Doing Epistemology Scientifically: Dewey versus Russell[1]

Fazendo Epistemologia Cientificamente: Dewey contra Russell

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Abstract: Dewey argues that Russell is wrong to think there is a legitimate philosophical problem concerning our knowledge of the external world. He further claims that Russell's attempt to ground knowledge on self-evident claims presupposes a theory of experience that science has discredited. In reply, Russell argues that Dewey's criticisms are irrelevant to scientific epistemology properly understood and that far from being undermined by contemporary science, the epistemological questions he addresses are forced on us by contemporary physics. I argue that far from settling their differences, the exchange between Dewey and Russell shows that their disagreement is more profound than either of them acknowledges. Dewey does indeed misunderstand Russell's epistemological project. Yet Russell misidentifies the source of Dewey's error and as a result fails to appreciate the appeal of the approach to epistemology Dewey recommends and the challenge it poses to his epistemology. As I see it, the disagreement between Dewey and Russell about knowledge turns on deeper disagreements about the way to settle philosophical questions and these deeper disagreements are not "scientific" in nature—at least, not in the sense that either Dewey or Russell uses this term.

Keywords: Scientific epistemology. Logical analysis. Pragmatism. External world. Dewey. Russell.

Resumo: *Dewey afirma que Russell está errado ao pensar que há um problema filosófico legítimo em relação ao nosso conhecimento do mundo externo. Ele alega ainda que a tentativa de Russell de fundamentar o conhecimento em alegações autoevidentes pressupõe uma teoria da experiência que a ciência desacreditou. Em resposta, Russell argumenta que as críticas de Dewey são irrelevantes para a epistemologia científica, entendida adequadamente, e que, longe de estar solapada pela ciência contemporânea, as questões epistemológicas que ele trata nos são impostas pela física contemporânea. Argumento que, longe de resolver suas diferenças, a troca de ideias*

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entre Dewey e Russell demonstra que seu desacordo é mais profundo do que qualquer um deles admite. Dewey, de fato, não entendeu o projeto epistemológico de Russell. Por outro lado, Russell não identifica corretamente a fonte do erro de Dewey e, consequentemente, não considera adequadamente a abordagem de Dewey à filosofia, e o desafio que representa para sua epistemologia. Como eu vejo, a divergência entre Dewey e Russell sobre o conhecimento aprofunda ainda mais as divergências sobre a forma de resolver questões filosóficas, e estes desacordos mais profundos não são de natureza "científica" – pelo menos não no sentido que Dewey ou Russell usam este termo.

Palavras-chave: *Epistemologia científica. Análise lógica. Pragmatismo. Mundo externo. Dewey. Russell.*

In 'The Existence of the World as a Logical Problem,'[2] John Dewey argues that the epistemological project pursued by Bertrand Russell in *Our Knowledge of the External World* is misguided.[3] Dewey denies there is a legitimate philosophical problem about the existence of the external world and argues that Russell's proposal for justifying knowledge of the external world presupposes a discredited theory of experience. As he sees it, Russell fails to appreciate the implications of contemporary science for epistemology and is thus left wandering down a blind philosophical alley.

Russell responds to Dewey's criticisms by arguing that they are irrelevant to scientific epistemology properly construed.[4] He embraces Dewey's view that philosophy ought to be pursued in light of scientific knowledge but insists that, far from being undermined by contemporary science, the epistemological questions he raises are forced on us by physics. In light of this he concludes that Dewey dismisses legitimate philosophical problems about our knowledge of the external world for no better reason than they do not interest him.

I argue that, far from resolving their differences, the debate between Dewey and Russell reveals their disagreement to be more profound and intractable than either of them acknowledges. Dewey misconstrues Russell's project in scientific epistemology and so his criticisms of it are easily dispatched by Russell. At the same time, Russell misdiagnoses Dewey's error and, as a result, fails to appreciate the depth of Dewey's approach to epistemology and the challenge it poses to Russell's project. I maintain that this disagreement about the nature of knowledge involves

2 'The Existence of the World as a Logical Problem' [hereafter EWLP] in *John Dewey: The Middle Works 1899-1924, vol. 8: 1915*. BOYSDON, J. (ed.). Carbondale: Southern Illinois University Press, 1979, pp. 83-97. The essay was first published in *Philosophical Review*, 24, 1915, pp. 357-370 and was revised and reprinted in *Essays in Experimental Logic*. Chicago: University of Chicago Press, 1916, pp. 281-302. Dewey says he targets Russell's version of the problem of the external world because his formulation is especially careful but maintains that his arguments apply equally to any other formulation of the problem.

3 *Our Knowledge of the External World as a Field for Scientific Method in Philosophy* [hereafter OKEW]. London: Routledge, 1993, [first published in 1914].

