J. R. Kantor (1888-1984) developed and promoted an often underappreciated psychological system he called interbehaviorism that attempted to organize scientific values into a coherent system of psychology. Kantor insisted that in all scientific behavior the scientist needed to differentiate between constructs and events. If we were to develop constructs it would be only after careful observation of the actual events in context. He felt that his mission of forging naturalistic constructs for psychological events could be achieved only through scientific system building, and this was the activity that consumed his entire career. The present paper focuses on scientific system construction with the intent of (a) clarifying the nature and value of scientific system construction from Kantor’s perspective, (b) articulating Kantor’s system-building procedure, and (c) outlining the system of interbehavioral psychology produced in accordance with that procedure.

J. R. Kantor’s (1888-1984) lifelong mission was to articulate a natural science of psychology. The motivation for this work arose from two sources. First, Kantor regarded psychological events to be an important series of happenings in their own right, about which no satisfactory treatment had been achieved. Second, he felt that a more satisfactory treatment of psychological events would facilitate the work of other scientists in their inevitable encounter with psychological issues (Kantor, 1959, p. ix).

Kantor provided no justification for adopting the perspective of a scientist in contrast to that of some other type of worker. Rather, he took this perspective as a starting point from which he argued that until events were made available for scientific study by way of their incorporation into a scientific system, there could be no scientific understanding of them (Kantor, 1959, pp. 60, 80). Thus, his mission of forging naturalistic constructs for...
psychological events could be achieved only through scientific system building, and this was the activity that occupied his entire career. In fact, system construction is a hallmark of interbehavioral psychology.

This paper focuses on system building and its aim is threefold: (a) to clarify the nature and value of scientific system building from Kantor's perspective, (b) to articulate Kantor's system-building procedure, and (c) to outline the system of interbehavioral psychology produced in accordance with that procedure. We begin by examining a small number of presuppositions upon which Kantor's view of science and the aim of his system-building efforts were formulated as a means of general orientation to his perspective.

First, as is the case for all scientists (Hayes, 1993, 1997), Kantor assumed the existence of the natural world, in his terms, of "a manifold of events," which is subject to observers' acts of description and interpretation (Kantor, 1953, pp. 13-14). Generally, he noted that different descriptions and interpretations are possible (e.g., chemical, biological, psychological) of this manifold of events; and he argued that scientific activities of these sorts can be distinguished from similar activities characteristic of other domains of knowing (Kantor, 1953, p. 5). Second, he assumed that only the products of scientific description and interpretation can show the properties of validity and reliability, and that only valid products may be characterized as to their adequacy and usefulness (Kantor, 1959, p. 41). Third, he believed that knowledge can show progress over time, but only when it is the product of scientific activity (Kantor, 1953, pp. 6-8; 1959, p. vii). Kantor further noted that scientific constructions can be, and typically are, subject to influence from nonscientific sources. He argued that this influence undermines their validity, and thereby their significance, and is further detrimental to the progressive development of scientific knowledge (1959, p. 39).

With this preliminary orientation to Kantor's views articulated, we now consider them in greater detail. We begin by articulating Kantor's views of science, followed by his views of scientific systemization.

Characteristics of Kantor's System Construction

Kantor's interests and contributions to science, and in particular to psychology, were unique. Much like Einstein, Kantor involved himself not simply in the study of events, but in the formulation of what it means to conduct scientific activity. Recognition and fad were not his motivation; he was a serious scholar, a visionary. In his early years, he searched for a naturalistic comprehensive scientific system that addressed the psychological domain and found none. Subsequently, he devoted his life to articulating such a system to fill this void. His goal was to make a science of psychology possible and available to others who wished to study psychological events in a rigorous, naturalistic manner. His writings are voluminous; his attention to detail, unsurpassed. In the most elegant sense, he was a pioneer, a maverick, and a crusader for improvement of scientific systems in general.
Because Kantor developed the system of interbehavioral psychology from the ground up, his discussions regarding the system and system construction in general were technical. Consequently, Kantor’s writings can be difficult because of the careful and lengthy attention given to the development of all constructs, including their conceptual development set within a detailed historico-critical analysis. However, he was never unnecessarily technical; each term or construct had a special place within the overall system, and any description for the reader was therefore a technical encounter. Any difficulties associated with his writings, then, are not necessarily caused by an intractability of his writing style or, for that matter, to an intractability of interbehavioral psychology. Instead, these difficulties simply involve a lack of appreciation for Kantor’s selective point of view, especially where readers have a difficult time appreciating the need for a radically naturalistic system of psychology. Given that the purpose of this paper is to assist the reader in understanding Kantor’s scientific system construction, we devote some time in providing some general information that will help the reader appreciate and understand Kantor’s views on system construction.

The Interbehavioral Continuum

A seminal point of Kantor’s writings was the fundamental assumption that all events are similar in their most basic character, that is, all events develop (or evolve) in a spatiotemporal framework and nothing fundamentally makes their direct study impossible (Kantor, 1959, p. 42). In this sense, according to Kantor, all events are fundamentally continuous and any class of events, including psychological events, allow for the possibility of direct study. To illustrate this point, Kantor turned to his schema of evolutionary continuity, which outlined this complete and exhaustive continuity into four distinct evolutionary intervals: (a) planetary evolution, (b) phylogenetic biological evolution, (c) ontogenetic biological evolution, and (d) psychological interbehavioral history (Kantor, 1959, p. 43). The first interval, planetary evolution, includes the development of all the planets and stars, as well as of chemical elements, compounds, and processes. The second interval, phylogenetic biological evolution, includes the development of all plants and animals (species, genera, phyla), as well as of biological organism-environment adjustments and adaptations. The third interval, ontogenetic biological evolution, includes the embryological development of individual organisms. The fourth interval, psychological interbehavioral history, involves the evolution of acts and traits (behavior) in relation to objects, conditions, and cultural institutions.

These evolutionary intervals represent all possible events that humans might go about explaining in a scientific manner, that is, all scientific disciplines can be defined in relation to one, or more, of these intervals and nothing falls outside of these domains. The fourth interval represents those events most closely defining the subject matter (or events) at the level of analysis we call psychology. This continuity is more completely appreciated when one understands (a) that these intervals
include all the types of events that are amenable to scientific analyses, (b) that each interval involves only events that are spatiotemporal, (c) that each interval is inextricably related to the others (i.e., they make up the same continuum), (d) that these intervals, although interwoven and related, are never the cause or the source of the other, and (e) that scientific activity cannot transcend them and arrive at Ultimate Truths.

