Structuring Skinner: Argument, Structure, and Metaphor in Verbal Behavior

Patrick Hamilton
Portland State University

Let us know how access to this document benefits you.

Follow this and additional works at: https://pdxscholar.library.pdx.edu/anthos_archives

Part of the Experimental Analysis of Behavior Commons, and the Social Psychology Commons

Recommended Citation
Available at: https://pdxscholar.library.pdx.edu/anthos_archives/vol1/iss4/4

This Article is brought to you for free and open access. It has been accepted for inclusion in Anthós (1990-1996) by an authorized administrator of PDXScholar. For more information, please contact pdxscholar@pdx.edu.
Patrick Hamilton

Patrick Hamilton was born 22 years ago in San Jose, California, but has lived all but three years of his life in Oregon. He graduated in the spring of 1995 from Portland State University with degrees in English Literature and Psychology. His current plans include getting into graduate school, where he plans to study clinical psychology and work toward a PhD.

Burrhus Frederic Skinner was born on March 20, 1904 in Susquehanna, Pennsylvania. Skinner graduated from Hamilton College with a degree in English literature, but was unable to achieve his goal of becoming a writer. Instead, he enrolled in the graduate psychology program at Harvard in 1928 and by 1931 had earned his doctorate. Among Skinner's works on behaviorism are Verbal Behavior, Science and Human Behavior, and About Behaviorism, as well as a number of journal articles. His works also include the utopian novel Walden Two and Beyond Freedom and Dignity, dealing with the possibilities of cultural engineering. B. F. Skinner died on August 18, 1990, ten days after receiving the APA's Lifetime Contribution to Psychology Award.¹

Scholarship uses argument, and argument uses rhetoric. The "rhetoric" is not mere ornament or manipulation or trickery. It is rhetoric in the ancient sense of persuasive discourse. In matters from mathematical proof to literary criticism, scholars write rhetorically.

Only occasionally do they reflect on that fact. The most common occasion is the manifesto, which seeks to expose the rhetoric of an earlier line of scholarship, demonstrating how the tone, figures of speech, and other devices of style to be discarded have lied or misled us. Yet even writers attacking an earlier rhetoric customarily pay no attention to their own. Modern scholars usually deny their rhetoric. Wearing masks of scientific methodology first donned in the seventeenth century, they have forgotten about the rhetorical faces underneath. Their simple repetition of official rhetoric against rhetoric serves mainly to dampen anxieties about how things really happen in the lab or library. Of late, the propaganda of governments and advertising agencies has devalued rhetoric still more.

Since the 1950s, however, and especially in the last few years, rhetoric has revived. Literary critics, theorists of communication, and teachers of public speaking never wholly abandoned Cicero, Quintilian, and company. Now the rhetorically minded seem prescient in their steadfastness, for the masks of methodology are wearing thin. Many people grow weary of claims that experimental technique, documentary interpretation, or regression analysis can avoid "subjectivity." Many scholars doubt that science opposes or replaces art, that "ought" ought not be derived from "is," or that any method ensures unproblematical results. Thus scientists and humanists alike appear again in the classical guise of rhetors: good people skilled at
This quotation sums up the basic philosophy behind the rhetoric of inquiry. It is an effort to demonstrate how the various disciplines, in putting forth their theories, interpretations and ideas, are engaging in a rhetorical discourse, and that the ideas put forth, as well as their acceptance or unacceptance, depends as much on the scholars’ persuasive abilities as much as upon the ideas being put forth.

What the rhetoric of inquiry deals with is the rhetoric, the metaphors, structures, and arguments that constantly occur within and between various disciplines. A field that they particularly single out is social science, including psychology:

Rhetoric of inquiry is especially valuable for the human sciences, the systematic studies of human kind. Rhetoric is generally recognized as part of the humanities. Its renaissance started there, and it promises important revisions at home. But the social sciences have less awareness of rhetoric than do the humanities, and would benefit more from increased rhetorical self-consciousness. The humanities already regard human acts and products as events for understanding, criticism, and celebration; the social sciences now regard them as objects for explanation, prediction, and control. The role of rhetoric has been played down in the humanities, but it has been downright ignored in the social sciences. In consequence, the social sciences float in warm seas of unexamined rhetoric. (Nelson, Megill, & McCloskey, 15-16)

This need for rhetorical analysis and discussion within the social sciences applies directly to the field of psychology. The attempt to make the field of psychology into more and more of a “science,” a move in which the physical sciences serve as a template of “true science,” has led to a buying into of science's own
rhetoric, which is the rhetoric of explanation, prediction, and control. In his article “Turning Psychology on Itself: The Rhetoric of Psychology and the Psychology of Rhetoric,” Donal E. Carlston pointed to this fact:

...Scientific metaphors are useful because they can aid interpretation, recall, and generalization of complex facts. But they are also hazardous, because they can obscure alternative interpretations and encourage selective memory, usually for facts that support the accepted metaphor. Such a metaphor may also lead scientists to assume, without evidence, that certain things are true because the metaphor implies that they should be true.

Psychology provides innumerable examples of metaphorical reasoning, from Freud's Oedipal analogy for childhood sexuality to electrical models of human memory. Social psychologists equate resistance to persuasion with medical inoculation, interpersonal relations with economic processes, human memory with laundry bins, behavioral expectations with cartoon strips, impression processes with linear regression, personal space with territoriality, and attribution processes with analysis of variance. (Carlston, 153)

Carlston points out how science has become a metaphor in that the practice of science is a particular way of approaching or structuring a subject matter. He also points out that science, far from being devoid of metaphor, creates metaphors of its own, such as those he lists from psychology.

One psychologist in particular who demonstrates the use of science as a metaphor for understanding human behavior is B. F. Skinner. In his text *Verbal Behavior*, Skinner attempts to apply the methods of science to a process hitherto unstudied by science: language and human verbal behavior. In doing so, Skinner makes science into a metaphor for structuring verbal behavior, and Skinner creates structures for language that are metaphori-
cally based. At the same time, Skinner denies and restricts the use of metaphor to understand verbal behavior. As a result of this, Skinner also engages in a running argument, as he places his application of scientific methodology to the study of verbal behavior in a context where it is in opposition to all other previous efforts to explain this behavior, efforts he sees as metaphorically based. This analysis of Skinner's *Verbal Behavior* will examine the argument and discourse that Skinner engages in throughout this text with these other approaches, as well as examine Skinner's conception of science and how he uses it as an approach to the study and structuring of human verbal behavior.

In another of Skinner's works, *Science and Human Behavior*, he puts forth his own idea of what science is and what its objectives are:

Science is more than the mere description of events as they occur. It is an attempt to discover order, to show that certain events stand in lawful relations to other events. No practical technology can be based upon science until such relations have been discovered. But order is not only a possible end product; it is a working assumption which must be adopted at the very start. We cannot apply the methods of science to a subject matter which is assumed to move about capriciously. Science not only describes, it predicts. It deals not only with the past but with the future. Nor is prediction the last word: to the extent that relevant conditions can be altered, or otherwise controlled, the future can be controlled. If we are to use the methods of science in the field of human affairs, we must assume that behavior is lawful and determined. We must expect to discover that what a man does is the result of specifiable conditions and that once these conditions have been discovered, we can anticipate and to some extent determine his actions. (6)

This passage from Skinner gives us a clear idea of what he views science to be and what he believes it should accomplish. For
Skinner, science is a way of ordering the world. And for Skinner, it is the ultimate way of doing so. As he says, we assume that this order exists; it is the aim of science to discover the nature of this order. Thus order becomes something naturally occurring in the world; all science must do is discover and delineate this preexisting order. And once this order is indeed discovered and understood, it can be used to predict and control human behavior and action, which for Skinner is the ultimate goal of science and its disciplines.

