



TIBI News Time

The International Behaviorology Institute

Behaviorology

Conductologia

Xingwei Xue

Gedragologie

Behaviourology

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TNT-5 News: Editorial

This issue has several worthy articles. In addition to them, here are some details about ongoing developments that might interest you.

The International Society for Behaviorology (ISB), which focuses mainly on experimental research (rather than on general disciplinary concerns as TIBI does), held its annual convention in March 2000 in Morgantown, WV. (The ISB was formerly called The International Be-

CONTENTS

<i>TNT-5 News: Editorial</i>	1
<i>Separate Discipline Status Corroborated Again</i> LI FANG JUN	2
<i>Methods for Pedagogical Success with</i> <i>The Millennium Man</i> STEPHEN F. LEDOUX	3
<i>Why Focus on Behavior</i> JOHN W. ESHLEMAN	5
<i>The Discipline of Behaviorology</i> LAWRENCE E. FRALEY	8
<i>TNT-5 Treasurer's Report</i>	9
<i>Always More at TIBI's Web Site</i>	9
<i>TIBIA Membership Benefits</i>	10
<i>TIBIA Membership Criteria and Costs</i>	10
<i>Membership Application Form</i>	11
<i>TIBI / TIBIA Purposes</i>	12
<i>TIBI / TNT Information</i>	12

haviorology Association.) To review a little history, with ISB's changed focus, several ISB members created TIBI, The International Behaviorology Institute, as a non-profit corporation to serve two other vital organizational missions. These are (a) to promote education/training in behaviorology, and (b) to promote general disciplinary concerns among behaviorological professionals. TIBI, as TIBIA (the TIBI Association), is the professional organization component for behaviorological professionals. Perhaps you will be interested in joining both ISB and TIBI; all these endeavors need many capable people.

In other convention news, at the ABA convention in Washington, D.C. in May, Joe Wyatt and Stephen Ledoux are presenting a workshop and paper concerning Wyatt's novel, *The Millennium Man*. The paper is about the measured effectiveness of some ways to use the book and its study questions in courses, while the workshop involves

a tour of Washington that imitates the tour Leonardo da Vinci took of Washington in Wyatt's novel. If you have not yet seen that book, Ledoux has a review in the first issue of this newsletter. It is available at the TIBI web site (www.behaviorology.org); enter as a member or visitor, click the "Course Information" button, and open the "Selected Articles" folder to find the review.

On a related front, several behaviorology courses have been approved at the State University of New York at Canton (SUNY-CTC). Significantly, they were proposed and approved as independent behaviorology, and natural science of behavior, courses. You can see what they are about by looking under "Ledoux" in the "Directory" of faculty at www.canton.edu which is SUNY-CTC's web site. Three of them that may be of particular interest to people once they are up and running are "Parenting Knowledge and Skills," "Preventing School Violence," and "Rehabilitation." Further courses are under development.

At the end of this issue are the usual informational materials: the Treasurer's report, a reminder to revisit www.behaviorology.org regularly to see the new materials and updates that are always in the works, membership benefits, membership criteria and costs, application form, purposes, and information on TNT and TIBI (including how to make contact). Note that the first issue of the newsletter, Spring 1998, which contains the Institute's by-laws—and these have not been changed—is still in print. Through it, the by-laws remain available to any who wish to peruse them. This notice fulfills the annual by-laws publication requirement. If you need a copy of the by-laws, contact TIBI.☺☺

Separate Discipline Status Corroborated Again

Li Fang jun

Xi'an Foreign Languages University

Although I am a TIBIA member normally residing in China, I have spent the 1999–2000 school year in a graduate linguistics program at a university in Singapore. As the last ten weeks of the program began, my class was being introduced to behaviorism. I had recently received a copy of Ma Wen's translation into Chinese of an article by Professor Stephen F. Ledoux titled "Behaviorology in China: A status report" (Ledoux, 1997a). Shortly after it arrived, an incident occurred that yet again corroborated the independent status of the behaviorology discipline as described by Ledoux in that article.

