



# TIBI News Time

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## TNT-7 News: Editorial

As usual, the spring issue of *TNT* carries some convention news. This year the thirteenth convention of our basic-science sister organization, the *International Society for Behaviorology (ISB)*, is being held next month on 18-20 March at the Holiday Inn at O'Hare Airport in Chicago, IL. For details, contact Dr. Doreen Vieitez, the site coordinator (815-237-9821).

Why are behaviorology conventions important? One reason inheres in constraining mysticism. Mystical causes of behavior abound, based mostly in presumptions of an inner-agency origin of behavior (as in "mind," "psyche," and "self"). The cultural-history bound acceptance of such mystical causes of behavior by the general public as well as by professionals—even other natural science pro-

fessionals—may be humanity's best guarantee of an early species extinction (Fraley & Ledoux, 1997).

Behaviorology conventions, along with conferences and courses and other disciplinary activities, help lead humanity away from its past reliance on mysticism, especially regarding our own behavior. And the sooner humanity replaces mystical mistakes like "mind" with even the currently available natural science principles and practices pertaining to the full range of human experience—from interpersonal relations and family practices to international relations and cultural practices—the better chance humanity will have to delay extinction, hopefully considerably and perhaps close to forever.

The articles in this issue of *TNT* support the need to replace mysticism. This issue continues the natural science topical focus of recent *TNT* features with articles on determinism, critical thinking, and coursework for disseminating our discipline and its applications (the three articles by Fraley, Wyatt, and Ledoux).

The featured articles are followed by the Treasurer's report, and the usual newsletter contents. The latter includes information on TIBI's web site and membership concerns, as well as how to subscribe without membership and how to obtain back issues.☞

## References

- Fraley, L.E. & Ledoux, S.F. (1997). Origins, status, and mission of behaviorology. In S.F. Ledoux. *Origins and Components of Behaviorology* (pp. 33–169). Canton, NY: ABCs.☞



# *The Discipline of Behaviorology and the Postulate of Determinism*

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## *Introduction to the Issue*

Behaviorology is the name of an organized natural science discipline that is committed to the study of functional relations between behavior and the environment in which that behavior occurs. Determinism is a philosophical doctrine of natural science. It is based upon the postulate that all real events are determined by a functional history that leads inevitably to the manifestation of those events. The scientific study of any event is largely devoted to accounting for the particulars of the natural history that has led to that event—and on that basis, to predict similar events that are yet to occur. These scientific foundations then support the development of the technology by which such events are brought under control. Typical objectives include producing such events, preventing such events, or customizing such events.

Problems arise when the human capacity to trace such a natural history proves inadequate, and a satisfying account cannot be completed. Scholars debate whether, at that point, we should say that the event is wholly or partly indeterminate, or whether we should say that it has a natural history that we are, as yet, unable satisfactorily to trace. At issue is whether nature is inherently unknowable, or whether, in some cases, the human intellect is simply incommensurate with the task of sorting out what are the orderly and theoretically predictable complexities of nature.

## *Historical Influences on Skinner's Approach*

This debate about the nature of nature occasionally arises when people consider the behaviorological scheme of analysis for operant behavior, instances of which are often described in terms of probability. The inherent multiplicity in the antecedent stimulus controls on an operant behavior renders impractical a complete accounting of all of the concurrently effective functional relations between environmental stimuli and an operant behavioral event. That leaves probability statements as the best available way to describe the potential appearance of an operant response. Doing so represents a shift to a different level of analysis at which validity is maintained at the expense of precision. B.F. Skinner led the analytical way

by speaking of the shifting *probability* of an operant response under changing environmental conditions.

It seems to me that Skinner's way of describing operant behavior was heavily influenced by the context in which Skinner struggled to clarify the difference between operant conditioning and the traditional psychological stimulus–response notions that today fit more closely with our contemporary concepts of respondent behavior. In conceptually prying operant behavior apart from that tradition, Skinner had to emphasize what then was the important new role of the consequating stimuli, and in doing so, he seemed to find it necessary to de-emphasize the functional role of the antecedent stimuli (which, in the traditional psychological view, long held center stage as far as function and importance were concerned).

Like most behaviorologists who review Skinner's attempts to present and explain operant behavior and its conditioning to the traditional psychology community, I do not believe that Skinner's de-emphasis of the antecedent stimulus represented any departure from his commitment to determinism. After all, the concept of *functional antecedent* has served as the foundation upon which natural scientists have based their abandonment of mystical causation. It seems to me that when Skinner pointed out that operant conditioning may be described without mentioning any stimulus that acts before the response occurs, he was not thereby implying that the response in question was a spontaneous event that had no functional history leading up to it. That is, Skinner, for strategic reasons pursuant to his departure from traditional psychology, needed to show how operant conditioning could be described by starting with the appearance of a response.

A given response, while it could serve as the starting point for a Skinnerian account of an instance of operant conditioning, did not thereby become divorced from its own functional history. That is, the fact that Skinner began his account of an operant behavior with a single response did not remove that initial response from nature. That response still had its functional history, even though that history was playing no role in Skinner's account of the further operant conditioning of the behavior represented by that response.

Skinner suggested that, given a response, we take note of precisely how it is consequated (perhaps by arranging that consequation), and that we then wait for the subsequent appearances of that behavior, again describing precisely how they too are consequated. We can then point to how those recurring responses are changing in frequency across that sequence of consequations, and, in the case of the variation called shaping, how the recurring responses are also evolving in form—all without having to identify the functional antecedents that share in evoking those responses. Given the traditional stimulus–re-

sponse formulation with which Skinner's main audience was familiar, Skinner's pointed lack of reliance on precisely identified antecedent events exposed most starkly the operant–respondent distinction to which Skinner hoped to sensitize his audience.

However, in proffering such accounts of the operant conditioning process, Skinner was not rejecting antecedent control as the driving force behind operant behavior (if, by *driving force* we mean the functional evocation of a response by an antecedent stimulus). While Skinner's way of accounting for an operant effect was rendered without explanatory reliance on the identity or nature of the functional antecedents, his doing so was not a denial of the necessary existence and evocative function of proximally antecedent events. I would say that any operant behavior is *driven* by its functional antecedents, but in a manner that has been *determined* by the prior consequences of that behavior. I presume that even the most inconsequential little behavioral manifestation has to have its functional antecedents, because I do not believe that any real event, however trivial and small, happens spontaneously (i.e., without a functional history). It is one thing to ignore that history and another to deny it.

In cases where finding those antecedents and exploring their functions goes undone because it is not practical, or is not important, we are left unable to predict accurately the time and characteristics of whatever response those unknown antecedents may evoke. However, based on the entire history of the natural sciences, plus our own personal histories with natural science, we tend to avoid saying that, because we cannot accurately predict an event, its appearance, when it does occur, is mystical, spontaneous, or intrinsically indeterminate.

Instead, we presume that the event *has* functional antecedents and say that we are *ignorant* of them. We would hardly be justified in insisting, on the basis of our personal ignorance of the functional antecedents, that there are none and that an observed behavioral event has instead occurred spontaneously. That would be taking our mere ignorance of the history of that event to mean that the functional order of the universe does not apply to that event. Nor would it seem justified to go mystical when we are merely ignoring the functional history of some event, and doing so, because, given the contingencies under which we are operating, no compelling reason exists to bother tracing and describing that history.