In his work *Verbal Behavior* then, Skinner attempts to extend the methods and ideas that he discussed above to what he describes as a subdivision of human behavior in general. As he briefly states, "We must find the functional relations which govern the verbal behavior to be explained" (*VB*, 10). In stating this, Skinner rejects other traditional formulations and attempts to explain language, such as those put forth by classical rhetoric, logic, grammar, criticism, semantics, and other disciplines. As Skinner describes it, these previous formulations of verbal behavior rely too much on ideas (or events taking place inside of a person) or meanings (something "expressed or communicated by an utterance"). One can see the behaviorist basis of Skinner in his rejection of these formulations, as both ideas and meanings rely on something that cannot be seen or observed, whereas behavior is "out there" and can be physically perceived and described. What Skinner believes one needs to understand human verbal behavior are "causes of behavior which have an acceptable scientific status and which...will be susceptible to measurement and manipulation" (*VB*, 10).

1. References to Skinner's *Verbal Behavior* will be given parenthetically within the text citing the page number preceded by *VB* when the title is not mentioned in the sentence.
One can already see the stirrings of Skinner's invocation of science here. It is from here that Skinner goes on to describe what he calls his "new formulation" of verbal behavior:

Our first responsibility is simple description: what is the topography of this subdivision of human behavior? Once that question has been answered...we may advance to the stage of explanation: what conditions are relevant to the occurrence of the behavior...what are the variables of which it is a function? Once these have been identified, we can account for the dynamic characteristics of verbal behaviors within a framework appropriate to human behavior as a whole. (VB, 10)

What Skinner wants to do is create a framework or structure for verbal behavior in such a way that this framework will allow us to understand and, consequently, predict and control that behavior. In general, one could say that Skinner views human verbal behavior as determined by a finite number of variables or conditions that, once science discovers and determines them, will allow us to control verbal behavior. He even wants to account for the "dynamic" or unpredictable aspects of verbal behavior by use of this framework. Skinner concludes this description of his new formulation by insisting "that the conditions appealed to in the analysis be...accessible and manipulable. The formulation is inherently practical.... It makes no appeal to hypothetical explanatory entities. The ultimate aim is the prediction and control of verbal behavior" (VB, 12).

Prediction, explanation, control, causation, measurement, manipulation, variables, conditions, etc. are all ideas and terms that Skinner uses. They are also all traditional adages of science and scientific study. It is simple enough to see that Skinner is adopting a scientific paradigm in his approach to understanding verbal behavior. Skinner's goal, the prediction and control of
human behavior, is also that of science which likewise seeks to predict and control the variables in what its practitioners study. They both view their objects of study as being subject to certain conditions or variables that, once they have been determined and understood, will allow us to understand that object of study. In this case, for Skinner that object is human verbal behavior. But in insisting that his approach is a "new formulation," Skinner automatically sets his approach against those other approaches to understanding human behavior, and verbal behavior specifically. The one approach that Skinner deals with throughout his text is that of literature, as that seems to be the previous approach that has the best understanding of human behavior. And Skinner often sets the two approaches of science and literature against each other in his text:

Human behavior is an extremely difficult subject matter. The methods of science have come to be applied to it very late in the history of science, and the account is still far from complete. But it is the field in which literature is most competent, secure, and effective. A Dostoyevsky, a Jane Austen, a Stendhal, a Melville, a Tolstoy, a Proust, or a Joyce seem to show a grasp of human behavior which is beyond the methods of science. Insofar as literature simply describes human behavior in narrative form, it cannot be said to show understanding at all. (VB, 98)

What Skinner is writing about here is the difference between simply describing behavior versus truly understanding it and how it happens. For Skinner, literature stops at the level of description. While there is no doubt that literature has perfected the art of depicting and describing human behavior in a way that Skinner describes as beyond what science can do, this has been done without any true understanding or knowledge of how that behavior functions and happens. Literature for Skinner works
best as a description or as an example of human behavior (and Skinner uses literature for this purpose throughout *Verbal Behavior*.) Science on the other hand goes beyond literature and the simple description of behavior. It instead describes and explains human behavior: how it functions, what conditions it arises out of, its patterns, and so on. In effect, for Skinner, science enables us to truly understand human behavior. Literature therefore appears to have knowledge of human behavior, but for Skinner that knowledge is of the appearance of human behavior. Literature has no understanding of what Skinner sees as the process of behavior, which for him is what enables one to truly understand behavior.

Skinner goes on to describe literature, especially its use of metaphor, as "prescientific." Specifically, Skinner writes that "literature is prescientific in the sense that it talks about things or events before science steps in...and is less inclined to talk about them afterward" (*VB*, 98). Skinner sees literature's use of metaphor as lying at the core of literature's prescientific nature, and delineates both literature's use of metaphor and how science treats metaphor differently. According to Skinner, literature

...is rich in metaphor...those far-fetched generic or metaphorical extensions which are semi-intellectual in their effect but which would not be tolerated within the stricter canons of science. In scientific writing only a modest metaphorical extension is permitted.... The distinction is in how far the metaphor had been 'fetched,' the scientific verbal community having learned...that far-fetched metaphors are seldom productive of other useful verbal behavior or effective action. (*VB*, 396)

This discussion becomes interesting in that Skinner does not completely eliminate the use of metaphor from the practice of science. Instead, he describes a difference in the extent to which
literature and science use metaphor. As he writes, "Literature in general...creates [its] own vocabularies by connecting verbal forms with descriptions of particular events or occasions from which they may then be metaphorically extended" (VB, 99). The example that Skinner uses to demonstrate this process is from the myth of Hercules. In that case, the particular heroic actions or efforts of the specific mythological being known as Hercules become a metaphor for great or heroic efforts, leading to the term "Herculean effort." Skinner speaks of this as the general process of metaphor. And it is only after this process that a term, such as "Herculean effort," can have any "practical" use, which for Skinner means in the practice of science:

When the literary expression is reinforced in its own right, it becomes useful in straight description. This takes the metaphorical force out...and gives us no clue as to what is happening when the term is used metaphorically. It leads, however, to a more and more complex and effective nonmetaphorical terminology descriptive of human personality. The scientific effectiveness of such a vocabulary will derive from the actual contingencies of reinforcement in the scientific community, not from its metaphorical origins. Any survival of the latter would interfere with scientific use. (VB, 99)

As Skinner describes it, a metaphorical term such as "Herculean effort" that literature creates carries much more with it than a simple description of an event. It carries reference to its origins in the labors of Hercules from which it was extended. It is only when a term moves beyond its metaphoric origins that it becomes useful in scientific description. In effect, the term must be divorced from its metaphorical origins and its ties of reference to that origin for it to be used "scientifically." In literature, a metaphorical term is useful because it conjures up certain images and ideas through its use of reference. In science, Skinner feels
that these images and ideas get in the way and it is the descriptive effect that makes the term useful. He describes this difference in the use of metaphor as