The incident began by my being praised—and later put down—by my psycholinguistics professor in class. A Hong Kong lady in her fifties, she told us she got her ph.D. in psychology from Harvard. That day, when she introduced us to behaviorism and structuralism in class, she found that I was the only one (among 35 of us) who could answer almost all the questions quickly and satisfactorily. So she asked me curiously how come I was so familiar with behaviorism. I told her that I had taken two courses in behaviorology, "Verbal Behavior" and "Behaviorology for Teachers," in China. (They were part of my MA program at the Xi'an Foreign Languages University [XFLU] where I have been on the faculty since graduation; they were taught by Professor Ledoux when he was at XFLU teaching in 1990–91 as part of a faculty exchange.)

Then I also told her that I was interested in this discipline and would like to do research and applications in this area in the future. After that she said, "Well, it is good for a young man to be ambitious, but you need to be aware of the limited scope there; behaviorism is mainly applicable to animal behavior and it is rather outdated ..." I told her that behaviorology is different from behaviorism and I also mentioned Professor Ledoux and TIBI to her. Unexpectedly she said, "Well, there are always people who like to use new terms to impress others." I didn't say anything more.

When I got back to my apartment, I took out Dr. Ledoux's book (Ledoux, 1997b) and our TIBI newsletters. Thumbing through a book of over 300 pages plus a six-page bibliography about behaviorology, I further assured myself that she must be completely ignorant of behaviorology. Later on, some of my classmates asked me what behaviorology is about. I told them it is the natural science that studies human behavior. It is an independent discipline different from behaviorism and it is applicable to many situations including foreign language teaching and learning. I also showed them Professor Ledoux's book and the translated article, plus the TIBI newsletters, and I recommended the related web sites to them.

This experience shows that "resistance from outmoded opinion" (Ledoux, 1997a, pp. 194–195) not only exists in China but also in Singapore. My psycholinguistics professor is an example. TIBI's training programs are needed even more than we may have thought.☺

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- Ledoux, S.F. (1997b). *Origins and Components of Behaviorology*. Canton, NY: ABCs.☺☺

Methods for Pedagogical Success with The Millennium Man

Stephen F. Ledoux

SUNY Canton

Abstract: The collecting of student outcome data resulting from pedagogical changes is described. This type of data collection is then used to evaluate the relative success of different pedagogical methods for using the novel *The Millennium Man* by W. Joseph Wyatt.

§

Changes that faculty make in the methods they use to teach their courses are best evaluated using data-based measures. Without such data, one would have little confidence in statements about whether or not the changes were successful and so should be retained. Fraley (1980) examines a range of measures relevant to answering such questions for both faculty and administrators.

The measure most useful to faculty is the percent of a student's possible gain that was actually achieved by that student in a particular term. This measure is simply called the percent of possible gain achieved (Ledoux, 1995). Fraley called it the attained percent of possible or desired gain (Fraley, 1980). Its particular value to faculty inheres in the selective effect it can have on enhancing faculty production of pedagogical changes that effectively improve instruction.

Using pre-test and post-test scores, the possible gain is calculated by subtracting the pre-test score from the maximum possible score, while the actual gain is calculated by subtracting the pre-test score from the post-test score. Then, the percent of the possible gain that is actually achieved is calculated by dividing the actual gain by the possible gain (i.e., the percent of possible gain achieved = [post-test score minus pre-test score] divided by [maximum possible score minus pre-test score]).

To compare across terms, one calculates the percentage of students in each term who reached some specific level of possible gain. The pedagogical techniques that were used in the term with the most successful student outcomes should be retained for further improvement and evaluation in an ongoing cycle.

