



Causes of unity and disunity in Psychology and Behaviorism: An encounter with Arthur W. Staats' Psychological Behaviorism¹

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ABSTRACT. The following is a synthesis of a number of interviews with Arthur W. Staats. For the last fifty years A. W. Staats has made important contributions in developmental psychology, learning Psychology, emotional behavior, language, behavioral theory and theoretical unification in psychology. His theoretical proposal, Psychological Behaviorism (PB), is illustrated as a non-eclectic framework for unification between behaviorism and Psychology. In this document we give special consideration to: (a) historical factors in behaviorism history, including similarities and pathways of influence between first- and second- and third-generation behaviorism; (b) theoretical fragmentation in contemporary Psychology; (c) the role of eclecticism as an artificial framework for unification in Psychology; (d) unification in psychology; (e) differentiation between PB and Radical Behaviorism with regard to functional analysis, emotional operation/classic responses, and their theoretical conception of the relationship between basic and applied research; and (f) key concepts in PB, including basic behavioral repertoires, three-function theory, multi-level theory, experimental-longitudinal method, behavioral use of psychometric tests, and PB theory of intelligence.

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KEYWORDS. Psychological behaviorism. Radical behaviorism. Unification. Eclecticism. Basic behavioral repertoires. Theoretical study.

RESUMEN. En este estudio teórico se presenta la síntesis de varias entrevistas mantenidas con Arthur W. Staats. Durante los últimos cincuenta años A. W. Staats ha realizado relevantes contribuciones en psicología del desarrollo, psicología del aprendizaje, comportamiento emocional, lenguaje, teoría conductual y unificación teórica de la psicología, entre otras áreas. Su propuesta teórica, el conductismo Psicológico, se presenta como un marco no ecléctico de unificación entre conductismo y psicología. En el presente documento se discuten especialmente: (a) aspectos históricos del desarrollo del conductismo, incluyendo las similitudes e influencias entre conductismos de primera, segunda y tercera generación, (b) fragmentación teórica en Psicología, (c) papel del eclecticismo como marco artificial para la unificación de la Psicología, (d) unificación de la Psicología, (e) distinciones entre conductismo radical y paradigmático con respecto a análisis funcional, conducta emocional, concepción teórica del vínculo entre investigación básica y aplicada, y (f) conceptos clave del conductismo psicológico (e.g. repertorios básicos de conducta, teoría de las tres funciones del estímulo, teoría multi-nivel, método experimental-longitudinal, uso conductual de tests psicométricos, teoría paradigmático-conductista de la inteligencia).

PALABRAS CLAVE. Conductismo psicológico. Conductismo radical. Unificación. Eclecticismo. Repertorios básicos de conducta. Estudio teórico.

RESUMO. Neste estudo teórico apresenta-se a síntese de várias entrevistas com Arthur W. Staats. Durante os últimos cinquenta anos A. W. Staats contribuiu de modo relevante para a psicologia do desenvolvimento, psicologia da aprendizagem, comportamento emocional, linguagem, teoria comportamental, e unificação teórica da Psicologia, entre outras áreas. A sua proposta teórica, o comportamentalismo psicológico, apresenta-se como um marco não eclético de unificação entre comportamentalismo e Psicologia. No presente documento discutem-se especialmente: (a) aspectos históricos do desenvolvimento do comportamentalismo, incluindo as semelhanças e influências entre comportamentalismo de primeira, segunda e terceira gerações, (b) fragmentação teórica na Psicologia, (c) papel do ecletismo como marco artificial para a unificação da psicologia, (d) unificação da Psicologia, (e) distinções entre comportamentalismo radical e paradigmático com respeito à análise funcional, comportamento emocional, concepção teórica do vínculo entre investigação básica e aplicada, e (f) conceitos chave do comportamentalismo psicológico (e.g. repertórios básicos de comportamento, teoria das três funções do estímulo, teoria multi-nível, método experimental-longitudinal, uso comportamental de testes psicométricos, teoria paradigmático-comportamental da inteligência).