Skinner himself noted that if all of the events leading up to an operant response could be taken into analytical account, we could then predict that operant response at least with the accuracy that we now predict an instance of respondent behavior from an occurrence of its eliciting stimulus (see *Science and Human Behavior*, p. 112). It seems to me that Skinner, like all natural scientists who seek out functional relations,

believed that those relations exist to be discovered. Otherwise, why bother with science?

### ***Reinterpreting Our Explanatory Reliance on Probability and Chaos Theory***

It has often been noted that a particular stimulus can evoke a number of different operant responses and that a given operant response can be evoked by any of a number of different stimuli. However, two points are relevant to statements of that kind:

First, a typical response occurs as a function of a *set* of stimuli—stimuli that, in some way, share in contributing to the evocative capacity of the environment to produce that response. When we talk about the control exerted by a particular stimulus in which we have an interest, and speak of it as if it were acting alone, we are really inquiring about its contribution to a behavioral effect that is a naturally concerted production. The stimulus of interest is not really acting alone, but shares the evocative function with other events, which, in many cases, we are not taking into analytical account, thus allowing their contributions to be exerted in ways that are going unmeasured. Our usual assumption is that the variable upon which we *are* focusing accounts for most of the functional control even though its exclusivity is problematic.

Second, we must also remain aware that both the environment and the behavior—mediating organism are dynamic systems, and that both of them are always in a state of flux. Any enduring function between environment and behavior upon which we direct our analytical focus thus necessarily manifests as a differential across time. The manifestation of a behavioral response defines a moment of capture by function—a sample pair consisting of the momentary state of the behavior—controlling environment and the corresponding momentary state of the dynamic body. Their functional relation has been established by a particular conditioning history. On the basis of what remains from that conditioning history, the functional relation between them is a deterministic function at that moment. The behavior is theoretically predictable, but to predict it accurately, we would have to be tracing both the flux of the environment and the flux of the body so that we could say that, given the environment as it exists at this instant, and the body as it exists at the same instant, this functional environment,<sup>1</sup> in its

entirety, will evoke precisely this response from this body at this moment.

That kind of predictability is precluded, not because nature is arbitrary (although natural states can change rapidly), but because we lack the capacity to keep pace with those changes. The fluxing mix consists of too many variables that are changing in too many ways, and our measurement technology is not equal to such a challenge. We deal with that problem by jumping to a different level of analysis where we rely on probability theory and chaos theory.

When we talk in terms of probability theory, chaos theory, and other such conceptual devices, those are merely intellectual schemes by which we manage our ignorance of antecedent events in special ways that allow us to tease out the most that validly can be said in spite of that ignorance. However, while those conceptual devices allow us to do that, we would be going too far in our analysis of a kind of behavioral event were we to permit an occasion of recourse to the principles of probability to become an excuse to doubt the *existence* of the functional antecedents that determine that event. That is, what amounts to a neat way of dealing with our ignorance of the functions that account for a behavioral event is not the occasion to start denying the existence of those functions.

The manifestation of that behavioral event can just as rationally be taken as the evidence *for* such functional causation. Recourse to probability theory is just a conceptual way by which we get along without knowing, or having to know, about some antecedent functions that are too costly or too difficult to analyze. In addition to the troublesome complexity of the complete set of evocative antecedents, by the time we undertake our analysis of some behavioral event, the evidence of its functional antecedents may have faded into history beyond the reach of what limited powers of recovery we might have been able to muster. That our residual ignorance compels our explanatory appeal to the concept of probability does not challenge the existence of the functions that define the deterministic kind of reality. Rather, our explanatory reliance on the concept of probability affords us the best kind of answers that are possible without our having to engage in measurement practices that are beyond our capacity, or that we cannot afford to undertake, or that are not worth the effort.

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<sup>1</sup> *Environment* can be defined in different ways. It consists of all stimuli that control behavior. Thus, *environment* can be defined in general for all behavior ever exhibited by each member of a population, or by any subset thereof—current, historical, or both. *Environment* can also be defined narrowly in terms of the stimuli that

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share in the control of (a) one individual's single response, (b) one individual's single behavior, or (c) the entire behavioral repertoire of an individual. (A response is a single instance of a behavior. Throwing a stone is a response. The throwing of stones is a behavior.)

### A Contemporary Casting of the Issue

I have done my teaching in a different era than Skinner did his teaching, and I have ranked the importance of the teaching problems differently because, over time, the problems facing a behaviorology teacher have changed in relative importance. Today it seems less necessary than was true in Skinner's time to go to extremes to try to convince people that respondent conditioning is not the only kind available. Thanks to Skinner's work, the operant–respondent distinction is now seldom doubted even by people who do not fully understand the details of either variety.

During my teaching career, I have found that most students arrive on my doorstep hopelessly superstitious. That would have been true in Skinner's time too. However, it is that corruption of the students' intellect that has posed the greatest teaching challenge to me. In helping my students to overcome their superstitious tendencies, it has been useful for me to stress the functional precursors of *everything*. For that reason, I have found it helpful to emphasize the role and place of the functional antecedents in *any* account of operant behavior, especially their role in the conditioning process.

In that way I deviate from the presentation strategy that Skinner sometimes favored. Whereas Skinner's main problem was how to make his newly delineated operant behavior seem as different as possible from the traditional respondent–like behavior familiar to most of his psychology colleagues and students, my main problem has been to teach the philosophy of naturalism to superstitious people. I have had to find ways to teach the science of behavior–environment relations and its supporting philosophy of naturalism to students who are all too anxious to go mystical given the slightest excuse, especially with respect to human behavior. In the context in which I have worked, I believe that it is best to start an analysis of a behavioral event with its set of functionally evocative antecedents, whether the elements of that set have been identified or not. See Figure 1.

In such a three–term contingency, the set of functional antecedents may be reduced to a single stimulus event that alone contributes enough of the functional ef-

fect to yield a satisfying account if all others are ignored. Alternatively, the set of functional antecedents may consist of multiple events that must combine to generate a net evocative capacity that is minimally sufficient to yield the behavioral effect.

Alternatively, the antecedent set may be a *sequence* of interacting events, the net effect of which comprises the evocative capacity. In such cases, the antecedent circumstances may make little sense unless all of the important elements in a functional sequence are considered. An example is the effect of a function–altering stimulus on an otherwise neutral stimulus. If a stimulus is only evocative in the presence of another stimulus, a satisfying account of the function of the antecedent conditions is possible only if both stimuli and their interactions are incorporated into the analysis.

In any case, as Skinner made clear, the identity of the set of functional antecedents need not be specified to demonstrate an operant effect. We have only to wait for the response and, upon its occurrence, follow it closely with a consequating stimulus, and then repeat that procedure as necessary. Changes, over time, in either the frequency, or the relative frequency, of the behavior then demonstrate the fact of operant conditioning and reveal its kind. However, I think it important that we remain confident that the functional antecedents are extant whether they have been identified or not. As a practical matter, if the wait for an instance of the behavior of interest lasts too long, we have only to evoke the desired behavior by arranging the organism's contact with the appropriate evocative antecedents (assuming that we have bothered to identify them).

With respect to the importance of the consequences of an operant response, I prefer to emphasize the functional role of the consequence *on the relation between the first and second terms*—that is, on the relation between the evocative antecedent stimuli and the behavior in question. For example, a reinforcing consequence has the functional effect of *strengthening that relation*, while an aversive consequence has the functional effect of *weakening that relation*—kinds of changes that are revealed during subsequent iterations of the evocative function. See Figure 2.