Ma (1999) used the percent of possible gain achieved measure to evaluate the success of a particular pedagogi-

cal change across semesters in his "Introduction to Chinese History and Culture" course. He provided the same study questions for his texts in both terms, but he *did not require* the students to write out their answers to these questions in the first term. His change was to require the students in the second term to write out the answers to the study questions. Ma found that in the first term only 25% of his students achieved at least 60% of their possible gain while in the second term 67% of his students achieved at least 60% of their possible gain. Consequently he has continued to require the students to write out the answers to the study questions.

While no specific level is as yet generally accepted as a minimum standard for across-term comparisons, Ma (1999) held his evaluation to a minimum standard of how many students in each term achieved at least 60% of their possible gain. He did this because he "wanted to judge effectiveness at a higher standard" (p. 3) than the more common minimum standard of how many students in each term achieve at least 50% of their possible gain (Ledoux, 1995).

The present study evaluates student outcomes resulting from two different pedagogical methods for using the novel, *The Millennium Man* (Wyatt, 1997), and its booklet of study questions (Ledoux, Wyatt, & Bias, 1999), in two different terms. This study uses the percent of possible gain achieved measure, and it reports the data at both the 50% and 60% minimum standards.

Method

In the second term, the basic pedagogy for the students' coverage of the *Millennium Man* novel and its study questions was changed with respect to the pedagogy that was used in the first term. In the first term, due to schedule constraints outside the professor's purview, (a) only one class period was available to discuss the novel and its study questions and answers in class, and (b) only one other class period was available to assess the students, so the whole novel and all its study questions were covered by one long post-test. In the second term, with schedule constraints eased, (a) three class periods were available to discuss the novel and its study questions and answers in class, so the work was divided into three roughly equal parts following the three parts into which the study questions already divided the work, and (b) three other class periods were available to assess the students, so the previous long post-test was also divided into three shorter quizzes whose scores were later combined to provide the post-test score for each student.

Pre-test scores for both terms were obtained by giving the students the same long test (the one used for the first term post-test) as a "repertoire assessment" on the

first day of the term to see what novel-related material they had already learned elsewhere and so were bringing with them into the course. The course could then not be credited with teaching them this material.

In both terms, percent of possible gain achieved data were collected to measure which pedagogy had the most beneficial effect on student outcomes. To compare across terms, the percentage of students in each term who reached or exceeded 50% and 60% of their possible gain was calculated. The most beneficial pedagogy would be retained (and, in an ongoing cycle, improved further.)

Results

Table 1 shows that of the 122 first-term students (who had only one class period for discussion and one class period for a single test) 12% achieved at least 60% of their possible gain while 22% achieved at least 50% of their possible gain. Table 1 also shows that of the 93 second-term students (who had three class periods for discussion and three class periods for three separate quizzes) 56% achieved at least 60% of their possible gain while 76% achieved at least 50% of their possible gain. Across terms, the percentage of students doing better increased.

Achieved at least: In first term: In second term:

60% of possible gain 12% 56%

50% of possible gain 22% 76%

Table 1: Percent of students achieving at least 50% or 60% of their possible gain in each term.

Discussion

These results confirm that merely requiring students to write out answers to the *Millennium Man* study questions while studying that novel generates some student success, but not a lot of it. (In an earlier term, students used only a book report to answer the questions posed for students in a review of the novel [see Ledoux, 1998]. Though not formally evaluated, the book report assignment seemed to produce far less learning than the study questions alone produced.) The additional allocation of six class periods per term—three for discussion and three for assessment—to work with *The Millennium Man* demonstrably boosts student success.

While these methods had a beneficial effect, there is always room for further pedagogical improvement. The allocation of six class periods along with requiring written out study question answers should be retained while

other methods are also tried in the effort to boost student success even further. Additional changes can be introduced and evaluated using the same measure. If evaluation shows a further change to be effective, it should be retained. This kind of cycle encourages professors to devise and try new methods, including combinations of methods, while keeping those that prove to work.