PALAVRAS CHAVE. Comportamentalismo psicológico. Comportamentalismo radical. Unificação. Ecletismo. Repertórios básicos de comportamento. Estudo teórico.

Arthur W. Staats is one of the few living behavioral theorists who has developed a comprehensive theoretical program toward the explanation of complex human behavior. His research has focused on extending and supporting his theoretical framework,

paradigmatic or psychological behaviorism (PB). This approach, according to Staats, solves the shortcoming of Radical Behaviorism (RB) and is the framework for the third-generation behaviorism by (a) emphasizing specific human learning processes (e.g. the basic behavioral repertoires [BBR], cumulative-hierarchical learning that enable a behavioral treatment of such phenomena as personality and intelligence), (b) establishing a more developed theory for showing the causal role of emotion and language in determining behavior, and (c) interrelating the different major fields of psychology in the process of unifying behaviorism and psychology. Arthur W. Staats was born in New York in 1924. His mother was a Russian emigrant from Tetiev, Russia. After the death of Staats' father the family moved to California when he was three months old. He acknowledges that he comes from a family of «radical thought» with a leftist and atheist tradition. Staats served in the navy during World War II. He then enrolled in the University of California where he obtained his PhD in 1956. His dissertation was entitled: *A behavioristic study of verbal and instrumental response hierarchies and their relationship to human problem solving* (Staats, 1956). Initially he was employed by the Arizona State University where he was driving force in establishing a modern behavioral department. Here he arranged for figures like I. Goldiamond, J. Greenspoon and J. Michael to join the department. Before his appointment to the University of Hawai'i in 1966 where he is currently emeritus professor he was a professor at Berkeley and the University of Wisconsin. He retired in 1999 (see a biography in Cloninger, 2000, p. 278).

This interview is the result of several encounters with A. W. Staats where the most relevant topics of his research and interests were extensively discussed. The interview was performed on Staats' *lanai* (porch) overseeing an extraordinary view of Wai'alaie Beach in the neighborhood of Kahala, Honolulu in January and February of 2004. Staats edited the manuscript twice before sent for publication. The taped interview is available by request at the author's address.

Psychology and disunity

-In 1933 Edna Heidebreder regretted that psychology was at that time a divided science. «Psychologists,» she added, «are continually looking upon the work of their colleagues and finding that it is not good. And with little hesitation, or with none at all, they expose the weaknesses and the flaws they find» (p. 3). She was optimistic about the future. In time, psychology would gather enough evidence «to make a single, solid system» (p. 17). Unfortunately, the current state of the subject has not improved since Heidebreder's days. The continuous emergence of new «sciences» without any common theoretical heritage, contributes to maintaining high levels of incommensurability within a preparadigmatic science (Kuhn, 1962) as we can see psychology to be (Staats, 1983). RB, although possessing generalizability and analyzing some non-behavioral works into behavioral terms (Skinner, 1945, 1974, 1987; Watson, 1924/1930), has largely failed to provide a unifying approach in that undertaking. Some have even proposed widening the schism between psychology and behavior analysis (Fraleigh and Vargas, 1986). Additionally, the RB approach to psychology is in regression (e.g., Haynes and

O'Brien, 2000, Figure 2-1). One of the major topics that has arisen in your work is the disunity of psychology (e.g. Staats, 1981, 1983). What characteristics of PB would make a better approach account for unification of psychology than those of RB?

