

Artículos / Articles

Is There Such a Thing as a Social Science?

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ABSTRACT

This paper looks at the centrality of *action* in social disciplines and examines the implications of this for whether social disciplines can be called scientific. Various reasons for calling social disciplines scientific are examined and rejected: (1) the claim that social disciplines are *reducible* to natural scientific ones, (2) the claim, from Donald Davidson, that reasons for action are to be construed in causal terms, (3) the claim that social disciplines employ, or should employ, the methodologies of the natural sciences. The question of progress in social disciplines will also be examined critically. Does the (apparent) lack of progress in social disciplines suggest that academics working in sociology, economics, politics, human geography, and philosophy should adopt the methods of natural science? My answer will be that it does not but nonetheless I will side with John Dupré against Hutchinson, Read, and Sharrock in claiming that social disciplines can properly be called scientific. There *is* such a thing as a social science.

KEYWORDS

Action, social science, reductionism, progress, causation.

RESUMEN

Este trabajo examina la centralidad de la acción en las disciplinas sociales y las implicaciones de este con el fin de saber si las disciplinas sociales pueden ser llamadas científicas. Se examinan y rechazan diversas razones que califican las disciplinas sociales de científicas: 1) la afirmación de que las disciplinas sociales son reducibles a las ciencias naturales; 2) la alegación, de Donald Davidson, de que las razones de la acción deben interpretarse en términos causales; 3) la afirmación de que las disciplinas sociales emplean o deberían emplear las metodologías de las ciencias naturales. La cuestión del progreso en las disciplinas sociales es examinada críticamente. ¿Deben adoptar los métodos de las ciencias naturales los académicos que trabajan en sociología, economía, política, geografía humana y filosofía a la aparente falta de progreso en las disciplinas sociales? Mi respuesta es negativa y comparo los puntos de vista de John Dupré contra Hutchinson, Read y Sharrock al afirmar que las disciplinas sociales pueden considerarse científicas ya que existe algo como ciencia social.

PALABRAS CLAVE

Acción, ciencias sociales, reduccionismo, progreso, causalidad.

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I am not interested in constructing a building, so much as in having a perceptive view of the foundations of possible buildings. So I am not aiming at the same target as the scientists and my way of thinking is different from theirs!

I. INTRODUCTION

Action is significant in Wittgenstein's later work and Wittgenstein's work is significant in terms of the development of the philosophy of action. In the very first of the numbered remarks in his *Philosophical Investigations* Wittgenstein highlights the way a shopkeeper acts in delivering goods to a customer as a way of contrasting his understanding of language with the 'Augustinian' picture of language. In discussing one sense of the expression 'language game' Wittgenstein describes a language game as consisting of «language and the activities into which it is woven»². In other remarks Wittgenstein discusses the relationships between action and ostensive definition³, the action of a machine (in connection with his discussion of rule following/the relationship between a rule and action in accordance

with it)⁴, action and reasons⁵, action/behaviour and language⁶, acting and thinking⁷, acting on orders⁸, and action and the will⁹.

In his book *The Idea of a Social Science* Peter Winch developed Wittgenstein's ideas about action, behavior, language, and rules into a critique of the idea that the disciplines known as the social sciences are scientific in the manner of the natural sciences. Action appears in *The Idea of a Social Science* as a way of distinguishing natural sciences, which feature causal explanations prominently, from social sciences, which focus upon human actions and feature explanations in terms of reasons and motives prominently. Winch distinguishes actions from habitual behaviour and distinguishes actions in terms of motives from causal explanations. Wittgenstein was notoriously opposed to scientism, i.e. the attempt to bring the methods of science to bear in areas where they are not appropriate, especially in philosophy¹⁰. Winch, following Wittgenstein, detailed ways in

⁴ Ibid. §193.

⁵ Ibid. see, for example, §211.

⁶ Wittgenstein's 'private language argument' provides a good example of his thinking about language and action but action and language are discussed throughout the *Philosophical Investigations*. See, for example, §243, §556.

⁷ Ibid. see, for example, §330 and §490.

⁸ Ibid. §459-460, §487, §493, §505, §519.