The continuum's significance. The significance of the evolutionary or interbehavioral continuum, especially for those first acquiring knowledge of Kantor's psychological system, is twofold. First, it naturalizes all events (Kantor, 1959). Any event, whether an inorganic process or a highly sophisticated psychological act (e.g., reasoning, remembering), occurs as a concrete spatiotemporal event. Ontological dualism is rejected. Kantor's response was to deny any possibility that other types of events may affect or control events specified within the evolutionary continuum. At no time can scientific description involve the use of terms that refer to events occurring outside spatiotemporal boundaries. Therefore, the idea that a nonspatiotemporal mind consisting of ideas, beliefs, attitudes, and the like, is necessary to describe psychological acts was completely refuted (Kantor, 1959, p. 42). In fact, by Kantor's standards, any system designed with these qualities would be regarded as protoscientific, lacking scientific validity due to its reliance on events transcending this continuum. The following helps to clarify Kantor's (1959) position on evolutionary continuity:

The interbehavioral continuum allows for no break between psychology and other types of scientific enterprise. Every psychological event, like the events handled in every science, consists of interbehavior of objects, though it must be specified that psychological and biological events involve the interbehavior of an organism with stimulating objects. Even the most outstanding differences between psychological and other kinds of events entail no fundamental variation in character. (p. 42)

A second significant aspect of the evolutionary continuum is directly related to the boundaries that separate each of the four intervals. Because of the continuous nature of the evolutionary continuum, events specified within the continuum play no type of conventional causal role with respect to one another. Therefore, one interval is not responsible (or causal) for any other. The implication is important. In Kantor's system, there was no causal reductionism. For instance, no psychological event can be described in biological terms, nor can a psychological event be said to be caused by a biological event. According to Kantor, psychological events must be described in purely psychological terms. Kantor's system of interbehavioral psychology, including its foundations in system construction, was designed to make the scientific description of psychological events possible in specific psychological terms. The evolutionary continuum is essential for an understanding of Kantor's system construction and his system because it specifically rejects all
references to a nonspatiotemporal mind or any attempt to explain psychological events in terms of biology or any other scientific enterprise. With the nature of the evolutionary continuum now described, we continue the discussion of system construction.

**Science as a Concrete Activity**

Kantor (1959, p. 31) described science as an enterprise for ascertaining the structure, operation, and interrelation of things and events. He emphasized the need to recognize (a) that science is a concrete activity, that is, an activity performed by people; (b) that these activities are subject to cultural influences like any other form of activity; and (c) that these cultural influences can be in direct opposition to the basic tenets of any reasonable scientific enterprise when they are derived historically from nonscientific sources of cultural life (Kantor, 1959, 1962). Therefore, the scientist, as a system builder, has an obligation to discuss events in terms that strictly characterize an authentic science, instead of relying on preestablished cultural biases.

**System construction and event availability.** By authentic science, Kantor was referring to a science that was fully and explicitly postulational and based on the notion of evolutionary continuity (Kantor, 1959). He argued that the underlying assumptions of any authentic scientific system were explicitly stated and organized, and thus were never left to simple happenstance or the result of muddled, disorganized activities. It is precisely Kantor's type of systemization that creates a particular scientific point of view and without these efforts there can be no systematic scientific orientation with respect to events (Kantor, 1959). Among scientists' primary tasks is to avoid contaminating their research with traditional attitudes or with considerations that originate in adjacent areas of cultural life. It is the activities involved in explicit system construction that actually make particular events available for scientific analyses. Prior to any concrete system construction, particular events may be available, but only in terms of a prescientific interest in them (e.g., language phenomena) and consequently these events are not, yet, scientifically available. Thus, the need for explicit system construction.

For Kantor (1959), system construction referred to concrete activities of persons in specifying the role of the observer and the fundamental nature of events. Accordingly, all scientific activity must begin and end with reference to concrete events. Only then can the structure, operation, and interrelations of events be articulated in a systematic manner appropriate to their specific description. Kantor (1959) also emphasized that all scientists come into contact with the same general things and events, such that scientific enterprises simply differ with respect to what aspect of these things and events they study. This constitutes a specific subject matter. His main objection to mentalistic and physiological approaches to psychology was due to their lack of concern for events that were explicitly psychological (Kantor, 1959, 1962). That is, mentalistic systems dealt not with concrete events, but rather with supposed psychic
events, while physiological systems favored the study of physiological events. This is what set Kantor out to construct a system appropriate for the scientific study of psychological events. In short, as it was derived from system construction, interbehavioral psychology makes psychological events scientifically available.

**Types of Scientific Propositions**

For Kantor (1959), no system was complete without the specific recognition and articulation of assumptions—termed postulates, when formally stated—that affect the scientist’s relationship with events. There are two general types of assumptions. The most general of which is the analysis referred to as the *logic of science*; the second arise from a set of basic assumptions regarding the interbehavioral field itself (Kantor, 1959, p. 69).

Assumptions pertaining to the logic of science are called *protopropositions* and are comprised of both definitions and postulates, while the set of assumptions pertaining to the specific formulations of a particular science are called *metapropositions* (Kantor, 1959, p. 69). The *metasystem*, in turn, constitutes the working basis of a science, the distinguishing definitions and assumptions essential to and characteristic of an individual science which is formally called the *system proper*. Kantor’s system proper articulated appropriate definitions, postulates, data, variables, units, investigative operations, and product constructions (laws, theories, etc.) specifically engineered (or constructed) for the interbehavioral system. Because the protopropositions represent the fundamental assumptions of scientific activity, or a logic of science, they are not formally included in Kantor’s interbehavioral system, which specifically addresses psychological events. However, these propositions are an essential element of Kantor’s overall system construction because they represent the fundamental assumptions concerning the nature of science upon which the interbehavioral system itself rests (Kantor, 1959, p. 69).

**Science**

*Isolation of the Scientific Enterprise*

Kantor (1959) isolated the scientific domain by identifying its boundary conditions. In his words:

> Scientists and their operations occupy a middle ground between two enormous bordering areas. On one side is the mighty stream of natural events, on the other, the mass of cultural institutions which influence the worker’s hypotheses, procedures, and interpretations. (pp. 37-38)

To understand the work and products of science, we must first take account of these two bordering conditions.