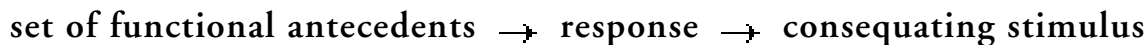


Figure 1

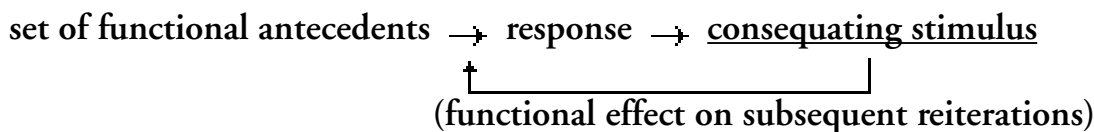


Figure 2

This approach keeps the students focused on a kind of functional causation that involves potentially discoverable real-world (i.e., measurable) antecedent events, a kind of causation that they are all too prepared to compromise to preserve their personal investments in superstition. While a demonstration of the operant effect does not *require* the identification of the set of antecedent stimuli, and we often leave a question mark written in that position, at least the question mark reminds people that some real stimulating events occurred there that are yet to be identified should it become important to do so.

In fact, some potentially important behavior engineering procedures depend upon identifying those antecedents, so that those functional antecedents can be manipulated on future occasions. An example of a practical behavior technology that requires the somewhat precise identification of those functional antecedents is a preclusion or prevention procedure in which a behavior is prevented by intervening to insure that the organism does not contact the stimuli that would evoke that behavior.

In any case, it seems to me that Skinner's way of resorting to the concept of probability to describe the operant conditioning process does not threaten the basic deterministic postulate of the natural sciences. My conclusion is that behaviorology remains as deterministic in its philosophical foundations as any natural science and for the same reasons.

### ***The Nature of the Postulate of Determinism***

The deterministic notion that underlies the natural sciences is, of course, a grand inference. The evidence supporting that inference consists of the frequent discovery of function when people have looked for it, coupled with the absence of credibly demonstrated exceptions. Instances of apparent spontaneity seldom withstand unrelenting searches for the measurable kind of functional antecedents that we describe as "real."

The concept of *function* itself is a kind of inference based on observations of certain conditions at one time being reliably followed by certain conditions at a later time. That is, we do not see the function that relates two events; we see the before-and-after conditions. We then infer the function from the reliability of that change.

Yet, without these kinds of deterministic inferences in place, why would we bother trying to analyze events, behavioral or any other kinds. It seems to me that we do so precisely because of our respective histories with the implications of the deterministic view. The assumption is that all events have a natural (i.e., functional) history. That history, when finally understood, affords a valid and reliable accounting for those events of a kind that leads to prediction and ultimately to control. When we have behaved as if such assumptions are true, that kind of behavior has paid off handsomely.

### ***Comparative Philosophy***

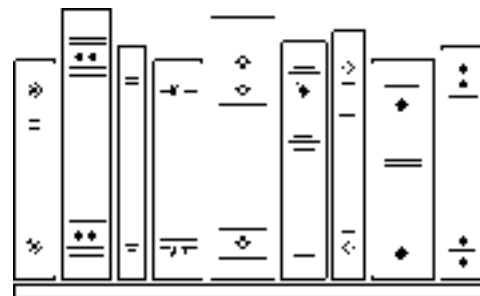
Once, during a classroom discussion of these issues, an astute and deeply religious graduate student critically noted that a kind of faith underlies the naturalistic philosophy of the natural science community, just as a kind of faith underlies the activities of persons in his devoutly religious community. True, the two communities feature respective faith in different sets of postulates, but, he asked rhetorically, were those differing postulates not both but assumptions that represent extrapolations beyond the hard evidence? He wanted his point to carry to the implication that our respective disciplines, both based on assumptions, were therefore equally worthwhile.

However, the fundamental postulate of naturalism, which can be classified as an assumption, *is inferred from a lifetime of contacts with relations among measurable variables*, whereas the fundamental postulate underlying that student's view of the world comes in the form of prescribed content plus instructions to act as if it were valid.

If the qualitative aspects inhering in the origins of the respective postulates are insufficient to evoke one's commitment to naturalism, then the implications of the kinds of behavior that those incompatible assumptions respectively control should suffice. While the past several centuries have revealed the vagaries associated with both intellectual approaches, the net effects seem to present a clear resolution of the contest. Overall, the human condition is more improved when people act on the implications of naturalism than when they act on the implications of its non-natural alternatives. (Also, see Fraley, 1994, for an elaboration of these issues.) ❧

### **References**

- Fraley, L.E. (1994). Uncertainty about determinism: A critical review of challenges to the determinism of modern science. *Behavior and Philosophy*, 22 (2), 71-83. ❧



# Critical Thinking and a Scientific Worldview: How Students' Thinking May Be Changed Upon Reading The Millennium Man

W. Joseph Wyatt

Marshall University

I wrote *The Millennium Man* (Wyatt, 1997) with several purposes in mind. That readers would develop greater appreciation for a scientific worldview was chief among them. Development of improved critical thinking skills was another. Greater appreciation for the advancements of science and technology (especially in the twentieth century) was one more. And I wanted to accomplish those goals while entertaining the reader.

Embedded within those goals was another—that readers would be more likely to think scientifically about behavior, less likely to succumb to pre-scientific explanations. Thus inoculated, readers would then be inclined to seek answers in the science of behavior analysis, rather than in the occult or the paranormal, or in schools of psychological thought that amount to little more than the paranormal.

This study looked into the changes in thinking of college students who read *The Millennium Man*. It also examined two methods of teaching the content of the novel.

## Method

*Subjects* were college students in a mid-sized college in upstate New York during the 1999–2000 academic year. Students were from two different introductory courses: Psychology and Behaviorology.

*Methods* of teaching the novel differed from first to second semester. During the first term the instructor, an experienced professor highly versed in behavior analysis, was able to devote only one class period and one long examination to the novel and its extensive study guide (Ledoux, Wyatt, & Bias, 1999). In the second semester, the same professor was able to teach the novel in three class periods, and to divide the long examination into

three shorter exams. The improved understanding of specific principles of behavior, from first to second semesters as measured by the professor's pre- and post-test examinations, are described elsewhere (Ledoux, 2000).

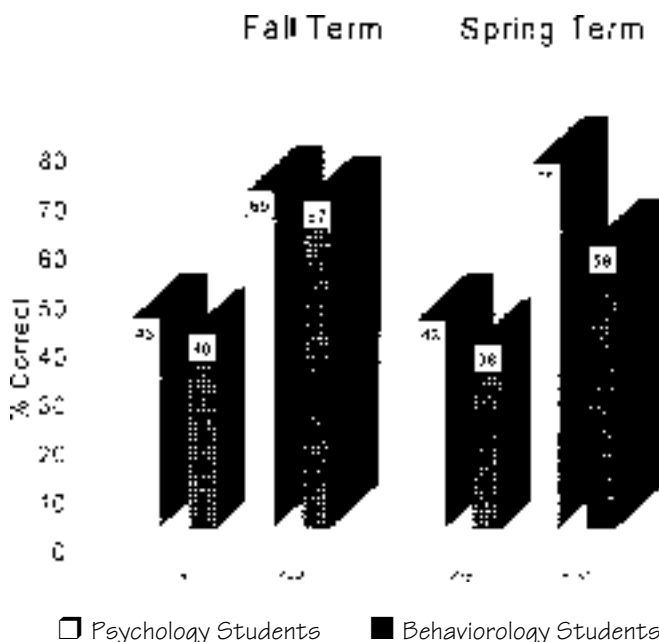
Another kind of pre- and post-test was administered as well. This included several items designed to determine whether the more general goals listed above were being achieved. If students were developing improved scientific worldviews, and better critical thinking skills, it was thought that the following items would provide evidence of those changes:

1. The twentieth century brought about more advancement in science and technology than all other centuries combined.
2. The advancements of science and technology have been beneficial to me personally.
3. There is scientific proof that some people have the gift of extra sensory perception.
4. There is scientific proof that astrology can be accurate.