⁹ Ibid. §§611-628. In a recent collection of articles on the philosophy of action edited by Constantine Sandis and Jonathan Dancy the editors place this selection of remarks from Wittgenstein at the front of the book because «[t]he work of Wittgenstein has been seminal in this change [the move towards having graduate classes devoted entirely to the philosophy of action]» ('Preface' to Dancy, J. and Sandis, C. (eds.) *Philosophy of Action: An Anthology*, Wiley-Blackwell: Oxford, 2015, p. 10).

¹⁰ For example, in the Blue Book Wittgenstein says that «[p]hilosophers constantly see the method of science before their eyes, and are irresistibly tempted to ask and answer questions in the way science does. This tendency is the real source of metaphysics and leads the philosopher into complete darkness» (Wittgenstein, L. *The Blue and Brown Books*, Harper & Row: New York, 1958, p. 18). See also §81, §89, §109, PPF 365 and PPF 371 in

¹ Wittgenstein, L. *Culture and Value*, trans. Peter Winch, Oxford: Blackwell, 1980, p. 7.

² Wittgenstein, L. *Philosophical Investigations*, Revised 4th edition by P. M. S. Hacker and Joachim Schulte, trans. G. E. M. Anscombe, P. M. S. Hacker and Joachim Schulte, Wiley-Blackwell: Oxford, 2009, §7.

³ Ibid. see, for example, §33 and §36.

which social investigations differ from investigations in the natural sciences.

Phil Hutchinson, Rupert Read and Wes Sharrock have recently defended Winch's account of differences between natural sciences and social disciplines. In their book *There is No Such Thing as a Social Science* they come to the conclusion that calling social disciplines 'sciences' is likely to lead to confusion¹¹. However, not all philosophers who have been influenced by Wittgenstein and Winch agree that there is no such thing as a social science. At the British Wittgenstein Society conference in 2015 (on Wittgenstein and the social sciences) John Dupré defended the idea that social studies can be scientific¹².

In discussing whether the disciplines that are known as social sciences¹³ are in fact scientific there are a number of different ways in which the question might be approached. (i) One way of arguing that social sciences are scientific is to claim that social sciences are *reducible* to natural sciences. The positivists of the Vienna Circle and philosophers influenced by them (as well as many scientists) have made the claim that social sciences are reducible to natural sciences, i.e. that behaviour at the level

Wittgenstein, L. *Philosophical Investigations*, Revised 4th edition by P. M. S. Hacker and Joachim Schulte, trans. G. E. M. Anscombe, P. M. S. Hacker and Joachim Schulte, Wiley-Blackwell: Oxford, 2009.

¹¹ Hutchinson, P., Read, R., and Sharrock, W. (eds.) *There is No Such Thing as a Social Science: In Defence of Peter Winch*, Ashgate: Aldershot, 2008, p. 51.

¹² A video of the talk John Dupré gave can be found here: <http://www.britishtwittgensteinsociety.org/news/annual-conference/conference-videos>. The paper delivered has since been published as 'Social Science: City Centre or Leaky Suburb?' in *Philosophy of the Social Sciences*, May 2016.

¹³ Social sciences are usually thought to include economics, sociology, anthropology, human geography, politics and sociology: disciplines which aim at knowledge of the various relationships between individuals and the societies they belong to. There is more disagreement about whether philosophy and history are to be counted among the social sciences.

of social groups can ultimately be explained in terms of objects at another level – cells, or molecules, atoms, physical things or even sense data. Reductionists often accompany this claim with the claim that laws at one level can be derived from laws at a lower level (e.g. that the laws of chemistry can be derived from the laws of physics). (ii) One might not accept reductionism but nonetheless claim that the kind of explanations used in the social sciences are of the same sort as those used in the natural sciences. The debate about whether explanations in terms of reasons are causal explanations is relevant to this. Donald Davidson in the later part of the twentieth century famously argued that reasons are causes. (iii) Another relevant issue in deciding whether the social sciences are scientific is *methodology*. Some have defended the claim that social sciences are scientific on the basis that they employ the same methodology as natural sciences¹⁴. (iv) A problem that arises in comparing natural sciences to social sciences is that there does not seem to be the same kind of *progress* in the social sciences as in the natural ones. In the natural sciences we see widespread agreement over a wide range of issues as well as advances in technology and in the sophistication and usefulness of theories. However, in the social sciences disagreement is the rule and doubts are raised about whether any progress has been made (in philosophy in particular). There is certainly no clear agreement amongst philosophers about, for example, the relationship between mind and body, and philosophers are still puzzled about the question of whether human

