the ESF via the Nucleus of Support to the Family Health/NASF are examples of such.

My doctoral study on the psychologist's performance in the primary health care context entered this context of criticism. It was an attempt to problematize the fact that psychologists obtain results that are not intended, due to structural and organizational factors of the services; or by the abandonment of the treatments by the users; or because of the difficulty of adapting to the new demands of social responsibility faced by SUS; or by the fact that its classic model of performance—individual psychotherapy—was inefficient in relation to the complexity of the problems faced in the field of mental health. This was disturbing and undermined the belief, often widespread among psychologists, that our work is essentially valid regardless of its results, pointing to the increasingly urgent need to enhance Psychology services and improve our knowledge of their effectiveness and effectiveness.

The thesis pointed out some aspects of the psychologist's training process, their professional practice, and social mandate, which are determinants of a professional culture, induces many of the problems that the psychologist faces up to the present

day in terms of their models in the field of public health care, especially at the Primary Care level. Professional Culture corresponds to the set of ideas, worldview, and professional lifestyle adopted by a specific professional group, which determines the adhesion and preference for certain models of performance, by certain theoretical references, as well as by certain standards, codes, and rules of relationship between peers and the lay community, and define their forms of organization and representation in society. In this sense, I highlighted:

(a) The predominance of intrapsychic focuses centered on an abstract, a-historical, and universal individual. It follows from this the production of universalist narratives, specialized knowledge, and specific forms of problematization of life and daily life.

(b) The overvaluation of the classic model of clinical–liberal–privatist, individual, and healing focused, with a reduced power of intervention and low social impact, a model that makes it impossible to express differences and deviations from the standardization, massification, and serialization of modes of life and subjective expression.

(c) Fragmented training, with a curriculum lacking specific knowledge to perform in the field of public health. In addition, lack of integration of the courses with the daily reality of the services, teachers with no knowledge of the public health problems of the country, disengaged with conducting research, supervised internships in the area, and with the very sustainability of public policy as a collective project.

(d) Our classes have fostered the depoliticization of the psychologist and the ideological function of his work, widening the distance between technical, daily, and social reality, starting from the investment in a standard of professional action focused on the regulation of life and bodies and to the prescribing of behavior patterns and norms of behavior.

Based on this perception, I proposed another profile of action for the psychologist in the context of primary health care based on the challenges posed by SUS in terms of their abilities and responsibilities. Mental health care linked to Primary Care is considered the key to the change of hospital-centered psychiatric care. Therefore, it is a priority in the sense of producing integral, continuous, and quality care. On a daily basis, several demands on mental health are identified in this context. These situations require immediate interventions, insofar as they can avoid the use of more complex care resources unnecessarily.

These are problems associated with the harmful use of alcohol and other drugs, psychiatric hospital graduates, inappropriate use of benzodiazepines, serious mental disorders, and situations resulting from violence and social exclusion. The identification and follow-up of these situations by psychologists along with the primary care teams can subsidize actions of early intervention, rational use of medications, continuity of care, and prevention of improper admissions in psychiatric hospitals, and establishment and maintenance of support systems in a communitarian level.

I worked with the psychologist's perspective as an "operator," a concept that indicates the ability to reconstruct users' life history beyond diagnosis and symp-

tom, to be an active worker in the process of reinventing life (Rotelli et al. 1990). For this, it is essential to create another professional culture, new skills, and psychosocial skills, a process that first involves reinventing oneself. In this sense, the profile of the psychologist to work in the field of Primary Care in Mental Health would have the following characteristics (Dimenstein and Macedo 2012):

(a) Be able to observe the context and know the territory of the area covered by the health unit. The variations in health, the spatial diffusion patterns of the diseases, as well as the access and form of use of the health services are elements directly associated with the characteristics of the space. The health profiles of the populations depend largely on the territory in which they live, that is, health is influenced by the attributes of the context, arising from their physical, social, economic, cultural, and historical environment (Nogueira and Remoaldo 2012). In addition to that, they are effects of the conditionalities of gender, race, and ethnicity.

(b) To know the socio-political aspects in terms of organized groups, of leaderships, of significant events for the community, participating in actions of identification and confrontation of the social problems of greater local expression, with emphasis on community development and intersectoral action.

(c) Detect the main problems and health needs of the community based on their epidemiological profile, access to services, medicines and health programs and/or social benefits, integrative practices (use of herbal medicines, mourners, practice of physical activities), as well as the presence of social support.

(d) Carry out programmatic or free form consultations, inside and outside the physical space of the health unit and at home visits, as well as other care strategies based on an in-depth understanding of the psychosocial phenomena that involve the health-illness-care process.

(e) Carry out a local and situational diagnosis based on the negotiation with the professionals of the health service and with the community, in order to establish a consensus on the priority problems and then proceed with the choice of participatory intervention strategies.

(f) To establish trust and bond with families and communities, to know closely the problems, difficulties, histories and life projects, social and health needs, as well as the potentialities of families, for the planning of actions, and a care plan continued and singled out.

(g) Use several tools for the development of the work, among which, the diagnostic interview, case study, singular therapeutic project/PTS, individual and collective reception, matrix support, therapeutic follow-up, active search/early detection in mental health, home visits, and the use of tools such as the Genogram, Ecomap, and institutional support to health teams.

This profile is marked by a more active positioning of the psychologist in the operationalization of a territorial approach. Primary health care therefore opened a new agenda in terms of working in health, the ways of being a worker in the SUS, the skills required, ethical–political commitment to the production of a universal and resolute health system, associated with the idea of citizenship. It began to

demand commitment, sensitivity, negotiation skills and dealing with uncertainties, as well as with the complex problems and high psychosocial vulnerability that marks the reality of most users of these services. All of this is deeply destabilizing and challenging for the teams, in particular, for the psychologist, since they are equipped with few critical tools, unaware of the organizational and institutional aspects of public health, and trained for a super-specialized practice, and as a result of training that does not meet the requirements by the SUS, the psychologist arrives at the health network with little knowledge of the enormous clinical–institutional challenges placed before them.

In this way, it is a new professional place that psychologists have been experiencing, which is characterized by the fact that the quality of work is not restricted to the technical aspects, but it mainly concerns its ethical, political, and social effects. Finding ways to inhabit this existential and technical territory that is in constant processuality, to operate cuts, in what has prevented the creation and expansion of the power to act on oneself and on the world, the aspects required by the SUS proposal, has been the challenge faced by the category.

It is therefore a high-cost enterprise since "it is very easy to overthrow a tyrant, because it is difficult to destroy the cause of tyranny" (Chauí 2011, p. 171). It involves technical and organizational improvement, but especially subjective, in that it involves interim and interminable shifts in the ways of looking at life and work, and through which new problems and sense slips are generated incessantly. That is, the differential of work in Primary Care in Mental Health lies in this constant creation of self, learning in action and in contact with the diversity of problems, and ways of living life.

This proposal, previously unknown in the field of Brazilian Psychology, has reverberated and produced effects in the national scenario of Psychology training, in the technical qualification of professionals linked to the health care network, as well as in the formulation of insertion policies and the performance of the psychologist in primary health care. It has advanced innumerable investigations at the national level, in the production of scientific knowledge through master's and doctorate research and, especially, helped to qualify the practices of psychologists and other professional categories in the field of public policies in regard to work management and continuing education in health. It has also served as a guide to generate more consistent criteria and indicators of good practices of Psychology in Primary Care.

At the international level, it is in line with propositions that comprise mental health in a multidimensional perspective, considering that it has effects of the place and that the contexts of life can function as buffers of vulnerability or triggers of psychic suffering. It is anchored in the paradigm of Social Determination of Health that starts from the history and particularities of the territories, from situational analysis of the factors that determine inequities in health and the needs of a population for the contextualization of the health-disease-care process.

However, it comes with a singular contribution, the rupture with scientific rationality guided by the idea of a universal epistemic subject, who pursues truths, neutrality, standardization, objectification, and generalization. In addition, it warns of

the deep rootedness of Psychology to the modernity project focused on the regulation of existence and the production, increasingly strong but unspoken, of mechanisms of classification, control, pathologization, and medicalization, that is, of "objective and neutral" policies aimed at adapting individuals to social norms, taken as natural and a-historical. Finally, it reveals the inseparability between the political and subjective planes, our implication with the reproduction of normative logics, serving, in this way, scientific support of the dominant ideologies, inequalities, and social exclusion.

The Life of Teacher and Researcher: The Production of Interferences Inside and Outside the Academic World and Future Plans

Since my entry as a lecturer at the Federal University of Rio Grande do Norte (UFRN) in 1998, in the Department and Postgraduate Program in Psychology, such discussions have been increased from teaching, research, and extension activities in partnership with students scientific initiation, master's and doctorate, as well as with national teachers and from countries such as Spain, Italy, Portugal, and Colombia. I also highlight in this trajectory the constitution of the Research Group linked to the National Council for Scientific and Technological Development (CNPq) directory "Modes of subjectivation, public policies and vulnerability contexts," whose purpose is to be a "development incubator" (Ceccim 2011, p. 15) working in the university interface, health services, and community. There is an ethical–political commitment to take the health network and the communities as scenarios of inspiration and experiential field to train professionals oriented by a critical perspective and problematizing reality, affirming the social responsibility of the university.

This working group has been producing articles and books, many of which are in partnership with health network workers and researchers from other national and international higher education institutions. Additionally, the development of didactic or instructional material financed by the Ministry of Health, as well as the partnership with the Municipal and State Health Departments of Rio Grande do Norte, through Mental Health Coordination and Basic Health Care Departments (Health Strategy Family and NASF), aimed at strengthening the teaching–service–community triangulation and the creation of an extra mental health care network focused on Primary Care.

From the past decades, when the discussion about public health psychologists has been triggered, it is possible to observe the movements of the category around the construction of a new social place for Psychology and for the expansion of its presence in the field of public policies. This has been done under the strong argumentation of our inherent "vocation to promote well-being and increase the quality of life of individuals, collectives and institutions" (Conselho Federal de Psicologia

2006, p. 4). Therefore, there is a significant remodeling process currently under way in the category.

Nevertheless, this process has also generated one of the most effective mechanisms for qualifying lifestyles and defining technologies for correcting mismatches and deviations identified in social gears in the name of health promotion. It is a strategy of governmentality (Foucault 1989) that articulates a form of knowledge, technical procedures, and a target population, which aims to define the way in which individuals constitute their life forms and know themselves, by "allowing to propagate by the capillarity of the social fabric a certain rationality" (Hillesbeim et al. 2010, p. 252). The psychologist is one of the fundamental elements of this plot that involves the marginal populations, economically disadvantaged, deviant, maladjusted, "vulnerable," or "at risk." As Bernardes (2010, p. 214) points out, "Psychology offers public health the interiority of the public subject and the technical rationality for its government."