The above items were rated on the following four-point scale: strongly agree; agree somewhat; disagree somewhat; strongly disagree. "Strongly agree" was the correct response to items one and two. "Strongly disagree" was the correct answer to items three and four.

## Results

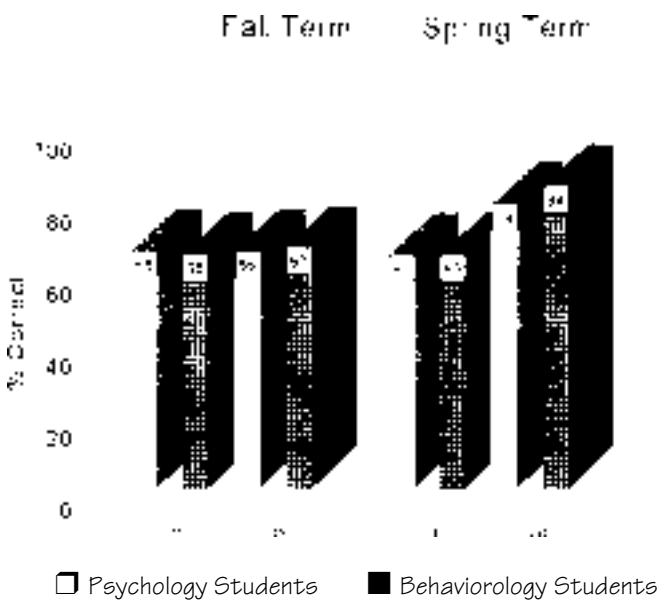
Figure 1 shows the percent correct (i.e., those who strongly agree) for the statement, "The twentieth century



**Figure 1:** Those who agree strongly with the statement, "The twentieth century brought about more advancement in science and technology than all other centuries combined."

brought about more advancement in science and technology than all other centuries combined.” After reading the novel, improvement was evident both for introductory psychology students and for introductory behaviorology students, and this was true for both semesters.

Figure 2 shows the percent correct (i.e., those who strongly agree) for the statement, “The advancements of science and technology have been beneficial to me personally.” During the first semester, the percent correct was essentially identical for both psychology and behaviorology students, and did not change as a result of reading *The Millennium Man*. The importance of improved teaching methods is evident, however, in the second term when there was improvement in post-test scores for both groups of students, with behaviorology students improving slightly more than psychology students.



**Figure 2:** Those who agree strongly with the statement, “The advancements of science and technology have been beneficial to me personally.”

Figure 3 shows the percent correct (i.e., those who strongly disagree) for the statement, “There is scientific proof that some people have the gift of extra sensory perception.” This result is from an item that deals with the hoped-for goal of improved critical thinking skills. On the first semester’s pre-test, only 9% of the psychology students, and only 10% of the behaviorology students, disagreed strongly with this statement. After reading and discussing *The Millennium Man* for one class period, the percent who strongly disagreed quadrupled for psychology students (to 37%) and tripled for behaviorology students (to 33%). During the second term, the proportions of improvement were the same or slightly better (although for reason unknown, the second semester’s stu-

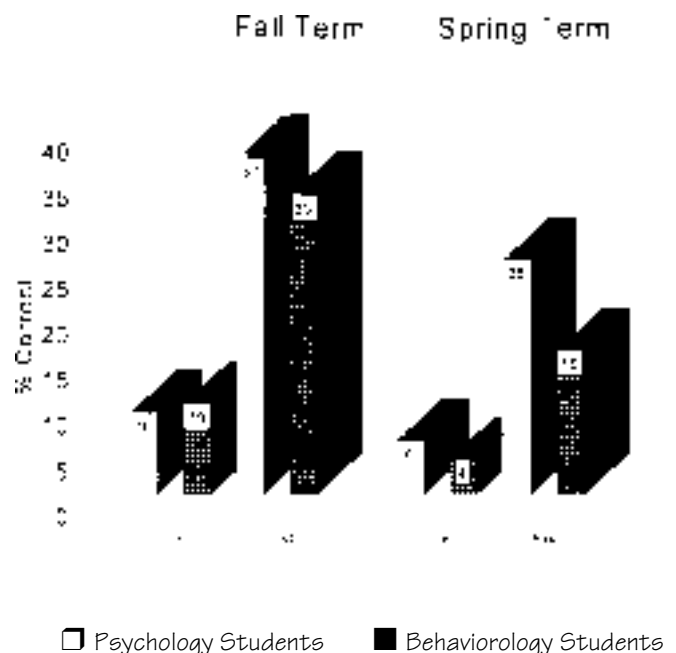
dents registered lower percentages of correct responses on the pre-test). Thus, responses to this item suggest that students’ critical thinking skills, at least as regards a specific claim about one alleged paranormal phenomenon, improved as a result of reading the novel.

Figure 4 shows the percent correct (i.e., those who strongly disagree) for the statement, “There is scientific proof that astrology can be accurate.” This item, which also dealt with critical thinking skills, yielded results similar to the results from item three. Improvement in the percent of students who “strongly disagree” occurred for both psychology and behaviorology students, and this was true for both semesters.

### Discussion

The data show that *The Millennium Man*, a novel for ages 14 and up, is a useful tool for improving students’ appreciation for science and technology, and for enhancing their critical thinking skills. And students enjoyed the novel, based on their informal comments.

Additionally, the novel would seem to be a useful tool with which to teach behaviorology/behavior analysis. As one reviewer put it, “The book is easy to follow and would have interesting potential as a supplement in a general psychology class, or an introductory class on behavior modification and analysis...” (Hummel, 1998). Another reviewer said, “The novel, *The Millennium Man*,



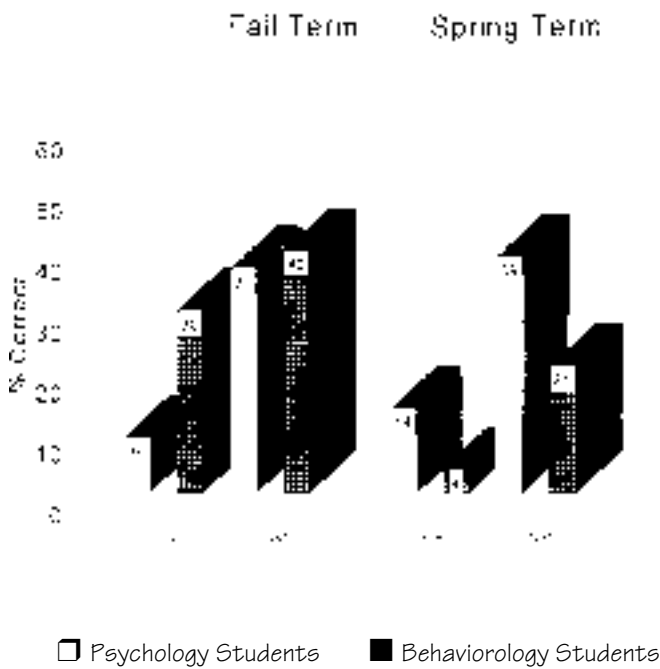
**Figure 3:** Those who disagree strongly with the statement, “There is scientific proof that some people have the gift of extra sensory perception.”