¹⁴ For example, Otto Neurath (of the Vienna Circle) claims that it is not reasonable to separate cultural sciences from natural ones by saying that each employ special methods (Neurath, O. 'Physicalism: The Philosophy of the Viennese Circle', in *Philosophical Papers 1913-1946* (Vienna Circle Collection) Vol. 16 edited and translated by Robert S. Cohen and Marie Neurath, D. Reidel Publishing Company, Dordrecht/Boston/Lancaster, p. 50).

beings have free will despite centuries of having discussed the question¹⁵.

It is worth noting that John Dupré and Hutchinson, Read and Sharrock would largely agree in how they would think about the issues of reductionism, the varieties of explanation, methodology, and progress. However, they come to different conclusions. In this paper I will come down on the side of Dupré and conclude that ultimately the question of whether the social sciences are scientific does not rest on whether they are reducible to natural sciences or whether they employ the same methodologies. I will argue that social sciences are not reducible to natural sciences and that social and natural sciences do not employ the same methodologies across the board (and nor should they) but that nonetheless disciplines like psychology, sociology, and economics can make some claim to be scientific.

Before going on to discuss reductionism it is first worth-while mentioning the related, infamous, dispute in the late 1950s and early 1960s between C. P. Snow and F. R. Leavis about whether there were two cultures, literary and scientific, which were mutually uncomprehending of one another. Snow suggested that there were and that in order to correct the situation there should be greater efforts to educate the young in the natural sciences and to introduce more scientific literacy into politics. He thought that this would lead to improvements in society, especially in poorer parts of the world. Snow was accused of scientism for his efforts to promote the role of science in so-

¹⁵ There is an excellent recent book on the topic of theorising in social sciences written from a critical Wittgensteinian perspective that I will not discuss here. Leonidas Tsilipakos' *Clarity and Confusion in Social Theory* (Ashgate: Farnham, 2015) discusses problems with trying to import theoretical frameworks into social sciences. My review of his book appeared in Vinten, R. 'Review of «Clarity and Confusion in Social Theory» by Leonidas Tsilipakos', *Nordic Wittgenstein Review*, Vol. 4, No. 2, 2015.

ciety¹⁶. Leavis, on the other hand, argued that there was just one culture¹⁷ (and was accused of 'literarism'¹⁸). Leavis's concerns about Snow's scientism are not of the same sort as Wittgenstein's worries about scientism mentioned above. Whereas Leavis was primarily concerned with the way in which Snow emphasized science education and technological progress at the expense of literature and social science education which involved a kind of lacuna in terms of what makes for good, meaningful, happy lives (literature has an important role to play, according to Leavis), Wittgenstein's worries about scientism were primarily about the confusion caused by trying to import scientific methods and concepts into social sciences (particularly philosophy but also psychology and other social/humanistic disciplines) and about attempts to reduce social sciences to natural ones. However, that is not to say that there is no overlap at all. Wittgenstein expressed somewhat similar worries to Leavis about progress¹⁹ and Leavis had relevant things to say about the status of social and humanistic disciplines that I will come back to in my conclusion²⁰.

¹⁶ See Leavis, F. R. 'Luddites? Or, There is Only One Culture' in *Two Cultures? The Significance of C. P. Snow* (with Introduction by Stefan Collini), Cambridge: Cambridge University Press, 2013, p. 103.

¹⁷ *Ibid.* p. 101 and p. 106.

¹⁸ *Ibid.* p. 103.