Because of this, I have been immersing myself in problematizations about contemporary lifestyles and their refutations in Psychology. In the face of the profound social, economic, political, and cultural transformations that we witness, knowing the impact of such transformations on the processes of subjectivation and performance of the category seems to me fundamental. Therefore, the interest of this line of discussion is focused on the regulation of existence, on the subjective patterns produced to the taste of disciplinary and biopolitical technologies in the contemporaneity and their effects on the enhancement or not of more equanimous and solidary policies, as is the case of SUS.

Disciplinary technologies are instruments aimed at subjecting the subject to a system of control and vigilance of their actions and behaviors. They are "methods that allow the meticulous control of the operations of the body, which carry out the constant subjection of its forces and impose upon them a relation of docility-utility" (Foucault 1999, p. 118). Foucault (1987) understands biopower as the power that influences life and biopolitics as the techniques and strategies, by which the state regulates the life of the population in order to qualify forms of life that enhance the strength of the state itself. From the control over individual bodies, we control various dimensions of life. These are mechanisms for managing health, birth, hygiene, food, etc.

In this scenario, it is evident that the wide presence of the psychologist in health services and teams throughout the country did not necessarily imply a change in the logic of production of health knowledge and acts by category, as well as in the daily actions of other professionals. In this regard, I draw attention to the fact that the psychologist is one of the actors involved in the varied and contradictory block of forces that makes up the territory of public health, which is guided by biological and mechanized conceptions of life, by a prescriptive character in terms of modes of existence, by a tendency to individualized work, anchored in verticalized relations and not focused on the user. Their interventions varied little, limited to complaints and aimed at the remission of symptoms, as well as strategies of subjectivation guided by the principles of discipline, normalization, and crystallization of identity references. This logic is the one that conforms the hegemonic model of the actions

of the psychologist in SUS from the technical-assistance and ethico-political point of view. However, it is not enough to recognize that the psychologist works alone, that he has little knowledge of the territory where he works, that he believes in the neutrality of knowledge and practices. It is not only a matter of making adjustments in academic and professional training and expanding the range of disciplines and contents related to SUS and to the Psychiatric and Sanitary Reform in our courses. Neither instrumentalize the professional with increasingly sophisticated technologies, or simply open more jobs in the health care network, as is commonly advocated.

Our challenge, therefore, is not limited to making certain adjustments in academic and professional education, to expanding the range of disciplines and contents related to SUS and the Psychiatric and Sanitary Reform in our courses, nor to instrumentalizing the professional with increasingly sophisticated technologies, nor to opening more and more jobs in the care network, as it is commonly advocated. Huning and Guareschi (2009, p. 179) accurately say that:

> Reinventing psi practices is not necessarily about inventing other methods of intervention but about introducing other ways of questioning and other questions, including what we want and what the implications of our practice are, what we say as truths about what we take as our own subject-objects.

So what is the point of making adjustments in forms while keeping the working logic intact, the moralistic and metaphysical background in Psychology that holds it captive from the perspective of the flock, fetishes, universalism, and normality, as put in the Nietzschean criticism of science? (Giacóia 2001; Mosé 2005; Nascimento 2006). For Nietzsche, Psychology was instituted from the overvaluation of consciousness, reason, communicable, devaluing the sensitive, the affections, the body, the movement, the transitory, and the historical. He invested in the construction of a specific type of man, "who believes in the identity, in the truth of his being, and not in the metaphorical and inventive capacity of his provisionality" (Mosé 2005, p. 83). Thus, in order to face the tensions opened by the professional culture of psychologists and the problems that emerge in the context of a continuous reordering of practices, powers, and subjectivities, such as the SUS, Psychology, and psychologists must operate a transvaluation of values, as proposed by the German philosopher.

To transcend values is to make Psychology an art of interpretation, which, with its fictional and aesthetic character, is capable of analyzing one's culture, of suspecting the value and of its own foundations, as well as of proposing a new policy of human relations with the life. This seems to be the great challenge facing our field of knowledge in the contemporary world. In this sense, to reach all beliefs in the conceptions of identity, subject, interiority, human nature, health, and well-being, illness—which are powerful unconscious forces rooted in the psychologist's heart and considered by Nietzsche as the most difficult affective resistances to overcome—becomes the ethical–political project of a Psychology alert to the effects of its practices and knowledge.

From this perspective, it is evident the need to break repetition of daily habits and gestures, to escape from dogmatism, from morality of customs, from "technological

prejudice that prevents psychologists from developing actions that go beyond the repertoire advocated by the formation itself," such as pointed out by Ferreira Neto (2011, p. 104), by producing even subtle exercises of indignation at practices that make us specialists recognized and sought incessantly in these times, when everything became pathologized in the empire of perfect health and life without pain and suffering.

Basaglia (1979, 1985), on his part, insisted that we cannot restrict ourselves to technical problems when it comes to producing a distinct social reality; or what Rotelli (1992) called a "human justice project." It is necessary to invest in the non-fulfillment of the social mandate that makes us operators of exclusion and violence, fomenting the intimidation of life (Coimbra 2011), perfecting social policies that perpetuate inequalities of all kinds, reproducers of social and institutional relations that we ironically want to transform.

The Basagliano challenge seems increasingly present and alive in contemporaneity, but equally retracted in the logic of technical perfectionism, sterile, and limited in its political reach. The directions of the "institutional revolution" proposed by the Italian psychiatrist, dissipate in times of biopolitics, whose subtlety is to interfere in our collective capacity to understand the modalities of relation with the various institutions that cross us, our implications, and their effects on daily life.

Nowadays, the way of managing the professions under the sign of autonomy and technical excellence has produced, among other things, the objectification of our action. This can be seen in the protocol of everyday life, with the proliferation of guidelines, procedures, and tools for normalizing care practices, that are widely valued by management and desired by professionals as an indication of reliability and quality, when they often reflect only a sterile perfectionism with a strong impact in terms of the relations of forces between technicians and users by the invisibility and naturalization of the processes of capture put in course.

In the field of Psychosocial Rehabilitation, for example, the current trend in several European countries, like in England, Italy, and Portugal, as well as in Spain, is to attribute its technical "dignity," by conceiving it as a measurable and reproducible methodological procedure. Increasingly, psychosocial rehabilitation proposals associated with evidence-based practices, that are a psychologized recovery perspective, attuned to the individualistic intimacy typical of contemporary societies, of empowerment limited to the individual sphere, to the less articulated to collective life, to the transformation of daily micro-fascisms, and the production of new forms of sociability.

Rehabilitation as a biopolitical strategy that has the function of ordering the daily life of the mentally ill and their families, of managing everything that escapes normality and morally acceptable through the imposition of discipline and surveillance practices within health services and social relations aimed at producing the well-behaved, obedient, and hard-working "mental patient." Improvement is made through the conversion of the old asylums into modern hospital structures, through perfectly logical and aseptic theories, through the belief in the neutrality, and the intrinsic effectiveness of the techniques, whether it is individual or group, in individualized care plans that users do not participate in its elaboration, and finally, in

practices that keep the specialist's place preserved and his unguarded tutelary dimension.

This means that the argument of social commitment to the needs and demands of society, which sustains the idea of the indispensability of Psychology in the SUS, has not been materialized into practices and processes that are effectively health producers, in the sense of impacting the concrete conditions of life, in access to a resilient social sanitary protection network, in culturally sensitive and territorialized care modalities. To transcend by promoting ruptures in the "institution-chains," that cross us daily and which deny ourselves to subjective mutations, which objectify the unconditioned essences and truths, which stagnate the intensities that force the deconstruction of the traditional modes of existence, has not been the tone of our work (Andrade and Lavrador 2007).

Fortunately, this pattern of functioning of psychologists in SUS has been the subject of harsh criticism, which I add and intend to contribute academically. There is an important tension that goes beyond the scope of Psychology, and it is composed of the various knowledges that constitute Collective Health, understood as a field of knowledge and practices around the "health" object (Paim and Almeida Filho 2000), which has questioned the value of the contribution of Psychology to the political project of the SUS and demanded of us the confrontation of the banalization of the psi knowledge, of the theoretical and technical insufficiency of our formation for a complex analysis and intervention, amplified in reality, which required the revision of the hegemonic discourses on health and quality of life, as well as on the tendency to psychologize and pathologize life with medicalization practices that are generalized to every social body.

I believe that these tensions have helped in the formulation of new problems and enabled the emergence of a political actor, which takes part in an ethical plan, that is, that provokes analyzes of what is put into operation, including the public policies themselves and the ongoing care models, who dares to jump from saturated records to a permanent reconfiguration of themselves and interprofessional relations, which recognizes that health care is not restricted to technical competencies and tasks, but it extends to a clear displacement of normative horizons from the projects of happiness of each person, which is what moves them and identifies them in their concrete existence (Ayres 2001).

The process of transvaluing values as an essential operation for Psychology as a science and profession is gradually being built day by day, in meetings, in the clashes, in the operationalization of the intentionalities of not intending totalizing, hypertrophied, moralizing. It is an arduous task because, as Fuganti (2008) says, it is not only a matter of denying the ways of producing meaning and value that underlie our system of judgment, but of confronting the "gigantic mind-set and reactive organization of bodies installed within capitalism"(p. 110), which makes us accomplices of this enclosure, which gives us the taste for uniformity, which seduces us and protects us.

For this gigantic enterprise, philosophers, such as, Baruch Spinoza, Friedrich Nietzsche, Gilles Deleuze, Félix Guattari, Michel Foucault, are privileged interlocutors, yet they are references that are still timidly articulated to the actions of

Psychology in the field of mental health. Some principles enclose these authors, which I point out in a simplified way in this work (Dimenstein 2014):

a. They sustain the recognition of the provisional, finite, and unpredictable ways of life that are being generated and the arbitrariness of the senses produced in daily life.
b. They understand that these instituted ways of life and work are contingent, and they can be transformed from their continuous problematization, from the recognition of the game of forces in action at a given moment and context.
c. They point out the impossibility of absolute catches, even in the total institutions, such as in the asylum, and the existence of lines of fracture and vulnerability, that operate resistances and decomposition in what is chronified, even in a provisional way. That is, life escapes continuously.
d. They indicate that resistances never occur in a decontextualized way, but they articulate elements that are present in the culture and in a specific existential universe (Ferreira Neto and Kind 2011), being the resistances, therefore, collective, and singular.
e. They widen our possibilities to intervene, to provoke unrest, to mobilize forces in the direction of overcoming our moral limits, to be inventive in the ways of working and in the choice of tactics and strategies aimed at producing new interpretations of life, by taking us out of the regime of fatalism and immobility.
f. They engage in unique and creative modes of existence that do not need to be rejected for the simple fact that they escape the simplification of unique and homogeneous forms and they throw us into the regime of abundance, exuberance, and plurality, which is profoundly destabilizing.
g. They recognize that, to endure the estrangement caused by the loss of contours, territories, identity, when new combinations of forces articulate and take us out of the known plane, is difficult. Living life without the filter of form, order, knowledge, without the illusion of duration, and permanence seems unbearable, and it is against this mutability that we produce fictions as truth, belief in certain knowledge, values, the firm ground against instability.