## Developing Opportunities to Disseminate the Natural Science of Behavior

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**Figure 4:** Those who disagree strongly with the statement, “There is scientific proof that astrology can be accurate.”

by W. Joseph Wyatt lives up to its honest billing as a ‘positive look at behavior analysis’...” (Ledoux, 1998).✦

### Endnote

These data were part of a larger presentation with Stephen F. Ledoux as coauthor that was presented under the title “Methods for pedagogical success with *The Millennium Man*,” at the twenty-sixth convention of the Association for Behavior Analysis, Washington, DC, 26–30 May 2000 (see Ledoux, 2000).

### References

- Hummel, J.H. (1998). A novice’s introduction to some principles of behavior. *Contemporary Psychology*, 43 (8), 581.
- Ledoux, S.F. (1998). Carl Sagan is right again: A review of *The Millennium Man*. *TIBI News Time*, 1 (1), 21–23.
- Ledoux, S.F. (2000). Methods for pedagogical success with *The Millennium Man*. *TIBI News Time*, 3 (1), 3–4.
- Ledoux, S.F., Wyatt, W.J., & Bias, E.F. (1999). *Study Questions for W. Joseph Wyatt’s The Millennium Man*. Canton, NY: ABCs.
- Wyatt, W.J. (1997). *The Millennium Man*. Hurricane, WV: Third Millennium Press.✦

This article serves to update behaviorological scientists and practitioners regarding the growing number of behaviorology courses available through both TIBI and regular university course offerings. Articles in past issues of this newsletter also addressed this topic (see Ledoux, 1998, p. 4; 1999, p. 2). While some details have changed since those articles appeared, the general trend they report continues. This article will describe the successes to date (spring 2001) in developing courses to disseminate behaviorology through the author’s university campus—the State University of New York at Canton—as well as through [www.behaviorology.org](http://www.behaviorology.org) which is TIBI’s web site.

As editor of this newsletter, the author also invites behaviorologists at other institutions of higher education to provide descriptions of their successes disseminating the independent discipline of behaviorology for publication in future newsletter issues. (See the last page of this issue for some simple submission guidelines.) This independent discipline is the natural science of behavior known as behaviorology (though originally known as behavior analysis—see Fraley & Ledoux, 1997, for a discussion of the name change). Behaviorology is the discipline of strictly *naturalistic* explanations of behavior and so it should not be confused with the discipline of fundamentally *mystical* explanations of behavior known as psychology. (In practice psychology, as a discipline, requires even its dissenting members to allow the mysticism inherent in granting causal status—through an inner agency of behavior origins—to minds, psyches, selves, etc. For elaboration, see Fraley, 2000a, 2000b, 2001 [in this issue]; also, see Ledoux, 2000 [in the previous issue]).

This article will also consider some early factors relevant to successfully developing courses to disseminate behaviorology. Some of these factors are available to behaviorological scientists and practitioners at other institutions of higher education. Perhaps the presence of such factors will prompt similar successes on the part of others, thereby substantially moving forward the natural science of behavior and the contributions it makes to the human community.

## Successes Through Spring 2001

Before the end of 2004, TIBI is committed to having ten behaviorology courses available online. To the extent possible, TIBI wants these courses to be offered at three levels:

(a) The first level is to offer the courses for free. This level is for those who simply want to expand their repertoires—by downloading a course syllabus from TIBI’s web site, purchasing the course materials from a book seller, and working through the course solely on their own—but who do not want or need any sort of credit toward TIBI certificates or regular academic degrees.

(b) The second level involves paying TIBI tuition and being assigned a TIBI faculty member to help cover course content (while working through the course after downloading the course syllabus from TIBI’s web site and purchasing course materials from a book seller). This level is for those who want to earn TIBI credit toward one or another of TIBI’s certificates.

(c) The third level is for those who want or need regular academic credit toward an official degree from an institution of higher education. (While TIBI’s non-profit, 501-C-3 incorporation required the consent of the New York State Education Department, TIBI is not accredited to offer “degrees.”) At this level each course TIBI offers on its web site includes a list of any regular academic courses, offered by institutions of higher education, that TIBI considers equivalent. Students can then contact the institution of their choice about taking the course, paying that institution’s tuition, and getting that institution’s credit. (Students who take such equivalent courses also automatically accumulate TIBI credits toward TIBI’s certificates. See TIBI, 1999, particularly pp. 12–14 and pp. 15–16, for details on TIBI’s certificates and courses; these were modeled after Ledoux, 1997a.)

The value of successes with regular academic courses resides in that third level. Currently SUNY–Canton has five behaviorology courses. Two more are scheduled to be fully approved before the end of the spring 2001 semester. Each of the five already approved courses was proposed and approved explicitly as a “behaviorology” and “natural science of behavior” course, with a “BEHG”—behaviorology—designator for the course number (e.g., BEHG–135). The designator was changed to “SSCI”—the designator for social science—by the Curriculum Committee at the suggestion of the Deans who were concerned to insure that students would be able to transfer these courses to other colleges. Also, the behaviorologist designing and proposing these courses was a professor in the Department of Social Sciences. In this context the concept of “social science” inheres more in the concerns of the various “social science” disciplines for people issues than in

any competition with, or alternative to, the natural sciences. Since, ultimately, behaviorology courses should be academically housed with the natural sciences, a review of some origins and definitions of natural science is relevant to this discussion. Readers can find a brief review of this topic in Ledoux, 2000, in the last newsletter issue.

Each of SUNY–Canton’s seven courses will be offered as TIBI courses by TIBI online (and probably by SUNY–Canton online as well). Here are brief descriptions of all seven courses:

✻ **SSCI–135 *Parenting Knowledge and Skills*** (equivalent to TIBI’s BEH–201 *The Behaviorology of Child Rearing Practices*): This course provides students of any age and interest with the scientific contributions of behaviorology that can instill or enhance the knowledge and skills for caring for children in effective, non-coercive, positive, and loving ways.

✻ **SSCI–245 *Introduction to the Science and Technology of Behavior*** (equivalent to TIBI’s BEH–101 *Introduction to Behaviorology I*): This course provides students with a solid grounding in the various components of the behaviorology discipline. The areas covered include fundamental principles, basic experimental research methods, elementary techniques of behavior/environment engineering, historical and philosophical perspectives, and trends.

✻ **SSCI–345 *Applied Science and Technology of Behavior*** (equivalent to TIBI’s BEH–102 *Introduction to Behaviorology II*): This course provides students with general applications of the principles of behaviorology by focusing on a range of problem prevention and intervention techniques and considerations (e.g., ethics) in a range of settings.

✻ **SSCI–365 *Behavior Engineering—Rehabilitation***: This course provides students with the application of behaviorological considerations to help improve human interactions and success rates in institutional rehabilitation settings such as hospitals and prisons. The course emphasizes the use of the more effective, science-based practices in these settings. Both adult and youth clients and offenders receive consideration.

✻ **SSCI–375 *Behavior Engineering—Autism Analysis and Recovery Methods***: This course provides students with the behavior engineering practices and skills valued in the recovery of children from autism. Topics include (a) the different roles of professionals, paraprofessionals, and school systems, (b) training curricula and programs, (c) home- and center-based programs, and (d) the organizational and legal supports available to autistic children and their families.