*The manifold of events.* The “stream of natural events” was understood by Kantor as an evolving field of interactions among the
things and events conceptualized collectively as the existent natural world. Although impossible to list or classify because of their vast numbers, these events may be said to vary from directly visible objects to exceedingly subtle aspects and relations among them (Kantor, 1953, pp. 16-17). In taking account of these more subtle aspects of natural events, Kantor addressed what he called spurious problems of reality, namely, the view that the independent existence of the natural world is subject to doubt. In his view, such problems arise from confusing events with scientists' reactions to events, such that scientists are sometimes led to believe that their observations contribute to the existence of the things observed. Kantor argued that the events and our reactions to them can be differentiated and, in so doing, he assumed the independent existence of the natural world (1953, pp. 17-18).

Cultural institutions. The “mass of cultural institutions” referred to the cultural circumstances in which scientific work occurs. As Kantor (1963-1969) related in his two-volume history of psychology, The Scientific Evolution of Psychology, “All the sciences in their branches and specializations evolve as a unified constellation. They all arise out of a common matrix of events” (p. 18, Vol. 1), also “the soil or cultural matrix in which each particular institution germinates and grows consists of the specific societal circumstances which provide the conditions of origin and development” (p. 32, Vol. 1). Kantor’s point was that scientific activities and products are continuous with the activities and products of other cultural enterprises.

Kantor further argued that cultural circumstances influence the origins of specific enterprises, the problems they address, and the character and use made of their products (1953, p. 45; 1959, p. vii). No matter how highly evolved scientific enterprises become, they carry with them their basic cultural characteristics (Kantor, 1953, p. 46). This notion is fostered by the fact that science has not originated or flourished in every society, but is rather a characteristic of particular cultural arrangements favorable to scientific development. From Kantor’s (1959, p. 8) perspective, cultures in which philosophical dualism is adopted as the dominant organizing theme represent the greatest threat to this development. The influence of culture on science is not a one-way process, however. That is, once scientific institutions have arisen in a culture, they may become powerful enough to exert a reciprocal influence on that culture (Kantor, 1953, pp. 48-50).

The Nature and Purpose of Science

Within the two bordering areas of events and culture is the enterprise of science, characterized as the set of unique activities involved in determining (a) the existence of things and events and (b) the characteristics of those things that do exist (Kantor, 1953, p. 4). Among those characteristics are the structure and operations of things and events, as well as their interrelations with other things and events (Kantor, 1959, p. 31). To examine this enterprise, Kantor adopts an observational
procedure: Science is an activity of specific workers, operating upon specific materials, with specific instruments, under specific cultural circumstances, producing specific products.

Having articulated Kantor’s understanding of the manifold of events and views concerning cultural auspices, we turn now to a selection of the other elements making up Kantor’s description of science. For reasons explained below, the discussion of the scientific worker and the work of scientists are collapsed and the tools and instruments with which scientists operate are not specifically addressed.

The work of scientists. As a biological entity, the scientific worker falls outside of the psychological domain as understood by Kantor (Kantor & Smith, 1975, pp. 4-8). In psychological perspective, the scientific worker is the cumulated interactions of the scientific worker with things and events that constituted the scientific worker. In other words, the worker is essentially the work. The significant fact to acknowledge about the scientific worker, so understood, is that whenever there is a scientific worker, there is an interbehavioral history with which to contend. This history of psychological interactions was conceptualized by Kantor as an aspect of the stream of natural events. As discussed earlier, the stream of events is described as an interbehavioral continuum in which previous evolutions of inorganic, phylogenetic, and ontogenetic events culminate in the interbehavioral history of an individual organism (Kantor, 1959, p. 43). One significant implication of this understanding is that psychological events, including the activities of scientists, are held to be continuous with, and a culmination of, all other events participating in the complex field of natural occurrences.

While continuous with the activities of all other types of workers, scientific activities can be distinguished on the basis of certain characteristics more common to the scientific enterprise than to others. In this regard, Kantor (1953, pp. 6-7) suggested that scientific work is serious or consequential work, the implication being that it is productive of useful information. Further, scientific work is said to involve discovery, the implication being that its products involve a factor of novelty or originality. That is, if the scientific enterprise is successful, something new emerges, something frequently incompatible with previous conditions (Kantor, 1953, p. 7). These characteristics of scientific activities and their outcomes are not possible in the absence of methodological precision and intentionality with regard to goals. Accordingly, scientific work is more definite and deliberate in its organization and operation—that is, confronting concrete events—than are other pursuits (Kantor, 1953, p. 5).

The basic work of science consists of so interbehaving with things and events as to increase our knowledge of them. Only by examining and manipulating things and events do we obtain knowledge and control... All scientific contacts with things have one primary goal—the ascertainment of their nature: their constitution and organization. The organization of a thing includes its interrelations with other things resulting in various changes and
transformations. From such manipulative contacts scientists proceed to describe and explain things. They are then prepared for the further interbehavior of prediction and control. (Kantor, 1953, p. 13-14)

In more specific terms, Kantor (1953, pp. 15-16) outlined four general types of scientific procedures: direct observation, instrumental observation, transforming contacts, and remote observation. Direct observation is distinguished from the other three in that it occurs with a minimum of manipulation of the objects under study. Instrumental observation and transforming contacts involve direct manipulations of objects and events so as to facilitate observations of them and their relation to other objects and events. Remote observation, among which Kantor included generalizing and analogizing activities, is described as inferential in nature. Despite the indirect character of remote observations, Kantor was careful to point out that they are founded, ultimately, on directly encountered events. In his words: "The chain connecting the worker and the thing upon which he operates may consist of many links, but it is characteristic of scientific work that the connection is rigidly maintained" (Kantor, 1953, p. 16).

The products of the work. Given that science is an activity of specific workers, operating on specific materials, with specific instruments, under specific cultural circumstances, no means exist by which the products of scientific work could have universal and absolute characteristics, as is sometimes claimed (Kantor, 1953, pp. 3-4). In other words, the products of scientific work do not consist of static truths. On the contrary, "Science is perennially in a formative stage" (Kantor, 1953, p. 25). This admission of tentativeness does not suggest that the outcomes of science are without value. Their value is observed in the extent to which they provide for more effective interactions with nature. A result is not achieved with respect to all things in all circumstances at once, but rather with regard to some things in some circumstances progressively over time. Indeed, from Kantor's perspective, the cumulative character of science not only distinguishes it from other endeavors, but is also the very source of its value.

