

**this is a manuscript version of the following two publications:**

**Biesta, G.J.J.** (2009). How to use pragmatism pragmatically: Suggestions for the 21<sup>st</sup> century. In A.G. Rud, Jim Garrison, and Lynda Stone (eds), *John Dewey at 150. Reflections for a New Century* (pp.30-39). Lafayette, IN: Purdue University Press.

and

**Biesta, G.J.J.** (2009). How to use pragmatism pragmatically: Suggestions for the 21<sup>st</sup> century. *Education and Culture* 25(2), 34-45.

**HOW TO USE PRAGMATISM PRAGMATICALLY?  
SUGGESTIONS FOR THE 21<sup>ST</sup> CENTURY**

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**Introduction**

I am never entirely sure what those who call themselves pragmatists or who declare an affinity with pragmatism actually believe in. Pragmatists would probably respond that this is the wrong question, as what matters is not what they believe in but what they do with their beliefs – or, to be more precise, what *follows* from their beliefs. After all, one of the founding insights of pragmatism is Charles Peirce’s contention that different beliefs are distinguished solely “by the different modes of action to which they give rise” so that “(i)f beliefs do not differ in this respect (...) then no mere differences in the manner of consciousness of them can make them different beliefs, any more than playing a tune in different keys is playing different tunes” (Peirce 1955, p.29). Yet even if it is granted that we should focus first and foremost on the *consequences* of pragmatism, it cannot be denied that pragmatism also consists of a set of beliefs such as, in John Dewey’s case, a belief in naturalism, in communication, in the scientific method, in intelligence and in democracy. The problem is that many critics of pragmatism have focused on these beliefs rather than on the particular arguments in which these beliefs function. This has led to much misunderstanding about pragmatism, not only amongst critics of pragmatism but sometimes also amongst those who are sympathetic to pragmatism.

In this paper I wish to focus on one particular aspect of this discussion – one particular ‘misunderstanding’ so to speak – which concerns Dewey’s appreciation for the method and worldview of modern science. A superficial reading of Dewey’s work – or perhaps we should say a reading that focuses exclusively on the *beliefs* that can be found in Dewey’s writings – might indeed give the impression that Dewey not only endorsed the scientific *method* but also seemed to believe in the *worldview* of modern science. I wish to argue, however, that rather than a celebration of the method and worldview of modern science, Dewey’s philosophy actually amounts to a profound critique of the hegemony of modern science in contemporary life. Rather than an argument for the superiority of scientific rationality, Dewey’s philosophy can actually be seen as an attempt to develop a more encompassing and more ‘humane’ conception of rationality.

Central to Dewey’s argument is the claim that if we take the procedures and findings of modern science seriously – which means taking them in their own terms rather than interpreting them with philosophical categories that were developed long before the emergence of modern science – we end up with a completely different understanding of reality and truth than what is commonly claimed about scientific knowledge, viz., that it provides us with an account of how the world really is. Reading Dewey in this

way not only helps to understand why his critique of the hegemony of modern science is so effective – he begins, after all, by taking modern science seriously; it also helps to understand why discussions about the methods and views of modern science play such a central role in Dewey’s writings. But it would be a mistake to claim, as the German philosopher Max Horkheimer did in one of the most detailed discussions of Dewey’s work emerging from continental critical theory, that all this amounts to a “worship of natural sciences” (Horkheimer 1947, p.49) and that it makes pragmatism into a form of scientism that is actually unable to be in any sense critical of the role science plays in modern society.

Reading Dewey’s work as a critique of a particular representation of modern science and, through this, as a critique of the role that modern science appears to claim within modern society is in my view tremendously important if we are interested in the question whether Dewey’s pragmatism has anything to offer in the 21<sup>st</sup> century. As long as we approach Dewey’s philosophy just as ‘a philosophy,’ that is, as long as we engage with his work at the level of his beliefs rather than in function of the wider problem he sought to address, we severely restrict the opportunities that his pragmatism has to offer for dealing with the problems that characterise our global condition at the dawn of the 21<sup>st</sup> century: problems that have to do with inter-cultural, inter-ethnic and not in the least inter-religious communication and understanding. Whereas a Dewey that would be presented as a defender – or even worse: a worshipper – of the scientific worldview and scientific method would only be one party in such communication, the Dewey that engages critically with the methods and beliefs of science in order to address a wider ‘crisis in culture’ might at least be able to enter the conversation from a different and hopefully more fruitful angle (see also Biesta in press). It is the latter Dewey that I wish to present in this paper.