Conclusion

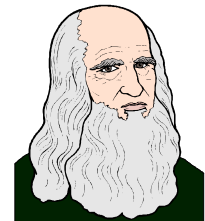
The behaviorological evaluation method used in this study is useful across courses, curricula, and campuses. Pedagogical changes must be tested. Their retention must be supported by scientific data. Indeed, the soundness of any educational innovation must be established through the kind of scientific measure used in this study.✻

Endnotes

The material reported here was part of a larger work with W. Joseph Wyatt as coauthor. That work was presented under the same title at the twenty-sixth convention of the Association for Behavior Analysis, Washington, D.C., 26–30 May 2000.

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Why Focus on Behavior

John W. Eshleman

ELS, Inc.

1999 November 19

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A person might peruse my Instructional Systems website (<http://members.aol.com/JohnEshleman/index.html>) and wonder, “why all the emphasis on behavior?”

There does not appear to be any mention of cognitive processes, information, or the methods by which teaching is “normally” done on the site. One might well ask, why all the focus on behavior? Does that mean that the important cognitive processes can not or will not rate consideration? Does that mean that an instructional system built around behavior can not or will not handle cognition?

I think that a well-designed instructional system, and yes, one built around behavior, can and will address all of the cognitive process and informational issues—and then some. But, let us figure out what the term “cognitive processes” means. As I see it, the term “cognitive processes” usually refers either to a repertoire of behavior or to low-amplitude verbal behavior. In some cases, it might even refer to both a repertoire and low-amplitude verbal behavior. In other cases cognitive processes, if presented as explanations for behavior, could turn out to be explanatory fictions. I will deal with each of these possibilities.

Repertoires

A repertoire consists of a set of different behaviors. The set of behaviors has some overall purpose, function, or effect. The behaviors in the set may occur in a fixed sequence, a partially fixed sequence, or vary in no particular sequence. The behaviors may occur in a chain, be concurrent, or both. The sequence or chain may include repetitions of the same behavior. Each particular behavior “operates” on the person’s environment in some way.

Each particular behavior produces an effect. In some cases, the effect produced allows another behavior in the repertoire to occur.

To turn that statement around, some behaviors may require other behaviors to occur first.

Operating a motor vehicle represents an example of a repertoire. When you drive a car, for instance, driving refers to a set of related behaviors. The behaviors are related with respect to effective and successful operation of the

motor vehicle. The set includes starting the car, shifting gears, steering, watching out for traffic and other objects, braking, signaling, accelerating, putting on a seat belt, adjusting the mirrors, stopping the car, and so on. Some behaviors require a sequence. For instance, you must first turn on the ignition to start the car before you shift it into gear or steer it. Steering requires that the car engine be on, and the car be in motion.

Other repertoires work pretty much the same way. Say that you need to analyze some process, for instance. To analyze something means that you separate it into its basic components, and identify the relationships among the components. The “cognitive process” of conducting an analysis consists of many different behaviors.

The repertoire involved in “analyzing” may include basic reading and writing skills, making lists, identifying and classifying terms in a list, defining terms, drawing a schematic or a diagram, circling items on a diagram and drawing lines between them, measuring quantities, lining up measured values, stating constituent parts, stating relationships between parts, and so on. Some of these behaviors themselves are repertoires that can be broken down further into behavioral elements. For instance, defining a term requires that one be able to read, write, look up words in a dictionary, copy a definition, write a definition in “one’s own words,” write about limits or exceptions, and maybe give examples. When you express it this way, some of the mystery of the cognition goes away. Moreover, if a person has difficulty with a higher-order skill such as conducting an analysis, one might be able to determine which component behaviors are missing or weak, and teach directly to these components.