4 'Professor Dewey's "Essays in Experimental Logic"' [hereafter DEEL,]. *The Journal of Philosophy, Psychology and Scientific Method*, vol. XVI, n. 1, January 2, pp. 5-26, 1919.

deep differences over what philosophy is and how its questions are to be settled and these differences are not 'scientific'—at least not in the sense that either Dewey or Russell gives to this term.

Dewey on Russell's our Knowledge of the External World

In *Our Knowledge of the External World* Russell sets out to reconstruct knowledge of the external world on the basis of what he calls 'hard data'. For him, hard data comprise knowledge that is self-evident, rather than data justified by 'outside evidence' (OKEW: 75). These are limited to the laws of logic, certain facts of recent memory and introspection, along with 'immediate facts perceived by sight or touch or hearing [etc.]' (OKEW: 75). The question Russell poses is whether 'the existence of anything other than our own hard data [can] be inferred from the existence of those data' (OKEW: 80). This question, he says, involves the further question of whether we can 'know that objects of sense […] exist at times when we are not perceiving them' (OKEW: 82).

Dewey pursues two main lines of criticism against Russell's project in epistemology. First, he argues that the problem of the existence of an external world 'involves a self-contradiction' (EWLP: 83) and is, therefore, 'not a question at all' (EWLP: 84). Second, he argues that Russell conflates the legitimate problem of determining the conditions under which something in the world can be taken to licence reliable inferences about other things in the world with the pseudo-problem of determining whether we can know that anything exists beyond private, immediate, sensory experience. I shall consider each objection in turn.

(i) The Incoherence of the Problem of the External World

Dewey first argues that in specifying the nature of hard data—the 'objects of sense' from which the existence of the external world is to be inferred—Russell relies on knowledge about things beyond these data. Dewey takes this to show that Russell is in no position to call our knowledge of external things into question for the simple reason that he must already concede that he has such knowledge. Put otherwise, the very knowledge that allows Russell to raise doubts about knowledge of the external world renders such doubts unfounded. As a result, Russell's question about the possibility of knowing the external world is 'self-contradictory' and 'unreal' (EWLP: 83).

To illustrate his point, Dewey cites Russell's claim that the hard data associated with what would normally be described as walking around a table comprise 'sensible objects'—where by 'sensible object' he means 'just that patch of colour which is momentarily seen when we look at the table, or just that particular hardness which is felt when we press it, or just that particular sound which is heard when we rap it,' and 'not […] such a thing as a table, which is both visible and tangible, can be seen by many people at once, and is more or less permanent' (OKEW: 83-84). When walking around a table, Russell insists, '[w]hat is really known is a correlation of muscular and other bodily sensations with changes in visual sensations' (OKEW: 85). On Dewey's view, Russell's characterization of the objects of sense as 'muscular,' 'visual,' and 'bodily,' presupposes knowledge beyond what these data disclose

in and of themselves (EWLP: 89). That a patch of colour is something visual (as opposed to auditory or tactile) 'is a proposition about colour and it is a proposition which colour itself does not utter' (EWLP: 85). Taken by itself, Dewey argues, a bare patch of colour does not reveal how it is sensed, or even that it is sensed. So, Russell's identification of a patch of colour as something visual implies knowledge that exceeds anything present in the patch and qualifies, on Russell's definition, as knowledge of an external world.

Similarly, Dewey maintains that there is nothing in a bare patch of colour that reveals it to be an object of knowledge, never mind an object known immediately, without appeal to outside evidence.[5] Inasmuch as Russell's characterization of the patch of colour as a self-evident datum involves knowledge external to the patch itself, his formulation of the problem of the external world 'already assumes an answer to the question which [he] has put' (EWLP: 85).

Finally, Dewey thinks Russell's claim that his correlation of visual and muscular sensations is hard data is illegitimate. Such a correlation involves an ordering in space and time of changes in visual sensations, a similar ordering of muscular and other bodily sensations and a point-to-point correspondence between the elements of these two orders. Dewey thinks this correlation of elements ordered in space and time forms part of the public, external world, rather than a private realm of objects. 'It may not be a very big external world,' he says, 'but having begged a small external world, I do not see why one should be too squeamish about extending it over the edges' (EWLP: 90). However, even supposing that the visual and muscular sensations involved in our experience of walking around a table are accessible only to a single knower, as Russell claims, Dewey maintains that these sensations could neither be individuated nor ordered in space and time without reference to further objects by means of which their location and duration is fixed. '[W]e can know that a red [patch] is a momentary or transitory existence only if we know of other things which determine its beginning and its cessation' (EWLP: 89).[6] Since knowledge of these 'other things' goes beyond knowledge contained in the red patch, it seems again that in formulating the central problem of his epistemology Russell assumes the very sort of knowledge that 'is professedly called into question' (EWLP: 86).