In this light, Kantor articulated a number of specific products of scientific work. The primary outcome, as previously mentioned, is a new orientation to things and events in the form of ideas and knowledge concerning their structure, operations, and interrelations with other things and events. From these outcomes emerge what Kantor regarded as the most effective and valuable of scientific products, namely, scientific laws (Kantor, 1953, p. 25). In addition to these outcomes, Kantor cited two others. First, societal attitudes toward science might change as a result of scientific activity. Kantor argued that this may be both important in itself, as well as constitute a condition in which further scientific activity is

1Kantor (1953, p. 14) was cautious about prediction, arguing that such activity is often motivated by aims other than those central to the basic mission of science, namely, orientation to events.
influenced (Kantor, 1953, p. 25). Again, the enterprise of science does not operate outside the bounds of culture, but rather is an integral part of it. The second of these outcomes is the production of methods, techniques, and apparatus that can be employed in research beyond that in which they were originally developed (Kantor, 1953, p. 24). This final outcome illustrates the cumulative nature of the scientific enterprise in a particularly concrete way.

Kantor (1981a) argued that scientists always operate against a background of propositions of which they may or may not be aware, but which nonetheless influence their scientific work. Explicit articulation of these propositions thereby serves to clarify the scientific enterprises operating under their influence. Moreover, from Kantor’s perspective, until these propositions—explicit postulates and definitions—are identified, and scientific constructions are coordinated with them, there can be no authentic science (Kantor, 1959, pp. 57-58). We turn now to a discussion of the nature and purpose of scientific system building.

The Nature and Purpose of Scientific System Building

A scientific system constitutes a collection of formal definitions and postulates (assumptions) concerning such issues as the kinds of events worthy of study and how knowledge of them might be obtained. The definitions and postulates making up such a system are organized, hierarchically, in accordance with the generality or scope of the issues addressed. This organization results in levels of specification wherein definitions and postulates at the lowest level (i.e., those concerning events of least generality) are based on specifications at the next higher level, while these in turn are based on even more general specifications, and so on. Scientific systems are organized into a “Ziggurat of Science” by Kantor (Figure 1). The issues of broadest scope concern the logic or philosophy of science, below which is the metasystem of individual sciences, and finally scientific systems proper, in which particular models of individual sciences are specified.

Postulates are derived from observations of things and events in nature and thereby change as new observations demand. Hence, like all other aspects of scientific work, scientific system building is never complete, but rather is always in a state of progression. However, the products of system building change more slowly than the products of scientific investigation. This is because, in constituting organizations of assumptions concerning multitudes of investigative products, scientific systems are subject to change only as the multitude of investigative products change. At some point, reformulation becomes necessary, aided by improved criteria for doing so. As a result, the more encompassing the events addressed at a particular level of system construction, the slower will be the pace of change observed at that level. That is to say, the protopostulates of the logic of science may be expected to change more slowly than the metapostulates, followed by the postulates of the system proper. These expectations have been borne out in observations of the products of Kantor’s system building over six decades.
Clearly, system specifications regulate all aspects of scientific work, including event selection, investigative practices, and theory construction. Moreover, their explicit articulation allows for periodic evaluations of their scientific serviceability. The task of evaluating the assumptive bases of a particular scientific enterprise has three major components, identified by Kantor (1981a, p. 9) as monitorial, coordinative, and semantic. The first entails a critical examination of the origins and validity of established premises. The second involves coordination of the findings of the various sciences so as to prevent and eliminate contradictions among them, as well as to guard against other problems. The third concerns the way terms are used in the sciences, and serves to prevent semantic confusion and to repair the damage done should it occur.

If the assumptive bases of a scientific enterprise are not explicitly articulated, they cannot be evaluated in this way. Hence, contradictions among findings and interpretations of the various sciences might not be readily detected or, if detected, no guidelines may exist by which they can be eliminated. Likewise, semantic confusion may occur (or even prevail) without notice. Further, because scientists always in some manner operate on a foundation of assumptions, even if not explicitly acknowledged, premises of questionable value might exert a disserviceable influence upon the descriptive, investigative, and
explainatory phases of scientific work. The end result is incoherence among the postulates, practices, and products of particular scientific enterprises, as well as ineffective interdisciplinary contacts among them.

As previously discussed, the enterprise of science can be characterized as a serious or consequential endeavor from which emerge new orientations to things and events. This orientation is further said to cumulate and show progression over time. It can have these characteristics, however, only in so far as scientific constructs are valid, and the scientific systems of which they are a part are significant. From Kantor's (1959, p. 3) perspective, validity cannot be achieved unless constructs are developed on the basis of contacts with actual events; and significance cannot be achieved unless influence from nonscientific cultural sources is minimized. Moreover, proper science itself is not feasible in the absence of systemization. We turn now to these provisions for the development of valid constructs and significant scientific systems.

Specifications for Adequate Scientific Systems

Development of scientific constructs. Kantor (1959, p. 40) asserted that "no scientific enterprise will be successful unless the worker derives his constructs from contacts with events. Only then do constructs have any validity or reliability" (italics added). To understand Kantor's position, we must examine, in more precise terms, what he meant by contact with events, as well as what it meant to characterize constructs as valid and reliable.

Event sources. According to Kantor (1959, p. 20), any class of events occurring within the manifold of events is a legitimate area of scientific study. Accordingly, constructs referring to things, events, or processes assumed to exist outside of the manifold of natural events do not constitute scientific constructs. The manifold of natural events is further assumed to show evolution, as represented by the interbehavioral continuum (Kantor, 1959, p. 43). Hence, constructs referring to happenings assumed to fall outside the evolution of natural events are likewise not scientific constructs. Instead, scientific constructs are derived from contact with actual events and refer to a definite series of concrete happenings occurring within the interbehavioral continuum.

Validity of constructs. From Kantor's (1959, p. 79) perspective, levels of events can be differentiated, ranging from crude occurrences, which are quite independent of the scientist's treatment, to verbal descriptions or constructions of those events. Crude occurrences, or crude events, comprise an organism's original adjustments to environmental objects free from formal descriptive constructs (Kantor, 1959, p. 80), while constructs, or refined events, refer to descriptions of those events achieved when the scientist brings an original event into context with scientific interests and activities (Kantor, 1959, p. 80). To put it another way, refined events may be understood as scientific facts.

Valid scientific constructs cannot be developed on the basis of ordinary or superficial contacts with crude events. Rather, the events must be available from a scientific perspective. Availability in this context
means that the observer must be able to describe them in meaningful terms within a particular scientific system. It is thereby not possible to articulate a valid scientific construct in the absence of a scientific system into which it can be placed.