...one of the great differences between science and literature. Scientific verbal behavior is set up and maintained because of certain practical consequences.... In literature there are no similar practical consequences and metaphorical extensions therefore prevail. No one will deny that they are effective; but the advantage we gain by reading a Dostoyevsky or Joyce, in coming to share their 'knowledge' or 'understanding' of human nature, is very different from the advantage gained from scientific study. (VB, 99)

Skinner makes this point again later as he states that

Generic extensions are tolerated in scientific practice, but metaphorical, metonymical, and solecistic extensions are usually extinguished or punished. Metaphorical extensions may occur, but either the controlling property is quickly emphasized by additional contingencies which convert the response into an abstraction or the metaphor is robbed of its metaphorical nature through the advent of additional stimulus control. (VB, 419)

In setting up this opposition between scientific and literary discourse, Skinner has begun an argument that runs throughout the length of his text. Where science according to Skinner deals with facts and is objective, the necessity and practicality of science in the face of these pre-existing methods must be argued for before it is accepted. In approaching the study of human behavior, Skinner has encountered a subject that, as he acknowledges, has seemingly been understood by literary methods. And in fact, Skinner admits that what literature has contributed to this study has some use to it. What Skinner has to offer is a new formulation, and any "new" creation automatically assumes that there is
an "old" formulation to begin with. It also automatically assumes that this "new" formulation is different in some important way from the "old" one, and that that difference is indeed useful. All this sets up an opposition which must of course be argued. And arguing is exactly what Skinner is doing throughout *Verbal Behavior*. This results in an almost undercutting of Skinner's assumptions about science versus literature. Throughout this argument, Skinner makes the literary approach seem somewhat primitive and underdeveloped in comparison to science. Hence the term "prescientific" with which he labels it. Indeed, in asserting that literature is the simple depiction or portrayal of behavior, Skinner is echoing an argument that began with Aristotle and his *Poetics*. Skinner's description of the relationship between literature and human behavior (or action to use Aristotle's terminology) is a mimetic relationship. Literature is simply the description and portrayal of behavior, which for Skinner gives no understanding of that behavior. Skinner champions science on the other hand as a "true" understanding of human behavior, in that it sets out to understand the processes and conditions that lead to behavior. Skinner describes the knowledge that the scientific approach can impart about human behavior as a superior successor to the literary approach. But, again, this is something that must be argued. The superiority of the scientific approach over the literary one is not a given, but is instead an assertion that Skinner makes and must then argue for. The merits of science are not inherent, but must be demonstrated by Skinner himself. It is clear that while describing his theory about human verbal behavior, Skinner likewise engages in this argument for the bulk of his work.

In effect what Skinner has done is adopt a new and untested structure for the study of human behavior, and verbal behavior as a particular subset of that. This structure is of course what
Skinner would call "scientific." This makes it necessary to look at the structure he has adopted and how it describes behavior. The rubric under which Skinner has placed his ideas is that of "science." And it is this rubric within which he wants to place the study of human behavior, including verbal behavior. In order to accomplish this, Skinner must demonstrate that verbal behavior is indeed capable of scientific treatment. In essence, this means, as Skinner stated himself, that verbal behavior must be shown to be orderly, predictable, and controllable. And it is in this effort that Skinner reveals what exactly he means by the term "science," and what he envisions for the study of human behavior and psychology in general.

Two processes, or paradigms as Skinner calls them, will serve to demonstrate Skinner's notion of "science." These processes are those of what Skinner calls the "mand" and the "tact," and will be discussed in detail further on. The first of these is that of the mand, and Skinner graphically depicts this process as shown below (VB, 38):

Skinner describes this process as a stimulus-response process, which for Skinner is the basis of human verbal behavior and interaction. In this specific example, the speaker's hunger and the presence of a receptive audience \( S^4 \) lead the speaker to request or "mand" the bread, which serves as a stimulus for
the audience to pass the bread (R), thus reinforcing the speaker's request. This leads the speaker to say “Thank you,” (R') a stimulus (S\text{rein}^V + S\text{d}) for the audience to again reinforce (R') the speaker with “You’re welcome.” Clearly this process satisfies the scientific goal of orderliness, prediction, and control that Skinner desires for the study of behavior. But this same process or pattern also exists outside of the stimulus-response process, and in the physical sciences. The most obvious example to draw from is chemistry, specifically the chemical reaction process. To be somewhat simplistic, in the chemical reaction, elements and/or compounds are combined under certain controlled conditions. Assuming that these conditions exist, the result of this combination can then be predicted. To take a rather simple example, the combination of two hydrogen molecules with one oxygen molecule will result in the creation of water. The same pattern can also be found in Skinner’s paradigms of verbal behavior. To again use this specific example of the mand, the “elements” would be the speaker and the audience, and the conditions would be that the speaker is hungry, the bread is available, and the audience is receptive to the speaker’s request or mand. These conditions thus lead the speaker to request the bread, and the audience to pass the bread to the speaker. Once the audience has passed the bread, the speaker now thanks the audience for doing so, and the audience consequently acknowledges that thanks with “You’re welcome.” This process is clearly an ordered one in that certain actions follow other actions. It is also predictable, as one can predict what will happen from one action to the next. Finally, it too can be controlled, as knowledge of the “elements” or conditions that determine and shape this interaction will allow one to control and manipulate this sequence of behaviors.
As mentioned earlier, the same basic-chemical-process appears in depicting the process of what Skinner describes as the "tact." Again, Skinner uses a paradigm that he has created to visually depict this process (VB, 84):

<table>
<thead>
<tr>
<th>SPEAKER</th>
<th>Red object (Audience)</th>
<th>&quot;Red&quot;</th>
<th>&quot;Right!&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Object</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
</tr>
<tr>
<td></td>
<td>S' + S' · R'</td>
<td>S&quot;dir&quot;</td>
<td></td>
</tr>
<tr>
<td>LISTENER</td>
<td>Red object</td>
<td>&quot;Red&quot;</td>
<td>&quot;Right!&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In this instance, the elements are the speaker, the audience and the red object. When the red object and the audience are combined in a context or condition that facilitates the naming of the object's color, the result is the speaker's emission of the statement "Red." This statement in turn results in the audience's response of "Right!" which, while Skinner identifies it as reinforcement, is also a result of this second "verbal reaction." Again, this process is orderly, predictable, and controllable in the same basic way as the mand and the chemical reaction.

Clearly the process of language is more complex than the simple example of the chemical reaction that leads to water. But the same pattern exists in both instances. In describing the pattern or paradigm of the mand and the tact, Skinner uses the stimulus-response pattern as the foundation of this interaction between speaker and audience, and indeed, this pattern guides his entire theory concerning verbal behavior. But this complex process of stimulus-response is similar to that of the chemical reaction, as in both cases, the combination of certain "elements" under specific and determined conditions leads to a predictable, and ultimately controllable result. One will of course remember

---

80
that this is one of the goals that Skinner set before himself in his conception of human verbal behavior, in that it must be conceptualized in such a way that it could be predicted and controlled. This is exactly what Skinner has done. He has created a paradigm for the process of verbal behavior that facilitates, if not demands, the achievement of his goal.