### **Science and Philosophy: Was Dewey a Positivist?**

In his book *Reconstruction in Philosophy* Dewey wrote that “intelligent method, logic, is still far to seek in moral and political affairs” (Dewey 1920, p.159). Against this background he argued “for the adoption in moral reflection of the logic that has been proven to make for security, stringency and fertility in passing judgements upon physical phenomena” (ibid., p.174). Some have taken Dewey’s plea for a “scientific treatment of morality” (Dewey 1903a, pp.3-39) and his endorsement for the method of modern science more generally to mean that Dewey was a positivist, that is, someone who holds that we should only rely on ‘positive’ knowledge about reality, and not on ‘speculative’ knowledge. Others have even gone one step further and have accused Dewey of ‘scientism,’ which is the view that what the natural sciences have to say about the world is all there is to say (see Horkheimer 1947). Dewey has always been very clear about the value and importance of the scientific method because “its comparative maturity as a form of knowledge exemplifies so conspicuously the necessary place and function of experimentation” (Dewey 1939, p.12). But his appreciation for the method of modern science “would be misinterpreted if it were taken to mean that science is the only valid kind of knowledge” (Dewey 1929, p.200). Dewey not only rejected the idea that the knowledge produced by modern science is the only valid kind of knowledge. He even argued against the more general idea that knowledge is the only way in which we can get access to reality. If there is one recurring theme in Dewey’s work it is precisely his critique of the idea that knowledge is the “measure of reality of [all] other modes of experience” (Dewey 1929, p.235).

The main problem with the identification of what is known with what is real, is that it makes it appear as if all other dimension of human life – such as the practical, the aesthetic, the ethical, or the religious dimensions – can only be real if they can be reduced to and validated by what is revealed through knowledge. By assuming that knowledge provides the ‘norm’ for what is real, other aspects of the ways in which human beings live their lives are relegated to the domain of the subjective – the domain of individual taste, points of view, feelings, individual experiences and perspectives. “When real objects are identified ... with knowledge-objects,” Dewey therefore argued, “all affectional and volitional objects are inevitably excluded from the ‘real’ world, and are compelled to find refuge in the privacy of an experiencing subject or mind” (Dewey 1925, p.30). In this way the identification of what is known with what is real has driven a wedge between people and their many ways of being in and interacting with the world. It thus has made the human actor into an “unnaturalized and unnaturalizable alien in the world” (Dewey 1925, p.30). Dewey saw the identification of what is known with what is real as one of the most fundamental mistakes of modern philosophy; a mistake to which he referred as the “intellectualist fallacy” (Dewey 1929, p.175; see also 1925, pp.28-30).

One way to understand Dewey’s wider ‘project’ is to see it as an attempt to undo this mistake so that those dimensions of our being in the world that cannot be traced back to (scientific) knowledge can again be seen as real. In order to do this, Dewey had to make clear that the domain of knowledge and the domain of action are not separate domains, but that they are intimately connected; that knowledge emerges from action and feeds back into action. The reason why Dewey turned to modern science to make this point is precisely because the experimental method of modern science is an approach in which knowledge and action are already intimately and inextricably connected. For those who think that introducing the idea of action into the domain of (scientific) knowledge poses a threat to the purity, truth, or objectivity of knowledge, this may appear to be a problem. Dewey simply argued, however, that such assumptions about (scientific) knowledge rely on an epistemology that was developed long before the emergence of the experimental method of modern science and that are therefore fundamentally out of kilter with the method of modern science itself.