¹⁹ In one of the remarks published in *Culture and Value* Wittgenstein says that, «[o]ur civilization is characterized by the word 'progress'. Progress is its form rather than making progress being one of its features. Typically it constructs. It is occupied with building an ever more complicated structure. And even clarity is only a means to this end and not an end in itself. For me on the contrary clarity, perspicuity are valuable in themselves. I am not interested in constructing a building, so much as in having a perspicuous view of the foundations of possible buildings. So I am not aiming at the same target as the scientists and my way of thinking is different from theirs» (Wittgenstein, L. *Culture and Value*, trans. Peter Winch, Oxford: Blackwell, 1980, p. 7).

²⁰ Leavis and Wittgenstein were briefly friends (see Monk, R. *Ludwig Wittgenstein*, London: Vintage, 1991 pp. 42, 272, 278-9, 569 and also

II. REDUCTIONISM

(i) What is reductionism?

Reductionism has been defined as «a commitment to the complete explanation of the nature and behaviour of entities of a given type in terms of the nature and behaviour of their constituents»²¹. The *Stanford Encyclopedia of Philosophy* entry on reductionism²², makes the point that «[s]aying that *x* reduces to *y* typically implies that *x* is nothing more than *y* or nothing over and above *y*» and so the scientist Francis Crick's claim that «[*y*]ou...are in fact no more than the behaviour of a vast assembly of nerve cells...»²³ is an expression of a reductionist view. Crick goes on to argue that a nerve cell in turn can be expected to be understood in terms of its parts, «...the ions and molecules of which it is composed»²⁴. So, one might think that social groups are made up of collections of multicellular organisms, and multicellular organisms are made up of cells, which are made up of molecules made up of atoms composed out of subatomic particles, and that we can explain entities at one level in terms of the lower levels, with the subatomic particles studied by physics at the lowest level of explanation²⁵.

Leavis, F. R. 'Memories of Wittgenstein' in *Recollections of Wittgenstein*, Oxford: Oxford University Press, 1984, pp. 50-67).

²¹ Bennett, M. R. and Hacker, P. M. S. *Philosophical Foundations of Neuroscience*, Oxford: Blackwell, 2003, p. 357.

²² 'Scientific Reduction', <http://plato.stanford.edu/entries/scientific-reduction/>, accessed 29/08/16.

²³ Crick, F. *The Astonishing Hypothesis*, Touchstone: London, 1995, p. 3.

²⁴ *Ibid.*, p. 7.

²⁵ This is what is known as 'classical reductionism', and the classic formulation of it is Paul Oppenheim and Hilary Putnam's 'The unity of science as a working hypothesis' in H. Feigl et. al. (eds.) *Minnesota Studies in the Philosophy of Science*, vol. 2, University of Minnesota Press: Minneapolis, 1958.

(ii) Why be a reductionist?

The fact that this position is advanced by respected scientists like Crick and others such as Colin Blakemore lends it credibility²⁶ and it is not just the fact that scientists subscribe to it that lends it credibility but also the esteem in which science itself is held. Science is seen to have been very successful in making advances, in technology, medicine, and so on. The success of science makes it tempting to import scientific methods and attitudes into other areas to see if they might not benefit from the same kind of treatment. This issue, the issue of scientific progress, will be discussed in section IV. Reductionism is also apparently supported by the fact that dualistic conceptions of past philosophy have been discredited and replaced by one or another form of materialism. If everything is made out of the same kind of stuff - matter - then presumably everything can be explained in terms of it. We have no need for explanations in terms of immaterial substance and scientific explanation does not rely on such explanations²⁷.

(iii) Problems with reductionism

One problem for reductionism is that although the rejection of dualism appears to support a unified materialism, the rejection of dualism does not in fact imply materialism and even when it comes to explanations of material things we often do not explain them or things about them in terms of what they are made of. Materialism, if it is taken to be the view that everything that

²⁶ See, for example, Blakemore, C. *The Mind Machine*, BBC Publications: London, 1988, pp. 270-2.

