

BERTRAND RUSSELL'S INFLUENCE ON B.F. SKINNER'S EPISTEMOLOGY

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ABSTRACT B. F. Skinner's first foray into philosophy began with his epistemology. In turn, his naturalistic epistemology served as a jumping-off point for his radical behaviorism. Skinner encountered Bertrand Russell's work early on in his career and credited Russell with introducing him to behaviorism. Regarding epistemology specifically, much of Skinner's system was a product of either agreements or disagreements with Russell. This paper examines how Russell's ideas influenced Skinner's writing by analyzing Skinner's general externalist tendencies and his approach to epistemic doubt.

Keywords: epistemology, Bertrand Russell, B. F. Skinner, naturalism, externalism

Bertrand Russell's Influence on B. F. Skinner's Epistemology

Bertrand Russell (1872-1970) led a life of both scholarship and activism and made a wide range of contributions as one of the founders of analytic philosophy. He won the Nobel Prize for Literature in 1950 while working as a professor at Trinity College, Cambridge, and shaped some of the most talented thinkers of the following generations (Irvine, 1995). His most notable legacy, however, lies in his commitment to his philosophical beliefs, which resulted in his dismissal from several professor positions and multiple jail terms due to his pacifist and anti-war convictions. As he studied logic and epistemology, he increasingly felt drawn towards using behavioristic psychology to address issues like judgment, symbolism, and meaning (Russell, 1919; 1927).

Russell accepted a visiting professor position at the University of Chicago during the 1938-1939 academic year. Throughout the year, he visited nearby universities and attended a luncheon hosted by the University of Minnesota for psychologists and philosophers in the department. While attending the event, a newly hired assistant professor, B. F. Skinner, approached Russell and told him that Russell's work converted him to behaviorism (Skinner, 1976).

Detailed accounts of Russell's naturalistic epistemology (e.g., Kitchener, 2007), broader surveys of Russell's influence on Skinner (e.g., Moxley, 2003), and extensions of Skinner's system (e.g. Moore, 1984) have been offered before. The purpose of this paper is to discuss the specific influences of Russell's naturalistic epistemology on Skinner's naturalistic epistemology. In examining Russell's influence, readers may note that Russell entertained a number of different viewpoints in his writings.

The paper begins with a brief account of the history of epistemology and some relevant discussions. It then delves into the broader, documented interactions between the two thinkers. Once the context is established, the paper examines Russell's influence on Skinner's naturalistic epistemology.

Naturalistic Epistemology

Epistemologists have historically concerned themselves with topics such as knowledge claims and the constituent elements of a justified and true belief. The foundation of any science rests on a discussion of epistemic doubt and its appropriate uses. To determine the ownership of this subject matter, or the meaningfulness of dividing lines, a necessary starting point involves identifying the responsible parties.

At the turn of the 20th century, there was a clear distinction between science and philosophy. Claims made by psychologists were considered part of science, while claims made by epistemologists belonged to philosophy. The positivists inherited the separation between logic and psychology from Frege and were considered the authorities when Skinner became interested in epistemology (Kitchener, 2004). However, the grounds for separation were eventually questioned. Russell himself turned to psychology for answers to philosophical problems. Entering a post-positivist era, the distinctions between the subject matters of philosophy and science became less clear.

These changes set the stage for a naturalistic epistemology. If topics traditionally addressed by epistemologists were now open to inquiry from both philosophers and psychologists, a historically “scientific” approach began to seem more achievable. The nature of epistemic doubt was now subject to the same level of analysis as phenomena in the natural sciences.

Although epistemology covers a range of knowledge, such as knowledge of individuals (e.g., “I know him”) or a set of skills (e.g., “I know how to swim”), knowledge of facts is perhaps most relevant to the current discussion. To “know” a fact, three criteria must be met: (a) the fact must be true, (b) one must believe the fact, and (c) the belief must be justifiable. In a naturalistic epistemology, these criteria are limited by properties of the natural world and aligned with the scientific method (Steup & Neta, 2020).

Although there is no precise distinction between naturalistic epistemology (NE) and traditional epistemology (TE), there are some notable differences. Crumley (2009), Goldman (1986), and Pacharie (2002) refined Descartes’ arguments to reveal three basic assumptions of TE. First, TE prioritizes a priori theorization. Second, TE sees epistemology as an autonomous field, which science cannot inform, although advances in epistemology can inform or constrain science. Third, the subject matter of TE is normative. Facts are not purely descriptive but also evaluative (Rysiew, 2016).