The issue for Dewey was, however, not only about the philosophical interpretation of the method of science, but also about our understanding of how this method actually operates. It was in this context that he even argued that the experimental approach of modern science actually looks much more like the style of reasoning and judgement that is commonly seen as characteristic of the domain of value, in that it is fallible, focused on individual cases, and intimately connection with action. He therefore wrote: “The actual point of my theory may ... be found in the transfer of traits which has been reserved for the function of moral judgement over to the processes of ordinary and scientific knowledge.” (Dewey 1939, p.62) That this is anything but a positivistic or ‘scientistic’ strategy becomes even clearer when we look at the following statement from Dewey’s 1903 article “Logical conditions of a scientific treatment of morality”.

(T)here is no question of eliminating the distinctive quality of ethical judgements by assimilating them to a different logical type found in so-called scientific judgements; precisely because the logical type found in recognized

scientific judgments is one which already takes due account of individualization and activity. (Dewey 1903a, p.8)

This quotation shows that when Dewey argued for the adoption of the method of modern science in other domain of life, he was not talking about this method as an algorithm for the production of certainty. For Dewey the scientific method itself stands for an approach that is experimental and fallible; an approach, moreover, in which knowledge and action are not separated by intimately connected. Part of what Dewey aimed to achieve in his writings – for example in such books as *Studies in Logical Theory* (Dewey 1903b), *Essays in Experimental Logic* (Dewey 1916b) and, most notably, *Logic: The Theory of Inquiry* (Dewey 1938) – was the development of a theory of *knowing* (more than a theory of *knowledge*) that was consistent with the actual methods of modern science, rather than with an idealized view of what this method was about. In this regard we might say that rather than aiming for a scientific treatment of morality, Dewey was actually articulating a ‘moral’ treatment of science. But Dewey’s ambition was not simply methodological or cognitive; his ambition was not simply to get a more accurate account of the ‘logic’ of scientific inquiry. He felt that this was needed in order to address a wider and deeper problem – a problem to which he referred as the *crisis* in modern culture.

### **The Crisis in Culture**

Dewey saw his work first and foremost as a response to a ‘crisis’ in modern culture; a crisis that was the result of the influence of modern science on everyday life or, with Dewey’s phrase, “common sense” (Dewey 1948, p.265; see also Dewey 1929, pp.32-33). Dewey argued that modern science has completely altered our understanding of the world in which we live. It has given us a view of the world as a mechanism, as “a scene of indifferent physical particles acting according to mathematical and mechanical laws” (Dewey, 1929, p.33). Modern science has thus “stripped the world of the qualities which made it beautiful and congenial to men [sic]” (ibid). Because the world as presented by modern science has been interpreted as an account of how reality *really* is, it has derogated the world of everyday life to the level of mere, subjective experience. The problem with this is a double one. It has not only affected the division between what is real and what is merely phenomenal or subjective; it has at the very same time affected our understanding of rationality in that rationality has become confined to the domain of science – to that of scientific reason and scientific reality. Dewey put the predicament as follows.

The net practical effect is the creation of the belief that science exists only in the things which are most remote from any significant human concern, so that as we approach social and moral questions and interests we must either surrender hope of the guidance of genuine knowledge or else purchase scientific title and authority at the expense of all that is distinctly human. (Dewey 1939, p.51)

The problem is, in other words, that the interpretation of the worldview of modern science as ultimately real has put us in a position with two, equally unattractive options: we can have rationality at the expense of all that is distinctly human, which means that if we are concerned about all that is distinctly human it can only be at the expense of rationality. This predicament lies at the very heart of the crisis in culture – which reveals that for Dewey this crisis is first and foremost *a crisis of rationality*.