Dewey thinks it is no accident that Russell is forced in spite of himself to appeal to knowledge of external things in his characterizations of hard data. He claims that rather than derive knowledge of the external world from prior knowledge of private, sensory objects, as he professes, Russell starts from an understanding of the external world as a space-time continuum and proceeds within this world to make

5 According to Dewey, all that is required for the existence of a patch of colour is that certain physiological conditions be met and these can be realized without the colour actually being seen. Thus, he says, Russell's 'argument implies over and above the existence of color something called seeing or perceiving—noting is perhaps a convenient neutral term. And this clearly involves an assumption of something beyond the existence of the datum—and this datum is by definition an external world' (EWLP: 85).

6 'A moderate amount of unbiased reflection will, I am confident, convince anyone that apart from a reference to the same existence perduring through different times while changing in *some* respect, no temporal delimitation of the existence of such as thing as sound or colour can be made' (EWLP: 89).

fine-grained distinctions among sensory qualities as a means to better predict the behaviour of objects. For Dewey, it is plain that:

> the correlation of correlative series of changes which defines the object of sense perception [for Russell] […] signifies the result of an analysis of the usual crude empirical data, and an analysis which is made possible only by very complex knowledge of the world. It marks not a primitive psychologic datum but an outcome, a limit, of analysis of a vast amount of empirical objects (EWLP: 93).

According to Dewey, then, Russell's mistake is to suppose that 'hard data' are the starting point for inquiry into the external world rather than a product of such inquiry. The correlations of sensations from which, according to Russell, knowers begin are not given immediately in experience but are rather arrived at through the discrimination of elements within the world and these discriminations are made possible by advances in experimental science—including psychology and physiology. Given this, Dewey is confident that the contradictions he finds in Russell's views are not the result either of Russell's reliance on common sense locutions for ease of expression or his failure to exercise sufficient care in the formulation of his questions.

(ii) The Psychology of Cognitive Experience

Dewey's second complaint concerns the source of what he claims to be Russell's conflation between the legitimate question of how to determine the conditions under which the effects of objects on our senses justify reliable predictions and the question of how to infer that there is an external world from private data. The former question concerns the connections between elements in one and the same world—namely, nature—while the latter one deals with an alleged relation between elements in two disparate worlds—an inner world of subjective experience and a world of public objects thought to lie beyond it. Russell makes this conflation, Dewey charges, because he wrongly supposes that 'hard data' are psychologically primitive—that is, they constitute knowledge given immediately in experience and provide our only clues as to what the world outside private experience is like.

While Dewey grants that many psychologists take patches of colour, sounds, 'kinaesthetic qualities' etc. to be more primitive than knowledge of spatio-temporal objects, he is quick to point out that, unlike Russell, these same psychologists readily admit that their account of what is primitive in experience is the result of inquiry in physiology, anatomy and other experimental sciences (EWLP: 94). Whatever insight into primitive data psychology contributes is, then, part and parcel of our knowledge of the external world and cannot be used to cast wholesale doubt on the possibility of such knowledge.

Dewey further observes that many psychologists—William James foremost among them—challenge the view that the primitives from which our knowledge develops consist of finely discriminated particulars of the sort that Russell calls 'hard data'. For these psychologists, knowledge grows 'from a confusedly experienced external world to a world experienced as ordered and specified' (EWLP: 94-95)

but 'at no point' in this development is the mind 'confronted with the problem of inferring the world' (EWLP: 95). He writes:

> What psychological analysis contribute[s] [is] *not* primitive historic data out of which a world has somehow to be extracted, but an analysis of the world, which had been previously thought of and believed in, into data making possible better inferences and beliefs about the world (EWLP: 96).

As Dewey sees it, psychology shows that Russell is wrong to think that knowledge of the external world is rooted in the immediate apprehension of private objects given prior to, and independently of, knowledge of nature. Moreover, it confirms that '[t]aken for what they really are [Russell's hard data] are elements detected *in* the world serving to guide and check our inferences about it' (EWLP: 96).

Dewey draws at least two important morals from his critique of Russell's epistemology. First, he thinks Russell's inability to formulate his doubts about our knowledge of the external world without presupposing such knowledge makes clear that epistemology can only be pursued in light of our general understanding of human beings and their natural environment:

> what is doubtful is not the existence of the world but the validity of certain customary yet inferential beliefs about things in it […] [N]ever in any actual procedure of inquiry do we throw the existence of the world into doubt, nor can we do so without self-contradiction. We doubt some received piece of 'knowledge' […] and then set to work as best we can, to rectify it. The contribution of psychological science to determining unambiguous data […] is an important aid in the technique of such rectifications (EWLP: 97).[7]

