

WHY PINKER NEEDS BEHAVIORISM: A CRITIQUE OF *THE BLANK SLATE*

Elliot A. Ludvig
Duke University

A review of *The Blank Slate: The Modern Denial of Human Nature* by Steven Pinker. New York: Viking Press, 2002, 528pp.

In his most recent oeuvre, Steven Pinker challenges what he perceives as a growing dogma within the social sciences to attribute all aspects of human behavior to environmental causes, and the insidious public policy decisions that arise therefrom. He makes the important argument that growing evidence for genetic and evolutionary contributions to human behavior should inform our perspectives on numerous topics ranging from child-rearing to violence to gender equity. The overall message of the book remains unconvincing, however, because its psychological foundations collapse under closer scrutiny. In this review, I will argue that Pinker misunderstands and misconstrues Behaviorism and fails to appreciate the insights of more than 80 years of hard-wrought Behaviorist research. As a result, he is left with an internally inconsistent psychology that provides little insight beyond the intuitive folk psychology we already enjoy, and he does not offer a framework for understanding the effects of unique experiences in the life of an individual.

Missing the Point: Building a Behaviorist Strawman

The crux of Pinker's book is a negative argument: the "blank slate" of the title is a position he attempts to discredit, not defend. In outlining this "blank slate" position Pinker places much of the blame for its prevalence on the Behaviorist program that dominated psychological thinking from the 1930s through the 1960s. To illustrate how Behaviorists defended and lauded this hypernurturist approach, Pinker quotes the famous line from John Watson's *Behaviorism* that reads: "Give me a dozen healthy infants, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist, merchant—chief, and[,] yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors" (Pinker, 2002, p. 19). Reading these lines, I too am struck by the extreme "blank slate"-ism espoused by this founding father of

AUTHOR'S NOTE: The author is now at Rutgers University. Please address all correspondence to Elliot Ludvig, Center for Molecular and Behavioral Neuroscience, Rutgers University, Newark, NJ 07102, USA. Email: ludvig@andromeda.rutgers.edu.

Behaviorist thought. Pinker, however, does not immediately include the subsequent lines from this quotation; Watson continues, “I am going beyond my facts and I admit it, but so have the advocates of the contrary and they have been doing it for many thousands of years” (Watson, 1930, p. 104). Watson tempers his previous radical empiricist assertion by acknowledging that it is exaggerated, but invokes a license he feels that he needs to take to overcome the prevalent innatist polemic. Only over 100 pages later, with his rhetorical effect already achieved, does Pinker reveal in a different context that “Watson admitted he was ‘going beyond my facts,’ which was forgivable because at the time he wrote there were no facts” (p. 124). By quoting selectively from Watson early in the book, Pinker creates a true strawman that he can easily dispose of without giving real credit to the insights of Behaviorism.

Pinker fares no better when dealing with that other paragon of Behaviorist thought: B.F. Skinner. Pinker claims that “Skinner was a staunch blank-slater and a passionate utopian. . . . Given his premise that undesirable behaviour is not in the genes but a product of the environment, it follows that we should control that environment—for all we would be doing is replacing haphazard schedules of reinforcement by planned ones” (p. 169). Here, once again, Pinker misconstrues a Behaviorist argument. The Behaviorist logic for focusing on environmental variables rather than genetic ones does not stem from a contention that all “undesirable behaviour is. . . a product of the environment.” The opposite holds true: all behavior is widely recognized as being a product of both genes and environment (see quotations below). The focus on the individual’s environment derives from more practical considerations. If a research goal is the modification or prevention of undesirable behavior, evolutionary and genetic contingencies are beyond the control of the experimenter (especially for human subjects), whereas environmental variables are manipulable.