Low-Amplitude Verbal Behavior

Some cognitive processes may simply be the same as verbal behavior, but where the behavior occurs at a very low amplitude. Behaviorists have struggled with this problem. In a sense, the problem alludes back to the old “mind-body” distinction. One can see a body move, but the mind appears to be out of direct sight and thus “internal.” Accordingly, when referring to some types of thinking, or behavior, behaviorists speak about “inner” behavior, “covert” behavior, or “private events.” These terms perpetuate the dualism, however. They also seem to miss out on the basic, underlying fact that the whole organism lives, behaves, and learns. To me, much of what we mean by thinking simply refers to low amplitude verbal behavior. An example of low amplitude verbal behavior might be the “conversation” one has “in one’s head.” Such a “conversation” refers to a sequence of verbalizations. This means speaking. But it means speaking at a low amplitude, one insufficient to produce sound or even

to result in much movement of the vocal musculature. By considering such “private” verbal behavior as the same behavior as the overt, public verbal behavior, but differing in level of amplitude, one not only avoids the “mind-body” dualism problems, one also avoids the various problems related to use of terms such as “inner,” “covert,” and “private.”

Behavior analysts have typically ignored the amplitude dimension of behavior. It rarely surfaces in the published scientific literature of behavior analysis. A rare exception, B.F. Skinner, in his book *Verbal Behavior* (1957) refers to, and loosely describes, an amplitude scale as it applies to verbal behavior:

The theory that thinking was merely subaudible speech had at least the favorable effect of identifying thinking with behaving. But speech is only a special case of behavior and subaudible speech a further subdivision. The range of verbal behavior is roughly suggested, in descending order of energy, by shouting, loud talking, quiet talking, whispering, muttering “under one’s breath,” subaudible speech with detectable muscular action, subaudible speech of unclear dimensions, and perhaps even the “unconscious thinking” sometimes inferred in instances of problem solving. There is no point at which it is profitable to draw a line distinguishing thinking from acting on this continuum. So far as we know, the events at the covert end have no special properties, observe no special laws, and can be credited with no special achievements. (p. 438).

Skinner’s “range of verbal behavior” refers to an amplitude scale. This scale can be clarified, as in Table 1:

Table 1: Amplitude Scale of Verbal Behavior

<u>Behavior:</u>	<u>Amplitude:</u>
shouting	High
loud talking	—
quiet talking	—
whispering	Medium
muttering “under one’s breath”	—
subaudible speech with muscular movement	—
subaudible speech of “uncertain dimensions”	—
“unconscious thinking”	Low

In some cases, then, where a “cognitive process” refers to thinking, it may mean the low amplitude verbal behavior at the “covert” end of the scale Skinner described. True, we may find the scientific study of such low amplitude behavior difficult to carry out. Such study might require that we learn how to train and calibrate individuals to be their own observers. However, for purposes of instructional design, this represents something of a moot issue.

Lest this discussion seem too abstract, our culture places some value on low amplitude verbal behavior. Consider the skill of reading. At the high end of the amplitude scale, reading could include a government official shouting out the words on a proclamation as he or she reads it. At the low end we find various types of “silent” reading. One can read “out loud,” or one can read “silently.” In many situations we prefer silent reading, as it has the dual effect of performing the behavior without bothering other people. Yet, if you wanted to teach reading to someone, you would want them to start off with audible reading. That would be the only way that you, the teacher, could provide effective and reliable feedback and instruction. Later, as a student learns to read silently, the direct measurement of the reading becomes difficult, if not impossible. At that point one may only be able to measure reading indirectly, after the fact, by means of a reading comprehension test.



Explanatory Fictions

Some cognitive processes, if invoked as explanations for what people do, may turn out to be pseudo explanations. Some people call such explanations “explanatory fictions.” An explanatory fiction has the form of an explanation. However, the process invoked as an explanation is not separate from the event or condition being explained. For instance, suppose you wanted to explain why a person routinely gets all the answers on a test correct. You might say that the person gets all the answers correct because he is intelligent. Yet, the evidence for intelligence in this case is getting all the answers correct. How do you know the person is intelligent? Because he gets all the answers correct. Why does he get all the answers correct? Because he is intelligent. Round and round such circular reasoning goes.

An explanatory fiction does not get us anywhere. It explains nothing. It may sound good. It may feel good, at first, as an explanation. Yet, because it does not get us anywhere further in understanding behavior, it will ultimately prove unsatisfactory.