Second, Dewey thinks the fact that Russell arrives at his conception of hard data by distinguishing features of the natural world suggests that his epistemological work is best viewed as an attempt to define objects in terms of their experiential effects on perceivers in various circumstances. What Russell takes to be a characterization of private worlds is, according to Dewey, best understood as a description of possible perspectives within nature. Similarly, Russell's talk of correlations among entities in disparate private worlds amounts to nothing more than a recognition that these possible perspectives lie within a single, spatio-temporal continuum. For Dewey, then, the significance of Russell's analysis of objects in terms of sensory data does not lie in its accuracy as an account of private experience underlying knowledge of the external world. It lies instead in the predictive power of the correlations he

7 In light of this, Sidney Hook claims 'Dewey's position here not only undercuts the traditional epistemological problem but any view that professes to start with a wholesale scepticism or one which successively challenges the validity of any sense observation which confirms a judgment on the ground that it itself may be hallucinatory or a dream' (HOOK, 1979, p xxiii.).

finds between the behaviour of objects and their effects on organisms.[8] For Dewey, Russell's hard data are to be viewed as signs—alongside other physical signs like litmus paper or blood tests. They are elements in the world that give rise to reliable inferences about the state of other things in the (very same) world.[9]

Russell's Reply to Dewey

In light of Dewey's critique, one might expect Russell to defend his project in scientific epistemology by arguing, on the one hand, that the problem of the external world can be formulated in terms that do not presuppose knowledge of it and, on the other hand, that hard data are given in experience prior to knowledge of external things and therefore that the question of how to justify the latter in terms of the former is a legitimate and pressing one. However, Russell does no such thing. Instead, he accepts the substance of Dewey's critical remarks but denies that they challenge his views of epistemology in any way. '[I]n passages dealing with my own views,' he writes of Dewey's article, 'I have often found that the only thing I disagreed with was the opinion that what was said constituted criticism of me' (DEEL: 5). As far as Russell is concerned, then, Dewey's objections not only fail to undermine his epistemological project, they are entirely beside the point.

Rather then dispute Dewey's claim that the characterization of hard data presupposes knowledge of the external world, Russell openly grants it. He thinks all philosophical theorizing begins by taking certain 'data' for granted—and by 'data' here means 'matters of common knowledge, vague, complex, inexact, as common knowledge always is, but yet somehow commanding our assent as on the whole and in some interpretation pretty certainly true,' not 'hard data' (OKEW: 72). In epistemology, the data from which we start include knowledge rooted in experience of 'particular objects of daily life—furniture, houses, towns […] and so on' (OKEW: 73), knowledge based on the testimony of others (e.g. history, geography and journalism) and knowledge systematized in the physical sciences. The reason he takes our current understanding of the world as 'data' in epistemology, is 'not that common knowledge *must* be true, but that we possess no radically different kind of knowledge derived from some other source' (OKEW: 74). For Russell, no less than for Dewey, '[t]here is not any superfine brand of knowledge, obtainable by the philosopher, which can give us a standpoint from which to criticize the whole of the knowledge of daily life' (OKEW: 73). Thus, he writes:

> Philosophy cannot boast of having achieved such a degree of certainty that it can have authority to condemn the facts of experience and the laws of science. The philosophical scrutiny, therefore, though sceptical in regard

8 As Dewey sees it, 'the particulars of perception, taken as complete and independent, make nonsense. Taken as objects discriminated for the purposes of improving, reorganizing, and testing knowledge of the world they are invaluable assets' (EWLP: 96).

9 Thus, for Dewey, hard data 'are not the elements out of which perceptions are composed, constituted or constructed' but 'simply the most unambiguous and best defined objects of perception which can be secured to serve as signs' ('The Logic of Judgements of Practice' [hereafter LJP], 1979, p. 58).

> to every detail, is not sceptical as regards the whole. That is to say, its criticism of details will only be based on their relation to other details, not upon some external criterion which can be applied to all the details equally (OKEW: 74).

In the absence of an external standard by which to evaluate beliefs—the absence of a God's Eye View or Archimedean point—Russell thinks '[t]he most that can be done is to examine and purify our common knowledge by an internal scrutiny, assuming the canons by which it has been obtained, and applying them with more care and more precision' (OKEW: 74).[10] It is clear, then, that he agrees with Dewey that any doubts he raises about our knowledge of the external world rest on claims to know that world (OKEW: 74).