²⁷ However, it is worth noting that one can be a materialist without being a reductionist and one can be a reductionist without being a materialist. Berkeley, an idealist, thought that everything reduces to minds and ideas.

exists is material, is not well supported. There are many things which we would like to say exist but that are not material objects. As Max Bennett and Peter Hacker note, «laws and legal systems, numbers and theorems, games and plays are neither material objects or stuffs». Bennett and Hacker point out that even when it comes to material objects we often explain their behaviour, perfectly legitimately, in terms other than what they are made of. We explain some things in terms of their function (e.g. human organs), others in terms of their goals, reasons, or motives (the behaviour of animals and human beings)²⁸. Historical events, such as the Russian revolution, are not explained in terms of what they are made of, «...since they are not made of anything»²⁹. So materialism cannot be used in support of reductionism³⁰.

Another problem with attempts to reduce social sciences to natural ones is that social sciences often involve reference to the psychological attributes of human beings but psychological attributes of human beings cannot be reduced to any of the usual candidates that reductionist philosophers refer to - cells, molecules, brain states, or sense data. In the *Philosophical Investigations* one case that Wittgenstein brings our attention to is the case of *knowledge*. He carefully examines the grammar of 'know' and 'understand' and helps us to recognise that knowing cannot be a mental state or disposition. If it were then there would be (at least) two different criteria for knowing - (i) the correct application of a relevant rule (e.g. a criterion for some-

²⁸ This will be discussed in the following section.

²⁹ Bennett, M. R. and Hacker, P. M. S. *Philosophical Foundations of Neuroscience*, Oxford: Blackwell, 2003, p. 358.

³⁰ Bennett and Hacker's discussion of materialism leans on John Dupré's discussion of materialism in *The Disorder of Things*. Dupré discusses and rejects several versions of materialism in his chapter on reduction and materialism (Dupré, J. *The Disorder of Things*, Cambridge MA: Harvard University Press, 1993, pp. 89-94).

one knowing the alphabet is that they can write or say 'A, B, C, D, E...' etc.) and (ii) the criteria for identifying the corresponding physical state or disposition. But it seems that the second criterion is not the one we would use, since even if the brain were in a particular physical state whenever someone recited the alphabet we would not take the presence of the state to indicate knowledge if someone wrote 'A, D, F, Z, 3' when asked to write the alphabet³¹. Rather than being reducible to a physical state or disposition, knowledge is akin to an ability³², and an ability is categorially distinct from the usual candidates that reductionists refer to (cells, molecules, brain states, physical things, or sense data). Following Wittgenstein, Bennett and Hacker note, «[t]he criteria of identity for mental states, events and processes differ from the criteria of identity for neural states, events and processes»³³. This should be clear from the fact that psychological attributes are attributable to a person or to animals but neuro-physiological attributes are attributable to their brains³⁴. So, for example, someone might *believe* that voting to leave the European Union was the right thing to do in the recent referendum in the United Kingdom. I attribute that belief to them (not to their brain) on the basis of their behaviour; particularly their linguistic behaviour. I attribute that belief to them, most likely, because they *say* that they believe that voting to leave the E. U. was right and I have no reason to doubt that they believe that. However, I do not attribute brain states or processes to them on the basis of their linguistic behaviour and those brain states or

³¹ See Wittgenstein, L. *Philosophical Investigations*, §149.

³² Wittgenstein, L. *Philosophical Investigations*, §150.

³³ Bennett, M. and Hacker, P. M. S. *Philosophical Foundations of Neuroscience*, pp. 360-1.

³⁴ See Wittgenstein, L. *Philosophical Investigations*, §281: «... only of a living human being and what resembles (behaves like) a living human being can one say: it has sensations; it sees; is blind; hears; is deaf; is conscious or unconscious».

processes are states of *that person's brain* and not of the person. The person's beliefs cannot be neural states or events because their neural states and events have a location but their beliefs cannot be said to have a location (at least not in the same way). It makes no sense to ask 'where do you believe it was wrong to leave the EU?' Some questions sharing this form *do* make sense but they are not answered in a way that suggests that beliefs are neural states. So, for example, it does make sense to ask 'where do you believe the football game between Sporting Lisbon and Benfica will take place?' but this question is not answered appropriately by saying 'in my head', but by something like 'at the Estádio da Luz'.