All We Have Is Behavior

Whether cognitive processes are real or not, in the final analysis all we have to work with is the observable behavior. If a particular cognitive process refers to a real repertoire of behavior, we can work with the behaviors. We can see behavior. We can observe and measure action. We can see and determine the effects of behavior. We can see how it affects and changes the environment. If a cognitive process means low amplitude verbal behavior, we cannot do much about that, at least not directly. However, we can try to increase the amplitude of the behavior to make it more publicly visible. Or, we can teach a person to measure his or her own low amplitude behavior. Finally, if a cognitive process really turns out to be an explanatory fiction, we can recognize it as such, and then proceed to find some real independent variables that may change the behavior.

We do want people to have the higher-order skills. We do want people to learn problem-solving skills, for instance. Sometimes it seems that the “behavioral” skills are relegated to the lower-order behaviors and that the “cognitive” skills receive esteem from being considered higher-order. Yet, one can cut through all that dichotomy and obfuscation by recognizing that all we have to go on is the behavior. Problem-solving consists of many lower-order behaviors, some of which may have a low amplitude. And so, problem-solving means a reper-

toire of component behaviors. If you teach these component behaviors well, a person may then have a generalizable skill.

If you want to design good instruction, you will need to pay attention to the behavior. You will need to measure behavior directly. You will need to look for changes to behavior. If you want to use a different word than behavior, such as performance, that’s fine. For performance, too, you will need to work with the visible, the observable, and the measurable. The only secure way to tell whether a person has truly learned something is to see what that person can do after instruction. Learning refers to a change in behavior. Even psychologists often define it as such. Hypothetical cognitive processes and theories of learning may help eventually. We do not know for certain that they will or if they will. But for the present, succeeding at instruction means that a learner be able to act fluently when given a certain condition, event, or situation.✻

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The Discipline of Behaviorology

Lawrence E. Fraley

West Virginia University

The courses offered by TIBI afford students a substantial opportunity to explore the discipline of behaviorology. Like physics, chemistry, and biology, behaviorology is one of the basic natural science disciplines.

A Natural Science Discipline

A natural science has no explanatory reliance on mystical, metaphysical, or supernatural variables. Thus, behaviorology is a discipline of behavior/environment functional relations in which superstition has no place. Behaving organisms are regarded as natural products of evolutionary biological processes. Within the behaviorology paradigm, the behaviors that organisms exhibit are not assumed to be driven by a fundamentally supernatural and autonomous mystical self-agent operating from a hypothetical construct called a mind. Instead, behaviors occur naturally and are environment driven. From the perspective of this natural science discipline, a behavior is construed to occur inevitably as the dependent variable in functional relations between that behavior and properties of the environment. That is, the environment controls behavior in a natural and functional way, and a behavior is not a product of some mysterious spirit-like force that is presumed to inhabit a body.

Behavior per se consists not only of the familiar mechanical movements of body parts, but also includes all emotional reactions, and all verbal behaviors ("verbal behavior" being a large class that incorporates speaking, thinking, consciousness, awareness, visualizations, knowing about, and similar phenomena). With all of these recognized as kinds of behaviors, each occurring in accordance with basic principles of nature, behavioral outcomes—including the behaviors of affect and intellect—are brought within reach of an appropriate behavioral technology for any applied field. As a basic discipline of human behavior, behaviorology provides scientific support for the behavioral engineer addressing behavior-related challenges in any applied area.

Behaviorology is a comprehensive discipline featuring an experimentally based natural science which also usually goes by the name behaviorology. The discipline also includes the philosophy of that science, which is sometimes now called "selectionism" (others have suggested

"behavioral materialism"), although the traditional name has been "radical behaviorism." (Radical means fundamental or root, in the algebraic sense.) In addition to its philosophy and science, the broadly construed comprehensive discipline of behaviorology also includes various applied behavioral technologies under different names taken from the fields in which they are practiced (e.g., educational behaviorology).