✻ **SSCI–455 *Behavior Engineering—Preventing Workplace Violence***: This course provides students with three levels of application of behaviorological considerations appropriate to preventing workplace violence. The most general level examines the role punishment and coercion

play in prompting violence of all types throughout society. The middle level focuses on the use of effective behaviorological practices for performance management in the full range of workplace settings to replace the unscientific emphasis on coercive management practices thereby preventing the violence such practices may themselves induce. The most specific level focuses on the various recommended policies and procedures for deterring the actual occurrence of workplace violence.

✻ **SSCI-465 Behavior Engineering—Preventing School Violence:** This course provides students with three levels of application of behaviorological considerations appropriate to preventing school violence. The most general level examines the role punishment and coercion play in prompting violence of all types throughout society, from interpersonal and family relations, through educational and workplace situations, to international and cultural relations. The middle, and most significant, level focuses on the use of effective behaviorological practices for classroom management. These replace the unscientific emphasis on coercive classroom “discipline” practices thereby preventing the violence such practices may themselves induce. The most specific level focuses on the various recommended policies and procedures for deterring the actual occurrence of school violence in situations where violence has become likely.

At present, only one of these courses, SSCI-245 (the basic discipline course) is already offered on TIBI’s web site. Three more should be online before the end of 2001. These are SSCI-135 (the child care course), SSCI-345 (the initial applied behaviorology course), and SSCI-465 (the “classroom management prevents school violence” course). All four courses could also simultaneously be online through SUNY-Canton by the end of 2001. Together, the first three of these courses fulfill the requirements for TIBI’s basic *Behavior Literacy Certificate* (i.e., 135, 245, and 345).

Of course, the progress of seven approved courses did not occur in a vacuum. Several factors came together to enable such success. Some are generally available to other behaviorologists, or can be arranged. Others are unique to SUNY-Canton. Most of these factors are discussed next.

## Factors Relevant to Success

The personal story begins about fourteen years ago (1987), the same year as the founding of TIBA (The International Behaviorology Association, which later changed its name to the International Society for Behaviorology—ISB) and about ten years before the current successes began. After arriving at SUNY-Canton five years earlier (1982), I proposed a typical “psychology” behavior modification course. The department approved the proposal (though not unanimously as psychology instructors were

department members and some opposed the proposal). However, the Dean at the time, who has since retired, was disinclined to move the course forward. Little happened at SUNY-Canton over the next ten very long years.

However, during those intervening years, a variety of events accumulated which prepared a foundation for the possible success of renewed efforts. For instance, as my TIBA presidential address (Ledoux, 1997a), I developed a set of consensus-based behaviorology curricula to begin answering the questions, “What [would] we want to do with behaviorology training time when we behaviorologists are responsible for *all* of it? How should behaviorologists be trained?” (p. 174). The publication of that paper in a book on the broad components of the behaviorology discipline (Ledoux, 1997b) caught my administrators’ attention when they received a complimentary copy.

Also, when I returned from an academic year teaching in China (1990–1991), I reported the speed with which my three invited behaviorology course proposals (two at the graduate level: one on verbal behavior and one on educational behaviorology) were approved and scheduled: The whole process took less than three weeks! This too grabbed some administrative attention.

Three other factors lent credibility to development efforts. One was the already mentioned incorporation of TIBI with the consent of the New York State Education Department. Another was the separate existence of another behaviorology professional organization, ISB, and my circulating each organization’s newsletters as they arrived, along with demonstrating TIBI’s web site. The third was TIBI’s successful proposal to SUNY-Canton that the two co-sponsor a visiting scholar from China who was interested in coming here to study behaviorology. That first visiting scholar, Professor Ma Wen (see Ma, 1998, 1999, 2000) earned TIBI’s *Professional Studies in Behaviorology Certificate*. And our second interested-in-behaviorology visiting scholar from China is scheduled to be at the college for the 2001–2002 academic year.

More recently, other factors occurred that increased the chances of success for renewed development efforts. For instance, SUNY-Canton received approval to begin offering four-year “Bachelor of Technology” (BT) degrees. This approval instantly created the need for upper division courses to support such degree programs. (And, in a cash-strapped college environment, development efforts are certainly not hurt by SUNY allocating more dollars to campuses for their upper division courses.) Also, local employers were weighing in with letters supporting behaviorology courses in terms of the number of behaviorology-knowledgeable students these employers would hire annually if they could. Such letters were received from the local ARC and from United Helpers. The local chapter of Families for Early Autism Treatment (FEAT) also provided support for behaviorology development efforts.

At the same time as renewed behaviorology–development efforts went forward, SUNY–Canton was also becoming increasingly interested in two related areas, both of which supported such efforts. One was in offering online courses in general, something for which most behaviorology courses are well–suited, since the discipline itself would be applied in teaching them (which is appropriate, as it is the most effective informing science for education), and since TIBI would be offering online behaviorology courses anyway. The other was in offering online courses in particular to China, as the college had received a grant to arrange such courses and I had substantial experience both with China and with one of the online course areas that would interest Chinese universities: applied behaviorology (Ledoux, 1997c).

This variety of factors seemed supportive of renewed development efforts. Hence I began developing behaviorology course proposals in 1997.

## Local Steps to Success

The first course I proposed was a basic introduction to behaviorology course (titled SSCI–245: Introduction to the Science and Technology of Behavior). It would be a lower division course and, should it succeed (which it did), it would serve as the fundamental prerequisite course for more advanced behaviorology courses.

As the college became more involved in four–year degree programs, and the need for upper division courses increased, I developed four additional course proposals, only one of which was appropriately a lower division course without a prerequisite. (Actually I had developed five course proposals, but one was thin and so did not pass the department. I reworked and resubmitted it later successfully.) These four were (a) SSCI–135: Parenting Knowledge and Skills, (b) SSCI–345: Applied Science and Technology of Behavior, (c) SSCI–365: Rehabilitation, and (d) SSCI–465: Preventing School Violence. To improve the chances of success, each course topic reflects a major, meaningful behaviorology application area. Most are also potentially useful to one or another of the college’s current four–year BT degrees. The courses are also appropriate to some future BT in “Behavior Technology.”

Subsequently, I identified two further areas that served community needs, college needs, or BT–program needs. So I developed two more upper division courses in these areas: SSCI–375: Autism Analysis and Recovery Methods, and SSCI–455: Preventing Workplace Violence.

When the Dean has scheduled any of these courses, I have taken steps to improve their chances of success. One step involved enabling SSCI–135 and SSCI–245 to serve as alternative courses for students who usually get put into intro psych but who do not need that course as their cur-

ricula do not require any advanced psych (for which intro psych is the prerequisite). This way, my behaviorology sections cover the students who would otherwise have been in psych sections that I would have had to teach. Another step involved producing flyers to assure that students and advisors were aware, during each pre–scheduling time for the following term, of the behaviorology courses being offered. (I only had to deliver the flyers to each dean’s secretary who would distribute them to the advisors, and to the Director of Student Life who would distribute them to the dorms.)

With only one behaviorology professor, seven behaviorology courses is probably too many when all need to be taught, some every term, others at least occasionally, and all both face–to–face and online. Over the next couple of years, I hope to teach each course both ways, with an online version offered both by SUNY–Canton and by TIBI.