**Coherence of constructs.** For a construct to fit within a scientific system, the construct must reflect the definitions and specifications of that system; that is, it must be articulated in such a way that coherence with the system is sustained. A scientific system involves more than the specifications for an individual science. The specifications for an individual science are based on specifications of a broader sort pertaining to scientific enterprises in general. Therefore, a valid scientific construct is not only derived from contacts with actual events within the interbehavioral continuum, but also shows coherence with the metasystem of a particular science, and the logic of science on which that metasystem is based. A construct which fails to meet these criteria is, by definition, not a scientific term, whereupon an evaluation of its scientific validity cannot be made.

**Accuracy of constructs.** Unlike construct validity, which depends on contact with events and coherence with the system, "accuracy" refers not to the construct itself, but rather, to the behavior of the scientist. In other words, while a construct may be said to be valid, it cannot be said to be accurate. Accuracy refers, rather, to the scientist's activities in making use of a construct, as suggested by Kantor (1959): "Accuracy or serviceability [of constructs] depends entirely upon the scientist's interbehavior with events and his freedom from unrecognized presuppositions" (p. 61). Scientists achieve accuracy with respect to valid constructs only when they use them in relation to proper methods and presuppositions. When a scientist uses constructs in such a way as to violate the specifications of the system, it is the usage, not the construct, that is said to be inaccurate.

**Development of Scientific Systems**

**Validity of scientific systems.** According to Kantor (1959), "The validity of a system, however, is not affected by the choice of factors to be emphasized but depends primarily upon coherence and congruence" (p. 55). As for coherence of constructs, this is an intrasystem issue, referring to the relation of each level of system organization to every other level. As discussed earlier, the validity of constructs, refined events, or scientific facts depends on a number of specifications, among which is their incorporation into a scientific system. In other words, only when constructs are articulated in such a way that they fit a system is it possible for them to be incorporated into that system, and hence have the character of validity. Fitness is an issue of coherence: A construct must cohere with the definitions and specifications of the system to fit within it.

Constructs cannot cohere with system specifications unless the latter are themselves coherent because, in the absence of system coherence, there can be no basis on which to judge the adequacy of the fit of the construct. It might, in other words, fit with some system specifications but
not with others. The coherence of the system, including the relation of systemic specifications with metasystemic specifications and these, in turn, with specifications of the more general logic of science, is thereby essential to establishing the validity of particular scientific facts.

The coherence of a system cannot be evaluated unless the system is fully formalized. For this reason, Kantor (1959, p. 58) suggested that the goal of system development is full postulation. Moreover, system specifications are subject to influence from nonscientific cultural sources, regardless of scientists' awareness of them, and these influences are given opportunity when postulates are not made explicit. The optimum method of arriving at a secure system, Kantor (1959) suggested, is to assure that systemizing behavior consists exclusively of critically performed operations whereby the constructs of the system remain consistently within the bounds of the interbehavioral continuum (p. 56). In other words, the validity of a scientific system, as with a scientific construct, depends on its having been derived from contacts with actual events.

**Significance of scientific systems.** Kantor (1959) argued that "a naturalistic logic of science demands that systems be not only valid, but also significant with respect to a particular series of events" (p. ix). From his perspective, the significance of a scientific system can be evaluated only in terms of other systems (Kantor, 1959, p. 55). This evaluation is an intersystem issue referring to the serviceability or utility of a system as it pertains to interactions with other systems.

Kantor's logic in this regard bears on his supposition that, although individual sciences are focused on particular sets of events, all such events are isolated from the same manifold; hence, particular sciences constitute points on the same continuum as all other sciences. While all sciences on this continuum are related through a common logic or philosophy of science, a circumstance that permits interactions among them, some are more closely related than others. The closer relation may be owing to any of a number of conditions, among them overlapping subjects matters, common methods of operation, and common instruments and apparatus. In such cases, progress in one science might impact progress in another, both favorably and unfavorably. Broadly speaking, progress in science as a whole, as well as in individual sciences, depends on the possibility of interactions among them. Such is possible only when their system specifications show some degree of congruence.

To clarify this issue, Kantor (1959) suggested that "It is possible to construct a perfectly 'logical' system by arbitrarily choosing elements and setting up manipulatory rules without regard to anything else than a willfully accepted criterion of consistency" (p. 63). The problem with such a system is that it would be incongruous with other scientific systems and would, as a result, lack serviceability with regard to interactions among them. Such a system would, in his view, be completely lacking in significance.
Kantor’s System of Science and Psychology

In this section, we present Kantor’s interbehavioral psychology as a scientific system, which includes a logic of science, a metasystem of interbehavioral psychology, and a system proper. Our purpose is to examine its adequacy as indicated by evidence of its validity and significance. We also note modifications of the system as they have appeared in Kantor’s articulations of it, from one of his earliest expositions (1918-1919) to among his last (Kantor & Smith, 1975). The system outlined by Kantor and Smith (1975) is identical to that of Kantor (1959), the latter constituting his most formal exposition. For this reason, we take the 1959 exposition of assumptions to constitute the most well-developed of Kantor’s system-building products, on which we will evaluate and trace its evolution. We begin at the level of the logic or philosophy of science.

The Logic of Science

The nature and value of protopostulation. When scientists’ descriptions of scientific work and their assumptions concerning the nature of science are structured as a set of protopostulates, the latter constitute a logic or philosophy of science (Kantor, 1959, pp. 69-71). Because protopostulates specify both definitions and postulates pertinent to general scientific activity, not to psychological activity in particular, they are not included as a formal aspect of Kantor’s system of interbehavioral psychology. The basic assumptions at the logic of science level are nonetheless continuous with the specific propositions of individual sciences, as well as reflective of the cultural circumstances in which they are embedded. Hence, the explicit articulation of protopostulates serves to clarify the scientific systems based on them.

For the most part, protopostulates pertain to the kinds of events subject to scientific investigation, the investigative activities themselves, and to the products of investigation. In addressing each of these issues, the effects of disserviceable cultural traditions are eliminated accordingly. Moreover, although one of the protopostulates is the claim that scientific systems are corrigible—including the protopostulates themselves—change is slow and it has not been felt in Kantor’s philosophy of science: Kantor’s protopostulates did not change over repeated presentations. The following protopostulates are taken from Kantor (1959, pp. 70-71).

1. Science is the enterprise of interbehaving with specific things and events which leads to a definite and precise orientation with respect to those things and events (p. 70).
2. Scientific orientation concerns a) the existence and identity of things and events or their components, and b) the relationship between either the components of things and events, or between the various things and events themselves (p. 70).
3. No science is concerned with existences or processes which
transcend the boundaries of scientific enterprises. No scientific problem is concerned with a Reality beyond confrontable events and their investigation (p. 70).