-A very basic thing about psychology, and about behaviorism as part of psychology is that you won't understand some of the actions of behaviorism unless you understand behaviorism as a part of a disunified science. Psychology is a science that really has different operating features than the more established sciences. As I have pointed out extensively, all sciences started with disunity (Staats, 1983). Kuhn described the disunified state of physical science several hundreds of years ago, stating that all the major experimenters had different, opposing theories although they all did scientific studies. That created a chaos of unrelated knowledge (Kuhn, 1962, pp. 13-18). That's the way psychology is now, and that's how behaviorism is. There are many major theories each with its different theory language. And the work done in the framework of those theories is considered to be separate, different and in competition. There is not a building way of operation, rather there is rivalry among those in the same area, for example among the behaviorisms or among theories of personality. There is no goal of unifying the common portions of the theories. And that occurs throughout psychology and behaviorism as a part of psychology. If we go back to the days of C. L. Hull, E. C. Tolman, and B. F. Skinner, you can see it very clearly. Skinner never referred to Hull. They are both reinforcement theorists. They both worked with the same principles, but the interactions with the different schools are minimum. That is really disadvantageous for a science. One will develop one thing that will appear in the other one with a different name. Let us consider the idea of concept formation. Hull worked in concept formation very early (Hull, 1920) and Skinner introduced the term abstraction in his 1953 book; both are exactly the same concepts. He never mentioned Hull and his empirical work (e.g. Hull, 1943), so if you work in concept formation you would never pull these things together. You see different terminologies that separate people and their researches. That is a deep characteristic of American psychology, and a deep characteristic of RB. It has been influenced by other behaviorisms very widely but Skinner never referred to that. Most of the followers in the different schools don't read each other; although the leaders must, when they find something of value and use it they translate it into the theory language of their school as though it is indigenous to that school.

-Is mutual enrichment between behaviorisms possible?

Yes, but is not manifest. There was much in common among the classic behaviorisms, and still is. As an example, after we started behavioral applications, there were people who still denied verbal psychotherapy as a topic to be concerned with. I did a paper on that in 1972 (Staats, 1972, see also Staats, 1963, pp. 509-511) and it was really criticized by a radical behaviorist³ (Tryon, 1974). In 1988, 16 years later there was an article written by S. A. Hamilton, a radical behaviorist, it was called *A behavioral formulations of verbal behavior in psychotherapy* (Hamilton, 1988). The delay in the

³ It is remarkable that W. W. Tryon later became himself a researcher within PB framework. In fact was him who proposed the term «Psychological Behaviorism» (Tryon, 1990).

inclusion of a behavioral psychotherapy in RB lasted 16 years. There is a tremendous disadvantage on that. If you read about science a very basic thing is communication, enabling a building on the basis of people's works that came before. That is lacking in this example and many others.

As a result of a rivalrous methodology, right now it is impossible to bring together all the behavioral approaches to exert their whole power. PB right from the beginning rejected that approach. One of the features of my 1963 book is that it does not follow the separation of different schools (Staats, 1963). Throughout that book I have integrated things that are important regardless of where they come from and I have cited where they come from. So PB has been constructed to be a unifying framework, a behaviorism that uses and cites prior developments so it can produce the next generation of advancement. That is carried over into unification with materials outside of behaviorism. Behaviorism has always made such uses of psychology, but has never recognized that as a part of behaviorism. If you read J. B. Watson's book of 1924, you will see that the psychological phenomena that are referred to are then interpreted in behavioral principles (Watson, 1924/1930), but those psychological phenomena are never given importance and credited to traditional psychology. PB has always used a different methodology. The study of a different phenomenon by traditional psychology may not be completed, it may have errors in it, it may use mentalistic concepts, but nevertheless, be an important phenomenon. PB will recognize that value but interpret the phenomenon in behavioral principles. That will then make it possible to make a functional analysis of that phenomenon, while recognizing that traditional psychology was valuable in discovering and developing the study of the phenomenon. For example, intelligence -rejected by RB as a mentalistic concept- has been subjected to behavior analysis by PB. PB asked what is this phenomenon? It is individual differences between people in the goodness of their behavior and in the goodness of how they achieve in the classroom. What can intelligence be? PB's analysis considers intelligence to be defined by learned basic behavioral repertoires (BBR) that enable the child to behave better; to learn better in the classroom. Without those repertoires the child is not capable of learning. That conception opens a whole field of exploration. Can you measure intelligence? Can you train the child to be intelligent? The conception is an unification. That unification recognizes the value of intelligence and the work that went into composing intelligence tests along with its own behavior analysis (Staats, 1990). This constitutes another example of behaviorisms disunity. That is, in the last issue of *The Behavior Analyst* J. Moore has an article where he accepts intelligence and makes a beginning behavioral interpretation of intelligence (Moore and Cooper, 2003). Thus as has occurred frequently before, the PB approach is beginning to appear in RB, but without identification. Any further development of intelligence in RB will then appear to arise from RB (Staats, 2003).