Meanwhile, I anticipate the opportunity to expand this collection of courses, developing it into local certificates and degree programs. This may also be the only way to “get some help,” that is, enable the hiring, in due time, of additional behaviorologists as faculty members. (Just think of all the job descriptions properly trained behaviorology students can fill, and how many more students could be taught by more than one professor...)

Another factor, one which I could *not* use to enhance success, involved being able to say that so–and–so college already offers *Behaviorology* courses (approved as such). At least now, behaviorologists at other campuses *can* say that!

## Conclusion

In every institution of higher education, factors already exist that affect the likelihood of success for efforts to develop dissemination opportunities for behaviorology and its applications across human concerns. The only guarantee of failure it not to try. This article identified and addressed some supporting factors which, when added to the local mix, could tip the balance in favor of further success. As readers include such factors in their dissemination efforts, successes should continue to accrue. ✻

## Endnote

This material was prepared after Dr. Jerome Ulman, the President of ISB, called me early in 2001 about presenting such material at the ISB–13 convention in Chicago in March 2001. I accepted only to discover some time later that prior commitments precluded my attendance. So I prepared this article instead, and arranged for each convention attendee to receive a copy of the issues of the newsletter

containing this article and the article on defining natural sciences (Ledoux, 2000) as that material would have been an integral part of the convention presentation.

## References

- Fraley, L.E. (2000a). The discipline of behaviorology. *TIBI News Time*, 3 (1), 8–9.
- Fraley, L.E. (2000b). About behaviorology. *TIBI News Time*, 3 (2), 4–5.
- Fraley, L.E. (2001). The discipline of behaviorology and the postulate of determinism. *TIBI News Time*, 4 (1), 2–6.
- Fraley, L.E. & Ledoux, S.F. (1997). Origins, status, and mission of behaviorology. In S.F. Ledoux. *Origins and Components of Behaviorology* (pp. 33–169). Canton, NY: ABCs.
- Ledoux, S.F. (1997a). Behaviorology curricula in higher education. In S.F. Ledoux. *Origins and Components of Behaviorology* (pp. 173–186). Canton, NY: ABCs.
- Ledoux, S.F. (1997b). *Origins and Components of Behaviorology*. Canton, NY: ABCs.
- Ledoux, S.F. (1997c). Behaviorology in China: A status report. In S.F. Ledoux. *Origins and Components of Behaviorology* (pp. 187–198). Canton, NY: ABCs.
- Ledoux, S.F. (1998). A summary of progress in disciplinary development. *TIBI News Time*, 1 (2), 2–5.
- Ledoux, S.F. (1999). TNT–4 news: Editorial. *TIBI News Time*, 2 (2), 1–2.
- Ledoux, S.F. (2000). Defining natural sciences. *TIBI News Time*, 3 (2), 6–8.
- Ma, W. (1998). Introducing a visiting scholar. *TIBI News Time*, 1 (1), 16.
- Ma, W. (1999). Using data to measure pedagogical change effectiveness. *TIBI News Time*, 2 (2), 3–4.
- Ma, W. (2000). Behaviorology in China: A status report—A Chinese translation. *TIBI News Time*, 3 (2), 9–16.
- TIBI. (1999). TIBI policies and procedures. *TIBI News Time*, 2 (1), 5–17. ☺

## Always More at behaviorology.org

Be sure to visit TIBI’s ever-expanding web site regularly ([www.behaviorology.org](http://www.behaviorology.org)). Material is always being added and updated. After entering (as a visitor or as a member) you will be in the “Course Announcements” area, with several navigation buttons that are *always* to the left of the screen. Use these buttons to get where you want to go.

Several types of material from the newsletter are available. If you click on the “Course Information” button and

then on the “Current Institute Info Docs” folder, you will find the most up-to-date Institute information documents. If you click on the “Course Information” button and then on the “Selected TNT Articles” folder, you will find a selection of useful newsletter articles. If you click on the “Course Information” button and then on the “TNT Archives” folder, you will find the complete newsletter archives.

Two other information areas receive regular additions. If you click on the “Course Information” button and then on the “TIBI Certificate Programs and Courses” folder, you will find the Institute’s educational offerings. If you click on the “External Links” button, you can access all the “Features” articles and links.

The other navigation buttons also lead to interesting materials. Be sure to try them as well. Also be sure to provide feedback on you site-visit experience. Your input is needed and welcome. ☺

## TNT–7 Treasurer’s Report

This report covers TIBI’s finances from 1 January 2000 through 31 December 2000. It was approved by the Board of Directors at a single-agenda-item phone meeting on 20 February 2001 (for which this report constitutes the meeting minutes).

**BALANCE** (as of 2000 January 1): US\$1549.94

### INCOME:

US\$ 850.00	DUES
US\$ 32.11	INTEREST (on fee-free interest bearing checking account)
US\$ 20.00	BOOKS TO STUDENTS
US\$ 902.11	TOTAL

### EXPENSES:

US\$ 162.32	NEWSLETTER PRINTING
US\$ 51.59	POSTAGE
US\$ 533.95	WWW.BEHAVIOROLOGY.ORG COSTS
US\$ 747.86	TOTAL

**BALANCE ON 31 DECEMBER 2000: \$1704.19**

*Standard procedure for minutes of meetings of the Board of Directors.* The chair drafts the minutes and provides them to the other Board members who verify them, indicating additions and corrections. The chair then incorporates the changes and publishes the minutes in the corporate records and newsletter. These procedures have been followed with the current minutes. (*Added at the end of the corporate-records copy are the signature of the chair and the date of 2001 February 21.*) ☺

## *TNT Subscriptions and Back Issues*

People can receive copies of this newsletter in ways other than as a member. People can subscribe without membership (US\$10 for an individual, and US\$20 for a library or other institution), and people can obtain back issues for US\$5 each. Contact TIBI for details. ☺

## *TIBIA Membership Benefits*

Beyond the intrinsic value that TIBIA membership bestows by virtue of making the member a contributing part of an organization helping to extend and disseminate the findings and applications of the natural science of behavior for the benefit of humanity, and beyond the benefit of receiving the organization's publications, TIBIA membership benefits include the following:

- ✧ Members will have opportunities to present papers, posters, and demonstrations, etc., at the organization's meetings;
- ✧ Members who first join TIBIA in the last third of the calendar year will be considered as members through the end of the following calendar year;
- ✧ Members who first join TIBIA in the middle third of the calendar year will be allowed to pay one-half the regular dues for the following calendar year;
- ✧ A TIBIA member may request the Institute to evaluate his or her credentials to ascertain which TIBI certificate level most accurately reflects the work (and so, by implication, the repertoire) behind those credentials. The Institute will then grant that certificate to the member; as part of this evaluation, the Institute will also describe what work needs to be accomplished to reach the next certificate level. The normal processing fee for this service (US\$20) will be waived for members. For the processing fee of US\$20, a non-member may also request this evaluation and, should she or he ever join TIBIA, the US\$20 already paid will be applied to the initial membership dues owed. (Faculty teaching behaviorology courses can encourage their students to request this evaluation.)

TIBIA continuously considers additional membership benefits. Future iterations of this column will report all new benefits upon their approval. ☺

## *TIBIA Membership Criteria and Costs*

TIBIA has four categories of membership, of which two are non-voting and two are voting. The two non-voting categories are Student and Affiliate. The two voting categories are Associate and Advocate. All new members are admitted provisionally to TIBIA at the appropriate membership level. Advocate members consider each provisional member and then vote on whether to elect each provisional member to the full status of her or his membership level or to accept the provisional member at a different membership level.