4. Scientific orientation requires specialized instruments and methods depending upon a) the specific characteristics of the events interacted with and b) the specific problems formulated about them (p. 70).

5. Scientific interactions eventuate in protocols (records), hypotheses, theories, and laws (p. 70).

6. Scientific construction, the formulation of a) hypotheses and b) theories and laws, must be derived from interbehavior with events and not imposed upon the events or scientific enterprise from nonscientific cultural sources (pp. 70-71).

7. Culture consists of the events and institutions (religion, art, economics, technology, social organization, and laws) of a specific group of people (p. 71).

8. Scientific enterprises are evolutional; they develop in cultural situations as complex institutions. Scientific domains are cumulative and corrigeable. They are completely free from all absolutes, ultimates, or universals (p. 71).

9. Scientific enterprises can be and sometimes are autonomous and fundamental within a cultural complex. Only specific enterprises may cooperate and mutually influence each other with respect to basic investigational and interpretive procedures (p. 71).

10. Applications of a) scientific findings (records concerning events and their investigation) and b) investigative results (laws and theories) may be localized within scientific enterprises. Such applications constitute the authentic basis for scientific prediction and control (p. 71).

The majority of these specifications for science constitute noncontroversial descriptions of scientific events, activities, and products. Exceptions are Protopostulates 3 and 8, in which Kantor respectively eliminated certain kinds of events from consideration, and considered certain characterizations of scientific products illegitimate. In essence, these two protopostulates reflect Kantor’s biases with respect to the boundary conditions of science. The former reflects views as to the constitution of the event manifold: Events of nonspatiotemporal dimensions are excluded as participants. The latter reflects a concern over what, in Kantor’s view, were disserviceable cultural traditions, namely, mind-body dualism in its various forms. The two protopostulates are obviously related.

These assumptions are preanalytic, and they are not characteristic of the protopropositions of the logic of science articulated by most other philosophers of science. On the contrary, dualism dominates the philosophical views prevalent in Western culture, if not the entire world, and with it comes the view that the manifold of events includes things and events of nonspatiotemporal dimensions.
The Metasystem of Interbehavioral Psychology

The nature and value of metapostulation. Scientific metasystems serve to delineate the foundations and specifications of particular scientific systems. The metapostulates of interbehavioral psychology pertain to such issues as the subject of psychological study and the relation of psychology to other sciences. Beyond these issues, the metapostulates specify certain characteristics of adequate systems from Kantor's perspective, including the comprehensiveness of their event coverage, their avoidance of disserviceable cultural traditions, their evolutionary character, and their compatibility with previously established systemic specifications. Like protopostulates, the metapostulates of Kantor's interbehavioral psychology have also remained relatively stable over repeated iterations. The following list of metapostulates is taken from Kantor (1959, pp. 72-79).

1. Psychology is homogeneous with all other sciences (p. 72). Because all sciences isolate some specific set of events as their special objects of study from the same manifold, "It is assumed here that all sciences are coordinate, none being more basic nor more naturalistic than any other" (Kantor, 1959, p. 72).

2. Psychology is a relatively independent science (p. 72). All sciences draw from the same manifold of things and events, and therefore are interrelated. At the same time, they retain relative independence from each other, "psychology has its own subject matter and accumulation of facts and operations and cannot therefore use as its data abstractions borrowed from any other science" (Kantor, 1959, p. 72). On the contrary, "psychological systems require unique construct patterns" (Kantor, 1959, p. 72, emphasis deleted).

3. An interbehavioral system of psychology departs from all traditional epistemological and ontological systems (p. 73). In 1959, the objectionable systems of each type were identified. In addition, confusion of events with their descriptions was cited as an additional problem to be avoided. By 1975, this metapostulate is reduced simply to "psychology must be freed from all traditional philosophies" (Kantor & Smith, 1975, p. 414).

4. A psychological system should achieve a comprehensive coverage of events, operations, and theory constructions (p. 73). This specification, while warranted in its own right, was likely motivated, in part, by the more limited coverage of psychological events characteristic of learning theories of this time, toward which Kantor felt some affiliation. These systems are cited as examples of incomplete coverage (p. 73).

5. System construction requires adequate orientation with respect to systemological problems (p. 73). In 1959, this metapostulate was elaborated to clarify the ancillary role of systems in scientific work. More specifically, a system was not regarded as a thing in itself with its own value, but rather as a tool for improving orientation toward the subject matter of the enterprise, out of which may come explanations and laws concerning it. Moreover, the obligation of the system builder to formulate
the system on the basis of previously established specifications was emphasized (Kantor, 1959, p. 74). By 1975, these specifications were reduced merely to “psychological systems must be oriented” (Kantor & Smith, 1975, p. 414).

6. A psychological system is not reducible to any other type (p. 74). All sciences are held to be interrelated on the grounds that the events studied by all sciences are continuous. Nonetheless, Kantor argued, each selects its own data and problems, and the specificity of these events must be respected. In essence, Kantor is rejecting reductionism.

7. Psychological systems are relative and subject to continual corrective reformulation (p. 74). Because all scientific constructions arise from contacts with events, no system can be said to be final or absolute. Further, within the domain of actual prediction and control, systems are subject to verifying tests and are, therefore, tentative and relative to the state of investigation of given data (Kantor, 1959, p. 74).

By 1975, a more detailed explanation for the impossibility of final or absolute systems is presented. It points to changes in the “events under study” as the principle reason for inevitable reformulations of systems. In the words of Kantor and Smith (1975): “Because of perennial changes of events and in consequence, greater or lesser modifications in investigative procedures, all scientific systems are subject to changes in circumstances. It must be assumed that new events will be met with and therefore new hypotheses will be developed” (p. 415, italics added).

While changes in the events under study might be a reason for systems change in some sciences, it seems highly likely that this would apply to the science of psychology.

The System of Interbehavioral Psychology

The nature and value of postulation. The definitions and postulates of the interbehavioral system proper outline the distinguishing features of psychological events, along with the implications of those features for their investigation and explanation. Psychological events are distinguished from events of other types on the basis of a number of criteria. First, they are distinguished by the significance of the interactional history to the participating objects. In other words, psychological events are relatively less dependent on the structural traits of interacting things than are biological and physical ones (Kantor, 1959, p. 79). Second, psychological events are distinguished by the prominence of setting factors in their organization (Kantor, 1959, p. 42). And third, unlike the events of anthropology and sociology, psychological events are constituted of the behavior of individuals, not groups (Kantor, 1959, p. 79). The following list of postulates is taken from Kantor (1959, pp. 84-90).