All these thinkers invest in an ethic of appreciation for life in its maximum possibilities of expansion, life that is always perishable, renewable, and varied. According to Nardi and Silva (2009, p. 143), "ethics can be understood as the problematization of the modes of existence. This problematization refers both to relationships with others and to relationships with oneself."

They therefore invest in the arts of existence from the lucid perception of what favors it or not, where man becomes a creator and caretaker of himself and of others, a potential source of more solidary ways of coexistence by the recognition of the multiplicity of forces and resources, by appreciation of the different ways of desiring and valuing. According to Foucault, "he who takes proper care of himself is therefore able to conduct himself adequately in relation to others and to others" (2004, p. 271).

This care is related to the way of relating to oneself, that is, to an ethics that implies a work of knowing that positions us critically on our instituted ways of feel-

ing and acting, allowing us to escape the desires of subjugation, to take the other as the simple object of our actions, to exert on it a tyrannical power, in short, to break a relation with itself of subjection and slavery. Therefore, it is an ethic of struggle against the desire for serfdom, oppressive forms of existence, to live in the regime of powerlessness, sadness, and resentment.

How does this perspective reverberate in the fields of Mental and Collective Health? By what lines is it configured as a powerful tool to produce interference in our work? First, this ethical dimension calls us to feel health as an open, unfinished field of daily and permanent negotiation. Nietzschean "Great Health" is a fundamental concept in this perspective, since it refers to "a life in which one experiences oneself boldly, overcoming and dilating one's limits and constantly putting oneself at risk" (Ferraz 2011, p. 92), a state that must be incessantly acquired, by opposing the mere preservation of life. Pelbart (1989, p. 213) summarizes it like a philosophical perspective, as follows:

> Health is not only the ability to avoid catastrophes, but also to create new norms at the risk of one's life. There is the vital exuberance, creativity, and generosity that irretrievably distances us from the notion of health as stability. The normal is one that feels that it is more than normal, which can risk because it has the plasticity necessary to do it. It is part of health, says Canguilhem, to abuse health. It is the patient, not the healthy, that saves, because it tends to reduce their norms and stabilize their living conditions.

Second, it denounces our difficulty to perceive health, as a field of daily and permanent negotiation, and that our fixation with watertight conceptions of health associated with balance, normality, adaptation, and stereotyped models of quality of life, whose meaning is not in to the expansion of life, but in its impoverishment, has repercussions on the reception practices, that is, on the micropolitics of daily care intervention.

These bounds make us impenetrable to the unconditional acceptance of life, of differences. Operationally, it indicates that to produce ruptures in the culture of attention to the users, in the hegemonic intervention modalities, as well as to change the modes of organization and management of the services, demands changes in the processes of subjectivation; therefore, it implies to produce complicity between workers and users.

Another important contribution is the questioning of the dichotomies between the ideas of individual/society, biological/social, nature/culture, which are the basis of the various disciplinary fields that deal with the subject of health. These authors will highlight the production of self (subject) and the other (collective), therefore, of singularities and alterities that are collectively constituted.

In the field of Primary Care in Mental Health, the contribution of this perspective has been very valuable. It has given visibility to a set of forces that operate to reduce the experience of madness to a "pathology" or "disease." From another epistemological and ontological matrix, the thinkers mentioned help us understand that, through the analysis of discourses, practices, and institutions, we can both identify the mechanisms that seek to control, protect, normalize, and medicalize madness, as well as invent new knowledge and devices toward the deinstitutionalization of the asylum culture, which goes far beyond the restricted scope of profes-

sional services and practices and concerns the everyday living modes of life, which compose the hegemonic forms of sociability and conviviality with the difference in contemporaneity.

Nevertheless, the most challenging aspect, as indicated above, is not only to problematize the notions and practices and to propose new approaches to the psychologist's performance, but rather, to be willing to experiment and to make these concepts gain a practical sense, by means of moving away from the inclination to freezing and becoming a "tensioning and tensioned surface, sized to host new launching platforms of life" (Fuganti 2008, p. 17). To disinvest from an idealized practice, which is the bearer of death sentences, because it is embedded in transcendent and universalizing references, it has been the effort undertaken by several professionals.

Even incipient, these movements observed among psychologists have been making a difference in the field of collective health, especially in Primary Care and Mental Health. It is possible to identify a certain contagion, something infamous penetrating daily, potent interferences in the logic that crosses the knowledge and practices that make up the health that insists on the perpetuation of the determination of the man already given (Giacóia Jr 1999).

In this sense, the research methodologies that help us in the work of daily analysis and micro-fascism that operate in us (Fonseca et al. 2008), in addition to its instrumental dimension, reflect theoretical choices, ethical positions and a worldview. These are paths that demand of the researcher a constant effort of denaturation of the objects and of the phenomena researched. In addition to much attention to the way problems are recognized, approached and legitimized in a field of knowledge.

We adopted the qualitative aspects of research guided by Foucault's archegenealogy, by the French Institutional Analysis and the Cartographic method proposed by Dimenstein et al. (2015) and Gomes and Dimenstein (2014). This perspective comes in direct confrontation with those based on the positivist paradigm and dualist ontologies based on the human/nonhuman separation, individual/society, nature/culture, mind/body, secular/sacred, reason/madness, subjectivity/objectivity, which are strongly present in the field of Psychology.

As a horizon and plans for the future, I think of continuing to cultivate vigorously and relentlessly this disposition to "metamorphosing modulations" (Rolnik 1989), by creating occasions, changing circumstances, overcoming desires, plotting the lapidation of life, in order not to cloister myself in a professional or teaching identity. Since 2012, a new research front focused on the articulation between modes of subjectivation, social inequalities, and mental health of rural and forest populations has been increased in the research group that I coordinate. The contribution of Psychology is still very timid in the context of the ruralities. In this sense, we have opened several research fronts and we have already published some results in recent years (Dimenstein et al. 2016; Leite and Dimenstein 2013).

Currently, Primary Care teams from all over the country need to reach the territories of agrarian reform settlements, quilombola communities, riverine populations, among other scenarios provided by the National Policy on Integral Health of

the Populations of the Field and the Forest (PNSIPCF 2011). They are confronted with a scenario where poverty, inequality, and exclusion have broad visibility, where the denial of basic rights is a commonplace. This violation, however, is invisible; it produces violence, abuse, loss of years of life, loss of social and family ties, lack of access to basic services, loss of social participation capacity, etc.

However, as far as the National Mental Health Policy is concerned, there is no established directive of care and attention to the rural and forest populations, although it constitutes a collective, whose specificities generate particular demands associated with living and working conditions, and consequently, of specialized care in the cases of mental disorders and chemical addiction. Even in the most recent public policy focused on the comprehensive health of the rural and forest populations (PNSIPCF), there is no reference to mental health, either to indicate the territorial, social, and cultural particularities that shape the livelihoods of these populations, and consequently health needs, ways to get sick and care, to guide the planning and ordering of care networks, as well as the provision of actions and services of a psychosocial nature.

My future purpose and commitment is to contribute for the extension of the health primary care access for those populations, by comprising the social processes and subjective that constitute and characterize life in those territories, and its relationship with the health-sickness care process in the scenarios of psychosocial and environmental vulnerability, in the assistance gaps, through the incorporation of the determinants of gender, race, and ethnicity. I believe that this supports an incessant movement of unlearning of dogmas and doctrines, with the possibility of producing powerful reverberations inside and outside the academic sphere.

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Cooperation from an Evolutionary Perspective

Maria Emilia Yamamoto

Abstract My interest in cooperation was present before I started investigating it in humans. The research on a cooperative breeder species, the common marmoset, made it clear to me that cooperation was not a straightforward phenomenon. Cooperators also competed with each other, and strived to gain advantage even in a group that depends on cooperation for its own survival. How should that happen in humans? Evolutionary theory offered, from my point of view, the best perspective to understand these apparently opposing behaviors. For many years, I looked at cooperation in children, using game theory as an instrument to gain some insights. An invitation to participate in a symposium on religious behavior inspired me to look at a behavior that often comes together with both cooperation and competition—group coalition. So, I used religion, or its absence, as the factor promoting cooperation. After almost 30 years studying cooperation, more than ten of them in humans, I believe I have unveiled some of the motives that lead both humans as well as marmosets to collaborate and to compete. I have also contributed to bring a biological perspective into Brazilian Psychology, which I consider as my greatest achievement.

My interest in cooperation was present before I started investigating it in humans. During my graduate studies starting in 1980 at Universidade Federal de São Paulo (UNIFESP), my supervisor, Dr. Orlando Bueno, suggested that I should investigate the behavior of a primate native to the Northeast of Brazil where I lived and worked, which was scarcely studied back then. This suggestion from my supervisor and his willingness to supervise a project that was unrelated to what he worked with at the time was a generous offer that represented a breakthrough in my career. The common marmoset (*Callithrix jacchus*) was interesting to me for many reasons, including the fact that its behavior was very different from that of other well- studied African and Asian primates, and also because they had a social system marked by cooperation and by female dominance.

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For more than 20 years, I investigated the behavior of marmosets and became increasingly fascinated by these unique primates. My Ph.D. dissertation, in 1990, was on the cooperative care of infants. By then, marmosets had taught me that cooperation is not a straightforward phenomenon. Cooperators also compete with one another and strive to gain an advantage, even in groups that depend on cooperation for their own survival. Both male and female marmosets compete for breeding positions, and breeding females fiercely prevent subordinates from breeding, and even kill their infants when subordinates escape breeding suppression. Nevertheless, infants are carried and fed by non-breeding individuals (Yamamoto et al. 2010). The balance between cooperation and competition is fascinating and, in my opinion, evolutionary theory offers the best perspective to understand these apparently contradictory behaviors.

The balance between cooperation and competition is also true for humans, considered to be one of the most cooperative and prosocial species. Just like marmosets, human beings need the help of others to survive when they are born and for the rest of their lives. Babies need care, feeding and affection, and the interactions that happen at the beginning of life will build the foundations for future social bonds. To me, as a psychologist, human behavior was a source of wonder and curiosity, and the new area of Evolutionary Psychology soon captured my attention.