Subject Matter

When we say that behaviorology is the natural life science of the functional relations between environments and behaviors, we mean that changes in the behavior-controlling environment produce changes in the behavior of individuals. Because behaviorology focuses on the behavior-controlling relations between behavior and the environment in which it occurs, it emphasizes behavior change as a function of the events that occur during the life of the individual ...events that can be of either a socio-cultural or non-cultural nature. But behaviorology also takes into account determinants of behavior that stem from the selection of organisms for survival in the biological history of the species. The current effects of such evolutionary factors appear in the form of genetically determined body structures. The nature of the body that behaves obviously contributes to the nature of the behavior in question.

While studying the behavior of all organisms, many behaviorologists have focused heavily on human behavior. Scientific answers have been provided for such ancient questions as: What is behavior? What can cause it? How can analyzing the processes by which behavior occurs help us behave effectively in all facets of life? What is knowing? What does it mean to say that something is important? Behaviorology encompasses what psychologists call "learning" (although behaviorologists construe it differently). Behaviorology includes the study of various processes by which behavior is changed. Under the rubric of this discipline, behavioral events are described, probed and studied, predicted, and subsequently controlled.

Gaining control of behavior is always the point. Very few people are paid merely to understand behavior, and not many make their living by passively describing it. For example, educators (and most other kinds of professionals) are paid only for changing it. From the behaviorological perspective, behavior of any kind (motor, verbal, and emotional), whether produced through operant or respondent processes, is viewed as a producible product. Behaviorologists do not try to cajole or persuade mystical inner selves to direct their host bodies to behave in certain ways. Instead, behaviorologists produce those behavioral effects through direct applications of their scientific principles, and that production is the professional responsibility of the parent, teacher, lawyer, social worker,

human factors engineer, politician, nurse, or...whatever. That is why, from the behaviorological perspective, all these people are behavior engineers.

Behaviorology is a basic discipline supporting any field in which human behavior is important. It provides the science with which to study such phenomena as how a nurse comes to care, how parents produce new forms of behavior in their children, how a leader comes to have followers, how an artist appeals to an audience, how a friendship is strengthened, or how a sense of duty is instilled. Behaviorology is the science that affords us the capacity to produce a feeling of freedom, a new kind of "wanting," a sense of guilt, sin, or shame, or a feeling of pride or of love. It is not only the discipline for the study of values and ethics, but of how to produce them. None of these outcomes are of mysterious origin. They occur naturally. They can and do occur by accident. But with a science of behaviorology, these kinds of effects or outcomes can all be prescribed as objectives, and they can be produced to specification. Practitioners in any field, whose work includes the challenge to produce behavioral effects of any kind, if properly and adequately trained in behaviorology as the basis of their operations, can be held accountable for producing those results. Behaviorologically trained people are engineers whose products are behaviors and behavioral effects. ☺

TNT-5 Treasurer's Report

This report covers TIBI's finances from 1 January 1999 through 31 December 1999. It was approved by the Board of Directors at a single-agenda-item phone meeting on 25 March 2000 (for which this report constitutes the meeting minutes).

BALANCE (as of 1999 January 1): US\$331.14

INCOME:

US\$ 1442.00	DUES
US\$ 23.90	INTEREST (on fee-free interest bearing checking account)
US\$ 1465.90	TOTAL

EXPENSES:

US\$ 25.00	NYS FEES
US\$ 118.26	NEWSLETTER PRINTING (2 issues)
US\$ 68.84	POSTAGE
US\$ 35.00	DOMAIN NAME
US\$ 247.10	TOTAL

ACCT. BAL. ON 31 DECEMBER 1999: \$1549.94

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 2000 March 25.)* ☺



Always More at TIBI's Web Site

Be sure to visit TIBI's ever-expanding web site regularly (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.☺

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:

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

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

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:

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 Phone • Fax: (315) 386-2684 • 386-7961
 Electronically: 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

Authors' views need not coincide with official positions of TIBI. (Authors retain copyrights.)

*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