Moreover, Russell rejects Dewey's claim that his reliance on knowledge of the external world in the formulation of his problem renders his epistemology incoherent. As he sees it, it is precisely because the doubts he raises rest on beliefs drawn from common sense and science that they cannot be lightly dismissed. He insists it is '[p]sychologists' who 'have made us aware that what is actually given in sense is much less than most people would naturally suppose, and that much of what at first sight seems to be given is really inferred' (OKEW: 75). And it is physics that tells us that the effects an object has on us (its appearing green, for example) depend not only on the object but also on ambient conditions and the state of our physiology. In light of this knowledge, he reckons it is both physically and psychologically possible that one might undergo the experiences normally caused by a table situated in front of one without there being a table there and, moreover, that one might have the experiences associated with seeing a table on different occasions without there being a table that persists between viewings. He writes:

> We naturally believe, for example, that tables and chairs […] are still there when we turn our back upon them. I do not wish for a moment to maintain that this is certainly not the case. But I do maintain that the question whether it is the case is not to be settled off-hand on any supposed ground of obviousness […] As soon as the question is seriously raised whether, because we have seen them, we have a right to suppose they are there still, we feel that some kind of argument must be produced, and that if none is forthcoming, our belief can be no more than a pious opinion (OKEW: 77).

Russell recognizes that we are all inclined to dismiss the possibility we are dreaming or the victim of deceptions engineered by an evil demon. He even agrees, it is important to stress, that we are reasonable in doing so. Nevertheless, he insists that the justification of our dismissal needs explaining. As he says, "I find myself, when I begin reflecting on the external world, full of hitherto unquestioned assumptions,

10 'We are quite willing to admit there may be errors of detail in this knowledge, but we believe them to be discoverable and corrigible by the methods which have given rise to our beliefs, and we do not, as practical men, entertain for a moment the hypothesis that the whole edifice may be built on insecure foundations. In the main, therefore, and without absolute dogmatism as to this or that special portion, we may accept this mass of common knowledge as affording data for our philosophical analysis' (OKEW: 73).

for many of which I quickly realize that I have as yet no adequate reason. The question then arises: what sort of reason could I hope to discover?" (DEEL: 20). The challenge that he is concerned to address is as follows: given my current knowledge, my belief in the existence and persistence of tables can coherently be doubted. Yet I do not doubt it. When I look to justify my lack of doubt, I find I have nothing to offer in the way of an argument. For Russell, then, the sceptical challenge is best viewed as a *reductio ad absurdum* of science and common sense—it is a challenge to our knowledge of the external world based on that knowledge. It is because this challenge arises from within our current system of belief that failure to meet it threatens the coherence of our view of the world.

What, then, of Dewey's second objection—the objection that Russell is wrong to suppose human beings are given isolated tastes, sounds, smells etc. as hard data on which to base conjectures about the existence and persistence of objects in the world? Is Dewey right to complain that hard data are not the starting point for knowledge but rather the product of inquiry into the external world and that psychology shows that human beings never face the problem of having to make out the nature of the external world on the basis of sensory data alone?

As with the previous objection, Russell does not take issue with the psychological claims behind Dewey's criticism. He argues instead that psychological facts are irrelevant to his enterprise. As he sees it, the question of what comes first temporally in the acquisition of knowledge is of no philosophical importance:

> What earlier beliefs preceded those which we now entertain, either in the individual or in the race? What vaguer state than 'belief' precedes the growth of even the earliest beliefs? […] All these are questions of psychology. They are questions which I, for my part, have not attempted to discuss. Nothing that I have said on the problem of the external world is intended to be applicable to them (DEEL: 8).

In calling hard data 'primitive' Russell does not mean to imply that they come first in the psychological order of things. When 'I speak of […] "hard data"' he writes, 'I am not thinking of those objects which constitute data to children or monkeys' (DEEL: 7). Nor does he dispute that the identification of hard data requires a sophisticated scientific understanding of the external world:

> When I speak of […] 'hard data,'[…] I am thinking of the objects which seem data to a trained scientific observer. It is quite consciously and deliberately, not by mistake, that I am thinking of the trained observer […] The state of mind that I am imagining in investigating the problem of the physical world is not a naïve state of mind, but one of Cartesian doubt (DEEL: 7).

Russell, then, does not take issue with any of Dewey's claims about the psychological origins of cognitive experience. He even grants that knowers do not in the course of their lives ever infer the existence of the external world on the basis of private objects of sense. On Russell's view, data is not 'hard' because it is given apart from knowledge of the external world or comprises the first knowledge written on our *tabulas rasa*. What makes data hard is that it is knowledge that 'resists the

solvent influence of critical reflection' (OKEW: 77-78)—in contrast to 'soft data' 'which, under the operation [of internal critical scrutiny], become to our minds more or less doubtful' (OKEW: 78). For him, the claim that the table I see exists and persists when I am not observing it is 'soft' because critical scrutiny reveals it to be in need of justification. What I see when looking at the table is not identical to the physical table I claim to know—its colour, shape and texture, for example, remain unchanged, while the colour, shape and texture I observe vary from perspective to perspective.[11] In light of this, Russell insists, an argument is needed to justify my beliefs about the table if those beliefs are to be anything more than 'pious opinion'. On the other hand, the claims that I feel something solid and see something oblong, even though not psychologically (i.e. temporally) primitive, are hard data (i.e. epistemologically primitive) because they cannot be doubted. Critical scrutiny of such claims reveals them to be justified by the mere presence of certain experiences and no demand for additional evidence arises. For Russell, they are self-evident inasmuch as belief in these claims is caused by the very things these beliefs assert and we could not be out of touch with these things because they "are there, and as far as their momentary existence is concerned, no further argument is required" (OKEW: 77). Russell's project, then, is not—as Dewey supposes—to explain how we manage to discern what the world is like solely on the basis of private experience—he agrees with Dewey that we do not do this. The question that concerns Russell is rather:

> How do we, ordinary persons with a working knowledge of physics, organize our beliefs from a logical point of view? What, if we are challenged, and an attempt is made to make us doubt the truth of physics, shall we fall back upon as giving a basis for our belief which we are not prepared to abandon (DEEL: 8)?

Contrary to what Dewey's critique implies, Russell does not share the Lockean view that knowers are cut off from the world by a veil of subjective experience (LJP: 60). A more apt analogy for his view is that we are like expert witnesses testifying in court about the nature of the external world and forced to justify our knowledge claims under cross-examination by a sceptic who turns our own beliefs against us. It is the need to establish a strict logical connection between self-evident hard data and the soft data that critical scrutiny shows to be in need of justification that is Russell's motivating concern.

Having easily dispatched Dewey's two main arguments, Russell undertakes to diagnose Dewey's confusion. As he sees it, Dewey is interested primarily in uncovering the psychological origins of knowledge. Given this interest, he avers, Dewey takes Russell's account of what is epistemologically primitive—what comes first in the logical order of justification—to be an account of what is psychologically primitive—what comes first in the temporal development of cognition. Dewey then rejects Russell's view, he supposes, because it misidentifies the basic processes whereby human beings arrive at knowledge of the external world. In reply to this objection, Russell is only too happy to concede Dewey's point that it is wrong to

11 See 'Appearance and Reality' in RUSSELL, 1997. pp. 7-16.

think human beings come to their knowledge of the external world by deducing it from private sense data. However, he does not see this concession as in any way undermining his epistemological project because his justification of knowledge of the external world in terms of hard data does not purport to reveal the psychological processes of knowledge at all.[12] It is rather an attempt to justify doubtful knowledge claims in terms of firm ones. In rejecting Russell's epistemology on the grounds that it is poor psychology, Russell maintains, Dewey fails to distinguish the project of providing a rational justification for our beliefs about the external world and the project of uncovering the processes of inquiry through which we have acquired these beliefs.

It is important to note, however, that Russell's portrayal of what Dewey is up to is no fairer than Dewey's characterization of what Russell aims to do. In the first place, Dewey is not out to explain the development of cognition either in children or in early human beings. His main concern is rather to improve the prospects of human inquiry through a careful study of the conditions underlying its successes to date. Dewey does indeed see a close connection between the theory of inquiry and inquiry in the behavioural sciences but this is because he thinks that uncovering the biological, psychological and sociological conditions necessary for the acquisition of knowledge yields an effective method for engineering the conditions of further learning—in science, education, politics, ethics and even esthetics.

In the second place, Dewey does not reject Russell's epistemology because it misrepresents the temporal development of knowledge in children and early human beings. Dewey's point is rather that a proper account of the conditions of intelligent inquiry, one informed by findings in the behavioural sciences, shows Russell's concern to justify knowledge of the external world in terms of private experience is misguided. Dewey starts from the notion that organisms modify their behaviour in response to discrepancies between their various activities and demands of the environment that inhibit them. He develops a model of knowledge according to which inquiry is a specialization and development of this basic feature of biological activity. Pursuing this hypothesis concerning the nature of knowledge, he concludes that the experimental method is fundamental to justifying knowledge claims. On his account, this method involves acting so as to effect changes in the world in an effort to bring about events that one's beliefs would lead one to expect and assessing the truth or falsity of beliefs on the basis of what results. For Dewey, results uncovered through experimentation are warranted only to the extent that they are intersubjectively verifiable and replicable. On this model of justification, then, the private sensations that Russell takes to be the foundation of knowledge of the external world are of no epistemological relevance. For Dewey, observation in science is not a matter of introspecting private sensory objects but rather of responding reliably to public features of the natural world (e.g. to dinosaur bones, DNA samples, changes in blood pressure etc.). The essence of Dewey's critique, then, is not that Russell fails accurately to characterize the primitive origins of knowledge but rather that, according to the picture of inquiry afforded us by the

12 'He [Dewey] insists that what I call data are logical, not psychological, data, and in his sense of these words I entirely agree. I never intended them to be regarded as data which would be psychological in his sense' (DEEL: 6).

behavioural sciences, he is simply wrong to insist that claims to know the external world are unjustified unless deduced from knowledge of private contents.