With an evolutionary approach in mind, Evolutionary Psychology proposes a solution to tackle the question that has long been debated: the dichotomy between nature and nurture, biology and culture. The answer to this apparent contradiction between human diversity and universality arises with models that use complementary levels of explanation and consider cultural complexity to be a reflection of biological complexity. In the words of Bussab and Ribeiro (1998), man is *biologically cultural*. However, back in the early 2000s, while Evolutionary Psychology was a well-known and acknowledged branch of Psychology in North America and Europe, it was virtually unknown in Brazil. A few researchers that investigated topics such as animal behavior, ethology, and ecology showed interest and started exploring this new discipline. Among them were the scientists that formed the Working Group in Evolutionary Psychology at the *Associação Nacional de Pesquisa e Pós-Graduação em Psicologia*—ANPEPP (National Association of Research and Graduate Studies in Psychology) in 2004. Under the joint coordination of Professor Emma Otta, from Universidade de São Paulo (USP), and myself, we assembled a group of 12 researchers formed by psychologists, biologists, a sociologist, an anthropologist, and a physician, in order to discuss Evolutionary Psychology and put forward some collaborative research. Two consequences that marked my career as an evolutionary psychologist soon followed.

The first consequence was my first Ph.D. supervision of an Evolutionary Psychology project, dealing with cooperation in children, from 2004 to 2008. The student was Anuska Alencar, who developed a protocol to test cooperation in children that we have been using to this day. Cooperation was a source of interest for us because it has been a controversial topic among evolutionary minded scientists, including Darwin himself. At first sight, cooperation, altruism, and prosocial behavior look like anomalies in the animal kingdom, humans included. This happens because of the idea that evolution is all about competition, and therefore every indi-

vidual should struggle to override others and not cooperate with them. Popular science books, such as *The Selfish Gene* (Dawkins 1976), have contributed to spreading this idea, particularly among those that did not read them[1].

In fact, cooperation makes a lot of sense from an evolutionary perspective, particularly among social animals.[2] Cooperation increases the chances of survival and reproduction of individuals in a group. These chances may increase even more through taking advantage of the cooperative efforts from others. So, the question: Why do individuals cooperate instead of preying upon others? Probably because some conditions favor the occurrence of cooperation, such as kinship (nepotism) and reciprocity. I have been investigating the latter, looking at cooperation among unrelated individuals, triggered by reciprocity and reputation.[3] I mentioned before that humans are considered one of the most cooperative species. However, it has been suggested that humans are cooperative because they are taught to be so and because such behavior is compelled by social norms. So, are we naturally cooperative or are we cooperative because culture teaches us to cooperate? Although many authors since the early studies by Piaget (1999) suggest that young children are selfish, many evolutionary oriented studies suggest that cooperative behavior may be observed as early as at 14 months (Warneken and Tomasello 2007). House et al. (2013), in a study of six different societies, including traditional ones that presented a wide variation in culture and subsistence strategies, including groups of foragers, herders, horticulturalists, and urban dwellers, suggested that prosocial behavior is influenced by both biology and culture. Very young children showed similar prosocial behavior throughout all six societies, but in their early teens they displayed levels of prosociality that reflected the behavior of adults in their respective societies.

From this and other studies age was shown to have an important effect on the children's decisions to share or not to share. Hamlin and Wynn (2011) showed that 6- to 8-month-old infants were able to distinguish prosocial and antisocial behaviors,

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[1] It is important to emphasize that altruism, from an evolutionary point of view, has quite a different meaning to altruism from a moral point of view. This latter meaning refers to those behaviors that confers benefits to someone else. From an evolutionary perspective, a behavior is altruistic only when it benefits another individual at a cost for the actor's fitness, in other words, for his/her survival and/or reproduction. Thus, an altruistic moral behavior may or may not be altruistic from an evolutionary perspective. House (2016) defines cooperation as the behavior that is costly to an actor, while benefiting other individuals. That definition may be entangled at times with that of pro-social behavior, which the same authors define as a behavior that brings benefits to others, as the cost to the actor may not always be clear.

[2] We usually think about humans and other vertebrates when discussing cooperation. Curiously enough, Griffin et al. in a paper from 2004, report cooperation among bacteria, which is enhanced when they belong to the same lineage, i.e., are related. Moreover, one of the better studied societies are those of eusocial insects, like ants and bees. Cooperation in these insects includes forsaking reproduction in favor of a queen and even dying for its community, which represented Darwin's special difficulty. The occurrence of cooperation in bacteria and insects suggests that this trait may be much older, evolutionarily, than we could suppose.

[3] Direct reciprocity describes the willingness to cooperate in response to another's cooperation. Indirect reciprocity, on the other hand, occurs when individuals help those that help others, in other words, those that have a good reputation.

and to show preference for helpful individuals. 18-month-old children spontaneously cooperate with adults (Warneken and Tomasello 2006) and a little later, at 24 months, coordinate their behavior with a peer to get a reward (Brownell et al. 2006). Vaish et al. (2011) report that 3year old are able to identify norms and norms violations and show empathy. Children as young as 5-years old are aware of their reputation and act more generously when observed (Leimgruber et al. 2012), and are more concerned to keep their reputation to their own group compared to another group (Engelman et al. 2013).

With a dual hypothesis in mind, the influence of biology and of environment/culture, we chose to work with economic games to standardize the experimental condition. The games we chose were the public goods game (PGG) and the tragedy of the commons (TC). For many reasons, the first one proved to be the most fruitful. It basically involved giving the children three small wafers[4] over a number of sessions and asking them to either donate all, none, or part of it to a common fund. The total donations, increased threefold by the experimenter, were equally shared among all participants. In the original study and further ones (Alencar et al. 2008; Dutra et al. 2018; Silva et al. 2016) using the same protocol, we investigated the effects of adult influence on the cooperation in an iterated PGG. The types of influence involved were: positive and negative verbal feedback and vigilance by an adult observer, in addition to a control condition. Feedback was open to the group, but the identity of the donor was kept anonymous. General anonymity was, therefore, granted in the two feedback conditions, and in the vigilance condition, the donor was only anonymous to their peers.

Accordingly, all children in our studies, aged 5–12, were less generous in the control condition, which was the least informative to their peers. But our results also suggested that this effect becomes stronger with age, probably as a reflex of an increase in moral awareness and also in the development of theory of mind. An interesting trend, also reported in other studies, was a shift in the children's behavior between 8 and 9 years of age, when they become more aware of their reputation, and show an increase in generous behavior in the vigilance condition in comparison to younger children. A recent paper summarizes our results and reflects the studies of Ph.D., M.Sc., and undergraduate students (Dutra et al. 2018).

Despite the long-term effects of vigilance and negative feedback, the children decreased their donations over time in all conditions. However, in a recent paper we proposed that the kind of incentive used may prevent such a decrease in cooperative behavior (Silva et al. 2016). Using stickers instead of wafers, children created an informal barter market, using stickers as the trading currency. This kept their interest in donating to the public fund, in order to create variety and increase trade. It also suggested to us that there are ways to promote prosociality in children, and to teach them that cooperation may be advantageous for everyone.

From an educational point of view, we also wanted to promote cooperation in children without the use of tokens, but also because it makes us feel good and/or because it is the right thing to do. A study conducted by another M.Sc. student,

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[4]Brazilian ethical committees do not allow the use of money as a reward in scientific studies.

Mayara Medeiros, sought to emulate this kind of behavior using cartoons as a priming (Medeiros 2015). Children with and without symptoms of conduct disorder watched prosocial or antisocial cartoons or no cartoons at all. After that, they were offered the option to share some trinkets they had just won with their best friend. Children that did not present symptoms of conduct disorder behaved as expected, increasing sharing after the prosocial video and decreasing it after the antisocial one in comparison with the control condition. Children that presented symptoms, however, shared more of their trinkets after the antisocial priming, showing what is called a reverse priming. These results are potentially useful for promoting prosociality in children who present this kind of behavior.

Cooperation proved to be a fruitful theme of investigation, and other projects are currently in development, involving both children and adults. Of particular relevance are the projects on group coalition that I will discuss later.

The second consequence of the ANPEPP working group was the proposal and approval of a collaborative grant by CNPq (National Council in Scientific and Technological Development) and MCT (Ministry of Science and Technology) in 2005, the Millennium Institute of Evolutionary Psychology, the only one in Psychology among the 34 approved in the whole country. These grants were directed to outstanding research groups in Brazil and the approval of our project was a recognition of both Psychology and Evolutionary Psychology. Under my coordination and Maria Lúcia Seidl de Moura's vice-coordination (Universidade do Estado do Rio de Janeiro, UERJ), it involved a network of 17 scientists from nine different Brazilian universities, besides a team of postdoctoral researchers and graduate and undergraduate students. Five years later, at the end of the project, we were a vibrant research network, having become the group of reference for Evolutionary Psychology in Brazil and also recognized internationally as such. We closed the project in 2009, celebrating the 150 years of Darwin's *The Origin of the Species*, with the *I Symposium on Evolutionary Psychology: Plasticity and Adaptation*, organized in Natal, the home of the project. Five years later, as another sign of our international standing, we organized, again in Natal, the *26th Conference of the Human Behavior and Evolution Society* with a wide international attendance. We also organized the *I Brazilian Meeting of the Human Behavior and Evolution Society* in 2015, in Gramado, and hosted in Natal, in 2018, the *II Brazilian Meeting of the Human Behavior and Evolution Society*, organized by Fívia Lopes (Universidade Federal do Rio Grande do Norte, UFRN).

Ever since the Millennium Project, most of my efforts have been directed at the investigation of human subjects, although I have never lost my interest in marmosets, and have been collaborating with my colleagues, Maria de Fátima Arruda and Arrilton Araújo, from UFRN, trying to better understand their social and reproductive behavior. However, from the start of the Millennium Project, all my students have investigated cooperation and related themes in humans. An invitation in 2008 by Jay Feierman (University of New Mexico) to participate in a symposium on religious behavior at the *XIX Biennial Conference of the International Society for Human Ethology* inspired me to look at a behavior that often includes both cooperation and competition—group coalition. This was already a topic of interest of mine,

as I had been collaborating with Dr. Leda Cosmides from University of California, Santa Barbara, and the Millennium group in research on race and group coalition. But in this case, I used religion, or its absence, as the factor promoting cooperation. Religious individuals identify themselves as a group and we were curious to know if non-religious individuals, atheists, and agnostics would also perceive themselves as a group.

In collaboration with Dr. Fivia Lopes from UFRN, and two graduate students, Monique Leitão and Rochele Castelo-Branco, we developed an online game that allowed us to measure in-group bias among religious and non-religious groups. Our results showed what we were expecting: both believers and non-believers perceived themselves as a group, but among the believers, this applied to only Evangelists and devout Catholics (Yamamoto et al. 2009). Moreover, cooperation was stronger between atheist, Evangelist, and devout Catholic in-groupers.