The fact that Dewey relates the crisis in culture to a specific *interpretation* of the mechanistic worldview of modern science should not be read to imply that the crisis is only a theoretical problem and has nothing to do with the urgent practical problems of contemporary life. Dewey rather wanted to stress that the hegemony of scientific rationality and the scientific worldview – i.e., the situation in which it is assumed that rationality only has to do with the 'hard facts' of science, and not with values, morals, feelings, emotions and so on – makes it almost impossible to find an adequate solution for these problems, since the situation we are in is one in which rationality gets restricted to facts and means, while values and ends are, by definition, excluded from rational deliberation. What makes all this even more urgent is the fact that to a very large extent modern life is what it is as a result of the “embodiment of science in the common sense world” (Dewey 1938, p.81). We are, after all, constantly surrounded by the products and effects of modern science, particularly through the omnipresence of technology in our lives, and this seems to ‘prove’ again and again the truth of the scientific worldview upon which it is based (for an example of this way of reasoning see Gellner 1992). This is why Dewey wrote that the “outstanding problem of our civilization” is set by the fact “that common sense in its content, its ‘world’ and its methods is a house divided against itself” (Dewey 1938, p.84).

It is in relation to this that Dewey set a major task for (his) philosophy. He wrote:

The problem of restoring integration and co-operation between man's [sic] beliefs about the world in which he lives and his beliefs about values and purposes that should direct his conduct is the deepest problem of any philosophy that is not isolated from that life. (Dewey 1939, pp.8-9)

In order to achieve such integration, Dewey felt that two philosophical problems had to be addressed (see *ibid.*). First of all we need to find out whether it is possible to accept the findings of modern science in such a way that they do no longer pose a threat to the realm of values – using that word to designate “whatever is taken to have rightful authority in the direction of conduct” (Dewey 1929, p.315). Second, we need to find an answer to the question whether the world of natural science and everyday life – the world of ‘common sense’ – can be reconciled. Dewey believed that philosophy can help to find a way out of the crisis in culture partly because it had played such a central role in creating the grounds for this crisis in the first place. The crisis in culture was after all first and foremost the result of a particular *interpretation* of the findings of modern science – an interpretation in which it is claimed that the knowledge generated by modern science gives us the world as it really and ultimately is.

### **Spectators and Participants**

The key question here is whether this interpretation of the findings of modern science is inevitable. According to Dewey this is not the case. His argument is partly philosophical and partly historical. The historical line of his argument focuses on the question why the scientific worldview has been interpreted as an account of what the world is really like. The roots of this problem lie in the birth of western philosophy in Greek society. According to Dewey western philosophy emerged in a society in which knowing was more valued than doing, and in which theory had a much higher status than practice (see Dewey 1916a, pp. 271-285). The reason for this hierarchy

was a longing for absolute, immutable certainty and the recognition that such certainty could not be obtained in the domain of action (Dewey 1929, pp.5-6). The identification of what is certain with what is immutable led philosophers such as Plato to a metaphysics in which it was maintained that only what is fixed and unchangeable can be real, and to an epistemology in which it was argued that certain knowledge “must related to that which has antecedence existence or essential being” (Dewey, 1929, p.18). One implication of this set of assumptions was that true knowledge could only be acquired if the process of acquisition does not exert any influence on the object of knowledge (see Dewey 1929, p.19). For this reason the acquisition of knowledge was cut off from the domain of action and became understood in terms of visual perception – a theory that Dewey referred to as the “spectator theory of knowledge” (Dewey 1929, p. 19). According to Dewey this has had a profound impact on our understanding of knowledge up to the present day. “(T)he notion which has ruled philosophy ever since the time of the Greeks, [is] that the office of knowledge is to uncover the antecedently real, rather than, as in the case with our practical judgments, to gain the kind of understanding which is necessary to deal with the problems as they arise” (ibid., p.14).