Pinker also takes a broader swipe at all of Behaviorism when he avers that “Behaviorists believed that behavior could be understood independently of the rest of biology, without attention to the genetic makeup of the animal or the evolutionary history of the species” (p. 20). By Pinker’s conception, Behaviorists ignore genetics, ecology, evolution, and the rest of the biological sciences in understanding all behavior. Let me pick a couple of quotations out of Skinner’s *About Behaviourism* and *Beyond Freedom and Dignity*—texts that Pinker references—to illustrate the absurdity of this point. “Just as we point to contingencies of survival to explain an unconditioned reflex,” says Skinner, “so we can point to ‘contingencies of reinforcement’ to explain a conditioned reflex” (Skinner, 1974, p. 43). Skinner understood his Darwin. Certain behaviors (unconditioned reflexes) may be better explained with reference to the evolutionary history of the creature, whereas other behaviors (conditioned reflexes) may be better explained with reference to the reinforcement history of the creature. Most behaviors need both histories for a full explanation. Where the early Behaviorists may have erred is through an insufficient appreciation of how “biological preparedness” could influence the course of learning, but this distinction is a question of degree, not an outright denial of “innate” biological

WHY PINKER NEEDS BEHAVIORISM

factors. In *Beyond Freedom and Dignity* Skinner is even more explicit: “The task of a scientific analysis is to explain how the behavior of a person as a physical system is related to the conditions under which the human species evolved and the conditions under which the individual lives” (Skinner, 1971, p. 14). The “staunch blank-slater” is nowhere to be found on these pages.

After promptly dismissing the insights of Watson, Skinner, and other early Behaviorist thinkers, Pinker trains his sights on more modern manifestations of Behaviorist thought. Pinker considers this line of argument worthwhile because even though “[s]trict behaviourism is pretty much dead in psychology. . .many of its attitudes live on” (p. 21). To emphasize what sort of ridiculous conclusions Behaviorism leads to, Pinker creates the following parody as an example: “How might we explain why Rex just walked over to the phone? We would not say that phone-shaped stimuli caused Rex’s limbs to move in certain arcs” (p. 32). Instead, Pinker offers the following as the better explanation: “we might say that he wanted to speak to his friend Cecile and knew that Cecile was home. *No explanation has as much predictive power as that one*” (p. 32; emphasis added). Let me start by countering that no right-minded Behaviorist would offer such a facile account. Here is a considerably more realistic (although still simplified) account:

1. Rex has had previous experience with telephones.
2. Cecile called yesterday.
3. On previous occasions, when Rex has returned Cecile’s phone calls, he has been rewarded with a pleasant conversation.

Numerous constructs would still need to be fleshed out (e.g. experience, pleasant) in more precise terminology, but the form of the explanation is sufficient to suggest that a behavioral account can certainly rival—and possibly exceed—in predictive validity and explanatory utility an intentional, mentalistic account. All that behavioral accounts require are a proximal stimulus and a reinforcement history. The richness of behavior that can be accounted for in a behavioral framework is not limited to “reflex arcs” and simple motions.

Pinker’s subsequent strong claim about the utility and validity of mental constructs as explanations of behavior is certainly not obvious and can be met with a host of objections. Firstly, an explanation in terms of “wanting” and “knowing” is entirely post-hoc and has no predictive power whatsoever. How do we know what someone “wants” except by inferring it from what they do? We can ask the person for an introspective report, but as Pinker himself notes in a later section, first-person accounts of behavior are notoriously unreliable. Moreover, how could we ever distinguish this account from any other mentalistic account that could be created (e.g. “Rex really hated Cecile, but felt obliged to return her calls”)? We might look at previous conversations Rex has had with Cecile or other people, but then we would be looking into individual history for explanations and not into the internal belief structure of the acting individual. The mental construct then

becomes superfluous. Finally, who cares what “we might say”? Since when did popularity decide the utility of scientific constructs? This reliance on popular validity for the final word of approval or censure on psychological constructs hints at larger theoretical problems with Pinker’s scientific framework to which we will now turn.

