

Russell and Behaviorism

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I. Russell studies psychology

In *My Philosophical Development*, Russell describes a pre-conception he brought to his new work in knowledge and mind (ca. 1918), which was “to emphasize the continuity between human and animal mind” (MPD 128).

Thorndike vs. Köhler: in reading “animal psychology”: “I found, somewhat to my amusement, that there were two schools in this field, of whom the most important representatives were Thorndike, in America, and Köhler in Germany. It seemed that animals always behave in a manner showing the rightness of the philosophy entertained by the man who observes them. . . . What concerned me were the observations on how animals learn. Animals observed by Americans rush about frantically until they hit upon the solution by chance. Animals observed by Germans sit still and scratch their heads until they evolve the solution out of their inner consciousness.” (MPD, 129)

Reading list: While imprisoned for some months in 1918, Russell kept a record of “philosophical books read in prison” (CP 8: 315), which included a wide spectrum of American psychology (James, Dewey, James Angell, Knight Dunlap, E. B. Titchener, Margaret Flow Washburn, John B. Watson, and A. P. Weiss), a work each from Freud and Jung, an article on thought from Karl Bühler, and a scattering of philosophical works.

II. Watson’s attack on introspection, Thorndike’s and Russell’s defenses

Watsonian behaviorism. Watson’s radical behaviorism would “never use the terms consciousness, mental states, mind, content, will, imagery, and the like” (1914, 9); its theoretical vocabulary would largely be that of “stimulus and response,” “habit formation,” and “habit integration” (1914, 9); it will “throw out imagery altogether and attempt to show that practically all natural thought goes on in terms of sensori-motor processes in the larynx” (1913, 174).

Thorndike (1911) supports behavior-based research while recognizing the value of introspective reports and phenomenal descriptions. In his chapter on “The Study of Consciousness and the Study of Behavior,” Thorndike described how psychology traditionally portrays itself as needing to incorporate both physical facts and mental facts, between which there is supposed to lie an unbridgeable methodological gap.

Mental-physical gap: He offered the following topics to illustrate the alleged gap: “The writer must confess not only to the absence of any special reverence for the supposed axiom [of a gap], but also to the presence of a conviction that it is false, the truth being that whatever feature of any animal, say John Smith, of *Homo sapiens*, is studied — its length, its color of hair, its body temperature, its toothache, its anxiety, or its thinking of 9×7 — the attitude and methods of the student may properly be substantially the same” (1911, 7).

Degree, not kind: Thorndike finds that self-reports fall on both sides of the alleged gap: Smith can give a self-estimate of his feverish state, but both he and the others will prefer to read the

thermometer; the observers, including Smith, have good behavioral information on aspects of his dental pain, and Smith has an additional useful source; observation of whether the multiplication is happening must rely on Smith's testimony or on cases in which he makes marks. Thorndike concedes that scientific statements about toothache, anxiety, and numerical judgments are more variable than statements about height, hair color, or body temperature. But he insists that "Some physical facts, such as hair-color, eye-color or health, are, in fact, judged more variably than some mental facts, such as rate of adding, accuracy of perception of a certain sort and the like" (1911, 12).

Denial of public/private distinction: Thorndike (1911, 13) disagrees with the traditional claim that physical facts are known by many (which is sometimes described as their *publicity*) and that mental facts are only known to one person, who directly experiences them (their alleged *privacy*): "there is no more truth in the statement that a man's pain or anxiety or opinions are matters of direct consciousness, pure experience, than in the statement that his length, weight and temperature are, or that the sun, moon and stars are. If by the pain we must mean the pain as felt by some one, then by the sun we can mean only the sun as seen by some one. Pain and sun are equally subjects for a science of "consciousness as such." But if by the sun is meant the sun of common sense, physics and astronomy, the sun as known by any one, then by the pain we can mean the pain of medicine, economics and sociology, the pain as known by any one" (1911, 13).

Russell on privacy, similar to Thorndike: The dentist can't feel your pain as you do and so relies on external signs (such as tooth decay) and your verbal reports (which are based on private data). Private sensations are pervasive and reliable: "The correlation of cavities with toothaches has been established by a number of observations, each of which was private, in exactly the sense which is considered objectionable. And yet one would not call a person introspective because he was conscious of toothache, and it is not very difficult to find a place for toothache in the physical world. I shall not insist upon the fact that, in the last analysis, all our sensations are private, and the public world of physics is built on similarities, not on identities. But it is worth while to insist upon the privacy of the sensations which gives us knowledge of our own body over and above the knowledge we have of other bodies. This is important, because no one regards as scientifically negligible the knowledge of our own body which is obtained through these private data" (Marsh 294; CP 8: 285).