This is not the only case of Skinner's "fetching" science as a way of understanding and structuring the process of verbal behavior. What this particular paradigm does is make language and the process of verbal behavior both quantifiable and formulaic. In essence, one need only know certain variables in the situation in order to create a certain result. And Skinner goes on to apply aspects of the physical sciences in further descriptions of verbal behavior. For example, he goes on to describe some of what he calls the "dynamic properties" of the mand after describing its basic process:

The energy level of the mand may vary from very faint to very loud, and the speed with which it is emitted when the occasion arises may vary from very fast to very slow. If the pattern is of substantial length, it may be executed slowly or rapidly. If the reinforcement is not immediately forthcoming, the response may be emitted only once or may be repeated. These properties vary as the result of many conditions in the past and present history of the speaker. Particularly relevant are level of deprivation and intensity of aversive stimulation and the extent to which a given listener or someone like him has reinforced similar responses in the past (or has refused to do so). Such conditions have a relatively greater effect upon the mand than upon the other types of verbal behavior to be discussed in later chapters. The wide range of dynamic properties which result makes the mand a very expressive type of operant.

The probability and intensity of the listener's behavior may also vary over a wide range. If the listener is not already predisposed to
act, the probability of his mediating a reinforcement may depend upon the effectiveness of the aversive stimulation supplied by the speaker. Some listeners are accustomed to taking orders—they have felt the unconditioned aversive consequences of not doing so—and respond appropriately to simple mands. Others are more likely to react to softened forms. The intonation, loudness, or other indications that the speaker will supply aversive consequences has an appropriate effect. A hesitant or weak request or command is least likely to be reinforced. A loud and threatening response is likely to be reinforced subject only to the relative strength of listener and speaker. It is to be noted that mands are characteristic of most hypnotic instructions, and the extent to which the subject co-operates or obliges the hypnotist will depend upon the kinds of variables here being considered. These variables enter into what is called the authority or prestige of the speaker. (VB, 42-43)

Throughout this passage, Skinner makes reference to the mand and the process it involves as possessing such properties as energy, speed, intensity, probability, strength, and frequency, all of which are scientific (and again, this refers to the physical sciences) terms and concepts. Skinner goes on to show how one can make predictions of what will occur in a verbal interaction based on the quantity or intensity of these dynamic properties. This again facilitates Skinner’s goal of making the study of verbal behavior a part of scientific study.

But it is important to note just how Skinner is applying these principles of the physical sciences to verbal behavior, and what this application does to the relationship between science and verbal behavior. As Skinner himself described it, this scientific methodology is an entirely new way of structuring the process of verbal behavior. And Skinner’s justification for adopting this structure is his belief that through it, we can learn the “true” nature of verbal behavior, allowing us to understand, predict,
and ultimately control that process. The important thing to note here is this idea of having to work through this structure. Earlier, Skinner described how the literary approach attempted to conceptualize and understand the process of verbal behavior. Again, this was another structure through which people who studied language had to work in order to get to language. But in stating this, Skinner is immediately creating structures even before he turns to studying language. In attempting to bring the study of verbal behavior under the rubric of science, Skinner automatically assumes a structure in which there is such a thing as science. Consequently, this move also results in the conceptualization of things that could be seen as "not science." And it is this latter category under which Skinner places the current literary understanding of verbal behavior. In essence, science is another structure through which one must work through. In that, it is no different from a literary structure or approach. Both color and determine the perception and discussion of what constitutes and what is important to the study of verbal behavior.

The specific problem Skinner has with this literary approach, and the reason why he saw the scientific approach as more valuable and useful, was its blatant use of metaphor. The process of metaphor is of course the likening of two disparate things to another in such a way that one serves to describe, or structure, the other. John Donne's poem "A Valediction Forbidding Mourning" serves as a good example of this. In that poem, Donne likens a pair of separated lovers to a geometer's compass, in which one foot remains in place while the other moves around, though this second foot always comes back to where it started. This metaphor, this conceptualization, this structure, gives us a particular way of thinking about the separation of these two lovers. To return to the study of language, the literary approach gives us one particular way of conceptualizing and
structuring and thinking about the process of verbal behavior. This conceptualization is one based on metaphorical relationships which, according to Skinner, is an insufficient way to produce understanding.

But Skinner’s adoption of science as a structure or conceptualization of verbal behavior is inherently metaphorical in nature. Where literature was a method that used metaphor to understand verbal behavior, Skinner’s adoption and extension of the scientific approach to language is a metaphorical extension. These scientific principles that Skinner is applying to verbal behavior are simply a new way of structuring and understanding that process. One will recall that Skinner earlier described how literature in its use of metaphor came to “fetch” or extend these metaphors to the point where they were no longer of use. Science he said was different because it limited its use of metaphor to only a modest amount, and also “knew” when to stop fetching or extending those metaphors. But, as was demonstrated above in the description of Skinner’s mand and tact paradigms, what Skinner is in effect doing when he says he is using a scientific approach to understanding verbal behavior is indeed extending the concepts of the physical sciences such as chemistry or physics, to the process of verbal behavior, a domain which is not currently within the strictures of science. His extension of the chemical reaction process as the basis of the process of verbal behavior is only a single example of how Skinner does this. But it serves to show the intrinsically metaphorical nature of what Skinner is attempting to do. Skinner’s entire use of science as an approach to studying verbal behavior is based on much more than a modest metaphorical extension.

In effect, what Skinner is approaching is not so much a new formulation or methodology for the study of literature, though this may be a consequence of his actions. Instead what Skinner
proposes is in essence an exchange of metaphors for conceptualizing the process and nature of verbal behavior. The literary and scientific approaches that Skinner draws distinctions between are actually two opposing metaphorical structures that attempt to describe these processes. Skinner is simply choosing to adopt the scientific way of viewing language, and it is this metaphor which he is constantly working through. One could liken it to a kind of filter between Skinner and language, as his adoption of a certain metaphor or structure colors and shapes how he will approach and come to understand this construct. One could even go so far as to describe Skinner’s use of metaphor and structure as operating on two levels. Skinner operates on one level in his adoption of science as his metaphor for understanding human verbal behavior. This automatically is the creation of a structure that includes science and “not science” with those approaches or metaphors that fall under the rubric of science being more highly valued than those belonging to “not science.” But this structure is again metaphorical in being only one way to structure the world. One could just as easily create a structure of literary and “not literary” in which the literary metaphor is valued more highly. And it is of course this second structure or metaphor which Skinner is working against and hopes to supplant with his own.

Skinner also operates metaphorically at another level as, upon his adoption of the scientific paradigm or metaphor, he then applies those things which have been identified as science to a subject matter that is “not science.” This is of course demonstrated in his application of the physical sciences and such things as the chemical reaction and various scientific properties to describe the mand and tact processes. This chemical reaction is a metaphorical restructuring of verbal behavior by Skinner. In this application, Skinner is operating at the level of actual lan-
guage in his extension, or fetching, of the scientific metaphor that he has adopted to specific processes of language.