It is also worth noting that not only are social sciences not reducible to natural sciences but natural sciences themselves cannot all be reduced to physics. John Dupré has argued convincingly that ecology is not reducible to any level below biology³⁵, and that there are various problems with reductionist projects in genetics³⁶. There have been successful reductionist projects but these successes have been very local. Biological science has not been shown to be reducible to physics and we have good reason to think that it cannot be reduced to physics, namely that categorization in biology and much of the rest of science is driven by changing human interests and there is no single privileged taxonomic scheme in biology in terms of which it could be reduced to physics.

Wittgenstein thought that the temptation to reduce phenomena in one area to phenomena in another was one of the causes of philosophical confusion. In the *Blue Book*, in the passage cited above (footnote 10), Wittgenstein says that his worry about philosophers' preoccupation with the method of science is, at least in part, a worry about «the method of reducing the

³⁵ Dupré, J. *The Disorder of Things*, Harvard University Press: Cambridge MA, 1993, pp. 107-120.

³⁶ Ibid. pp. 121-145.

explanation of natural phenomena to the smallest possible number of primitive natural laws...» and that «...it can never be our [i.e. philosophers'] job to reduce anything to anything». Philosophy is descriptive, that is it describes norms of representation with the aim of getting clear about the meaning of problematic terms in order to get rid of the confusion at the root of philosophical problems³⁷.

III. REASONS AND CAUSES

As mentioned in the introduction, one of the debates that is relevant to the question of whether the social sciences are continuous with the natural sciences is the debate about whether explanations in terms of reasons are causal explanations. One approach is to claim that human *actions* are distinct from *habits* which influence our behaviour causally. A way of bringing out this distinction is to compare human activity with the activities of animals. Peter Winch, a Wittgensteinian philosopher, uses the example of a dog learning to balance sugar on its nose and holding it there until its owner issues a command to eat it. In this case the dog has been trained into a habitual response and cannot be said to be reflectively following a rule. Like rule-following cases the dog might be said to have done something correctly or incorrectly but this is only because we are applying human norms analogically to animals, according to Winch³⁸. This is unlike the case of a human being continuing the series of natural numbers beyond 100 upon being ordered to do so because, «...the dog has been *conditioned* to respond in a certain way, whereas I *know* the right way to go on *on the basis of* what I have been taught»³⁹.

³⁷ Wittgenstein, L. *The Blue and Brown Books*, p. 18.

³⁸ Winch, P. *The Idea of a Social Science*, p. 60.

³⁹ Ibid. p. 62.

The debates in philosophy about the distinctions that Winch makes between rule-governed human behaviour and habitual animal behaviour and between reasons, motives, and causes, has moved on since the time of *The Idea of a Social Science*. A seminal anti-Wittgensteinian paper, in opposition to the kind of view that Winch presents, is Donald Davidson's 'Actions, Reasons, and Causes' published in 1963⁴⁰. The arguments between Davidsonians, Wittgensteinians, and others, continue to this day⁴¹.

Social Studies and Natural Science

The considerations about differences between causal and rule-governed behaviour suggest that human activity cannot be understood in terms of the causal generalizations favoured by natural scientists. However, Winch thinks that explanations of human behaviour in terms of institutions and rules might still be defended by followers of philosophers like John Stuart Mill as being scientific because:

- (1) «...an institution is, a kind of uniformity»
 - (2) «...a uniformity can only be grasped in a generalization.»
- And so...
- (Conclusion) «...understanding social institutions is still a matter of grasping empirical generalizations which are logically on a footing with natural science»

⁴⁰ Davidson, D. 'Actions, Reasons, and Causes', *The Journal of Philosophy*, Vol. 60, No.23, 1963, pp. 685-700

⁴¹ See, for example, D'Oro, G., and Sandis, C. *Reasons and Causes: Causation and Anti-Causation in the Philosophy of Action*, London: Palgrave Macmillan, 2013 and Tannev, J. *Rules, Reason, and Self-Knowledge*, Cambridge: Harvard University Press, 2013