Even when these mutual misunderstandings are cleared away, fundamental disagreements remain between Dewey and Russell. Whereas Dewey thinks his appeal to the findings of biology and psychology are sufficient to show that the central problem of Russell's epistemology is a pseudo-question, Russell disagrees. Russell does not dispute the biological and psychological facts on which Dewey's theory of inquiry rests. He does not even take issue with the account of inquiry Dewey defends. Indeed, in a late work he describes a theory of knowledge very close to the one Dewey offers as both 'legitimate and important' when taken as an account of how knowledge is acquired.[13] Still, he maintains that 'there is another kind of theory of knowledge which goes deeper and has… much greater importance' (IMT: 14) than Dewey's. On his view of knowledge, the findings of biology and psychology on which Dewey relies prove, in light of contemporary knowledge of physics and perception, to be soft data and to take these data at face value, as Dewey does, is to turn a blind eye to the legitimate demand that they be justified on the basis of knowledge that is less open to doubt. As Russell sees it:

> Scientific scripture, in its most canonical form, is embodied in physics (including physiology). Physics assures us that the occurrences which we call 'perceiving objects' are at the end of a long causal chain which starts from the objects, and are not likely to resemble the objects except, at best, in very certain abstract ways […]. The observer, when he seems to himself to be observing a stone, is really, if physics is to be believed, observing the effects of the stone upon himself […] [a]nd therefore the behaviourist [i.e. Dewey], when he thinks he is recording observations about the outer world, is really recording observations about what is happening in him (IMT: 15).[14]

Russell is right in thinking that Dewey does not address the problem alluded to in this passage. But this is not because he turns a blind eye to it. The reason he does not address it is that he thinks the facts Russell cites can be construed in ways that gibe with his account of inquiry without having to embrace the view that knowledge of the external world is rooted in subjective evidence residing in a private world. Dewey grants Russell's point that physical objects leave traces on organisms in the form of retinal images, chemical changes on the tongue, etc. He likewise grants that these effects are unique to each organism. However, he stops short of embracing Russell's view that these traces constitute private objects

13 *An Inquiry into Meaning and Truth* [hereafter IMT]. London: Routledge, 1992, p. 14.

14 'When the behaviourist [i.e. someone like Dewey] observes the doings of animals, and decides whether these show knowledge or error, he is not thinking of himself as an animal, but as an at least hypothetically inerrant recorder of what actually happens. He 'knows' that animals are deceived by mirrors and believes himself to 'know' that *he* is not being similarly deceived. By omitting the fact that *he*—an organism like any other—is observing, he gives a false air of objectivity to the results of his observation. As soon as we remember the possible fallibility of the observer, we have introduced the serpent into the behaviourist's paradise. The serpent whispers doubts, and has no difficulty in quoting scientific scripture for the purpose' (IMT: 14-15).

known by acquaintance. On his view, the effects of physical objects on organisms are likewise physical and open to public observation and investigation. As mere occurrences these physical effects do not affirm or justify anything. However, they cause knowers to make judgements, judgements that have implications that go beyond what occurs immediately on the surface of their skin or in their brains and that are subject to experimental verification. According to Dewey, then, a properly scientific epistemology reveals that knowing no more consists in the mere having or apprehending of sensory bombardments than farming or bridge building does.[15] It is rather a matter of acquiring intersubjectively reliable habits of responding to shared features of the natural world. While he thinks Russell is right in claiming that judgements caused by sensations are susceptible to error, he thinks the only problem this raises for philosophy is to determine the conditions under which judgements triggered by sensations yield reliable inferences. As noted, solving this problem is not a matter of determining the relation between entities in disparate worlds—private and public—but of determining the relations between the expectations prompted by sensations and the way the world is (LJP: 60-63). For Dewey, then, Russell's appeal to private worlds and subjective evidence is otiose in epistemology and indeed doubly unhelpful since it gives rise to intractable problems about the connection of mind and body, the existence of other minds and how to span the divide between the private and public worlds (LJP: 60-61). Thus, when Russell writes that '[m]en of science, for the most part, are willing to condemn immediate data as "merely subjective," while yet maintaining the truth of the physics inferred from those data' and '[i]t is therefore necessary to find some way of bridging the gulf between the world of physics and the world of sense' (OKEW: 106) Dewey replies:

> I do not see how anyone familiar with the two-world schemes [i.e. the outer world of physics and the inner world of the mind] which have played such a part in the history of humanity can read this [Russell's] statement without depression (LJP: 61).