NE differs from TE by rejecting one or more of its three features. Whereas TE asserts itself as the autonomous foundation on which science operates, NE proposes a more intertwined, bidirectional relation between philosophy and science. It is worth noting that conversations about naturalistic epistemology shifted considerably with Quine’s *Epistemology Naturalized* (1969)—a more radical stance that psychology should replace epistemology—but most of the works of Russell and Skinner that are the focus of the current paper predate this text (Rysiew, 2016).

In 1928, Skinner moved into a rented bedroom in Cambridge, MA to attend Harvard University. Skinner (1979) recalls:

On the mantel which no longer had a fireplace beneath it I began to build a library, starting with Bertrand Russell’s *Philosophy*, John B. Watson’s *Behaviorism*, and I. P. Pavlov’s *Conditioned Reflexes* – the books which had, I thought, prepared me for a career in psychology. (p. 4)

Skinner’s initial exposure to Russell was Russell’s (1926/1986) review of *The Meaning of Meaning* (Ogden & Richards, 1923). Here, Russell gave a behavioristic account of meaning, one that “converted” Skinner to behaviorism. Eventually, this led him to purchase Russell’s (1927) *An Outline of Philosophy* and Russell’s (1912) *Problems of Philosophy*.

Russell

Skinner’s first encounter with epistemology—and behaviorism—was through Russell’s (1926/1986) review of Ogden and Richards’ (1923) *The Meaning of Meaning*. Russell continued his epistemological

commentary, notably in his 1927 work *An Outline of Philosophy* and *An Inquiry into Meaning and Truth* (1940), a book that evolved from his William James lectures.¹ While introducing epistemology in general, Russell noted that there are two distinct avenues of inquiry that could be said to make up the field. The first is, at least partly, couched in science. He noted that in a natural sense, the organism that can be said to know is a biological entity. Russell partially endorses this first account, before noting that it is ultimately insufficient (1940), before moving onto his proposed project, involving the nature of the relationship between propositions and reality, and the arrangement of propositions according to different levels of epistemic certainty. Skinner, on the other hand, embraces the former (stimulus-response account) and rejects the latter, more traditional account. We will begin with a brief outline of the relevant parts of Russell's (1926/1986) review, before reviewing Russell's (1912; 1927; 1940) first stimulus-response account in more detail and note only the relevant parts of the latter when discussing their differences.

Beginning with his first account, in Russell's (1926/1986) review of *The Meaning of Meaning* (1923), he began by establishing what he considered foundational truisms about language. He asserted that words are intrinsically social and cannot be fully understood without considering the interaction between speaker and listener. He also stated, as a given, that words are forms of bodily movements, which, "like other bodily movements, are caused by stimuli" (1926/1986, p. 109). Additionally, Russell emphasized that the words uttered by the speaker serve as stimuli in relation to the listener.

Russell (1926/1986) then referenced Watson (1913) in the context of expressing and associating ideas, invoking an account akin to a respondent conditioning paradigm. A pivotal moment in the discourse, to which we will return, is Russell's suggestion that "There is no need to postulate a 'mental' intermediary between the stimulus and the reaction" (1926/1986, p. 110). Russell emphasized that words, whether spoken out loud or privately, often occur together with other words, to the point that eventually, the private image evokes the utterance of the word. Russell clearly endorsed Watson's program, in the sense that he believed his "law of habit" could explain the use of a word when the physical object itself was not present (Russell, 1912). He did not, however, consider it sufficient to account for all learning (Russell, 1927)

In addition, Russell (1927) noted the difference between perceptive awareness and habit knowledge. *Perceptive awareness*, or sensitivity, is not unique to living organisms. That is, some stimulus reliably results in some physical change; for instance, a particular temperature reliably results in a physical change in a thermometer. *Habit knowledge*, however, is acquired by a living organism through experience. Through repeated interactions with the environment, a stimulus becomes a "sign" for another stimulus; that is, "we may say that A is a 'sign' of B if it promotes behavior that B would promote, but that has no appropriateness to A alone" (1940, p. 11-12).