However, this argument is defective according to Winch because where we speak of uniformities we must have some kind of criteria of sameness. To characterize something as going on in a uniform manner is to characterize it as being the same in certain respects throughout time. However, what is characterized as being the same by one criterion might not be characterized as being the same by another. For example, someone looking at two pictures (one picture of an African elephant and one of an Indian elephant) might say that both depict the *same* creature, an elephant, however, we might say that they depict *different* species; one is an African elephant and another is an Indian elephant. Someone who is asked whether the two pictures are *the same* would likely be confused until they are told something further about the criteria they are supposed to apply in deciding. They might respond that they are not the same because the pose of the animal is different in each, or they might refer to the dimensions of the pictures and say the second is larger than the first.

As Wittgenstein says, «[t]he use of the word 'rule' and the use of the word 'same' are interwoven». ⁴² What this means is that if we are to decide whether two things are the same or whether something counts as 'going on in the same way' (as in cases when we are asked to continue a series of numbers) we must do so by reference to a definition or a criterion — a *rule* of one sort or another. And, as Winch says, «...rules...rest on a social context of common activity»⁴³ and so to decide the nature of a particular field of study we must look at the kind of activities which it involves and also at the rules embedded in those activities which tell us whether the objects of the study are of the *same* kind or not, or whether they continue to be the *same* throughout time.

⁴² Wittgenstein, L. *Philosophical Investigations*, §225

⁴³ Winch, P. *The Idea of a Social Science*, p. 84

If we look at the kinds of activities engaged in by natural scientists and by those engaged in fields concerned with human activity (psychology, history, sociology, literature, and so on) then we find that the things studied differ in each case. The rules which we must consider in thinking about natural sciences are, for example, the grammatical rules which constitute scientific concepts, and the rules governing the procedures of the scientists. However, in the case of those studying human activity we must consider not only the rules of the activities of the sociologists but also the rules governing the behaviour of those that the sociologist studies. It is the second set of rules, according to Winch, that tell us about the nature of sociology. It is those rules, «which specify what is to count as 'doing the same kind of thing' in relation to that kind of activity»⁴⁴.

The significance of this in thinking about the relation between social fields and the natural sciences is that the two kinds of activities are quite different. John Stuart Mill had argued that studying human society is like studying a complicated mechanism. However, if Winch is correct then the sociologist's «... understanding of social phenomena is more like the engineer's understanding of his colleagues activities than it is like the student's»⁴⁵. Explanation in sociology is often not like the causal explanations of natural science. However, that does not imply that it is not scientific at all.

Is Winch Correct? Objections to Winch (1): Davidson

Winch distinguished explanations in terms of habituation, which he said were causal, from explanations in terms of rules, which he said were non-causal. Donald Davidson, in his 1963

paper 'Actions, Reasons, and Causes' argued, *pace* Winch, that explanation of human action citing the agent's reason for their action (i.e. the kind of action that Winch said was rule governed) «is a species of ordinary causal explanation»⁴⁶. Davidson argues for this first of all by pointing out that the division between explanations in terms of reasons and explanations in terms of causes is not obviously mutually exclusive. It may be that nonteleological causal explanations do not have features that explanations in terms of reasons do, namely that explanations in terms of reasons have a justificatory element, nonetheless, «...it does not follow that the explanation is not also-and necessarily-causal»⁴⁷.

Davidson also goes further. He doesn't rest satisfied with the claim that it is not obvious that explanations in terms of reasons are not causal. He gives an argument in favour of thinking that explanations in terms of reasons *are* causal. Davidson's argument for this is that people can have a reason to do something and yet that reason was not the reason why they did it. Several different reasons in a particular case could serve to make an action intelligible. For example, somebody might raise their arm and wave it around outside of their car window in order to greet a friend or in order to signal a turn or in order to cool their hand. We might ask why somebody raised their arm and waved it around outside of their car as they drove around a bend and they might respond 'I saw my friend on the corner and waved at him', or 'my hand was uncomfortably hot having been on the warm steering wheel and so I wanted to cool it down' or 'I wanted to signal that I was turning'. How do we pick out the agent's reason from amongst the reasons that they had, which might have served to make the action intelligible? – Davidson's

⁴⁴ Davidson, D. 'Actions, Reasons, and Causes', *The Journal of Philosophy*, Vol. 60, No.23, 1963, p. 685.