Admission to TIBIA in the Student membership category shall remain open to all persons who are undergraduate or graduate students who have not yet attained a doctoral level degree in behaviorology or in an acceptably appropriate area.

Admission to TIBIA in the Affiliate membership category shall remain open to all persons who wish to maintain contact with the organization, receive its publications, and go to its meetings, but who are not students and who have not attained any graduate degree in behaviorology or in an acceptably appropriate area. On the basis of having earned TIBI Certificates, Affiliate members may nominate themselves, or may be invited by the TIBI Board of Directors or Faculty, to apply for an Associate membership.

Admission to TIBIA in the Associate membership category shall remain open to all persons who are not students, who document a behaviorological repertoire at or above the masters level or who have attained at least a masters level degree in behaviorology or in an acceptably appropriate area, and who maintain the good record—typical of “early-career” professionals—of professional accomplishments of a behaviorological nature. On the basis either of documenting a behaviorological repertoire at the doctoral level or of completing a doctoral level degree in behaviorology or in an acceptably appropriate area, an Associate member may apply for membership as an Advocate.

Admission to TIBIA in the Advocate membership category shall remain open to all persons who are not students, who document a behaviorological repertoire at the doctoral level or who have attained a doctoral level degree in behaviorology or in an acceptably appropriate area, who maintain a good record of professional accomplishments of a behaviorological nature, and who demonstrate a significant history—typical of experienced professionals—of work supporting the integrity of the organized discipline of behaviorology including its organizational manifestations such as TIBI and TIBIA.

For all membership levels, prospective members need to complete the membership application form and pay the appropriate dues.

Establishing the annual dues structure for the different membership categories takes partially into account, by means of percentages of annual income, the differences in income levels and currency values among the world's various countries. Thus, the annual dues for each membership category are:

<b>Other Category</b>	<b>Dues (in US dollars —\$20 minimum)</b>
<b>Board of Directors member</b>	<b>The lesser of 0.6% of annual income, or \$120.00</b>
<b>Faculty member</b>	<b>The lesser of 0.5% of annual income, or \$100.00</b>

<b>Membership Category</b>	<b>Dues (in US dollars —\$10 minimum)</b>
<b>Advocate member</b>	<b>The lesser of 0.4% of annual income, or \$80.00</b>
<b>Associate member</b>	<b>The lesser of 0.3% of annual income, or \$60.00</b>
<b>Affiliate member</b>	<b>The lesser of 0.2% of annual income, or \$40.00</b>
<b>Student member</b>	<b>The lesser of 0.1% of annual income, or \$20.00</b>

## TIBIA MEMBERSHIP APPLICATION FORM

(SEE THE NEXT PAGE FOR THE TIBI / TIBIA PURPOSES.)

Copy and complete this form  
(please type or print)  
then send it with your check  
(made payable to TIBIA) to:

Dr. Stephen Ledoux  
TIBIA Treasurer  
SUNY-CTC  
Cornell Drive  
Canton NY 13617 USA

Name: \_\_\_\_\_

Member Category: \_\_\_\_\_

Office Address: \_\_\_\_\_

Amount enclosed: us\$ \_\_\_\_\_

\_\_\_\_\_

Home Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Office Phone #: \_\_\_\_\_

Home Phone #: \_\_\_\_\_

FAX #: \_\_\_\_\_

CHECK PREFERRED MAILING ADDRESS:

E-mail: \_\_\_\_\_

Office:  Home:

Degree/Institution\*: \_\_\_\_\_

Sign & Date: \_\_\_\_\_

\*I verify that the above person is enrolled as a student at: \_\_\_\_\_

Name & Signature of Advisor or Dept. Chair: \_\_\_\_\_

## TIBI / TIBIA Purposes\*

TIBI, as a non profit educational corporation, is dedicated to many concerns. TIBI is dedicated to teaching behaviorology, especially to those who do not have university behaviorology departments or programs available to them; TIBI is a professional organization also dedicated to expanding the behaviorological literature at least through the *TIBI News Time* newsletter and the *Behaviorology and Radical Behaviorism* journal;\*\* TIBI is a professional organization also dedicated to organizing behaviorological scientists and practitioners into an association (The International Behaviorology Institute Association—TIBIA) so they can engage in coordinated activities that carry out their shared purposes. These activities include (a) encouraging and assisting members to host visiting scholars who are studying behaviorology; (b) enabling TIBI faculty to arrange or provide training for behaviorology students; and (c) providing TIBI certificates to students who successfully complete specified behaviorology curriculum requirements; and TIBI is a professional organization dedicated to representing and developing the philosophical, conceptual, analytical, experimental, and technological components of the discipline of behaviorology, the comprehensive natural science discipline of the functional relations between behavior and independent variables including determinants from the environment, both socio-cultural and physical, as well as determinants from the biological history of the species. Therefore, recognizing that behaviorology's principles and contributions are generally relevant to all cultures and species, the purposes of TIBI are:

- A. to foster the philosophy of science known as radical behaviorism;
- B. to nurture experimental and applied research analyzing the effects of physical, biological, behavioral, and cultural variables on the behavior of organisms, with selection by consequences being an important causal mode relating these variables at the different levels of organization in the life sciences;
- C. to extend technological application of behaviorological research results to areas of human concern;
- D. to interpret, consistent with scientific foundations, complex behavioral relations;

- E. to support methodologies relevant to the scientific analysis, interpretation, and change of both behavior and its relations with other events;
- F. to sustain scientific study in diverse specialized areas of behaviorological phenomena;
- G. to integrate the concepts, data, and technologies of the discipline's various sub-fields;
- H. to develop a verbal community of behaviorologists;
- I. to assist programs and departments of behaviorology to teach the philosophical foundations, scientific analyses and methodologies, and technological extensions of the discipline;
- J. to promote a scientific "Behavior Literacy" graduation requirement of appropriate content and depth at all levels of educational institutions from kindergarten through university;
- K. to encourage the full use of behaviorology as the essential scientific foundation for behavior related work within all fields of human affairs;
- L. to cooperate on mutually important concerns with other humanistic and scientific disciplines and technological fields where their members pursue interests overlapping those of behaviorologists; and
- M. to communicate to the general public the importance of the behaviorological perspective for the development, well-being, and survival of humankind.☺

## TIBI / TNT Information

*TIBI News Time* (TNT), the newsletter of The International Behaviorology Institute, a non-profit educational corporation, is published in the spring and fall each year.

TIBI can be contacted at:

9 Farmer Street • Canton NY 13617-1120 • USA  
 Phone • Fax: (315) 386-2684 • 386-7961  
 Electronically: [www.behaviorology.org](http://www.behaviorology.org)

The TNT newsletter editor is Stephen F. Ledoux.

To submit items for publication, contact the editor. Send items on a 3.5 inch Mac-formatted disk, in a program that can be placed in PageMaker 5.0, with a hard copy, to the editor at:  
 SUNY-CTC • Arts and Sciences • Cornell Drive  
 Canton NY 13617-1096 • USA  
 Phone • Fax: (315) 386-7423 • 386-7961  
 E-mail: [ledoux@canton.edu](mailto:ledoux@canton.edu)

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\*This statement of the TIBI / TIBIA purposes has been quoted from the TIBI by-laws.

\*\*This journal (BARB) is under development at this time and will appear only when its implementation can be fully and properly supported.—Editor