However, in-group bias is socially relevant not only because it favors cooperation but also because it can be related to negative behaviors, such as out-group derogation. Evers (2015) combines both sides of this in-group bias by proposing that humans are "empathetic xenophobes." This motivation is so strong that Tajfel et al. (1971) demonstrated that people would show those tendencies even when included in arbitrary groups, without any previous social meaning, called minimal groups. In collaboration with Wallisen Hattori, a former post-doc and now at Universidade Federal de Uberlândia (UFU), and two graduate students, Tiago Bortolini and Eduardo Oliveira, we compared in-group effects in meaningful and non-meaningful social groups (Bortolini 2012; Oliveira 2015). We used a PGG protocol very similar to the one used with children but compared two conditions: one where donations resulted in direct benefits, and another where they had no direct benefits, as the content of the common goods were to be delivered to unknown, absent group members. Our minimal groups were represented by letters and the meaningful ones, again, by religion. This comparison allowed us to investigate the possible effects of the affective component of group identification, present in meaningful groups, in contrast to the cognitive component, present in minimal groups.

Our results confirmed those from the previous study, providing further evidence of prosocial behavior by devout religious and atheist participants. Moreover, both minimal and meaningful groups displayed preferential cooperative behavior towards their in-group members. However, group markers proved to be more powerful in the non-benefit condition for the highly identified groups (i.e., the socially meaningful ones), when compared to minimal groups. This is an example of a benefit provided by group association, contingent altruism. On the other hand, it also brings costs, in the form of donations to absent and unknown group members, through depersonalized trust (Brewer 1999), which carry no guarantee of reciprocity.

I have invested more than 30 years of my professional life studying cooperation, more than a decade of which has been dedicated to studying it in humans. I believe that, during the course of my studies, I have unveiled some of the motives that lead both humans and marmosets to collaborate and to compete. In marmosets, cooperation is necessary given the reproductive system that includes twin births, heavy newborns (as much as 23% of the mother's weight), a postpartum estrus with the

possibility of a new pregnancy a few weeks after giving birth, and later, providing food for infants. The heavy burden calls for the assistance of helpers to ensure infant survival. The evolutionary solution was a communal breeding system, in which most group members collaborate in infant care. However, breeding spots are limited, particularly for females, as even with broad cooperation, the raising of infants brings costs to caregivers and restrictions to the number of infants a group is able to support. Therefore, females engage in fierce competition for breeding spots and males provide support for the communal rearing of infants. A highly successful breeding system depends upon the balance between these two aspects, competition and cooperation (Yamamoto et al. 2010).

The bewilderment expressed by Darwin (1859/1996) when referring to cooperation is also present in the mind of an evolutionist studying this theme in humans. Not for the same reason presented by Darwin, however, who believed that the expression of cooperation, particularly by eusocial insects, could present a fatal blow to his theory. What may disconcert an evolutionist is the extension of prosocial behavior, and especially in humans, its apparent disconnection to fitness.[5] Humans direct prosocial behavior towards people they know they will never meet again in their whole lifetime, and sometimes show extreme behavior, that may endanger their lives when protecting a complete stranger.

An important part of the desire to help and to cooperate is present at the very beginning of life, as we have seen before. However, this disposition is shaped by culture as we develop. This makes a lot of sense for a highly social species that depends on conspecifics to survive. A loner would probably not be able to survive and reproduce during our evolutionary past. However, cooperating would not be enough, as there are social norms regarding proper behavior that may differ widely among cultures. The combination of biology and culture results in elaborate forms of cooperation and prosociality that are unique in their form, but that also expresses the biological predisposition to help and act prosocially towards our conspecifics.

In our studies, we have addressed the effect of biology, through age and sex, and the environment, as we varied public vs private conditions, the influence of praise and disapproval, and group allegiance. Age is highly significant but sex does not seem to interfere with the willingness to cooperate, at least in our studies. This result goes against scientific evidence that suggests that women are more empathic, and therefore should display more prosocial behavior. The literature is highly controversial, and we are working on new protocols that we expect will contribute to further understand this particular variable. The effect of an audience is highly effective in promoting cooperation and prosocial behavior, particularly in adults and children over 8 years of age, suggesting that reputation is an important factor in promoting cooperation. However, in children, we have only tested the effect of an adult witness, and it would be interesting to test the influence of peers. Praise and disapproval, when directed at a group and not at an individual, showed mixed effects depending on age, with disapproval being more effective than praise for older

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[5] Fitness, in evolutionary theory, is defined as the ability of an individual to survive, reproduce, and propagate its genes to the next generations.

children (8 and more), while the inverse was true for younger ones. One important contribution regarding the studies with children is that we provided evidence from a population that is scarcely studied in Psychology, which are lower SES children from a South American country that, together with Central America, represents approximately 0.7% of published results in top developmental Psychology journals.[6] Of relevance is the fact that we found the same shift in cooperative behavior at around 8-9 years of age that are reported for middle class, English-speaking, and European children, suggesting a widespread similarity in behavior and a strong developmental trend.

Our publications, both on marmosets and humans have been received with interest and are frequently cited. Our studies are mostly in agreement with findings from other scientists from different countries; however, we have added new information to the international literature in the kind of populations that we study: in marmosets, free-ranging natural groups, and in children, low-income urban individuals, outside of mainstream countries.

Wild marmosets have to deal with foraging, protection from predators, exposure to the climate, and competition for resources with conspecifics in a much more complex social and physical environment than that of captivity. Accordingly, differences in behavior should be expected between wild and captive individuals. Behavioral patterns that are analogous in the field and in captivity indicate hard-wired behaviors that are resistant even to huge changes in the environment. A comparison of wild and captive samples, therefore, helps us to understand the limits and the flexibility of marmosets' behavior.

In humans, cultural differences may result in diverse behavioral patterns while similar cultures should result in similar behavior. Yet, as discussed before, most investigations have been carried out in the so-called Western countries, which are assumed to share very similar cultural patterns. However, the great majority of the so-called Western countries are represented by English-speaking and European countries, and the majority of samples come from the middle classes. Therefore, studies like ours, that use low SES samples from less represented countries, may expand the scope of evidence when results are corroborated and add new questions when they are not.

For all these reasons, our publications have attracted international attention and collaboration, and contributed to the understanding of the issues we have addressed. These publications have favored the discussion, sometimes heated, of aspects of humans and marmosets' behavior, as well as their potential implications and interpretations. This, I believe, is how science advances.

One of the objectives of the Millennium Project, as described before, was to disseminate Evolutionary Psychology in Brazil. We accomplished this by publishing papers in Portuguese in Brazilian journals, by organizing symposia and roundtable discussions in Brazilian events, and also by editing a manual on Evolutionary

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[6] Nielsen et al. (2017) report that only 0.7% of published papers in top developmental Psychology journals described results from South and Central America populations, while English language-speaking countries and Europe represent 90%.

Psychology in Portuguese (Otta and Yamamoto 2009) to be used by graduate and undergraduate students. That was a very successful enterprise, as the book was widely used all over the country. Presently we have a new expanded and revised edition (Yamamoto and Valentova 2018). I consider that the effort was well applied, mainly by its contribution to the dissemination of a biological perspective of Psychology in Brazil, more even than Evolutionary Psychology per se.

The biological perspective has been looked upon with suspicion by a part of the psychological community in Brazil, as it has been considered deterministic. Of course, all of us admit that behavior is determined. There is disagreement as to how much of it is determined and its origin. The critics of the biological perspective advocate that it does not allow for the influence of environmental and subjective variables in the determination of behavior. However, the idea of multiple determination, which is central to the biological perspective, considers that any behavior is influenced by physiological, genetic, environmental, cultural, developmental, and evolutionary factors. This idea, consolidated by Tinbergen (1963) while considering the determination of behavior, discards determinism. This more comprehensive approach to the role of biology in the determination of behavior helps to approximate the biological perspective to the more social ones. The dissemination of Evolutionary Psychology in Brazil played an important role in that approximation. I consider my contribution in the process of bringing a biological perspective into Brazilian Psychology as my greatest achievement.

How do I see the future of our research on cooperation? I believe that we have established a sound research group, and the next steps are already outlined. The protocols we have developed can be used to answer questions posed by our studies and to unravel variables that are not well clarified by former studies. Two new paths are on our horizon: the introduction of physiological measures and the investigation of new populations scarcely studied, such as children raised in quilombola communities[7] and collective farms in Brazil, characterized by cooperative systems, which may give rise to more prosocial children.

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[7] Quilombolas are communities of former slaves that ran away in late nineteenth century in Brazil.

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Violence Prevention in a Violent Country

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Abstract In the present chapter I intend to assert that my most relevant scientific contribution to Brazilian Psychology is possibly the systematic effort to do violence prevention research, in Brazil, through the creation of The Laboratory for Violence Analysis & Prevention (LAPREV), with a program to study and intervene in family and school violence. Nevertheless, before I give examples of my endeavors associated with LAPREV, a brief introduction will be given justifying the need for violence intervention in Brazil.

Pinker (2011) has made a monumental effort to show how civilization brought a substantial decline in violence and that humanity presently lives in peace compared to our aggressive past. Without disagreeing with Pinker (2011), Brazil has been in the past and still is a very violent country. Although it was classified by the World Bank, in 2016, as an "upper middle-income" country, according to the Gini coefficient measuring inequality, Brazil is also the 10th most unequal country in the world (United Nations Development Programme – UNDP 2016).

Brazil's atrocious inequality, among other variables, is responsible for some of its high violent indicators, as in the examples to follow. Brazil is the 5th worst country in the world in regard to highest homicide rate of children from 10 to 19 years (based on 2015 data). Indeed, according to UNICEF (2017), boys from 15 to 19 comprehend 58.3% of murders in Brazil (Cerqueira et al. 2017). The same report states that although around one third of all adolescent boys are either from African or multiracial background, in Brazil, three out of four Brazilian male adolescents who die from homicide had these same ethnic backgrounds. Likewise, Brazil's femicide rate of 4.8 per 100,000 women is considered by the World Health Organization the 5th largest in the world (Nações Unidas do Brasil 2016). Finally, Brazil ranks in 9th place worldwide in terms of general homicide rate (30.5 per 100 thousand inhabitants), according to 2015 data (WHO 2017).

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In this dramatic scenario any individual contribution is inherently modest, although much needed. Moreover, although the science of Psychology has had a large impact in advancing knowledge and technology on violence prevention, the complex and wide-reaching nature of violence as a phenomenon calls for interdisciplinary action, as no single discipline could be credited to make sustaining gains. Finally, we lack data in the country of large epidemiological studies showing the prevalence in the population of intimate partner violence (IPV), and child maltreatment along the years.