According to Skinner, his experimental analysis of behavior (EAB) was the methodology to use to study human behavior. S. W. Bijou used EAB methodology with mental retardation (e.g. Bijou, 1965), O. R. Lindsley did so with psychotics (e.g. Lindsley, 1959) and other Skinner students did so with different subjects. But they all were working with simple responses such as pulling a plunger. Their work was valuable in showing that the different types of subjects followed the principles of reinforcement in

their behavior. But, if behaviorism would have stayed within that program, it would have gone no further. It was necessary to break away from that framework; complex human behavior can't be studied using EAB. Although this is not recognized, the progress of the modern behavioral movement has involved this process of breaking away from various central points of RB. For example verbal psychotherapy was opposed by RB until it had been shown indisputably in behavioral work that it was effective as I just mentioned before. Now there are many behavior analyst whose allegiance is to RB who work with a form of psychotherapy. An important breaking away involves methodology for research with humans; Skinner's RB first intended that the EAB was sufficient to the exclusion of others.

-One of the appeals of PB is that many different methods are acknowledged to provide relevant information on the study of human behavior and behavioral repertoires. Early in your career you have stated that: «[The] psychometric approach and the experimental S-R approach can be considered to have a complementary relationship» (Staats, Staats, Heard, and Finley, 1962, p. 111). For example, items of the Stanford-Binet can be arranged to assess a child's verbal-labeling repertoire, verbal motor repertoire, etc. (Staats, 1963). How can traditional assessment instruments evaluate a BBR?

One of the things that the PB analysis does is it looks at the traditional fields and makes behavioral analyses. For example, what is intelligence? In answering that question let us ask what did Alfred Binet do when he selected his problem items? He gave those problems to different children and then established at what ages a certain percentage of the children were able to answer the problems and so he age-graded those items. He also correlated those items with children's school achievement. Afterward, he selected those items that predicted achievement, that was a crucial step. When he did that he guaranteed that the test composed of those items would be predictive of school achievement. The test was then considered to test intelligence, because it predicted classroom performance. So PB asked why there was a relationship between test scores and school achievement? The answer is that intelligence items measure behaviors, repertoires that the child needs to learn well at school. If the child doesn't have those behaviors, then it doesn't have the ability to achieve in school. My work with children, convinced me that child development really involves acquiring repertoires of behavior and those repertoires are the foundations for learning other repertoire and so forth. That is the nature of child development. With this analysis, and the empirical studies that back it up, one can understand why intelligence tests can predict achievement because of the way they are constructed. They are constructed because they measure behaviors that predict the ability to learn other behaviors. PB says it is necessary to analyze what are the behaviors that predict achievement in school. They are language and motor repertoire of the child that are important as foundations for learning additional skills. Psychological Behaviorism saw that intelligence items measured repertoires that PB had already studied behaviorally. With that knowledge of important BBR it was possible to analyze intelligence test in terms of the basic behaviors they measure. That research was purely behavioral, it only deal with behavioral things.

-Is there difficulty in the fact that those instruments have been developed with statistical and topographic criteria which neglect the function of the behavior?