Earlier, Russell (1912) noted a distinction between knowledge by acquaintance versus knowledge by description. *Knowledge by acquaintance* involves direct awareness of an object. It is not inferential at all; it does not involve a representation of the object, nor a belief about or judgment of the object. Rather, it involves actual sensory inputs that are a product of objects in one's environment making themselves known. For example, one has knowledge by acquaintance of a chair in front of them when the sense data that are a product of the chair's presence make themselves known. There is a genuine relationship that does not exist without the object's physical presence. One cannot have knowledge of acquaintance with something that is not present (Hasan & Fumerton, 2004). Knowledge of the chair itself, however, is *knowledge by description*. One cannot doubt the sense-data making themselves known, as one cannot doubt that one is having an experience, but the inference that those sense data are a product of the presence of an actual chair is knowledge by description.

¹ In outlining Russell's positions, this section also draws upon *An Inquiry into Meaning and Truth* (1940). Although Skinner would have encountered this work later on, his familiarity with Russell (1940) is evident (e.g., Skinner, 1953, 1957). While Russell's *An Outline of Philosophy* (1927) and his review of *The Meaning of Meaning* (1923) would have shaped Skinner's early epistemological views, the inclusion of Russell (1940) provides a more comprehensive understanding of Russell's positions, and Skinner's exposure to both predate most of his epistemological commentary.

Although the initial stimulus-response account of knowledge is not presented as a final account, higher order accounts of knowledge are unlikely to succeed without it. Knowledge is assessed using observable criteria and we use observable criteria in our assessment of the knowledge of others. To say that someone knows how to play chess, is to say that if put in front of a chess board and an opponent, they are likely to make moves that adhere to the rules of the game. They may also speak about chess in the absence of a board.

Even though Russell (1927) acknowledged that an externalist account alone is ultimately inadequate, he emphasized that a stimulus-response account remains valid. According to this externalist account, knowledge is a response to one's environment, and it offers an approach that is “much more fruitful than the way which has been customary in philosophy” (p. 20).

Skinner

Unfortunately, what knowledge actually is, never truly solidified for Skinner, which leads to confusion. For example, Moore (1984) stated that, “Knowledge in the Skinnerian system implies effective action. It is not the cause of effective action; rather, it is the name for the state of affairs wherein effective action may be taken” (p. 85). If only this were the case. If “being under the control of” addressed causality, then Skinner explicitly stated that this is what knowledge is (Skinner, 1974, p. 144). The confusion continues. Sometimes Skinner explicitly stated that contingencies are the causes of knowledge, and that knowledge is an effect (1977). Sometimes he claimed that contingencies, as a whole, are knowledge (1977). Elsewhere he claimed that knowledge is just behavior (Skinner, 1977; 1990). Occasionally he claimed that knowledge is only verbal behavior (Skinner, 1974), but sometimes this restriction was lifted (Skinner, 1990). Loose terminology is not a virtue. That said, with enough benefit of the doubt, and some pruning, one ought to attribute to him the best version of his account that one can, and Moore (e.g., 1984; 1993) did more than enough to get there. Following existing detailed accounts, this section briefly outlines Skinner’s epistemology, setting the stage for evaluating Russell’s influence.

Action

The concept of knowledge as action is a starting point. According to this view, knowledge does not exist independently of behavior, nor is it merely applied or utilized through action. Skinner (1974) suggested that knowledge itself is a form of action. If knowledge is equated with behavior, and as Skinner asserted, “behavior only exists when it is being executed” (p. 141), then knowledge only exists during its execution. Asking if someone knows how to get downtown is not inquiring about possession of a private map, but whether they can navigate there independently or give instructions enabling others to do so. Knowledge is the act of successfully reaching downtown without getting lost.

Knowledge is also *possessed* in the behavioral repertoire, or what one is able to do, should certain circumstances come to pass (Skinner, 1974). This is somewhat confusing, as knowledge isn't solely action, but sometimes the potential for action. Thus, it exists sometimes only as behavior, and other times as behavior that is likely to occur. This seems to conflict with the notion that knowledge is behavior (Skinner, 1977), and behavior does not exist until it is being carried out (Skinner, 1974). Knowledge as an entire contingency, or knowledge as control, is far too shapeless to be of use, but at his best Skinner seemed to suggest that one type of knowledge is action, and one type of knowledge is a disposition to act (1957). Summarizing his theses this way brings the most common threads together between his commentary and sorts many claims that seem to be contradictory. Again, pruning stray remarks should not be jarring, as it often occurs with prolific writers who have extensive bodies of work spanning long periods (Kirkham, 1992/2001).