When LAPREV started its first actions, in 1998, doing research, outreach community intervention, and teaching Psychology students about violence prevention, peer- reviewed psychological publications in the Brazilian scenario in violence against women, child maltreatment (physical, psychological, sexual violence and negligence), as well as school violence were scarce. In addition, Psychological research, in Brazil, at the time, on these topics of interest was more frequently descriptive in nature, with little emphasis on assessment of community interventions other than clinical work in a case-study format.

Theoretical and Methodological Considerations

Influenced by my cognitive-behavioral approach I tend to focus on the learned aspects of violent behavior adopting Albert Bandura's social learning paradigm (Bandura 1973). I espouse the World Health Organization's (2002) definition of violence as:

> the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, which either results in or has a high likelihood of resulting in injury, death, psychological harm, mal development, or deprivation (WHO 2002).

I also adopt the different violence modalities described by the same organization in 2002 (physical; psychological/emotional; sexual; negligence), although the boundaries in which they reside are didactic in nature (i.e., any act of physical violence results in psychological consequences). Due to the cultural aspects in which violence is defined and our changing norms throughout history (Pinker 2011), I adopt the definition of violence as violations of the human rights established by the UN convention, in 1948, and subsequently amended on several occasions.

In terms of school violence, the lack of a commonly adopted definition in the literature has encouraged my former Ph.D. student Ana Carina Stelko-Pereira to propose a conceptual model (Stelko-Pereira and Williams 2010), encompassing: (a) the location where the aggression takes place (not necessarily in the school, as in the case of school outings, for example); (b) persons involved (students, staff, parents, and others); (c) roles they assumed as perpetrator, victim, perpetrator/victim, and witness; (d) how these violent episodes were characterized in terms of physical,

psychological, sexual violence, negligence, or property damage, and (e) if these events had any particularities, as in the case of bullying and cyberbullying. In addition, Ana Carina Stelko-Pereira and myself have engaged in an international discussion on the limitations of the bullying definition (Williams and Stelko-Pereira 2013a; Finkelhor et al. 2013), and we are presently in progress of using our large data base on bullying to argue for a more solid definition in the literature, as well as proposing some criteria.

My modest contribution was to show that by using psychological science one could build a path for the prevention of family and school violence in Brazil. I use the term prevention to encompass not only traditional preventive interventions aimed at reducing the occurrence of violent behavior, but also programs designed to actively promote mental health through knowledge expansion, strengthening coping skills, and enriching resources for support, as proposed by Weisz et al. (2005). Thus, in my efforts to teach future psychologists to engage in violence prevention, I have tried to integrate community outreach and research, as the practice made us closer to the phenomenon, raising questions yet to be answered by research and, on the other hand, the acquired knowledge helped us conduct the intervention in a more solid way.

As a specialist in optimum human development, psychological science has been making a substantial contribution to understanding and changing violent behavior. Although it is beyond the realm of the present chapter to review all the important contributions to violence prevention, I would like to highlight two particular ones which helped me in my prevention endeavors. The first one is Gerald Patterson's Oregon Model and his functionalist view of conduct problems and expertise in training parents of children with such problems, using behavior analysis of child development (Patterson 1992). The second is the academic field of developmental psychopathology led by Harvard psychologist Dante Cicchetti (2004).

To intervene and engage in violence prevention we have to strive to understand its impact with special attention to risks associated with the phenomenon, and its traumatic potential as in the case of post-traumatic stress disorder (PTSD), at the same time that we familiarize ourselves with the reverse construct of resilience and protective factors for optimal development. We also need to make appropriate choices regarding valid measurements of different modalities of violence. Thus, to conduct some of our prevention efforts we had to search for available instruments in the literature which would measure different aspects of family and school violence.

Much energy was spent in validating well-known North-American instruments to Brazil, which also provided us with rich research interaction with many of its authors. Thus, (1) Ph.D. student Ricardo Padovani adapted along with my Psychometry colleague Patricia Schelini, the Social Problem-Solving Inventory Revised-Short (SPSIR-R:S) (Padovani et al. 2009), by D'Zurilla et al. (2002); (2) Former Ph.D. student Karyne Rios, undergraduate student Carolina Patrian along

Prof. Patricia Schelini and University of São Paulo's Professor Marina Bazon adapted to Brazil, The Child Abuse Potential Inventory—CAP (Patrian et al. 2013; Rios et al. 2013), authored by Professor Joel Milner (1986); (3) Former Ph.D. student Paloma Albuquerque and myself validated the Student Alienation and Trauma Scale—SATS-R (Albuquerque and Williams 2014) to retrospectively study the traumatic effects of school violence developed by the late Prof. Hyman and Snook (2002); (4) The National Institute of Child Health and Development—NICHD Protocol to interview children suspected of child abuse victimization, developed by Lamb et al. (2008), was translated to Portuguese from Brazil by Williams et al. (2012a, b, c), and along with a group of researchers from Southern Brazil, the process of validation is ongoing. Our contribution in this sense has been reviewing the literature (Williams et al. 2014a, b, c), and assessing forensic professional training by my present Ph.D. Student Hackbarth et al. (2015), and finally (5) our recent bullying studies have led Ana Carina Stelko-Pereira and present Ph.D. student Jéssica Valle and I to adapt the School Engagement Scale by Schaufeli et al. (2002) (Stelko-Pereira et al. 2015).

Intimate Partner Violence Prevention

The first year of LAPREV involved supervising undergraduate psychology students who were offering cognitive-behavioral psychotherapy to women with a history of IPV, at the Woman's Police Station (WPS) in the mid-size city of São Carlos, State of São Paulo, while mapping the violence reported by women at this Station, as initial research. The WPS was created in Brazil, in 1985, pressured by feminist groups who were unhappy with the treatment received by women in regular police stations (Santos 2005). The rationale for its creation was that female officers would be more attentive to women reporting domestic or sexual violence.

Our first publication (Williams et al. 2000) was a description of a workshop assessment, my undergraduate students Alex Gallo, Daniela Maldonado, Rachel Brino, and I gave in that first year to the officers after they complained that Police School had not prepared them to the work they had at the WPS. Although the study was a simple pre-post intervention assessment, with an instrument on domestic violence beliefs in the initial phase of construction, its relevance was to point us to the path we wanted to take in the direction towards violence prevention assessment.

Ricardo Padovani, then another undergraduate student published a successful case study describing a 6-month intervention with an aggressive husband whose wife also received psychotherapy at the WPS, using standardized instruments to measure depression, self-esteem, violent conflict assessed by him and his wife, in addition to reporting the daily frequency of violent episodes, which zeroed at the end, and was maintained at this level after a 2-month follow-up (Padovani and Williams 2002). A search on CAPES and Scielo data bases with the keywords such as intervention/batterers, intervention/aggressor, and marital aggressor indicates

that this was the first publication assessing therapeutic intervention with a male IPV offender in Brazil, confirmed by a recent review (Ribeiro et al. 2017).

A few years later, Ricardo Padovani (then doing his M.A.) helped me supervise undergraduate student Myrian Cortez to evaluate a group format intervention with male IPV offenders which would become Brazil's first group format publication with such population in a peer- reviewed journal (Cortez et al. 2005). Sadly, our CAPES and Scielo data bases search indicated that it was the only offender group evaluation study published so far in Brazil, showing the lack of this type of systematic intervention in this format.

Our most successful intervention in family violence has been Project *Parceria* (*Partnership),* a program to teach parenting skills to abused women and prevent behavior problems in children where, in addition, we teach women about their own violence prevention (Williams et al. 2012a, b, c, 2014a, b, c; Santini et al. 2012; Santini and Williams 2016). This project also is a good example of our efforts to combine violence against women prevention with the prevention of child abuse. Originally planned to be a lengthy intervention project due to the vulnerability of the clientele, Project Parceria has two Manuals in Portuguese which are downloadable: A Life Free of Violence (Williams et al. 2008a, b) and The Positive Education of Your Children (Williams et al. 2008a, b), in which its 16 individualized sessions are described with exercises and homework assignments.

Project *Parceria* was developed as we could not find, in the literature, systematic efforts to teach mothering skills to victimized women, in spite of its urgent need, as mothers would often ask us for help in child rearing, and considering the vast literature pointing out that children exposed to marital violence are at risk (D'Affonseca and Williams 2011). To assess the intervention, we used traditional paper and pencil questionnaires, such as depression measures and children's strengths and difficulties measured by the mothers and the children, but also introduced two self-report daily measures on Sense of Parental Competence and Sense of Well-being. Most importantly, we used the golden standard of parental evaluation, which was direct observational measure of parent–child interaction. The observational procedure took advantage of a house-replica laboratory inside a Day Hospital at the University, with one-way mirrors throughout the furnished house, which contains living-room, bedroom, and kitchen with digital cameras at each room.

We tested Project *Parceria's* feasibility with mothers whose children had been involved in the Judicial system for different types of child maltreatment victimization, as we expected a large overlap in child abuse and domestic victimization by mothers. My former Ph.D. student Paulo Pereira (Pereira, D'Affonseca, Williams, 2013) offered the project individually through home-visitation to 17 mothers who evaluated it positively, showing increased sense of well- being and improvement in parental style, as well as assessing their children with less problems at the end of the intervention.

Finally, Paolla Santini who had been using Project Parceria successfully with victimized women since her M.A. thesis (Santini and Williams 2016), for her Ph.D., tested the project with mothers who used corporal punishment with their children (Santini and Williams 2017), combined with live-coaching and video-feedback pro-

vided at the home-replica lab. We used in this study the gold standard for evidence-based parent training assessment of efficacy, in which 40 mothers who used corporal punishment were randomly assigned to intervention or control groups. Analysis of mixed models for repeated measures revealed significant positive effects on mother's improvement on depression and positive evaluation of their children's behaviors, as well as less conduct problems and hyperactivity. Observational data also indicated significant improvement in positive interaction for the experimental group mothers at post-test in comparison with controls (Santini and Williams 2017).

Child Maltreatment

Although we have conducted studies and interventions with all the modalities of child abuse (physical, emotional, sexual abuse, and negligence), I will illustrate our contributions in an area which perhaps received our greatest emphasis due to its high potential for traumatic impact: child sexual abuse (CSA). To train future psychologists on the dynamics and impact of CSA, I have often relied on analyzing the lives of well-known individuals with such history, or taught them to study fictitious characters from famous authors. Thus, I have published a case study of Virginia Woolf's history of CSA analyzing her diaries and current literature review (Williams 2014), as well as studying the visionary work of Vladimir Nabokov in terms of his Lolita (Williams 2016).