One of the interesting aspects of the Greek worldview was the assumption that values were part of reality. The Greeks assumed, in other words, that reality was purposeful. This meant that for the Greeks true, objective knowledge about reality would at the very same time provide us with guidelines for the direction of human action. It is not too difficult to appreciate the kind of problems that arose when the mechanical worldview of modern science emerged. Whereas until then it had been possible to derive aims and values from our knowledge of the world, modern science “ceased to disclose in the objects of knowledge the possession of any such properties” (Dewey 1929, p.34). This led to the question of how the results of the new science could be accepted and the domain of values maintained. Dewey argued that, given the available philosophical framework – the spectator theory of knowledge – there appeared to be only one possible solution: values had to be relegated to a separate domain, the domain of the non-material, the spiritual and the subjective. “Qualities, excellencies and ends that were extruded from nature by the new science (...) found their exclusive abode and warrant in the realm of the spiritual” (Dewey 1929, p.23). To be able to accept the findings of modern science and at the same time safeguard the domain of values, philosophers such as Descartes and Kant thus introduced the distinction between mind and matter, between the objective and the subjective, and between facts and values. Whereas science was positioned on the side of matter, the objective and facts, all that was relevant for direction in the domain of human action ended up on the side of the mental and the subjective – and this created the framework in which the crisis in culture could emerge.

Dewey’s main point with this reconstruction of the development of modern philosophy is to make clear that the distinction between mind and matter, between the subjective and the objective, between facts and values is not the inevitable or necessary point of departure for all philosophy. It rather is the particular solution that the inaugurators of modern philosophy came up with to tackle the problem of how to accept the findings of modern science and at the same time retain the realm of values. What Dewey’s reconstruction also shows is that this problem was, in a sense, an artificial problem from the very start. After all, “(i)f men [sic] had associated their ideas about values with practical activity instead of with cognition and antecedent

Being, they would not have been troubled by the findings of science” (Dewey 1929, p.34).

When, against this background, Dewey looked favourable at modern science it was first of all because his analysis shows that the road taken at the beginning of modern times, i.e., to split mind and matter, the objective and the subjective, facts and values, was not inevitable but was only one of the available options. When modern science emerged there were actually *two* options for philosophy. The one that was taken was to use the existing philosophical framework to interpret the findings of modern science, and it was this manoeuvre that eventually led to the crisis in modern culture. The road not taken, however, was to explore what would happen if we would adjust our theories of knowledge and reality in line with the findings and methods of modern science itself. It is the latter line that was explored by Dewey and explains the prominent role of the scientific worldview and method in his writings. But it is crucial to see that Dewey is not exploring the worldview and method of modern science on the assumption that this worldview is true and that therefore the scientific method must be the key to the truth, as such an interpretation would rely on the very philosophical framework that Dewey seeks to overcome. Dewey’s writings on the worldview and method of modern science should be understood entirely pragmatically. They function in Dewey’s attempts to address a very specific problem, the problem of the crisis in culture caused by a ‘clash’ between modern science and pre-modern philosophy.

### **Transactional Realism**

There is, of course, a lot that can be said about Dewey’s theory of knowing and about the reconstruction of epistemology, metaphysics and western philosophy that is implied in this theory. Within the scope of this paper I can only focus on the general structure of Dewey’s views which I will do by focusing on Dewey’s ‘transactional realism’ (for this term see Sleeper 1986; see also Biesta & Burbules 2003).

The starting point for Dewey’s philosophy is the idea that as living beings we are always already in interaction – or to use Dewey’s term: transaction – with the world. . It is not that we first need to gain knowledge about the world before we can act. As living beings we are always already acting ‘upon’ and ‘with’ the world. This means that there is no fundamental gap between us and the world, unlike what was assumed in the dualistic worldview which starts from an unbridgeable gap between mind and matter. Transaction means that we are always already ‘in touch’ with the world and this connection, in turn, ensures that our knowledge is always knowledge ‘of’ the world. We can say, therefore, that our knowledge is real as it is ‘about’ the world. However, unlike in the spectator theory of knowledge in which it is assumed that our knowledge is an (objective) picture of a world independent from us, Dewey’s transactional view implies that we only know the world *in function of* the ways in which we manipulate, interact with and intervene in the world. Our knowledge is, in other words, knowledge of the possible *relationships* between our actions and their consequences. ‘The world’ is therefore not that what we create knowledge about. ‘The world’ rather is a particular construction we make in order to account for the relationships between actions and consequences. This world is, therefore, no longer an objective world in the traditional sense – i.e., a world disconnected from our interests and activities. It is a world that in a sense emerges – or to put it in more active terms: that is hypothesised – on the basis of the perceived relationships between actions and

consequences. The objects that populate this world – which for Dewey can be called objects of knowledge as long as we do not assume that these objects exist before the act of knowing; they are rather the outcome of it – can be compared to instruments that can not only help us to account for relationships between actions and consequences but that can also become instruments in drawing practical implications from our knowledge, e.g., in the form of technology.