Selectionism

Towards the end of his life, Skinner adopted an entirely selectionist account of knowledge:

Knowledge is imposed upon the knower by three kinds of variation and selection. The first, natural selection, accounts for the behavior of species, for what animals, nonhuman or human, must know in order to survive. The second accounts for what individuals come to know during their lifetimes. It is not as well understood as natural selection, but it is much easier to study experimentally and we have learned a great deal about it. The third, a quite different kind, accounts for the evolution of the social environments we call cultures, which enable the individual to profit from what others have come to know during their lifetimes. (Skinner, 1990, p. 103)

These three levels, identified as phylogenic, ontogenic, and cultural, are what knowledge is born out of (Skinner, 1966). At times, Skinner seemed to imply that some knowledge claims may solely stem from phylogeny, a notion that appears incongruent with his broader commentary. Knowledge as action is more plausibly a product of the interaction among all three levels of selection. However, he suggested that all organisms, not just those with self-awareness, possess some knowledge strictly due to their evolutionary history (Skinner, 1966). This perspective seems at odds with the idea that self-knowledge emerged later in our species' history and is exclusively verbal (Skinner, 1974). For instance, if phylogeny is responsible for "...what animals, nonhuman or human, must know in order to survive" (Skinner, 1990, p. 103), then the acorn-burying behavior chain of a squirrel constitutes knowledge. However, this chain is not verbal. It remains unclear whether Skinner posited that a knowledge claim can originate solely from phylogeny. Nevertheless, a comprehensive account of knowledge must consider the interplay of these three distinct levels of selection.

Introspection

Lastly, Skinner explicitly dismissed introspection, yet the specific type of introspection he refuted was not clearly defined. He explicitly dismissed appeals to "mental surrogates" (1977, p. 5) and "what is felt or introspectively observed" (1974, p. 222). While he rejected mental surrogates, Skinner did not thoroughly address the nuances of Russell's initial theory of acquaintance or subsequent acquaintance theories.² Numerous accounts of introspection exist, many of which do not rely on some "mysterious world" (Skinner, 1974, p. 229). At most, Skinner appeared to reject what he perceives as a 'traditional' form of introspection, along with the utility of invoking mental surrogates.

Influence

Bertrand Russell once said that one of the two great aims of his life was to discover what could be known. I could say that one of mine has been to discover what it means to be a knower. (Skinner, 1990, p. 103)

This quote captures the relationship between the epistemologies of both thinkers well. It appears to contrast a focus on content—what can be known—with a focus on the role of the knower. Of course, Russell was not only concerned with content, but when Skinner did break from Russell, it was almost always to further emphasize the importance of a role. We argue that the majority of Skinner's epistemological commentary can be traced back to his interactions with Russell's work. Skinner's work largely built upon or diverged from Russell's ideas, with occasional comments that do not clearly suggest whether Skinner agreed or disagreed.

²See Gertler (2011) for a more comprehensive review.

Knowledge as Action

Once again, although Russell did not ultimately endorse his first stimulus-response account of knowledge, he noted that nothing he added to the account later invalidated a conceptualization of knowledge that emphasized externalist criteria when assessing the knowledge of *another* person (Russell, 1927). But the focus is not just an evaluation of the knowledge of others, but what knowledge actually is. Russell explicitly outlined knowledge as action, or even as a matter of degree. He noted that, "...the rat, during its progressive improvements in the maze, is gradually acquiring more and more 'knowledge'" (Russell, 1927, p. 90).

One might say another person knows how to play chess *if*, when faced with a chess board and an opponent, *then* they are likely to make moves that adhere to the rules of the game. Although in Russell's early works that Skinner read, Russell did not fully flesh out knowledge as a dispositional concept, Skinner was still led to a position relatively close to Gilbert Ryle's (1949) conceptualization of knowledge as a tendency to act. Skinner's appreciation for an externalist account continued as he noted, "Knowing a city means possessing the behavior of getting about in it" (Skinner, 1974, p. 86). The use of these criteria can be found in Russell: "Do you 'know' the way from Trafalgar Square to St. Pancras? Yes, if you can walk it without taking any wrong turns" (Russell, 1927, p. 95).