Skinner then is adopting science as an approach to understanding language and verbal behavior. In doing so, Skinner creates a structure in which a scientific approach to this study is more highly valued than other approaches. But Skinner’s creation of structures does not end with this structure of approaches nor with his metaphorical application of the physical sciences to specific verbal processes and interactions. In his study of language and verbal behavior, Skinner creates his own structures of verbal behavior that he casts within the scientific vein. Of course, the creation of structures to shape one’s understanding of a subject is not new with Skinner, and this process is one that has been often examined. One of those figures that dealt with the issue of creating structures was Friedrich Nietzsche in his work “Truth and Falsity in an Ultramoral Sense.” In that text, Nietzsche describes the process by which structures such as Skinner’s eventually came to be developed:

Every idea originates through equating the unequal. As certainly as no one leaf is exactly similar to any other, so certain is it that the idea “leaf” has been formed through an arbitrary omission of those individual differences, through a forgetting of the differentiating qualities, and this idea now awakens the notion that in nature there is, besides the leaves, a something called the “leaf,” perhaps a primal form according to which all leaves were woven, drawn, accurately measured, colored, crinkled, painted, but by unskilled hands, so that no copy had turned out correct and trustworthy as a true copy of the primal form. (1992, 636)

This first passage from Nietzsche points out a fundamental difficulty in creating structures. In structures, things or objects are grouped together under some concept or term, such as “leaf” in
Nietzsche's example, that ignores the fact that each and every object within that group is different. Without those differences, there would be no need to categorize them as they would all be the same object. The result of this according to Nietzsche is that we come to adopt this structure or categorization, which Nietzsche sees as arbitrary, and eventually come to believe that this idea or concept that we hold is indeed true. As Nietzsche himself then asks,

What therefore is truth? A mobile army of metaphors, metonymies, anthropomorphisms: in short a sum of human relations which become poetically and rhetorically intensified, metamorphosed, adorned, and after long usage seems to a nation fixed, canonic, and binding; truths are illusions of which one has forgotten that they are illusions. (1992, 636)

Important in these passages from Nietzsche are the ideas of "nature," "arbitrary," "illusions" and "forgetting." For Nietzsche, the arbitrary essence of concepts and structures stems from the fact that they are human creations, and not some natural occurrence. Structures are not created in or by nature, but are instead human ideas of how the world works. These ideas are then imposed on nature of the world by man. All structures then are created by a human equating of things that are essentially different. According to Nietzsche, these concepts and structures become so ingrained in human beings through their usage that the structure is what comes to be seen as nature, when it is in fact an artificial and human construct. This is where the idea of forgetting comes in, as Nietzsche sees man creating these artificial structures, and then forgetting the fact that they were indeed created, and subsequently treating them as though they were "true."

With this critique of structures in mind, we can turn to examining the structures of language that Skinner creates in
Verbal Behavior. The first structure of Skinner's to be examined will be his actual conception of how language and verbal behavior function. This is of course the structure alluded to previously, being composed of what Skinner calls the "mand," the "tact," and the "autoclitic." Skinner also creates a structure to the use of language and verbal behavior that also bears examining, and this will be looked at through Skinner's creation of "verbal communities."

The first part of the three-part structure that Skinner deals with is the mand. As Skinner defines it, this is "the type of verbal operant in which a response of given form is characteristically followed by a given consequence in a verbal community" (VB, 35). Skinner goes on to give specific examples of what responses and what consequences he is describing:

In a given verbal community, certain responses are characteristically followed by certain consequences. *Wait!* is followed by someone's waiting and *Sh-h!* by silence. Much of the verbal behavior of young children is of this sort. *Candy!* is characteristically followed by the receipt of candy and *Out!* by the opening of a door. These effects are not inevitable, but we can usually find one consequence of each response which is commoner than any other. (VB, 35)

One can clearly see the kind of relationship Skinner is identifying here. And he goes on to say that this "basic relationship has been recognized in syntactic and grammatical analyses (expressions such as the "imperative mood" and "commands and entreaties" suggest themselves) but no traditional term can safely be used here" (VB, 35). This again demonstrates how Skinner rejects previous conceptions of verbal behavior, as here he objects to terms derived from grammatical or rhetorical studies of language. It is here that Skinner creates the "mand." He also gives very particular reasons for creating this term, as
he states that “the term ‘mand’ has certain mnemonic value derived from ‘command,’ ‘demand,’ ‘countermand,’ and so on, and is conveniently brief” (VIB, 35). This idea of convenience seems to serve as the basis for Skinner’s structure, and also serves to harken back some of the criticisms Nietzsche made of structures in general that exist within Skinner’s structure. To begin with, the term “mand” serves much the same purpose as Nietzsche described the term “leaf” as serving. Both terms are in essence a grouping together of similar things under one rubric or category. But just as Nietzsche stated that this grouping ignores the fact that all leaves are different, Skinner’s creation of the mand ignores the differences that exist within that category. And Skinner himself even points out these differences. As seen in the second quotation from Skinner, the relationship that defines the mand is not an absolute one. The consequences that result from the use of a mand are not always the same, and indeed Skinner states that one can identify a common consequence. This inherently implies that there exist uncommon consequences, or differences in the consequences of the various verbal operants that Skinner groups under the term mand. To go back to Nietzsche’s example, just as the term “leaf” was used to describe all kinds of different and distinct leaves, Skinner uses the term “mand” to describe a body of verbal operants that are not necessarily consistently alike in their consequences, nor does the same mand have consistently the same result.

The second part of this structure that Skinner creates is that of the “tact.” And again, Skinner gives a specific example of the relationship he is attempting to describe:

The three-term contingency in this type of operant is exemplified when, in the presence of a doll, a child frequently achieves some sort
of generalized reinforcement by saying *doll,* or when a teleost fish, or picture thereof, is the occasion upon which the student of zoology is reinforced when he says *teleost fish.* *(VB, 81)*

In other words, the tact is a response made in the presence of some object or event, such as the doll in this example. The process by which Skinner creates a name for this type of verbal operant parallels that by which he created the mand. For example, as in the case of the mand, Skinner rejects other previous attempts to describe this relationship:

> There is no suitable term for this type of operant. "Sign," "symbol," and more technical terms from logic and semantics commit us to special schemes of reference and stress the verbal response itself rather than the controlling relationship. *(VB, 81)*

From here, Skinner creates his new grouping term and describes the particular relationship that drives it:

> The invented term "tact" will be used here. The term carries a mnemonic suggestion of behavior which "makes contact with" the physical world. A tact may be defined as a verbal operant in which a response of given form is evoked (or at least strengthened) by a particular object or event or property of an object or event. We account for the strength by showing that in the presence of the object or event a response of that form is characteristically reinforced in a given verbal community.

> It may be tempting to say that in a tact the response "refers to," "mentions," "announces," "talks about," "names," "denotes," or "describes" its stimulus. But the essential relation between response and controlling stimulus is precisely the same as in echoic, textual, and intraverbal behavior. We are not likely to say that the intraverbal stimulus is "referred to" by all the responses it evokes, or that an echoic or textual response "mentions" or
“describes” its controlling variable. The only useful functional relation is expressed in the statement that the presence of a given stimulus raises the probability of occurrence of a given form of response. This is also the essence of the tact. (VB, 81-82)

As can be seen from this passage, much of what was said about Skinner’s mand can also be applied to the tact. Both are categorical terms in that Skinner attempts to group a set of verbal operants within these terms. In the use of both terms, Skinner demonstrates his rejection of previous attempts to structure verbal behavior. Furthermore, both terms are created based on a mnemonic sense as well as a need for convenience. In this, one can see Skinner’s influence from rhetorical practice, as it is much easier to describe a group of such terms by a single name then having to repeatedly describe it, for instance, as “a verbal operant in which a response of given form is characteristically followed by a given consequence” in the case of the mand. This rhetorical influence seems to be a strong one in Skinner, as his creation of these terms is as much driven by the mnemonic relationships that he finds as they are by the fact that a single term to describe a body of operants will make it much easier to present and argue for his structure as well as simply making language easier to deal with.

