

## ***PSYCHOLOGY AROUND DE WORLD***

### **NOTES ON BEHAVIOR ANALYSIS IN BRAZIL**

#### **NOTAS SOBRE EL ANÁLISIS DE LA CONDUCTA EN BRASIL**

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According to Pessotti (1975), the first academic publication in Brazil with a psychological theme was published in 1836 at the Medical School in Rio de Janeiro (which was, at that time, the capital of the country). This publication was a Doctoral thesis entitled *Paixões e Afetos da Alma* ("Passions and the Affection of the Soul"), written by Manuel I. F. Jaime. During the last half of the 1800s, typical psychological questions such as those related to intelligence and emotions, were studied and frequently were associated with investigations of brain functions and with the psychophysiology of perception. At the beginning of the twentieth century, an increasing diversity of academic psychological works appeared. Many of them related Psychology to Psychiatry and Neurology, thereby establishing the basis for the psychotherapy and the psychobiological research in Brazil. At the same time, papers considering scientific methodology established the basis for Experimental Psychology. In 1944 the first paper was written about the history of the experimental psychology in Brazil. That paper described research influenced by Freud, Séchenov and Pavlov.

In 1934, when the University of São Paulo (USP) was founded, Psychology started to be taught as a discipline in the course of Philosophy.

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Only in 1962, however, was Psychology officially recognized as an autonomous academic field. At that time, the first Brazilian Psychology course was created at USP, and Psychology was established as a regular profession in Brazil (Pessotti, 1975). Thus, Psychology, as an official profession and independent scientific area, appears in Brazil during very special years: the 1960s. At this time, our country was living a movement of general renovation, following the general cultural trends occurring in South and Central America. As reported by Todorov (1996), the philosophy of the day was to choose "the new." In 1959 our capital was moved from Rio de Janeiro (a very developed city) to a new and non-conventional capital (Brasília) that had been completely constructed in five years in the hinterland of the country, far away from the most developed areas, with the goal of starting a new phase for the country. During this time, the people (especially the students) were very politically active and enthusiastic about the recent successful revolution in Cuba, which had shown that it was possible to change "the old order."

In keeping with this political/social period of innovation, the arts also experimented with new expressions. Theater and cinema in Brazil were greatly influenced by this "atmosphere," as was music. The "bossa nova" changed our ways of playing and singing songs ("The girl from Ipanema," a kind of symbol of this musical movement, became internationally known). The same innovative atmosphere was being felt in the intellectual field. A new university was being planned in Brasília by our best intellectuals. Darcy Ribeiro, its first dean, proposed that Brasília University should adapt its teaching activities to the renovating atmosphere of Brazilian society. He proposed that the University change from the old ways of teaching to the new ones (Todorov, 1996).

It is clear that the beginning of the 1960s was the "right moment" to develop remarkable things. There were a number of Brazilian intellectuals who renovated the field of Psychology. However, many authors (Pessotti, 1975; Todorov, 1996; Rangé & Guillard, 1995) agree that the Brazilian psychological renovation, experienced at the first 60s, was largely catalyzed by a visitor who arrived in Brazil at that tumultuous time. His name: Fred Keller.

Fred Keller came to Brazil for the first time in 1961 (see Todorov, 1990; 1996, for detailed descriptions of the Keller visit). He came as a Fulbright Scholar at the invitation of the Dean of USP. He came with his wife, Frances, neither of them knowing very much about Brazil and expecting to live a "tropical adventure." They had some of the usual stereotyped ideas about this country (the jungle, many big trees, big rivers, Indians, ferocious and exotic animals, snakes in the street, etc.), and knew very little about São Paulo, a very large industrial city, located far away from the Amazon region. Moreover, they also did not know about our (dis)organization level and our "talent" for improvisation: when Fred and Frances arrived in São Paulo, the Dean who had

invited them had been replaced, and no one in the Psychology Department knew that the Kellers were coming. As a result, nothing was prepared for their visit to the University. Carolina Bori, an assistant professor from USP, was the only person to greet them at the airport on their arrival and it was incumbent on her to report to them on the disorganization of the Brazilian side of the cooperative venture. It was anticipated that they might decide to go back home immediately after learning of the confusion.