Russell on existence of mental images: "in spite of Watson, it seems impossible to deny that such images occur" (Marsh 296).

III. Can desire be handled behavioristically or does it require images?

Mental images and verbal habits for absent objects: In "On Propositions," Russell discussed Watson's claim that verbal habits can be explained behavioristically. At first he is skeptical, saying: "I do not wish to deny that much action, perhaps most, is physically explicable [read: explicable without images], but nevertheless it seems impossible to account for all action without taking account of 'ideas', i.e., images of absent objects" (Marsh 297).

Desire: "If this view is rejected, it will be necessary to explain away all desire," because a natural way to explain how desire for absent things arises is to attribute to the desiring subject a

current mental image of the desired object, which, given some circumstances, arouses a desire for an absent item.

Desire in *Analysis*: Russell reduces desire to patterns of behavior in relation to motivating states such as hunger and the efficacy of “satisfaction” or pleasure in fixing behavior habits:

“‘Discomfort’ is a property of a sensation or other mental occurrence, consisting in the fact that the occurrence in question stimulates voluntary or reflex movements tending to produce some more or less definite change involving the cessation of the occurrence.

‘Pleasure’ is a property of a sensation or other mental occurrence, consisting in the fact that the occurrence in question either does not stimulate any voluntary or reflex movement, or, if it does, stimulates only such as tend to prolong the occurrence in question” (1921, 71–72).

Thorndike and satisfaction: Russell (1921, 72) attributes these definitions to Thorndike (1911, 245). The definitions given by the animal-learning psychologist speak of “satisfaction” and “discomfort,” but do not speak of “mental occurrences.”

IV. Watson’s frequency vs. Thorndike’s law of effect

Association in “Propositions”: Russell maintains that the “chief peculiarities in the behaviour of animals are those due to habit and association,” and he finds that these features of animal learning can be explained by a single law, that of association by temporal contiguity: “When A and B have often existed in close temporal proximity, either tends to cause the other” (Marsh 298–299). This is Watson’s position.

In *Analysis*, Russell (1921, 52–55) maintains that this simple law must be supplemented by Thorndike’s law of effect, according to which, when a behavior leads to “satisfaction” (such as eating food) becomes more likely to recur again in a given situation.

Russell’s statement of Watson’s principle of frequency: “the successful movement always occurs during the animal’s attempts, whereas each of the others, on the average, occurs in only half the attempts. Thus the tendency to repeat a previous performance (which is easily explicable without the intervention of “consciousness”) leads to a greater emphasis on the successful movement than on any other, and in time causes it alone to be performed” (1921, 52). (See Watson’s graph below)

Russell notices: “no improvement ought to set in till after the *second* trial, whereas experiment shows that already at the second attempt the animal does better than the first time. Something further is, therefore, required to account for the genesis of habit from random movements” (1921, 52–53), viz., the law of effect.

Thorndike on Watson’s claim that frequency always wins: See graph below.

V. Russell and behaviorism: relation to neutral monism.

Watson:

St = situation offered by problem box: stimuli are present, leading either to reaction A or reaction B. But when B occurs (the successful movement) the animal is taken out by the experimenter,¹² which prevents the occurrence of either A or B until it is reintroduced. Call the situation which follows upon B, St':—

Trial	Sequences	A occurs	B occurs
(1)	St-A-B-St'	+	+
(2)	St-B-St'	0	+
(3)	St-A-B-St'	+	+
(4)	St-B-St'	0	+
(5)	St-A-B-St'	+	+
(6)	St-B-St'	0	+
etc.		3	6

Thorndike:

Situation S,	Trial	Day	Responses	Notes
"	1,	1,	1, 2, 1, 1, 1, 2, 1, 1, 3, 1, 1, 4	(4 bringing food)
"	2,	2,	1, 1, 1, 2, 2, 1, 2, 3, 5, 1, 4	(4 bringing food)
"	3,	3,	1, 2, 1, 1, 6, 1, 3, 1, 4	(4 bringing food)
"	4,	4,	1, 1, 2, 1, 4	(4 bringing food)
"	5,	5,	1, 3, 1, 1, 4	(4 bringing food)
"	6,	6,	1, 2, 1, 3, 4	(4 bringing food)
"	7,	7,	1, 2, 1, 4	(4 bringing food)
"	8,	8,	1, 4	(4 bringing food)
"	9,	9,	4	(4 bringing food)
"	10,	10,	4	(4 bringing food)