LAPREV conducted one of the first studies in Brazil showing the need to train teachers as CSA prevention agents (Brino and Williams 2003), as well as one of the first evaluations of teacher training in CSA prevention (Brino and Williams 2006, 2008). In addition, we trained over two thousand teachers from São Paulo State through a grant received by the Ministry of Education in a project called *School which Protects* (Williams et al. 2014a, b, c). Through our past connection with our University's Graduate Program in Special Education, I was able to call attention to the increased risk for child abuse in the population with any type of developmental problems (Williams 2003), and my undergraduate student Roberta Barros did an empirical study showing the difficulty women with global developmental delay had in sexual violence prevention (Barros et al. 2008). Finally, in addition to conducting a general analysis of Brazil's efforts in CSA prevention (Williams and D'Affonseca 2015), we have reviewed the Brazilian picture books to teach children about CSA prevention based on literature criteria (Soma and Williams 2017).

Other intervention assessments on child maltreatment involved different participants, such as children who were exposed to marital violence by their parents (D'Affonseca and Williams 2003); handicapped parents who used physical violence against their children (Santos and Williams 2006); low income pregnant teens in group intervention as in Gravena and Williams (2004), or individually with a negligent adolescent mother (Cia et al. 2005); paraprofessionals supervising foster care children (Prada and Williams 2007; Costa et al. 2012); young offenders (Padovani and Williams 2005); training forensic professionals on the use of the NICHD proto-

col to interview children suspected of being sexually abused (Hackbarth et al. 2015), and teaching parents about Abusive Head Trauma prevention or Shaken Baby Syndrome (Lopes and Williams 2016), among others.

School Violence Prevention

Regarding school violence, a literature search with the keywords bullying, peer victimization, and peer intimidation (the two last ones in Portuguese) in the Bireme, IndexPsi, LILACS, Pepsi, Scielo, and CAPES website revealed that the first empiric investigations published in peer-reviewed journals on this subject, in Brazil, where three publications in 2009: Calbo et al. 2009; Francisco and Libório 2009; Pinheiro and Williams 2009, the last one resulting from my student Fernanda Pinheiro's M.A.

Dan Olweus had been publishing on bullying since the 1970s (Olweus 1978), and it took almost four decades for Brazilian psychologists to start studying this serious problem affecting so many children. [A recent review by Herrera-López et al. (2018) reveals that this is not only the case of Brazil but to Latin America in general.] This lack of familiarity is exemplified by the difficulty Fernanda Pinheiro and I had in publishing our paper (Pinheiro and Williams 2009). The educational journal did not allow us to use the word *bullying* in the tittle, under the argument that the word did not exist in Portuguese. Thus, we had to replace it by peer intimidation, and one year later (2010) the word *bullying* was incorporated in the country's Portuguese dictionary.

In her thesis, Fernanda wanted to investigate the association between bullying and family violence, particularly children's exposure to parental Intimate Partner Violence and Child Maltreatment. We intended to apply a questionnaire to 600 students from three public schools of our University's town, but only 239 managed to bring signed consent forms. As this was our first data collection in schools, we did not know enough about getting adhesion. In spite of this frustration, the results revealed extremely high bullying involvement.

In the last three months, 49% of students reported some type of involvement: 26% as victims, 21% as victims and bullies, and 3% as bullies exclusively. In addition, our hypothesis that school bullying was strongly associated with family violence was confirmed. Just to cite a striking example, boys who were *mildly* physically abused by fathers had 4.1 odds ratio of being bully/victims, when the physical abuse perpetrated by the father was *moderate* the O.D. increased to 7, and finally when father's physical abuse was *severe* the boy had 8.5 more chances of being a bully/victim (Pinheiro and Williams 2009). Thus, Fernanda's thesis was not only one of the first published studies in Brazil on bullying, but it was also the first one in the country showing an association between the violence occurring at home and bullying involvement.

Our most relevant effort in school violence prevention was Project *Violência Nota Zero* resulting from Ana Carina Stelko-Pereira's Ph.D. dissertation (Stelko-Pereira and Williams 2016). The study took place in two highly vulnerable public

schools, and the design involved randomly selecting one school to take part in the intervention while the second worked as comparison, as it waited for the project. Approximately, 900 students initially answered the instruments, the main one was the School Violence Scale which Ana Carina Stelko-Pereira had been perfecting since her M.A. (Stelko-Pereira et al. 2010). Unfortunately, unknown to us, a third school was opened in the neighborhood, resulting in transference of a large number of students to the new school during the study. As a result, we finalized it with a small sample: 71 students (21 from the intervention school and 50 from the control group school); 13 educators (8 from the intervention school and 7 from the control group school).

The project consisted of twelve 90-min sessions to educators on school violence prevention, involving presentations, discussions, and classroom exercises. Through funding received from Brazil's Ministry of Education and Culture, and other agencies we developed a series of materials which were evaluated by teachers and students: (a) a book to train teachers on school violence prevention (Williams and Stelko-Pereira 2013b), which received a favorable review in the Brazilian literature (Coelho et al. 2014), and was a finalist of Brazil's most prestigious literary award (Jabuti) in the same year in the category of Education; (b) a video to instruct teachers about Human Rights at School, in which actors were hired to represent the roles of children and teachers (Stelko-Pereira and Williams 2013a also available at https://www.youtube.com/watch?v=NJH9PSVUgf4&t=15s); and (c) a folder with four games and activities for teachers to use in the classroom with students on bullying prevention. This material was assessed with positive results by 70 elementary students from the state of São Paulo in terms of word comprehension and consumer satisfaction (Stelko-Pereira and Williams 2013b).

In spite of the small sample of Project *Violência Nota Zero*'s evaluation (Stelko-Pereira and Williams 2016), the results were encouraging, particularly as there are not many similar initiatives in other developing countries: significant reductions were seen in self-reported perpetration of violence by students (M pre-intervention = 15, M post-intervention = 13, $z = -2.5$, $p = 0.01$), and of teachers' mental health problems (Mdn pre-intervention = 1.8, Mdn post-intervention = 1.4, $z = 2.1$, $p = 0.03$) in the experimental group after the intervention, in comparison to the control school. Lower levels of peer-to-peer violence as reported by students were maintained in the follow-up assessments.

Inspiration for Action

I had a specific personal motivation to become a researcher in the area of family violence prevention. I have written about it in the essay I had to prepare, in April 2006, as one of the exam requirements to become a Full Professor at the Federal University of São Carlos. In addition, I presented this explanation orally ("Facing family violence: The long journey from victim to becoming a Brazilian researcher,"

at the Third International Conference on Children Exposed to Domestic Violence on May, 2007 in London, Ontario, Canada).

I experienced a family tragedy, in 1984, that not only affected my personal life, but my professional career as well, when my sister Vera, who was 30 years of age, was killed by the father of her two children—a 6-year-old boy and a 5-year-old girl. Needless to say, that when something tragic like this happens it changes you, possibly in a permanent way. From a personal point of view, my parents and surviving three sisters made an integrated effort to raise my nephews in a supportive way so that they could overcome the loss. From the professional aspect, my immediate reaction was to consider that I could no longer work as a psychologist. As this coincided when I was moving with my former husband and children to Toronto, it was somewhat easier to not work in the field it had taken me so long to prepare myself (by then I had a recent Ph.D. degree working in Brazil as a young professor).

In hindsight, it is easy to understand what was going on, although at the time it felt very confusing. Cognitive-behavior therapy gives us innumerous clinical examples of distorted reasonings we give ourselves. "Something awful has happened to my family. We must be blamed for it." This type of victim-blaming was also associated with the main reason I had wanted, still as a teenager, to study Psychology— the possibility to alleviate human suffering. But back then I felt I could not help anybody. Most importantly I felt that I had nothing of interest to say to my students.

Violence against women or femicide was then an almost unknown scientific territory, particularly in Brazil. I packed my bags for Canada and donated my books, saying good-bye to Psychology. What made me return to the field a few years later were contextual reasons, when I got a divorce and needed to find a full-time position that would suit my family's needs. The first opportunity appeared as a therapist for youth with mental health problems, and little by little I had to learn about child sexual abuse victimization, family violence and, to my surprise, my clients felt I could help them.

Subsequently I started the long process to become a Registered Psychologist in Canada, and as a result was hired to work in Toronto's Educational system where I continued to receive training on domestic violence, child abuse, and remaining topics (I described my Canadian professional experience to Brazilian psychologists in Williams 1999). My Canadian training was instrumental for the prevention activities I would later develop in Brazil. I returned to Brazil, in 1998, as a visiting Professor, I started LAPREV's activities and then took the challenging decision to apply for a job as a permanent Professor at the same University I had left in 1985.

Expanding Brazilian Borders

At first, I published mostly in Portuguese, as there were limited publications on family violence in such language. Nevertheless, I would make an effort to attend international conferences on violence prevention which would help me feel

integrated with the researchers I read. My students and I slowly switched to publishing more in the English language and to develop international cooperation projects. In 2009, Laprev received our most important recognition by the Pan American Health Organization (PAHO/WHO), which considered our work an example of "Best practices that incorporate the Gender/Ethnicity Equality Perspective in Health." The award was received by me in Washington with the funding to describe our work in a book to be distributed in three languages—Portuguese, Spanish, and English (Williams et al. 2009). Another vital endeavor for internationalization came with the Fellowship at Sidney Sussex College at Cambridge University, in 2015, where I had the opportunity to work closely with Prof. Michael Lamb, one of my favorite developmental psychologists.

We established partnerships with prestigious international organizations, such as the American Psychological Association (APA) to contribute with the adaptation of its violence prevention parent training called ACT-Raising Safe Kids program to the Brazilian scenario (Silva and Williams 2016), and the University of California (Davis) to do a cross-national study in parental alienation, as Brazil's Federal Law on the subject can mitigate legitimate claims of child sexual abuse. Finally, we had frequent participation in international violence prevention conferences. In particular the world and regional conferences of the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) were instrumental to learn and network with professionals who later became research partners. As a result of this fruitful interaction, I was elected an ISPCAN councilor, in 2016, capacity which I will hold until 2022.

Expanding the Academic Boundaries

Working in violence prevention at a country with so much inequality as Brazil required, in my opinion, a dose of social activism that is not often seen in North American academia. Services and resources are so limited at times, that if we do not engage actively in society, we do not see the results we expect.

In LAPREV's first year of operation (1998), when I taught undergraduate students to conduct psychotherapy intervention with victimized women, one important component of crisis intervention was to assess risk. In that sense, if one of our clients told us, for example, that she was genuinely afraid of her partner, that he had made life-threats to her, and that he owned a gun, it would be irresponsible from an ethical point of view to tell our client—"See you next Thursday at the same time." As the city of São Carlos did not have a shelter for abused women and her children, I made an arrangement with the municipality that they would cover the costs of an inexpensive hotel when the client did not have a safe place to stay.