Very essential in the example I have given is that underlying the statistical procedure there is a behavioral process. The tests constructed with statistics are really measuring behavior. The fact that statistical procedures are involved is irrelevant. Central is the behavior of responding to the items of the test. Some of them are to ask the child to count or to ask the child to name different objects, etc. This is easy to see at the young ages. If you go on the behavior measured on the intelligence test become very complex and the analysis must be very complex. At the younger ages the behaviors measured can be readily analyzed and training program set up to teach the child the behaviors (Staats and Burns, 1981). The same PB conceptual analysis and methodology also applies to personality tests. It may not be a simple task to analyze what the behaviors are that composed a personality characteristic but psychometrics can help in identifying what the behaviors are. For instance, the MMPI will categorize people (e.g. schizophrenics); if you look at the items, they are measuring behaviors. If a person crosses the street to avoid speaking to someone, if a person has suspicions about people... these are behaviors. When you find a behavior that predicts something, for instance paranoid schizophrenia, that is an important behavior. We created intelligent children by using this analysis and the PB procedures for training children. If you want someone not to be schizophrenic, then make sure he doesn't develop the behaviors that schizophrenic people have. This combination of PB theory and analysis opens up such a vast potential for research that I think people don't really grasp what PB really is.

-Probably psychology's theoretical disunity leads to eclecticism. This tendency seems to be particularly prominent in regards to technical eclecticism in interdisciplinary settings (e.g. Virués, Santolaya, Buena-Casal, and García-Cueto, 2003). Under applied circumstances the unity of action is not a matter of theoretical debate, but necessity. The work of M. R. Goldfried (e.g. Goldfried, 1995) and J. C. Norcross in integrative psychotherapy (e.g. Norcross and Beutler, 2000; Norcross, Beutler, and Caldwell, 2002), the study of empirically supported therapy relationships (e.g. Ackerman et al., 2001), and the increasing interest in evidence-based treatments are a few examples of this process. The phenomenon of eclecticism can be observed even within behavioral psychology (Staats, 1999a). What are the shortcomings of eclecticism as an artificial framework for unification in psychology?

First, I may say that that clinical interest in unification came after PB analyzed and highlighted the need for unification. With respect to your question let me say that eclecticism takes different things and puts them together, but not in a way that they are unified, that is, interrelated in terms of principles. The different things are left different. It is a combination of apples and oranges. That is quite different than a unification that shows that the same principles apply to the two phenomena or two realms. Then knowledge in one realm will translate to advances to the other realm. When you can elaborate one framework by incorporating findings from another framework, you can enlarge the first framework and make it more useful. That is described in the philosophy of science and in PB's methodology (see Staats, 1983). PB is not eclectic in any way;

everything that occurs in PB is analyzed in terms of the same principles. From psychotherapy back to animal learning there is a clear line of connection in terms of principles. That is not true in eclecticism, which can occur in behavior analysis practices. As an example, a lot of behavior therapists in their practice will use psychometric tests (see Watkins, Campbell, and McGregor, 1990). It makes no theoretical sense for them to do that, there is no justification in principle. When PB has analyzed psychometric tests in terms of the same principles, however, that is no longer eclectic. For instance, when a PB analysis has been made of the repertoires measured on an intelligence test that is not eclectic, and the analysis has empirical implications. You can train the child to improve those repertoires. Then, they will do better on the tests and better in school. G. L. Burns and I did a series of studies that showed exactly that (e.g., Staats and Burns, 1981). Would it be important to be able to train such repertoires and make children more intelligent? Everybody recognizes that importance.

Radical Behaviorism (RB) and Psychological Behaviorism (PB)

-A. W. Staats has repeatedly pointed out the relevance of the BBRs that individuals bring to a given learning situation (e.g. Staats, 1971, 1994, 1996). However, the EAB has focused on the study of the near environmental events that account for the variability of behavior (e.g. Baer, Wolf, and Risley, 1968; Hanley, Iwata, and McCord, 2003). Which limitations of this concept of the functional analysis of behavior could be expected?