1. Psychological events consist of multifactor fields (p. 84). Psychological events have not always been articulated in this way by Kantor. For example, very early characterizations of psychological events focused on conscious behavior, as seen in the following: “Psychology has
as its proper data conscious behavior, and not consciousness or behavior. Conscious behavior is an immediate derivative from exact data, and brings psychology into direct contact with actually existing and transpiring phenomena" (Kantor, 1918-1919, pp. 158-159).

An emphasis on interactions among objects, although not a field of interaction—which implies an equivalence of factors and an absence of determination of one over another—appears very early, however, as indicated in the following: "One of the interacting objects is a psychophysiological organism to whom the results of the present interaction will become significant in influencing future contacts of this object (person) with the same or similar object" (Kantor, 1920, p. 192, italics added). Similarly, "psychology cannot take as its unit anything less full of content than the actual response of a person to a stimulus object" (Kantor, 1924, p. 2). Then "its [psychology's] subject matter consists of the interbehavior of organisms with objects and events" (Kantor, 1971, p. 228).

The field construction proper, prominent in the 1959 treatment, does not appear to emerge fully until later, where it occurs as follows: "A psychological event consists of an interbehavior in which an organism is in contact with stimulus objects. This interbehavior is conditioned by various factors: 1) behavior equipment in the form of responses, 2) stimulus functions gradually evolved by objects in such interbehavior, and 3) the settings which condition the interbehavior of organisms and objects" (Kantor, 1943, p. 324). Once articulated in this manner, the postulate showed no further evolution (Kantor, 1959, p. 84; 1973, p. 458; 1977, pp. 630-631; 1980, p. 123; Kantor & Smith, 1975, pp. 415-416.

2. Psychological events are interrelated with social as well as with biological and physical events (p. 84). The relation between psychological events and those of other sciences was not always described as one of interrelation. In earlier iterations of this general point, psychology is described as a branch of biology on one hand and as a branch of anthropology on the other. For example, Kantor (1924) stated: "Because psychological activity is always the action of an organism or a person this science must have its closely associated sciences which deal with structures it may be asserted that psychology is a branch of biology" (p. 3). Similarly, "The [psychological] event consists of not only acts of biological organisms but also of specific anthropological individuals. The Chinese speaker is entirely different from an English speaker, in this sense psychology is also a branch of anthropology" (Kantor, 1924, p. 3). Then further refined to "Psychological phenomena are, of course, always at the same time biological phenomena. In other words, physiological activities always participate in psychological happenings" (Kantor, 1933, pp. 7-8).

By 1975, the relation of psychology to other sciences was described as one of dependence, as in the following: "How an organism interacts with things depends upon cultural exigencies as well as upon organic and physicochemical conditions and circumstances" (Kantor & Smith, 1975, p. 415).

3. Psychological events are evolved from ecological interbehavior (p. 85). This postulate notwithstanding, Kantor was clear that other factors
were also involved in the expression of psychological events, which
differentiate them from bioecological patterns of action. In his words, "all
psychological interbehavior has bioecological roots, although the
accretions of complex cultural factors completely overshadow them"
(Kantor, 1959, pp. 85-86). By 1975, the participation of bioecological
circumstances came to have a distinctly evolutional character, as seen in
the following: "Psychological events are evolved from bioecological
interbehaviors. Psychological events of every variety develop from
ecological interbehavior in the same sense that organisms of every
description have evolved from prior different and simpler organisms"
(Kantor & Smith, 1975, p. 415). The 1977 exposition continues this
emphasis on evolution but, as in the 1959 treatment, it suggests the
participation of factors other than those of the bioecological sort, such
that the former are limited in their expression. In Kantor’s (1977) words,
"Psychological interbehaviors evolve from biological adaptations but
become as different from biological interbehavior as, for example,
Hominoids differ from organisms in prior stages of evolution. When
psychological interbehaviors occur biological components participate in,
but do not dominate, the entire field" (p. 631). For Kantor, biological
events consist of “adjustments - ecological adaptations, i.e., movements
and actions which relate organisms directly and immediately to
environmental objects and conditions” (Kantor, 1959, p. 223).
Bioecological adjustments are conceptualized as continuous with
psychological adjustments, and yet the prior constitute qualitatively
simpler acts. These are acts which satisfy basic needs, such as an
organismic need for food and shelter. Bioecological adjustments consist
of “relatively limited self-maintenance or survival interbehaviors” (p. 223).

The involvement of biological participants in psychological
interactions was consistently acknowledged by Kantor. For example,
even in one of his earliest treatments, in which psychological events are
described as conscious behavior, he wrote, “The specific, behavioristic
factors are the three predominately physiological functions, the muscular,
the glandular and the organic. Without these there can be no conscious
behavior” (Kantor, 1918-1919, p. 161). Stated 50 years later,
“Psychological events are at the same time biological events, and
psychological behavior of organisms develops in continuity with the
embryological maturation of organisms” (Kantor, 1976, p. 126).

4. Psychological events involve the participation of total organisms not
merely special organs or tissues (p. 86).2 This postulate has changed little,
if at all, over the 60-year history cited here. For example, in addressing the
issue of the organismic participant in psychological events, Kantor (1924)
wrote: “Nor must we assume for our convenience that the part is the whole.
The organism is a complex psychological machine and not a union of
discrete elements or stuffs” (p. 30). The mechanistic flavor of this description
no doubt reflects the prevalence of behavioristic views of this period, as it is
not carried forward into later treatments.

2This proposition is articulated as a corollary in Kantor (1959).
The exposition by Kantor and Smith (1975) is especially clear on this point: "Psychological interbehavior involves the performance of entire organisms, not special organs or tissues. Psychological events as multiplex fields not only preclude the confinement of action exclusively to the organism alone instead of the total field, but also exclude the notion that some particular biological organ or system is supreme and in control of every other organ or system" (p. 416).