From Russell's perspective, however, Dewey's entire line of argument is nothing more than an attempt to evade serious philosophical problems. He writes:

15 '[T]he fact of inference may be identified with the phenomenon of *evidence*. Wherever anything is discovered and used as evidence there, and only there, is inference. The hunting for, the weighing and sifting, the determination of the force of evidence, is something which takes place in public, in *plein air*. That which is *done* in the court-room with the participation of witnesses, court officials, jury, etc., and in consequence of which a man is hung, is not anything which can profitably be termed psychical. It belongs to the category where plowing, assembling the parts of a machine, digging and smelting ore belong—namely, behaviour, which lays hold of and handles and rearranges things.

The question of the psychical accompaniments and conditions of such behaviour, however interesting in other connections, is quite irrelevant here. It is not necessary to deny that they exist; all that is necessary is to recognize that, even if they exist, they are by-scenery and by-products' ('Logical Objects' in DEWEY, 1980, p. 91).

> The desire to escape from subjectivity in the description of the world (which I share) has led some modern philosophers astray—at least so it seems to me—in relation to theory of knowledge. Finding its problems distasteful, they have tried to deny that these problems exist. That data are private and individual is a thesis which has been familiar since the time of Protagoras. This thesis has been denied because it has been thought, as Protagoras thought, that, if admitted, it must lead to the conclusion that all knowledge is private and individual. For my part, I admit the thesis, I deny the conclusion.[16]

Conclusion

The disagreement between Dewey and Russell about the nature of knowledge and how it is to be justified is not easily summarized. It does not turn on views about the adequacy of so-called traditional philosophical views of objectivity. They are at one in holding that philosophical reflection can only be conducted within parameters set by our common sense and scientific beliefs and practices of inquiry. They both deny that knowers can assume the sort of God's-eye view alleged by many to be the sole motive for epistemology.[17] Nor does their disagreement turn on views about the relative merits of naturalistic epistemology and so-called first philosophy. Dewey and Russell agree that epistemology is best pursued in light of the findings of contemporary natural science and that there is no deeper sort of knowledge on which philosophers can rely.

Despite this broad base of agreement, Dewey and Russell pursue the study of knowledge with different aims and methodologies. Given Dewey's project of developing a theory of experimental inquiry informed by findings in the behavioural sciences (a theory aimed at improving pedagogy and scientific research) it is not surprising that he rejects Russell's model of justifying knowledge in terms of first-person private experience. Yet Dewey's attempt to argue that Russell's account of justification is inadequate as an account of inquiry fail to persuade because Russell never claims to provide an account of inquiry of the sort Dewey is concerned to develop. Dewey's appeal to findings in psychology and biology as evidence for his views about justification do not end the debate because Russell does not see himself as in any way challenging or departing from findings in the natural sciences—the biological and psychological views that Dewey's relies on included. For Russell, unlike Dewey, the debate does not turn on what the natural sciences have to say about the biological and psychological conditions of learning. It turns, instead, on how best to logically order our scientific beliefs in light of what critical reflection reveals about their doubtfulness.

Similarly, given Russell's project of deducing knowledge of the external world from indubitable premises about objects known immediately, it is not surprising that he is unmoved by Dewey's account of the experimental method. The findings in biology and psychology on which Dewey rests his theory of inquiry are of precisely the sort that Russell thinks need deeper justification. To say, with Dewey, that experimental

16 RUSSELL, 1948, p. 10.

17 See, for example, RORTY, 1979 and 1991, pp. 21-34.

justification is justification enough is, to Russell's way of thinking, to ignore sceptical doubts forced on us by our knowledge of physics and physiology, on the one hand, and immediate sensory contents, on the other. Yet Russell's case for this view fails to win Dewey over because Dewey thinks the challenge to knowledge Russell raises presumes an account of justification at odds with what the behavioural sciences tells us about the conditions for acquiring knowledge through experimental inquiry.

In light of the fact that Dewey and Russell disagree on what considerations should settle their debate, it is perhaps tempting to suppose that they are at a stand off and their views of knowledge incommensurable. However, such a conclusion is premature. While they each argue from within their own conception of philosophical inquiry, these conceptions presuppose views about language, meaning, mind, immediate experience, sense perception, logic, truth and reality. And on all these matters there are further arguments and deep disagreements that need and deserve to be thought through.

In this paper I have only scratched the surface of their controversy. What I have tried to argue is that the published exchanges between Dewey and Russell do not bring us any closer to a resolution of their philosophical differences. Dewey and Russell agree that epistemology should be done scientifically but they have different ideas of what this means. The question of who is really doing epistemology scientifically is not settled, as Dewey thinks it is, by appeal to findings in psychology or biology, for Russell does not disagree with Dewey about such things. Nor is it settled, as Russell claims, by the method of logical analysis, since Dewey accepts Russell's analysis of physical objects in terms of correlations of sense data (properly understood as involving relations among things in nature). It is for this reason that I maintain that their debate is not a straightforwardly scientific one—at least not in the sense that either Dewey or Russell gives to this term.

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