PB presented a program for behavioral research with children (see Staats, 1963; Staats and Butterfield, 1965) that was followed by later behavior analytic researchers. M. Wolf, for instance, was a student of mine in the first place (e.g. Staats, Finley, Minke, and Wolf, 1964; Staats, Staats, Schutz, and Wolf, 1962). PB only differs in not being limited to functional analysis, EAB, or any other behavioral methodology. Actually, let me suggest that PB's study of repertoires of behavior, BBRs, as explanations of intelligence scores is just as much a behavior analysis as reinforcing pulling a knob, or using time out (which PB invented) to lessen undesirable behavior.

Skinner said that he was not a learning theorist. He wasn't really interested in learning. And he wasn't, strangely enough. You can see it in his work. For example, in the EAB methodology the pigeons are first trained to peck the key. But that training is considered irrelevant and is not studied. You train the pigeon to the behavior only so that you can use the behavior to study the effects of reinforcement. You are not interested in learning. You are not interested in how the pigeon comes to peck. It is that focus on the immediate behavior and its consequences that excludes learning from consideration. This is one of the important aspects of Skinner's RB that PB has addressed. PB says that learning is essential. Skinner was interested in the here and now.

I worked with my children, among other reasons, because an experimental-longitudinal method was involved (e.g. Staats, 1977). Within that framework the experiments went on for a long time; years. I worked with my daughter for years in her reading; something like training my child to walk took me six months. We went through a number of steps (Staats, 1996, pp. 135-136). You have to consider the long drawn out effect. That's the way you get the concept of BBR. You don't get this concept in the EAB with a rat or

a pigeon. PB focuses on learning, including child learning. Only now are behavior analysts of an RB persuasion becoming interested in learning (e.g., H. Schlinger, personal communication, January 12, 2004).

-One of the prominent discrepancies between the RB and PB theoretical schemes is the two-level vs. multi-level approach to behavior. It has been proposed that human learning has distinctive characteristics when compared with subhuman learning (e.g. Gagne, 1965; Staats, 1981, p. 243). The transition of information within a two-level account from basic to applied settings can be addressed by the elaboration or abstraction of the same principles in more complex circumstances (Staats, 1981). Nevertheless, these strategies could be shown to be insufficient given the distinctive nature of human cognition, learning and language. Which methodological novelties are proposed in PB to bridge the distance between basic and applied research in psychology?

Regarding Gagne's position and mine. Gagne proposed that there were quite different kinds of learning. Conditioning was the simplest. The 'higher' types of learning were not derived from conditioning. My approach is different. Conditioning principles are basic. But through conditioning, repertoires are learned that enable more advanced repertoires to be learned. That more advanced learning involves new principles. But always the basic conditioning principles are operating.

Skinner's idea, and this also applies to Hull, Watson, and the other major behaviorists, was that once the basic principles have been established the task is just to apply them to all kinds of complex human behavior. I say that this is not the case. The basic principles are important in all human behavior but that is not the only thing that is important. When two children are sent to school and the teacher tries to teach them something one child does it very well and the other doesn't. Why? The same principles of reinforcement and classical conditioning apply to both. The reason is because the children bring with them different repertoires. One child has learned attentive skills, following direction skills, and other BBRs. The other child, although of the same age, has not had the training opportunities to learn those repertoires. The first child will learn many new things better than the second child. Those BBRs are part of the explanation of the differences in the two children's behavior. The conditioning principles are also part of the explanation because the child learns the BBRs through reinforcement and through classical conditioning. The study of the BBRs takes one to a different level of study. That's one reason why PB is a multi-level theory. It starts with basic conditioning principles that function in all human behavior and learning, but other things also function that have to be studied.