Surrogates and Explanation

One of the most influential aspects from Russell (1926/1986) is his discussion of mental surrogates in explanation. This influence is evident not only in Skinner's epistemology but also across his entire body of work. While agreeing with certain truisms in Ogden and Richards (1923), Russell stated, "All words are 'learned reactions' in this sense. There is no need to postulate a 'mental' intermediary between the stimulus and the reaction" (Russell, 1926/1986, p. 110). He further argued that "If a theory of meaning is to be fitted into natural science... it is necessary to define the meaning of words without introducing anything 'mental' in the sense in which what is 'mental' is not subject to the laws of physics" (Russell, 1926/1986, p. 111).

The extensive impact of these ideas on Skinner's work, though beyond the scope of this paper, is noteworthy. Specifically, in his epistemology, Skinner aligned with Russell's naturalism. For Skinner, knowledge existed entirely within scientific parameters, resonating with Russell's call for subjecting knowledge to physical laws. Moreover, Russell's reluctance to posit mental intermediaries was directly reflected in Skinner's approach to their role in a functional analysis (Skinner, 1953).

Doubt

Russell and Skinner's projects shared an underlying approach to epistemic doubt. Russell took two overarching approaches towards doubt in his lifetime (Kitchener, 2007). The most prominent approach was Cartesian, where no knowledge claim is presupposed; any claim vulnerable to epistemic doubt is discarded, until only knowledge of which we can be absolutely certain remains. For example, if one's knowledge of the presence of a table in front of one could just be the product of a hallucination, then this knowledge is set aside. Once a starting point is found—one that cannot possibly be doubted—then other knowledge claims can be examined.

A naturalistic approach is born out of a different framework. A Cartesian approach does not presuppose any knowledge claims, whereas a Kantian approach does. There are certain knowledge claims that are accepted, and one describes how one knows the things that they do. When the focus becomes accounting for how we know these things, a psychological account becomes possible (Kitchener, 2007). It is this Kantian approach that allowed Russell to develop his naturalistic epistemology and Skinner's account seems to stem from the same framework. If "the central question of scientific knowledge is not What is

known by the scientist? but What does knowing mean?” (Skinner, 1974, p. 148), then the Cartesian approach is abandoned in favor of a Kantian view. To focus on “what is known by the scientist?” is to wield the traditional, Cartesian doubt. When Skinner (1974) asserted that “...the facts and laws of science are descriptions of the world” (p. 148), he presupposed a level of epistemic certainty in his descriptions.

Sense Data

Many epistemologists, including Russell, focused on sense perceptions as a crucial point of discussion. Our reliance on at least some of our knowledge is based on our sense perceptions, which requires a solid epistemic framework to ground them. To illustrate this, imagine standing in front of a dog. Certain aspects of the experience are considered evidence that there is, in fact, a dog standing there, independent of oneself. Russell deemed it crucial to determine which aspects of this scene could be doubted; although this approach could be applied to any sensory mode, consider the following example involving sight.

Color is one sensory input that indicates the presence of a dog. In one moment, it seems as if the dog is a certain shade of gold. When the lighting in the room changes, the dog appears to be a sort of darker brown. The color is a product of one’s unique position with respect to the dog, and subsequently the light. Given that no two observers occupy the same position, no two observers will experience the same sensory inputs, and no two observers will see the same color. A broad realist view might be that some *actual* color is instantiated by this particular dog. The idea that when a golden color is experienced, the observer is somehow more correct, and when a dark brown color is experienced, the observer is somehow less correct, is called into question. The one aspect that cannot be doubted is that a golden color is being experienced. No matter how much doubt is introduced regarding the true color of the dog, something is made known. Russell suggested that these inputs that are immediately known to an individual are to be called *sense data*. In the case of the golden retriever, sense data may include the golden color when viewing the dog or a soft texture when petting the dog. The experience of being aware of the sense data is called a *sensation*. When petting the dog, the sense datum is the soft texture, and one’s experience of the texture is the sensation. Russell believed that only by parsing out these sense data and sensations can we establish a hierarchy of epistemic certainty underlying all knowledge (Russell, 1912).