Instead of giving up their Brazilian "adventure," the Kellers stayed. During their visit they learned to speak Portuguese and came to know (and enjoy) our culture. Most importantly, they learned with the Brazilians to improvise things. In a short period of time, Fred and his Brazilian assistants (teachers and undergraduate students) solved many problems: 1) the former Dean, and now professor, who had sent the official invitation letter, offered Fred a working space in his Biology laboratory to give courses and carry on experiments; 2) the equipment for laboratory classes (that had been imported but had not arrived) was totally improvised, constructed by his enthusiastic Brazilians assistants. According to Rangé and Guillardí (1995), such improvisation was facilitated because the Experimental Psychology program was housed in the Physiology department where there were ample numbers of metal cages (usually used for birds or small animals), metal hooks (for suspending pieces of dissected frogs), and different sizes of glass pipes (pipettes, etc). Larger metal cages were used for housing rats in the animal room and smaller ones for the experiments. Inside the "experimental cage" a band of metal (fixed by binding wire) was adapted and a mobile hook over it. When the rat "pressed" the hook, it touched the metal band, producing a noise. Immediately after this noise, the experimenter quickly introduced a long glass pipe inside a vessel with water, and put its wetted end inside the cage, allowing the subject to lick it. So, the reinforcer delivery was "almost" automatic!!!

Many undergraduate students, and some teachers, developed their first operant conditioning experiment using this cage. They were particularly impressed that, independently of who the experimenter was (an old teacher or a very young student), the results were always the same, that is, the behavior of the rat was a high rate of the "bar" press response. In summary, the operant conditioning course offered by Fred Keller was a huge success and converted many skeptics to behavior analysis. The impact of the Keller visit was so great that some people used to say that Brazilian Psychology has the B. K. and the A. K. time -before and after Keller, respectively (Rangé & Guillardí, 1995)!

After their first visit, Fred and Frances Keller subsequently returned to Brazil to participate in a very important educational experience, the application of a new technology of teaching. Carolina Bori had been invited by the Dean of the Brasília University to propose a new teaching method, and she asked Keller

to come and help her in this innovative task. Keller proposed that John Gilmour ("Gil") Sherman come with him. Gil had come to Brazil in 1962, also through the Fulbright program, had continued the Keller course, and was well adapted to the Brazilian way of working. Some of the people who were Fred's and Gil's students during their first visit were finishing their undergraduate education and the best of them were invited to participate in the Brasília experience. These students included João Cláudio Todorov, and Luis Otávio Queirós. The group was exceptionally enthusiastic and well prepared to apply Keller's personalized system of instruction (PSI).

The plans to go to Brasília were ready in January of 1964, a very special and unhappy year for Brazilians. On March 31, 1964 the military created an insurrection and deposed the legally-elected president of the country. The military put into effect a repressive dictatorship in the place of the President and his government. The Brazilian "golden years" were over and very bad times followed. After the coup d'état "the new" became synonymous with "dangerous." People who expressed their disagreement with the military dictatorship were incarcerated and tortured, and many of them were killed. The "golden" years of innovation gave way to a "black" period of reactionary times.

The Dean of the University of Brasília was replaced by another one that had no commitment to the "old" project. For several weeks, the Keller group lived in uncertainty about its future, but finally the new Dean asked the group to move to Brasília. The experience was stimulating and the PSI course was a success. The political situation was becoming worse for everyone, however, and in 1965 the Keller group was dismantled. The Brazilians involved with the project lost their jobs in the University of Brasília, and Fred and Gil returned to the United States where they continued developing the PSI project in Arizona (Todorov, 1996).