-B. F. Skinner acknowledged the parallelism between motivational factors, essentially operant, and emotional operations, essentially classic (Skinner, 1953, p. 76, p. 165, p. 169; Skinner 1988/1989, p. 83). However, he did not elaborate on the relationship between classical and operant conditioning in order to build a theory with more generalizability potential. In PB, three main functions of the stimulus are assumed. «[A] stimulus can elicit an emotional response, it can serve as a reinforcing stimulus, or it can serve to direct (control) behavior» (Staats, 1994, p. 103, see also Staats, 1979). What theoretical progress is addressed by this statement?

Skinner mentioned emotional operations and classical conditioning (e.g., Skinner, 1953). But he never treats the topic systematically and changes his position in different places. His focus was operant conditioning and he clearly said that classical conditioning and emotion are independent from operant conditioning and behavior (see Skinner, 1975). He also showed his disinterest in classical conditioning and emotion in his actions; he never studied classical or respondent conditioning, focusing on reinforcement and reinforcement schedules (e.g. Ferster and Skinner, 1957), and he pushed others to study reinforcement. That is unfortunate; everybody can recognize, even on a commonsense level, that emotion affects behavior. How you feel affects how you do. So an approach that can show the relationship between classical and operant conditioning and of emotion and behavior is advantageous just on that level. PB recognizes the intimate relationship between emotion and behavior by its the three-function learning theory (Staats, 1979).

Emotion is very fundamental to operant conditioning, namely, a stimulus has the reinforcer function because it elicits an emotional response. If it didn't elicit an emotional response it would not be a reinforcer.

Why are we interested in which stimuli will elicit an emotional response in a person? Because that will tell us what stimuli are rewards and what stimuli are punishments. If two individuals respond emotionally in a different way, they will be affected by different reinforcers. Take a person that is religious. Why does a religious person go to church? Because there are reinforcing things in church. Why doesn't an atheist go to church? Because it is not reinforcing for them. Things in church do not elicit a positive emotional response. We can explain peoples' differences in behavior if we know what stimuli elicit an emotional response for them. We showed that in a reaction time study. We took religious and non-religious people. When a word that could be either a religious word or a neutral word was exposed they had to pull either one type of word or the other toward themselves. We found that if the word was a religious one, religious people pulled the handle toward themselves faster than did non-religious people (Staats and Burns, 1982). Religious subjects pushed religious words away from themselves more slowly than non-religious subjects. So depending on the emotional value of the stimulus subjects would exhibit stronger approach or avoidance behaviors. That tells you that the behavior of religious people toward religious stimuli is determined by the emotional responses to those stimuli. Within the principles of PB lies the important subject matter of human emotion and motivation and the individual differences involved.

A future of unification

-The field has evolved from major theories in which relations were based on inter-theory competition (e.g. Staats, 1983, p. 232) to theory atomization. Currently, those micro-theories do not communicate. What do you consider to be the future of psychology over the next half century?

-I think that unification is very central to the future of psychology and behaviorism. Ahead of us lies the beginning of a tremendous task of establishing consensus and unification in psychology. The problem is that people talk about unity but they are not doing the many tasks involved in unification (Staats, 1999a). The task for behaviorists

is drawing together things in RB, PB, social learning theory, behavior therapy, cognitive-behavior therapy and the other variants. Additionally, the PB goal is to unify with non-behavioral psychology. There are so many redundant concepts in psychology, if someone could collapse all these concepts it would be of major importance. How many concepts of self-esteem, self-confidence, self-this, self-that are there? They are all considered different. How many concepts of reinforcement are there? If you go to the literature you will find all kinds of concepts that refer to reinforcement, but use different terms. Having many terms for the same phenomenon makes the field complicated and difficult for everyone. Advanced sciences do not allow such redundancy. Clearing redundancy from psychology is one of the large tasks of unification. There are many others.

-Do you consider that unification will be done by a behavioral language?

-I think that PB has shown that a behavioral language can provide the framework for a very broad unification. No other approach has shown such generality.

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