The creation of the tact also bears the same Nietzschean flaws that the creation of the mand did. As with any grouping term, the tact ignores the differences inherent in the body of operants it attempts to describe. As was the case with the mand, Skinner seems to acknowledge these differences, even as his use of the term ignores them. In the above passage quoted from Skinner, he describes the relationship of the tact as based on probability. In effect, with the presentation of a particular object or event, the probability that a given response will occur increas-
es. But again, this response is not a given, just as a particular consequence of a mand was also not definite. In the use of such terms as “characteristically reinforced” and “increased probability,” Skinner is again demonstrating that the relationship that he is describing in the tact is not an absolute. The use of these terms to describe this relationship automatically implies that sometimes this relationship does not hold true. Again, there are differences within the relationship that Skinner identifies as the tact that are ignored when he uses this term.

The third term that completes Skinner’s structure of verbal behavior is also his most difficult to grasp. This term is of course what he calls the “autoclitic.” Skinner defines the autoclitic as “intended to suggest behavior which is based upon or depends upon other verbal behavior” (VB, 315). In essence, the autoclitic seems to work between the mand and the tact and in some ways, qualifies them. Skinner goes on to describe particular kinds of autoclitics, which results in three subcategories of autoclitics. The first of these are “descriptive autoclitics,” which Skinner defines as “responses...associated with other verbal behavior effective upon the same listener at the same time” (VB, 315). As examples, Skinner describes various types of descriptive autoclitics:

One type of descriptive autoclitic informs the listener of the kind of verbal operant it accompanies. If the speaker is reading a newspaper and remarks I see it is going to rain, the I see informs the listener that it is going to rain is emitted as a textual response.... Another group of autoclitics describe the state of strength of a response. I guess, I estimate, I believe, I imagine, and I surmise all indicate that the response which follows is based upon insufficient stimulation or has been poorly conditioned.... Another group of autoclitics describe relations between a response and other verbal behavior of the speaker or listener, or other circumstances under which behavior is emit-
ted. Important examples are I agree, I confess, I expect, I concede, I infer, I predict, I dare say, I must say, I can say, I admit, I reply, I should say, and I mean to say. All of these permit the listener to relate the response which follows to other aspects of the current situation, and hence to react to it more efficiently. (VB, 315)

In essence, these descriptive autoclitics are certain phrases that describe or indicate something about the response they modify. The second type of autoclitic that Skinner creates is the “qualifying autoclitic,” which he describes as serving the “function of qualifying a tact in such a way that the intensity or direction of the listener’s behavior is modified” (VB, 322). The two examples he uses here are negation and assertion. The effect of these qualifying autoclitics is a change in the listener’s behavior. In the case of negation, the listener’s behavior ceases, whereas assertion encourages behavior. The third and final type of autoclitic that Skinner describes is that of the quantifying autoclitic, and in this Skinner deals with such words as the, a, some, and other words that indicate some sort of amount or quantity, and each has a different effect on the listener and his subsequent behavior.

In the autoclitic, one begins to see how these three terms, which originally seem to be simple descriptions of particular aspects of verbal behavior, begin to reflect more and more of a structure or framework to language and verbal behavior. The autoclitic seems to move between and mediate or modify Skinner’s mands and tacts. In the three subcategories of autoclitics, one can see in each one a different modification of the mand and tact and their effects both on the speaker’s and the listener’s behavior.

Clearly, the mand and the tact are the focal points of the structure or framework that Skinner is slowly developing in Verbal Behavior. While the autoclitic does possess a particular function, its very function is defined in terms of these other two
categories. As can be seen, the mand and the tact are no longer simple categories of language, but are instead actual processes of language that people using language actually use. In his original conception of these two terms, the mand and the tact were simply categories to identify certain types of verbal operants that seem to regularly occur in verbal behavior. But as Skinner continues his analysis of verbal behavior, it becomes clear that the mand and tact are no longer simple descriptions. Instead, they become what people actually do in language. In several places throughout Verbal Behavior, Skinner describes people in a verbal community doing what can only be called “manding” and “tacting”:

The poet is affected here by the reinforcements which are responsible for the vulgar forms Look, See, and Listen—forms which mainly call attention to the speaker (Listen, have you seen George?; Look, can you give me some help? or See here, what are you up to?). See is also used to mand attention to something being described (There he stood, see, and I said to him...). The poetic variant of See is Behold. The poet mands the listener to see someone sitting upon a grassy green and to hark, not only to his words, but to the lark. He also mands him to speak up (Tell me, where is fancy bred?), to be quiet (Oh, never say that I was false of heart) and to co-operate in various practical affairs related to the poet's deprivations: Come, let us kiss, Come live with me and be my love, Take, O take those lips away, or Drink to me only with thine eyes. (VB, 30)

When a cook tacts a given state of affairs with the simple announcement Dinner!, she creates a verbal occasion upon which one may successfully sit down to the table. But the listener does not sit down to, or eat, the verbal stimulus. The kind of response which can be made to both the dinner and the verbal stimulus Dinner! is exemplified by the salivary response conditioned according to the Pavlovian formula. The practical behavior of the listener (the consequences of which are ultimately responsible for the
development of the verbal response in the first place) must be formulated as a discriminated operant involving three terms, no two of which provide a parallel for the notion of a symbol. (VB, 88)

As can be seen in these two passages, Skinner is no longer using his terms of mand and tact to describe or identify certain patterns of verbal behavior. In fact, the mand and the tact have become behaviors themselves. Where before these two concepts were created to group a number of particular verbal behaviors, these two passages show that Skinner now sees the mand and the tact as actual processes of language and verbal behaviors.

From this point, these two processes become explanations of other aspects of human verbal behavior. Skinner deals with these other aspects as extensions of both the mand and the tact processes. To begin, Skinner identifies two types of extended mands. Both of these share the same basic process of the mand. But the extension that Skinner is dealing with here is an extension that makes the mand process in these cases somewhat unique. The two extended mands that Skinner deals with are what he calls "superstitious mands" and "magical mands." Skinner defines superstitious mands as "mands which cannot be explained by arguing that responses of the same form have been reinforced under similar circumstances" (VB, 47). In other words, these are mands that occur as a result of other successful mands, but this is not due to any consistent reinforcement or success. The specific example that Skinner uses is gambling:

The dice player exclaims *Come seven!,* for example, even though he has not asked for and got sevens anywhere. Accidental reinforcement of the response appears to be the explanation.... The player may readily admit that there is no mechanical connection between his response and the behavior of the dice, but he retains the response in some strength and continues to utter it... (VB, 47)
The second type of extended mand is what Skinner calls the "magical mand." He defines these as mands "which cannot be accounted for by showing that they have even had the effect specified or any similar effect upon similar occasions" (VB, 48). Skinner goes on to give examples of what he means:

The speaker appears to create new mands on the analogy of old ones. Having effectively manded bread and butter, he goes on to mand the jam, even though he has never obtained jam before in this way. The poet exclaims Milton, thou shouldst be living in this hour!, although he has never successfully addressed Milton before nor brought anyone to life with a similar response. The special relation between response and consequence exemplified by the mand establishes a general pattern of control over the environment. In moments of sufficient stress, the speaker simply describes the reinforcement appropriate to a given state of deprivation or aversive stimulation. The response must, of course, already be part of his verbal repertoire as some other type of verbal operant. (VB, 48)

In a way, the magical mand is an extension of the superstitious mand, in that, where the superstitious mand was based on accidental reinforcement of previous mands, the magical mand, while still based on previous mands, has never been reinforced. Thus it seems just one step beyond the superstitious mand, and further and further from a true mand. In both of these extensions, Skinner asserts that the mand process is operating in the behavior of the speaker. These extensions for Skinner only exist because the mand process has proven successful due to previous experience of it being reinforced. One can see here how the mand has been metamorphosed beyond a simply descriptive category and into an explanatory process. The mand itself is now a process of verbal behavior that can be extended beyond its normal use and context. Inherent in both of these extensions is an assumption and acceptance of
the mand as an actual aspect of verbal behavior that actively operates in human interaction.

A similar type of extension occurs with the tact process. In this case, there are five types of extensions that can occur. Skinner calls the first type of extension a “generic extension.” Skinner uses the example of a chair to demonstrate this process. As he describes it, a person demonstrates generic extension when he calls a new type of chair that he encounters a “chair.” This goes back to the idea of a primal form, such as that of the leaf which Nietzsche discussed. One has a general idea or conception of “leaf” by which one can identify other objects as leaves. The same thing happens with the chair. One has a general conception of “chair” by which one can identify other objects as chairs.

The second type of extension of the tact process that Skinner identifies is a “metaphorical extension”:

When for the first time a speaker calls someone a mouse, we account for the response by noting certain properties—smallness, timidity, silent movement, so on—which are common to the kind of situation in which the response is characteristically reinforced and to the particular situation in which the response is now emitted. Since these are not the properties used by zoologists or by the lay community as the usual basis for reinforcing a response, we call the extension metaphorical... When a metaphorical response is effective and duly reinforced, it ceases to be primarily a metaphor. A man is seldom called a mouse in an extended tact. *Mouse* has become a standard form in the reinforcing community in which small size, timidity, and other properties play an acknowledged role. *(VB, 93)*

Again, this is similar to the earlier discussion of Herculean effort. In both cases, what was a descriptive term at a particular instant is extended into a general description of similar events. This type of extension is similar to what Skinner identifies as the third type of tact extension, the “metonymical extension.”
Here an extension of a tact occurs when a stimulus acquires control over the response because it frequently accompanies the stimulus upon which reinforcement is normally contingent. Thus, we say The White House denied the rumor, although it was the President who spoke, or You haven’t touched your dinner, when the important fact was that the dinner was not eaten. We account for such behavior by noting that the President and the White House, and touching and eating, frequently occur together. (VB, 99-100)

The difference between metaphorical and metonymical extension is that, in metonymical extension, something associated with an object or event represents that object or event. In metaphorical extension, the representative term is not necessarily associated with what it replaces, such as with the lovers-as-compass metaphor from Donne. Skinner labels the fourth type of extended tact as a "solecistic extension" which Skinner describes by saying

A still more tenuous extension of the tact is so useless and confusing to the listener that it is described with such pejorative terms as malaprop, solecism, or catachresis. The property which gains control of the response is only distantly related to the defining property upon which standard reinforcements are contingent or is similar to that property for irrelevant reasons. This is not to say that some malaprops are not effective or go unreinforced. We may not be seriously disturbed when someone says dilemma although a situation is merely difficult, or feasible when action is merely possible.

As in metaphor and metonymy, solecistic extension is commonest when no other response is available. Also, as in metaphor and metonymy, some erroneous responses are reinforced by the verbal community and acquire a functional, if not a social, status comparable with that of correct responses. Original mistakes are perhaps almost as rare as original metaphors. (VB, 102)
In this example, the speaker is responding to an event or situation with terms like “dilemma” or “feasible” which are inappropriate to the situation. But these inappropriate responses are at least not punished, if not reinforced, and thus come to be used again. The final type of extended tact that Skinner deals with is “nomination” or naming. This is also a process of tact extension as one gives a name to a person or object and that name then in turn becomes a possible response to that person or object. In all of these mand and tact extensions, one can see how Skinner has turned his originally descriptive terms into processes of language that actually occur in verbal behavior. These extensions take the basic process of the mand and the tact that Skinner created and applies them in inappropriate situations or contexts. Thus there are not only inconsistencies in the consequences of a mand or tact. There are also differences in when these patterns are used. In effect, not only has Skinner created a structure of normal verbal behavior and patterns with the mand and the tact, but he also creates a structure based on these artificial constructs that accounts for times when these processes are extended or misapplied by a speaker. All of these extensions operate on an assumption that the mand and tact are regular and consistent aspects or patterns of verbal behavior that these extensions then warp or manipulate.

This then brings us back full circle to Nietzsche’s original concerns about the creation of structures and the apparent operation of what Nietzsche warned about, though much earlier, in Skinner’s work. As Nietzsche stated, the problem with structures is that they are originally created and artificial, but through their subsequent use, the created and artificial aspect of them is forgotten and these structures then come to be seen as how nature—or whatever construct is being studied—actually works and functions. One could say that Skinner seems to fall
prey to this. He begins by imposing a basically descriptive structure on language and verbal behavior, as his terms mand, tact, and autoclitic are all descriptive of certain aspects of verbal behavior. But then Skinner goes on to portray these terms as being actual processes in language and actively used in human verbal interaction. No longer is Skinner content to simply identify some aspect of verbal behavior as “a mand” or “a tact.” Instead he wants to take what he sees as fundamental aspects of verbal behavior and turn them into verbal behavior itself. From here, Skinner begins to describe people as “manding” and “tacting,” as if these were things that people actively and consciously do. Further, he uses these created processes as explanations of verbal behavior that seems to follow these patterns, but in some way extends them inappropriately or to inappropriate contexts. In doing all this, Skinner forgets that this structure he has created was imposed by him onto language. The structure of mand-tact-autoclitic was not something that simply arose out of language as a natural process of verbal behavior. Its very essence is that of a created framework that Skinner made in his scientific approach to studying verbal behavior. But in using this framework to guide his study of verbal behavior, Skinner more and more depicts language as occurring in these patterns he has identified, and ignores the fact that he created and imposed these patterns onto language and verbal behavior.