Skinner viewed this issue, which had been important for epistemologists and philosophers of mind, as a non-issue. The utility of a sensation or a sense datum in natural science remained unclear to him. Skinner saw these as, at best, serving as a surrogate comparable to “drive” (Skinner, 1957, p. 278). Consider person A presenting person B with an apple and emitting the vocal verbal response, “What color is this?” Person B responds, “red.” Skinner (1974) noted that the first time this occurs, it is difficult to identify exactly which property of the stimulus evoked the response. Only after repeatedly presenting more *red* stimuli, and those stimuli evoking the vocal verbal response “red,” can we begin to speak more confidently about what exactly evoked the response. Skinner believed that if these issues were to be addressed, it should be done operationally. Although he shared a certain level of skepticism with Russell, Skinner did not appeal to the innate redness of the apple and had initial doubts about what property evoked the response.

The issue did not seem trivial to Skinner, as “verbal behavior which is ‘descriptive’ of images must be accounted for in any adequate science of behavior” (Skinner, 1945, p. 550). The distinction now becomes whether or not the response “red” is evoked by a property of the stimulus or the sensation of seeing red. Suppose person A now presents person B with a red apple and a green apple and emits the vocal verbal response, “give me the red one.” The verbal community has access to the red stimulus and can reliably reinforce the response of handing over the red apple. If a private response such as seeing red happens to accompany the overt response that is met with reinforcement, it too will be reinforced. It is in this way that the verbal community shapes and establishes the *seeing* of public and private red stimuli. The verbal response “red,” however, differs from the response “I see red.”

In a behaviorist analysis knowing another person is simply knowing what he does, has done, or will do and the genetic endowment and past and present environments which explains why he does it. It

is not an easy assignment, because many relevant facts are out of reach... But our knowledge of another person is limited by accessibility, not by the nature of the facts. (Skinner, 1974, p. 180)

According to Skinner (1974), we cannot entirely know another person, but likely not because of the reasons that Russell (1927) suggested. For Russell, one has privileged access to their sense data and only that individual can be said to know those sensations, as no two observers occupy the same space and are presented with the same sense data. However, for Skinner, if the privileged access is only a product of accessibility, then either a sensation is not inherently privileged, or there is not a datum to be known at all.

The influence of Russell's distinction between knowledge by acquaintance and knowledge by description on Skinner's differentiation between rule-governed and contingency-shaped behavior is not entirely clear. Skinner acknowledged that his *Verbal Behavior* (1957) was, at least in part, a response to Russell's 1940 William James Lectures (Skinner, 1979). As Wood (1986) pointed out, only Freud and Shakespeare are mentioned more than Russell in *Verbal Behavior*. However, the specifics of this influence remain somewhat ambiguous.

In one of his last works on epistemology, *To Know the Future* (1990), Skinner frequently referred to Russell's distinction. He equated knowledge by acquaintance with contingency-shaped behavior, acquired "when we act upon the world," and equated knowledge by description with rule-governed behavior (Skinner, 1990, p. 105). However, this is not entirely consistent with Russell's views. Russell considered sense data, such as the 'brownness' observed in the presence of a table, as knowledge by acquaintance, which is non-verbal. Skinner, conversely, remarked that "...self-knowledge arose much later in the history of the species, as the product of social contingencies arranged by the verbal community..." (1974, p. 222) This contrasts with Russell's notion that, "If knowledge is to be displayed by behaviour, there is no reason to confine ourselves to verbal behaviour as the sole kind by which knowledge can manifest itself" (Russell, 1927, p. 85).

Knowledge as only verbal behavior restricts Skinner's conception beyond Russell's. Consequently, Russell's concept of knowledge by acquaintance and Skinner's idea of contingency-shaped behavior are not entirely synonymous. Rule-governed behavior and knowledge by description align more closely, although it has been pointed out that Russell never suggested that *all* knowledge by description needed to be linguistic (Hasan & Fumerton, 2004). Despite these inconsistencies, Skinner's application of Russell's terms may not have been intended to be exact. Moxley (2003) suggested that Skinner "would later employ and transform these terms" (p. 113), rather than replicate Russell's usage precisely.

Final Note

While some influences on Skinner are frequently acknowledged, the profound impact of Bertrand Russell's work is often overlooked. Acknowledging Russell's influence not only highlights the significance of his contributions but also opens up new perspectives. It allows one to appreciate the differences between their ideas, potentially sparking new lines of inquiry. It is worth noting that Russell's work, even in areas where it diverges from Skinner's, has been influential. As Wood (1986) pointed out, Russell's contributions in this section of his canon, though not extensively recognized by many psychologists or philosophers, have been pivotal in shaping the thoughts of key figures in various subfields. A deeper understanding of Russell's canon and its influence is invaluable for thinkers in these disciplines.

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