This arrangement was criticized by some WPS police officers under the argument that "people would line up when they found out the city was providing free lodging," to which I insisted that this was not the case, as most individuals do not want to leave their home, no matter how modest—it took a strong fear of the partner

to decide to hide with the children at a different location. This request for hotel accommodations was the first of many initiatives which would finally result in the inauguration of São Carlos's shelter for victimized women and their children in the year 2001, the very first shelter created in a non-capital Brazilian city.

The shelter creation was the result of a joint effort by any people, in particular wonderful female lawyers who had taken a course with me at the University on Violence against Women. But an important component of this joint effort went beyond academia, and involved meeting with mayors, attending the Municipal Council to explain why a female shelter was needed, and so forth.

I suggested to name the shelter *Gravelina Terezinha Lemes* after a dramatic case of a woman who was murdered by the father of her four children, in São Carlos, before we started our work at the WPS, What shocked the city was that Gravelina's corpse was found by Children's Services–despite being dead for a number of hours, the mother was still nursing her baby girl. I was able to retrace Gravelina's story by studying the court proceedings on her case, and use it as an analysis where society failed to protect the mother and her children (Williams 2001; Williams et al. 2012a, b, c).

More than a decade later, I also actively engaged in activism to help with the approval of a federal law banning corporal punishment against children in Brazil. I was invited to attend the Brazilian congress and present some of LAPREV's data on the prevalence with which children self-reported being hit, spanked, and other forms of physical aggression by parents and caretakers (Brazil's Federal Law 13.010 to ban corporal punishment was passed in 2014). I have also accepted invitations to take part in TV programs with very large audiences, as an opportunity to get out of the academic bubble, and voice some of our research findings and concerns.

If I could have one final wish before I retire, I would like to see Brazil incorporate a systematic universal parent training component on positive parent to our population in general, with more attention in depth and length to the vulnerable poor parents. Brazil has one of the largest cash transference programs in the world, responsible for reaching 13.7 million families which is equivalent to approximately 50 million people. The requirement to take part of this program entitled *Bolsa Familia* (Family Grant) involves having the child attend school and up- to- date immunization of children. It would be beneficial in terms of violence prevention to include a third requirement involving parent training. As in any type of prevention, the results would not be immediate, but the country would be addressing one of the most needed violence prevention strategies—facing violence from its very birth and beginnings.

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Afterword: Reflections

Merry Bullock

Abstract What an interesting tour through Brazilian psychology this volume offers! Personal reflections from prominent Brazilian psychologists on their career trajectories, motivations, influences, and professional contributions provide a window into the breadth, scope, and depth of psychology in Brazil. Common emphases include the social and political contexts of Brazilian psychology, the importance of understanding behavior in contextually rich, everyday situations, and the formative influences of the Brazilian science infrastructure in fostering networking, mentoring, and collaboration. This volume offers a curated snapshot of a vibrant psychology community from which we all have much to learn.

What an interesting tour through Brazilian psychology this volume offers! Like its inspiration volume, the chapters in this book give accounts of the evolution of the careers and intellectual work of eminent psychology researchers. In offering their personal reflections, the authors also provide a window into the breadth, scope, and depth of psychology in Brazil in a way rarely accessible to readers from outside the country.

I was honored to be asked to draft some reflections as an "Afterward" for this volume. As a psychologist who focused most of my post-academic career on fostering international collaboration and exchange, and on trying to understand global and local perspectives and developments in psychology, I have been particularly intrigued by how the burgeoning development of psychology outside of North America and Europe is transforming the structure and face of psychological science and practice. This volume, highlighting the work of many of those Brazilian psychologists who have been instrumental in that transformation, is especially effective in highlighting new directions and adaptations.

The task given to authors, to describe their most important contributions, makes for compelling reading about the events, questions, and passions that motivated each author's research career. Authors' choices of what they saw as their greatest contribution—a body of knowledge, a theory, an approach, a set of methodologies,

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or their academic progeny—provide the reader with a marvelous "short course" in a range of substantive areas in developmental, work, school, clinical, and social areas. Individually, the authors of the nineteen chapters chose to describe their life's work in different ways. From some, we learn of personal journeys and career trajectories from early interests, to university education, to special areas of expertise and research (J. Borges "In Search of Integration," E. Marturano, *Child development in context*, L. Williams' *Violence prevention in a violent country*, and L. Rabello de Castro *The Study of Childhood and Youth in Brazil: Dilemmas and Choices of a 'Southern' Academic* come especially to mind). From others, we learn about the substance of a theory, model, or methodological innovation, such as P. Guareschi's exposition on relationships, A. Raozzi's explanation of facet theory, or C. Gouveia's functional theory of human values,[1] or the development of systematic areas of study or inquiry such as E. Linhares' work on neonatal stressors, M. Yamamoto's on cooperation, S. Koller's on street children, J. Landeira-Fernandez's studies on animal models of fear, or M. Massimi's intriguing exploration of the history of psychological ideas.[2] Yet from others we are asked to rethink psychological approaches with a framework informed by Brazil's political past, social context, or global standing, such as R. Guzzo's *For what and for whom? Ethical and political commitments for psychology in Brazil*, L. de Castro's *The Study of Childhood and Youth in Brazil: Dilemmas and Choices of a 'Southern' Academic*, or M. Spink's *A post-constructionist approach to Social Psychology.*

There are some common themes woven through the chapters. Many authors mention the formative influences of political changes in Brazil—the dampening effects of a military dictatorship, and later effects of political change and "redemocratization." Many also stress the importance of taking psychological research and theory outside of the laboratory to understand behavior in contextually rich, everyday situations, and to think hard about how research can and could address pressing, community challenges. Discussions of the influences of Liberation Psychology and post-modern philosophical analyses of science and scientific study are especially compelling when described in the context of social and economic conditions in Brazil and Latin America.[3] As one author noted:

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[1] P. Guareschi, *Relation in Social Psychology: A Central Concept for the Understanding of the Human Being, Groups and Society*; A. Raozzi, *Advancing Facet Theory as the Framework of Choice to Understand Complex Phenomena in the Social and Human Sciences;* and V. Gouveia's *Human Values: Contributions from a Functional Perspective*.

[2] E. Linhares, *Interrelationships between Health and Childhood Development: Research and Preventive Interventions at Early Ages*; Yamamoto, M. *Cooperation from an evolutionary perspective*; S. Koller *Vulnerable Children and Youth: The Psychology of Social Development Innovative Approaches*; J. Landeira-Fernandez*, On Becoming a Brazilian Full Professor in Psychology*; and M. Massimi, *Psychology, History and Culture: the field of the history of psychological knowledge*.

[3] See, for example, M. Dimenstein, *Psychology, Mental Health and Primary Care* or L Rabello de Castro, *The Study of Childhood and Youth in Brazil: Dilemmas and Choices of a 'Southern' Academic*.

[my career was marked by those] "who who, starting from different theoretical perspectives, always sought a socially committed analysis of the unequal Brazilian reality, deeply questioning the ways of Psychology." (R. Guzzo, this volume)

These reflections are important as psychology, worldwide, struggles with positioning itself as relevant to local and global challenges and as being a source of expertise and advice for policy and action.

Beyond compelling individual reflections, the chapters also collectively illustrate some of the unique aspects of scientific psychology in Brazil, and the workings of a national psychology community. Almost every chapter describes the development of a mechanism for networking—a work group, network, institute, or research group that has been formative in the development of bodies of research or even subdisciplines of psychology. As one author noted:

> This is not a personal but collective contribution. I share it with all the researchers of my generation. Fifty years ago, there was no tradition of scientific research in Brazilian psychology. We, who have occupied the spaces of Brazilian scientific journals, ever since, publishing the results of our research, were responsible for establishing the basis of psychology as a science in Brazil. I think we provided models for the next generations. (Marturano, this volume)

Some of the chapters provide wonderful examples of how a discipline matures— for example, Del Prette's[4] description of Social Skills development illustrates a progression from observation and description to instrumentation to model development and intervention, illustrated in a figure showing the distribution of research paper topics over time. Others, such as Koller's compelling description of the development of research with street children, bring to life the broad brush strokes of "participant research" and methodological and ethical challenges in research taken outside the laboratory.

The development of organized psychology in Brazil is described explicitly in a few chapters (e.g., W. Gomes, and J. Landeira-Fernandez[5]) who recount some of the important steps in creating a vibrant psychology community. It is also implied in many other authors' descriptions of how their research developed to form substantive subdisciplines. Three facets stand out in these descriptions. One is the importance of a connection between problem solving and research questions—many authors describe the interplay between a need to address pragmatic questions relevant to the communities in which they were working (school and educational needs; health needs; and policy requests) and a passion to deeply understand a phenomenon or process or relation that influenced both career trajectories and choice of topics. As one author noted:

> Latin American countries bear the brunt of social inequality and historical oppression. This aspect challenges those working with scientific and academic knowledge to find alternatives and strategies for developing social technologies, public policies, and actions for

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[4]Z and A. De Prette, *Studies on social skills and social competence in Brazil: A history in construction*.

[5]W. Gomes, *Looking in History for Novel Integrated View on Psychological Science and Method*.

psychosocial strengthening, especially for the most vulnerable populations. (J. Castellá Sarriera, this volume[6])

A second facet is the prevalence of networking and the prominence of collaborative, generative, research groups, and strong commitment to mentoring.[7] The descriptions in many chapters of the development of collaborative research groups, the beginnings of journals, promotion of conferences, and finally founding of associations offer a compelling model of how to develop a discipline.

And, the third facet is infrastructure that facilitates networking, discussion, and action. In my observation, a structure for explicitly promoting collaboration and networking, instantiated through ANPEPP, the Association of Graduate Departments of Psychology, is a unique feature of psychology in Brazil. In addition, it seemed clear that national funding agencies have been important facilitators of disciplinary growth.

For most of us, reading the chapters in this volume will be instructive in the way that a series of master lectures is instructive—by providing a curated, expert-level overview of a body of work or perspective that at the same time is a "teaser" to learn more. I hope that this volume inspires its readers to read more of Brazil and of Brazilian psychologists. We have much to learn.

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[6] Jorge Castellá Sarriera, *Building Community Psychology in Brazil as a tool for change and social well-being*.

[7] See, for example, Siedl-de-Moura, *Understanding human development as a product of our evolutionary history and situated in cultural context: a personal trajectory* and Koller, *Vulnerable Children and Youth: The Psychology of Social Development Innovative Approaches*.

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