Paradoxically, those negative circumstances resulted in the possibility of multiplying and diversifying the Brasília experience. Carolina Bori returned to USP and helped to create an Experimental Psychology graduate course that was (and is) the standard for the development of Experimental Psychology in Brazil. She also became a very well known scientist by fighting against the repression of Brazilian science, becoming the President of the most important general scientific society in the country. Luis Queirós created an excellent undergraduate psychology course in Campinas, a city near São Paulo, but after few years he was fired for political reasons, terminating his creative efforts. He subsequently founded the first Brazilian psychological clinic using only behavioral analysis methods. The clinic was very successful and greatly expanded the use of behavior therapy in Brazil. João Todorov was a teaching assistant at Arizona State University, where he helped Gil Sherman with the PSI

course. When Todorov returned to Brazil, he became a teacher at USP (Ribeirão Preto) where he influenced a new generation of experimental psychologists. He also helped found a very influential Psychology Society. A few years ago, after the end of the military government, he became the Dean of the University of Brasília. In addition to people who worked directly with the Brasília project, other people also were influenced by Keller and contributed to the development of behavior analysis both in Brazil and internationally. Isaías Pessotti, for example, went to Italy and took with him his enthusiasm about operant conditioning experiments, thereby influencing the start of behavior analysis in Italy.

The 20 years during which the military governed Brazil were destructive in many ways. Not only were new ideas repressed but, as noted above, people were tortured and many of them were killed because of their ideas. In this context, behavior analysis was subject to a particular prejudice. Because the government of the United States of America had supported the Brazilian military during this time (with the help of the CIA), many young people associated the North-American nationality of Skinner, and other prominent experimental psychologists, with the repressive government in Brazil supported by the United States Government. Thus, through "Pavlovian conditioning," behavior analysis that had produced innovative activities in university education and in research in Brazil until 1964 came to be seen as a reactionary world view in Psychology. I was an undergraduate student at the beginning of the 1970s, and I remember that it was not easy to convince my colleagues that my decision to work with behavior analysis did not mean that I agreed with repressive ideologies, nor that the word "control," used frequently by the behavior analysts, was unrelated to the repressive government policies and actions during the military dictatorship.

In spite of this prejudice, many of Keller's intellectual "children" and "grandchildren" (Todorov, 1996) have continued to influence the new generation of Brazilian behavior analysts in different regions of the country. During this time, other visitors to Brazil contributed to the interchange of ideas about the development of behavior analysis. For example, Charles Ferster, Murray Sidman, Charles Catania, Peter Harzem, Emilio Ribes-Iñesta, Derek Blackman, David Eckerman, Allen Neuringer, Armando Machado and many others have come to exchange ideas with their Brazilian colleagues. Today, although behavior analysis is not the predominant approach in Brazilian Psychology, which predominantly is still interested in studying the mind, it has acquired a very respectable position within the human and biological sciences. We offer many graduate courses in different regions of the country, Experimental Psychology is required in all undergraduate Psychology courses

of study, and many scientific societies and journals are dedicated to behavior analytic research.

The future of the behavior analysis in Brazil is not different from the future of the behavior analysis in the United States: the priorities of mainstream psychology continue to be in the study of the mind. Cognitive Psychology and the Neurosciences predominate, establishing contingencies that are not always advantageous for radical behaviorism. If the newer generation of behavior analysts (the Keller's great-grandchildren) is not numerically large, it makes up for its size in its competence and enthusiasm. As a result, it is possible to predict that behavior analysis, reflecting its radical behavioral world view, will have a long and eventful history in Brazil.

The future and the past are related. So, let me conclude with a few more comments about Keller, Fred (and Frances) returned to Brazil several times after the Brasília experience (the last one when Fred was 96 years old!). Every time they visited they were surrounded by old friends, by new behavior analysts, and by young psychology students. Added to his intellectual charisma, Fred attracted the young students by speaking in Portuguese in his lectures and informal talks. His association with the Brazilians was a happy combination between competence, consideration, and affection. The right person at the right moment. Good for us!

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