The Limits of Scientific Psychology Sans Behaviorism

The scientific psychology that Pinker outlines throughout the book suffers from three major deficiencies: (1) it places an inordinate explanatory burden on mental states, (2) it has no method of dealing with individual experience, and (3) it fails to surpass our intuitive psychology. I will argue that bringing Behaviorism back into the fold would act as a corrective for all three shortcomings. Early in the text Pinker attempts to debunk the “Ghost in the Machine”—the approach to mental functioning that supposes a single, indivisible soul as the basis of mind. As evidence he brings the famous split-brain patients of Gazzaniga and Sperry against this viewpoint. Pinker notes how a patient who was shown the command “WALK” to the nonverbal right hemisphere then proceeded to leave the room. When asked why he had gotten up, the patient responded that he had “gotten up to get a Coke” (p. 43). Pinker uses this example to illustrate the notorious unreliability of first-person accounts of behavior. Yet, earlier, in dismissing Behaviorism, he appealed to us to put our trust in first-person accounts of behavior such as “He wanted to speak to his friend. . .” (p. 32). These sorts of accounts can only be created in one of two ways: either we infer it from the behavior (in which case it is a mere re-description of the behavior and thus circular) or we ask the subject for a first-person account, which Pinker has just established is unreliable. Thus, Pinker’s simultaneous appeal to mental causation and rejection of the validity of subjective accounts is inconsistent.

The second deficiency in Pinker’s psychology that results from his outright dismissal of Behaviorist thought is exposed in his chapter on children (Ch. 19). In this section Pinker relates that a substantial portion of the variation in complex human behavioral traits cannot be accounted for by the effects of genes or families (Third Law; p. 373). He then supposes that much of the remaining variability (~50%) comes from the unique lifetime experiences of individual people. Pinker, however, confesses ignorance with respect to any established effects: “We still don’t know whether these unique experiences leave their fingerprints on our intellects and personalities” (p. 396). This exact hole in Pinker’s tale is precisely the strong suit of Behaviorism. Much of the Behaviorist enterprise has been to pinpoint the particular environmental conditions (i.e., unique experiences) that lead to particular behavioral patterns (e.g., performance on intelligence or personality tests).

Finally, the failure of Pinker’s psychology to contribute much beyond intuitive psychology becomes most evident when he enumerates a “tentative but defensible list of cognitive faculties and the core intuitions on which they are based” (pp. 220-221). This list includes intuitive physics, biology, engineering,

WHY PINKER NEEDS BEHAVIORISM

psychology, space, probability, engineering, logic, language, and economics. Pinker then goes on to state that these various intuitive abilities evolved for us to deal with our ancestral environments, not for modern developments. Thus, on this list,

. . . conspicuous by their absence are faculties suited to the stunning new understanding of the world wrought by science and technology. For many domains of knowledge, the mind could not have evolved dedicated machinery, the brain and genome show no hints of specialization, and people show no spontaneous intuitive understanding either in the crib or afterward. They include modern physics, cosmology, genetics, evolution, neuroscience, embryology, economics, and mathematics. . . (p. 221)

Even more conspicuous by their absence on this latter list are psychology and cognitive science. I strongly suspect that this absence is because the intentional, mentalistic, computational theory of mind pushed by Pinker is nothing more than intuitive psychology. While all of these other sciences have transcended the limitations of our intuitive senses for that field, psychology and cognitive science remain mired in their prescientific “dark ages.” Pinker further amplifies this problem by attacking Behaviorism using arguments where references to what “we might say” serve as bottom-line evidence (p. 32). Of course, we will say that our intuitive psychology seems best, but as was the case with the other sciences listed above, for progress in psychology we need to try and build a structure that does not necessarily jibe with our pretheoretical intuitions.

Behaviorism aims to create such a science of behaviour—one that does not rely on subjective reports but is built on externally observable environmental conditions (in the lifetime of the individual and the species) and behaviours. As a scientific framework, Behaviorism shuns mental states as unreliable and inaccessible and places the explanatory burden on events in the environments of the individual and the species. As an engineering project, Behaviorism focuses primarily on changing environmental antecedents because the environmental factors are thought to be under the control of the experimenter (unlike genetic or evolutionary antecedents). It would behoove Pinker to carefully re-read some of the Behaviorist classics and take to heart the methods, goals, and messages outlined therein.

References

- Pinker, S. (2002). *The blank slate: The modern denial of human nature*. New York: Viking Press.
- Skinner, B. F. (1971). *Beyond freedom and dignity*. New York: Alfred A. Knopf.
- Skinner, B. F. (1974). *About behaviorism*. New York: Vintage Books.
- Watson, J. (1930). *Behaviorism*. Chicago: University of Chicago Press.