What Dewey's transactional realism thus offers is a way to understand reality as a function of our knowledge and where knowledge is itself entirely understood in terms of relationships between actions and consequences. Not any relationship is possible. When we intervene in the world, the world will 'respond' in a particular way or in a limited number of ways. When we approach the world for technological purposes – for mastery and control – we will 'find' a different world, then when we approach the world for the purpose of aesthetic enjoyment or when we approach the world through an ethical attitude. All such approaches are real encounters with a real world. It is not that some of these encounters are real and others just phenomenal (or even epiphenomenal). The main advantage of Dewey's approach is that it allows us to see the world of modern science as one particular construction related to very particular – mainly technological – interventions and manipulations. It is in relation to those particular actions that the world emerges as a world of, for example, atoms, quarks and bosons. But this world is not more real than the world of aesthetic enjoyment or ethical engagement. It is just a particular instrument that allows us to do some things – but, of course, not others and not all. Along these lines Dewey's transactional realism provides us with a way to acknowledge the scientific worldview and the technology that has been brought about on the basis of this worldview, *without* having to concede that this is the only real or only possible worldview. It is one particular world that sits next to others; a world, moreover, that is useful in relation to some of our actions and endeavours, but that can be utterly meaningless in other contexts of human activity.

It is along these lines that Dewey is able to argue that the world of modern science and the world of everyday experience are not to be seen as worlds that are in competition. The question is not whether the world of modern science is more real or more true than the world of everyday experience. They are simply different constructions, different ways of accounting for the relationships between actions and consequences, and while one world will be more useful in one situation another world may be more useful or appropriate in another. Transactional realism thus allows Dewey to argue that there is no philosophical ground for the hegemony of the scientific worldview. Dewey shows that science can no longer claim any privileged access to the world – the only thing it can claim is that it accesses the world in a very particular way, a way that generally is useful if our aim is to increase control over the world. But if our aim, instead, is to care for the world or to take responsibility for the world, then we enter in a whole set of different relationships between actions and consequences and thus in a completely different view of the world in and through which we act.

### **Conclusions: Pragmatism for the 21<sup>st</sup> Century**

The purpose of this paper has been to indicate how we should understand Dewey's attention to and appreciation for the methods and views of modern science. Against the idea that Dewey is a believer in the methods and views of modern science – which would make his philosophy into a form of positivism or scientism – I have argued that



Dewey's ambition has been to show the limits of science, both in terms of scientific knowledge and in terms of scientific rationality. Although Dewey has nothing against science as such, his work is motivated by a concern about the impact of a particular 'version' or interpretation of modern science, viz., the one which says that modern science is the only way towards true knowledge about the world. Dewey shows, and I have made clear in the foregoing reconstruction, that there is no philosophical justification for the hegemony of modern science. In this regard Dewey's philosophy can be seen as a radical critique of the hegemony of modern science. Unlike those critics who attack science from the 'outside,' so to speak, Dewey's approach is more immanent in that he asks what would follow for our understanding of knowledge and reality if we take the findings of modern science as our starting point. Dewey's critique of the hegemony of modern science is therefore first of all effective because he starts by taking the methods and findings of modern science seriously. But more importantly his critique is also effective because it does not end up in a wholesale condemnation of modern science but in a more precise account of how we should understand and interpret the achievements of modern science and understand its limitations and limits. It is through this that Dewey opens up opportunities for other modes and forms of human action and interaction to (re)gain reality rather than always having to be dependent upon the one true and real 'standard' provided by modern science. In this way Dewey not only convincingly shows how the world of natural science and the world of 'common sense' can exist together. He also creates a situation in which it is possible to accept the findings of modern science without them posing a threat to the realm of values. Central in all this is the simple idea that science is just one way in which we can engage with the world – a way that can be very useful, particularly in relation to technological control, but that in no way can claim privileged access to the world as it really is.