5. **Psychological events are ontogenetic** (p. 86). The view that psychological events arise and evolve within the lifetimes of individual organisms has always constituted an aspect of Kantor's system, as expressed by way of the construct of the interbehavioral history. The history construct, however, was at one time identified by the term *mind* as a means of showing connection to the terms of other systems. It is this sense in which Kantor (1935) used the term *mind* in the following statement:

Mind is individual. There is no such thing as mind in general. The psychologist who thinks of mind in any other way is hopelessly lost in the morass of mysticism. Moreover, mind is essentially a phenomenon pertaining to particular organisms or persons. Furthermore, mind is not a substance or quality, but action — the ways in which an individual adapts himself to the things and conditions of his milieu. (pp. 458-459)

Similarly:

A unique characteristic of specific psychological events is that they originate in the lifetime of particular individuals. This evolution of mentality may be regarded as a third stage following the organism's phylogenetic and ontogenetic biological developments. (Kantor, 1942, pp. 179-180)

The ontogenesis of psychological events is explicit in later expositions, as well. For example, Kantor and Smith (1975) wrote, "Psychological events as the interbehavior of organisms with stimulus objects in definite fields always occur as historical or developmental features of particular organisms, as a third stage following the phylogenetic and ontogenetic stages of organic evolution" (p. 416; see also Kantor, 1980, p. 125).

6. **Psychological interbehavior varies in specific details from other types of interbehavior** (p. 87). This postulate is reiterated many times, starting in the early part of the 20th century (Kantor, 1918-1919, p. 159; 1924, p. 5), and has not changed significantly over these repetitions (see Kantor, 1942, pp. 178-179; 1973, p. 457).

7. **Psychological constructions are continuous with crude-data events** (p. 88). This postulate has remained central to Kantor's system and has not changed over repeated presentations of his postulates. In 1929, Kantor noted that "all descriptions and laws must be based upon
observations of the organism in contact with other organisms and things" (p. 199). He also wrote: "Description as an actual phenomenon is an action performed by a person with respect to an object or event. Now when we confuse our description with the event, the latter loses its character as a fact in nature and becomes according to tradition, something in the mind of the describer" (1929, p. 209). In 1938: "Our interpretative constructions will be continuous with the manipulation and measurement of such events" (p. 33). In 1942: "All constructions must be made upon the basis of investigative contacts of the scientist with the events which originally stimulate the interest in and work upon the problem" (p. 177). And, in 1969: "The first and foremost characteristic of scientific psychology is that all its descriptions and interpretations are developed from original interbehaviors with the activities of organisms as they interact with other organisms or other objects" (p. 612).

8. **Psychological events consist of the interrelated factors which do not admit internal or external determiners** (p. 89). This postulate has undergone some evolution, not all of which has been explicit. In a very early reference to living beings, Kantor (1924) wrote: "we might say that (a living being) has forces working upon it from both inside and outside of the unit thing under observation" (p. 4, italics added). At this point in the development of Kantor's system, psychological events were always described as interactions or adaptations, neither of which necessarily implied causality. However, mention of forces suggests that the concept of the interactive field had not yet emerged, as was also suggested in connection with Postulate 1.

Descriptions in terms of forces are explicitly rejected by 1942, however, as indicated in the following passage: "Psychological science consists of the interbehavior of the investigator with the interbehavior of the observed organisms and their stimulational objects. Above all, such a view avoids all sorts of forces and powers assumed to bring about certain conditions" (Kantor, 1942, p. 175). At approximately this time, the integrated field notion was articulated and from that point forward prevails throughout Kantor's systemic discussions. For example, in 1959, Kantor stated: "A psychological event is regarded as a field of factors all of which are equally necessary, or, more properly speaking, equal participants in the event" (1959, pp. 89-90). No change was observed over the next 20 years, as seen in the following:

Psychological events consist of interrelated factors which do not admit internal or external determiners. Psychological events like all other types are to be causally interpreted as collocations of factors or variables without the invocation of intervening or extravening influences such as faculties, instincts, native competencies, innate intelligence, drives, and so on (Kantor, 1973, p. 458).

In Conclusion

The following is the note found on Kantor's nightstand the morning after his death:
No spirits, wraiths, hobgoblins, spooks, noumena, superstitions, transcendentalists, mystics, invisible hands, supreme creator, angels, demons (Kantor, 1984).

In the epilogue of *Interbehavioral Psychology*, Kantor (1959, p. 244) wrote that his life-long pursuit was simple: "to construct a scientific system that enabled researchers to practice an authentic natural science of psychology." To develop this system, however, Kantor found that he not only had to specify the events included in a proper psychological analysis, but also had to remove systematically, at every level, the impact of dualistic cultural presuppositions that have hampered the scientific development of psychology all along. According to Kantor (1959, p. 244), it was the removal of these cultural influences that made a relatively simple task a complicated endeavor.

To overcome this challenge, Kantor adopted two key strategies that allowed for the explicit rejection of traditional presuppositions and the development of an authentic natural science. The first involved expanding the breadth of his historical analysis; the second involved the presentation of interbehavioral psychology as a formal logical system. Together, these strategies formed Kantor's approach to scientific system construction.

The breadth of Kantor's analysis included: (a) the specification of the events properly included in the psychological domain, (b) the nature of science itself (or its logic), (c) the relation of psychology to other natural sciences, and (d) the cultural roots of various sciences (Kantor 1959, p. 244). The purpose of this strategy was to ensure that the interbehavioral system was specifically developed to preclude the influence of presuppositions arising from nonscientific cultural institutions (Kantor, 1959, p. 245). To accomplish this end, Kantor found it necessary to study the historical development of specific presuppositions along with their effects upon science, and in particular, their encroachment on a naturalistic psychology. For Kantor, the emergence of an objective natural science depended on its separation from these nonscientific influences. By articulating a naturalistic logic of science (e.g., the protopostulates), Kantor explicitly rejected traditional influences and was then able to construct a scientific system of metapostulates, postulates, definitions, and constructs entirely based upon the study of concrete events.

Kantor's second strategy, namely, to present interbehavioral psychology as a formal logical system, paved the way for important improvements over less systematized approaches. First, it provided an unambiguous platform from which system propositions were articulated and nonscientific propositions were explicitly rejected. Second, the formal structure facilitated coherence among propositions throughout the entire system of protopostulates, metapostulates and the postulates of the system proper. Third, the inherent structure of a formal logical system fostered precision and brevity in the articulation of all interbehavioral constructs. Lastly, the formal presentation of the interbehavioral system made possible the complete and critical examination of all system
elements. The interbehavioral system was constructed as a fully postulational system making it directly available for scrutiny at every level.

This strategy establishes the basis of the system's validity. In regard to the importance of philosophical work upon scientific system construction Kantor (1959) wrote, "Valid constructional work in science can only be based upon the appreciation that the philosophy and logic of science must have reached as high a stage of development as current scientific research" (p. 265). Hence, the proper regulatory role of philosophical behavior for scientific system construction has been well exemplified within the construction of the interbehavioral system.

References