The issue of Skinner’s created structures does not end with this three-part structure of verbal behavior. For the most part, this discussion has focused on Skinner’s ideas about responses made by a speaker, and little mention has been made of a listener or audience for the speaker, beyond the fact that one exists to reinforce or punish certain behavior. When we turn to the idea of an audience, we encounter another of Skinner’s creations, that
of what he calls the "verbal community." Throughout the quoted passages from Skinner's *Verbal Behavior*, there has been reference to how particular aspects of verbal behavior are reinforced or punished by a verbal community, without any real mention of what constitutes a verbal community. Skinner does give us his idea of what a verbal community is:

Audiences which control the largest subdivisions of a verbal repertoire are the communities which establish the reinforcing contingencies of the so-called "languages": English, French, Chinese, and so on. In a Chinese verbal community, only certain forms of response are effective; as an audience, any member or group of members of this community constitutes the occasion for the emission of forms called "Chinese." *(VB, 173)*

But Skinner does not limit this concept of verbal community simply to different languages. Instead, he goes on to describe what could be seen as more specialized verbal communities:

Within a single language community many jargons, patois, cants, and technical vocabularies are controlled by special audiences. When these deal with special subject matters, they need not represent control by an audience. Thus, many objects encountered on a sailing boat are usually not encountered elsewhere. The jargon of sailing is in this case a subdivision of a repertoire isolated only because the occasion upon which it is appropriate is isolated. But when an engineer talks about the low tensile strength of a worn shoelace, he is speaking a language appropriate to a special audience rather than a special state of affairs. In some languages (for example, Japanese), certain forms of response are differentially reinforced by listeners belonging to different social classes or by listeners standing in different relations to the speaker. Each class or relationship thus defines a special audience controlling such forms. The "little language" with which we talk to children or they to us is a repertoire under the control of a special audience. Such a repertoire is rein-
forced in early childhood by indulgent listeners, but it may survive between friends into adulthood. . . . There are special subdivisions of the community which also differentially reinforce bookish, pedantic, literary, archaic, polysyllabic, and polite vocabularies, and hence compose audiences in the presence of which these forms are particularly strong. (VB, 173-174)

In this passage, Skinner seems to be drawing a distinction between the verbal community and an audience. The verbal community for Skinner appears to be a group of speakers that can be identified with a particular kind or type of verbal behavior or speech. An audience then is made up of particular persons who belong to that verbal community. And, as mentioned before, these communities are not simply based on what language is being spoken. As Skinner himself mentioned, these communities are made up of people speaking a particular type of speech, such as a technical vocabulary. And throughout his text, Skinner makes reference to these specialized verbal communities, as he describes such things as a scientific verbal community or a literary verbal community, both of which reinforce different uses of language and different verbal behavior.

One will of course remember the distinctions Skinner drew between the scientific and literary verbal communities. As Skinner described it, the literary verbal community often reinforced metaphorical and metonymical usage of language. This was opposed to the scientific verbal community which brooked little or no metaphorical use of language, and to the extent that it did do so, it would eliminate the metaphoric and metonymic properties of that response. The difficulty with this sharp a distinction comes when one looks at how Skinner uses the idea of verbal community in his text. As Skinner described it, the verbal community is a kind of overarching structure associated with certain kinds of verbal behavior, and audiences for verbal behav-
ior are drawn from these verbal communities. When he is describing these audiences in the context of his discussion of verbal communities, Skinner mentions that it is the audience that actually reinforces a particular speaker's verbal behavior. But throughout *Verbal Behavior*, Skinner describes the verbal community itself as reinforcing a speaker's particular verbal behavior. In essence, what Skinner has done is substitute the verbal community for the specific audience that is before the speaker, and the process through which he accomplishes this is essentially a metonymy. In describing the metonymical extension of the tact, Skinner argued that a concept or idea normally associated with some other concept or idea comes to symbolize and stand for that second idea. One of the examples he used was how we often say something similar to "The White House said today," when in fact it was the President, and not the White House, that spoke. This is of course the process of metonymy, where one thing normally associated with or accompanying another comes to replace and stand for that second person, object, or so on. In saying that the verbal community reinforces a particular aspect of verbal behavior, Skinner is actively participating in a metonymy. For it is not the verbal community that reinforces the verbal behavior, but the specific members of the audience who belong to that verbal community. These specific audience members are associated with a particular verbal community, and through the process of metonymy, Skinner replaces these audience members with the verbal community itself as reinforcing verbal behavior.

In a way, Skinner bases much of his three-part structure on a metonymical relationship as well. In his mand and tact, it is the consequences that are normally associated with these types of responses that allow Skinner to label them as a mand or a tact. As such, these two terms then come to stand for the actual
responses that are made when Skinner uses them to describe verbal behavior. One will of course remember Skinner's original objections to the use of metaphor or metonymy in literary study of human verbal behavior. But it is also this metonymical process that allows Skinner to create his structures of verbal behavior.

To go back to the ideas behind the rhetoric of inquiry, Skinner demonstrates much of what this direction of inquiry describes in his "scientific" and "objective" study of verbal behavior. Skinner's *Verbal Behavior*, while an analysis of verbal behavior and its processes, is also a continuing argument for the use of scientific methods to investigate language and verbal behavior over the literary approach which Skinner hopes to supplant. This argument runs the entire length of Skinner’s text, making *Verbal Behavior* as much a persuasive and argumentative text as it is an analysis of language. In his adoption of science as an approach to the study of verbal behavior, Skinner uses the physical sciences such as chemistry and physics as a metaphor for what he thinks of when he calls something "science." Skinner then applies this metaphor of the physical sciences to depict the very processes of verbal behavior that he is investigating. Thus the mand and tact processes become chemical reactions in the same way that they are verbal interactions. This structure that Skinner creates is, as Nietzsche pointed out long before, an arbitrary one in that language and verbal behavior do not necessarily behave in the way Skinner asserts that they do. But Skinner, in the application and use of his structure, eventually forgets its created aspect, and deals with the processes he has created as actual behaviors or patterns occurring in language. Finally, Skinner's structure of the verbal community, and even his mand-tact-autoclitic structure of language, is based on an essentially metonymical relationship. Skinner describes the verbal community as reinforcing the verbal behavior of a person, when indeed it is the specific members
of an audience associated with that verbal community that will reinforce or punish certain types of verbal behavior. The verbal community may come to accept such behavior in general, but this acceptance is through the reinforcement or punishment given by a specific audience drawn from that verbal community, not the community itself. His three-part structure is also based on a somewhat metonymical relationship, as these processes, especially the mand and the tact, are defined by the consequences or patterns of behaviors that normally accompany the verbal behavior in question. And this metonymical aspect is what allows Skinner to create the mand and the tact and use them in his structure of verbal behavior.

Clearly there is as much to say about what Skinner says as there is about how he says it. While he rejects the methods used by the literary, rhetorical, and other approaches to studying verbal behavior, he also demonstrates what could only be called literary or rhetorical methods in his own “scientific” and “objective” study of language and verbal behavior. This is not to say that Skinner is wrong because he uses argument, metaphor, metonymy, etc. The use of rhetorical and persuasive techniques does not invalidate what Skinner has to say about language and verbal behavior. But it is useful to point out his use of these literary and rhetorical methods, as his attempt in Verbal Behavior to make the study of behavior a science is described by Skinner as an effort to eliminate these methods. But clearly Skinner has not completely eliminated argument, rhetoric, and metaphor from his study. As this discussion of Skinner’s work has demonstrated, these rhetorical and persuasive ways are tied into his “scientific” investigation of language and verbal behavior, and in many ways, it is these very methods that allow Skinner to create and describe his conception of verbal behavior, even as he claims to be eliminating and avoiding the use of these techniques.