While all this is important if we wish to mobilise Dewey to address the crisis in modern culture – and in my view this crisis as diagnosed by Dewey has strengthened rather than lessened at the dawn of the 21<sup>st</sup> century – my argument also has implications for how we approach and understand Dewey's ideas themselves. The main point I wish to make is that we should resist the temptation to take the *content* of Dewey's philosophy in itself seriously. As long as we would read Dewey's philosophy as an account of how things really are, we are in a sense repeating the very mistake that Dewey identified as being at the very heart of the crisis in culture. This is why we should resist, in other words, to believe in the beliefs expressed in Dewey's philosophy and instead should read his work entirely pragmatically, i.e., as an attempt to address a particular problem, not as an attempt to 'do' philosophy in the traditional, representational sense. As long as we do not do this, we not only go against what I see as the main 'driver' of Dewey's work – i.e., his ambition to address the crisis in modern culture. We also limit the very possibilities that can be found in Dewey's pragmatism for addressing some of the most urgent problems of our times, problems in which the worldview of modern science is itself at stake rather than that it can function as the unproblematic background for any dialogue 'across difference.' If Dewey's pragmatism will have anything to offer in the 21<sup>st</sup> century, we must disentangle it from any form of positivism or scientism, and read and represent it in the most pragmatic way possible, that is, as an attempt to address a particular problem, and not as an attempt to articulate a new truth about the universe.

## References

Biesta, G.J.J. (in press). "This is my truth, tell me yours." Deconstructive pragmatism as a philosophy for education. *Educational Philosophy and Theory*.

Biesta, G.J.J. & Burbules, N.C. (2003). Pragmatism and educational research. Lanham, MD: Rowman & Littlefield.

Gellner, E. (1992). *Postmodernism, reason and religion*. London/New York: Routledge.

Horkheimer, M. (1947). *Eclipse of reason*. New York: Oxford University Press.

Peirce, C.S (1955). How to make our ideas clear. In *Philosophical Writings of Peirce* (pp.23-41). New York: Dover Publications.

Dewey, J. (1903a). Logical conditions of a scientific treatment of morality. In J.A. Boydston (ed), *John Dewey. The middle works (1899-1924) Volume 3* (pp.3-39). Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1903b). *Studies in logical theory*. In J.A. Boydston (ed), *John Dewey. The middle works (1899-1924) Volume 2* (pp.293-375). Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1916a). *Democracy and education*. In J.A. Boydston (ed), *John Dewey. The middle works (1899-1924) Volume 8*. Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1916b). *Essays in experimental logic*. In J.A. Boydston (ed), *John Dewey. The middle works (1899-1924) Volume 10*. Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1920). *Reconstruction in philosophy*. In J.A. Boydston (ed), *John Dewey. The middle works (1899-1924) Volume 12*. Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1925). *Experience and nature*. In J.A. Boydston (ed), *John Dewey. The later works (1925-1953) Volume 1*. Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1929). *The quest for certainty*. In J.A. Boydston (ed), *John Dewey. The later works (1925-1953) Volume 4*. Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1938). *Logic: The Theory of Inquiry*. In J.A. Boydston (ed), *John Dewey. The later works (1925-1953) Volume 12*. Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1939). Experience, knowledge and value: A rejoinder. In J.A. Boydston (ed), *John Dewey. The later works (1925-1953) Volume 14* (pp.3-90). Carbondale and Edwardsville: Southern Illinois University Press.

Dewey, J. (1948). Introduction: Reconstruction as seen twenty-five years later. In J.A. Boydston (ed), *John Dewey. The later works (1925-1953) Volume 12* (pp.256-277)  
Carbondale and Edwardsville: Southern Illinois University Press.