⁴⁵ Davidson, D. 'Actions, Reasons, and Causes', *The Journal of Philosophy*, Vol. 60, No.23, 1963, p. 691.

⁴⁴ Winch, P. *The Idea of a Social Science*, p. 87.

⁴⁵ Winch, P. *The Idea of a Social Science*, p. 88.

answer is that «[c]entral to the relation between a reason and an action it explains is the idea that the agent performed the action *because* he had the reason». And Davidson thinks that in order to «account for the force of that 'because'» we should think of the relation between reason and action as causal⁴⁸.

Davidson argues that his opponents, the Wittgensteinians (including people like Winch), have not accounted for this relation between reason and action by talking about patterns and contexts because «the relevant pattern or context contains both reason and action»⁴⁹. Davidson might not have produced a conclusive argument in favour of construing the relation between reason and action in causal terms but it seems as though he has nonetheless provided some reason for thinking that explanation in terms of reasons is a kind of causal explanation. If his opponents are to dispute that, he says that they must identify an alternative pattern of explanation⁵⁰.

Davidson's anti-Wittgensteinian arguments are formidable and have been enormously influential in terms of the way that many philosophers nowadays think about explanations in terms of reasons. What this demonstrates is that anyone who wants to defend a position along the lines that Winch wanted to defend must now deal with Davidson's arguments. The debate has moved on since Winch published *The Idea of a Social Science* and non-Wittgensteinian thought now predominates in philosophy departments around the world.

However, that is not to say that Davidson is correct and that a defence of ideas in the spirit of Winch cannot be given. Over the course of the past two decades Julia Tannev has built up a powerful case against Davidson's conception of explanations in terms of reasons and she has defended the Wittgen-

⁴⁸ Davidson, D. 'Actions, Reasons, and Causes', *The Journal of Philosophy*, Vol. 60, No. 23, 1963, p. 691.

⁴⁹ *Ibid.*, p. 692.

⁵⁰ *Ibid.*, p. 692.

steinian view that Davidson attacked. She has written a series of articles about reasons and rule-following that are collected in the recent volume, *Rules, Reason, and Self-Knowledge*⁵¹.

In her article 'Why Reasons May Not Be Causes'⁵² Tannev examines various cases where somebody had a reason but did not act for that reason. This is the kind of case that Davidson suggested seems to call for thinking of the relation between reason and action in causal terms; to account for the force of the word 'because' where we say 'the agent performed the action *because* they had the reason'. Tannev denies that we have to bring in the notion of causation in order to account for these cases, instead «we just need to introduce judgements, weights, and values into the 'anaemic' analysis of reasons» What needs to be added in such cases is not the notion of causation but «a more complex justificatory machinery»⁵³. We can explain why someone acted for one reason rather than some other reason that they had by saying that the reason they acted on carried more weight for them than the others, or by adding something to the account about the agent's values (or both).

Davidson challenged his opponents to identify a pattern of explanation that accounts for the relationship between reason and action in something other than causal terms and Tannev rises to that challenge in her paper, 'Reasons as Non-Causal Context-Placing Explanations'⁵⁴. If the relationship between (1) *a reason* and (2) *the action that it is the reason for* is not causal

⁵¹ Tannev, J. *Rules, Reason, and Self-Knowledge*, Cambridge: Harvard University Press, 2013.

⁵² The article forms chapter 5 of *Rules, Reason, and Self-Knowledge*, pp. 103-132.

⁵³ Tannev, J. *Rules, Reason, and Self-Knowledge*, Cambridge: Harvard University Press, 2013, p. 109.

⁵⁴ This paper was originally published in Sandis, C. (ed.) *New Essays on the Explanation of Action*, London: Palgrave Macmillan, 2009, pp. 94-111 and was reprinted as chapter 7 of *Rules, Reason, and Self-Knowledge*, Cambridge: Harvard University Press, 2013, pp. 149-170

then what is it? Tanney explains that, «in many cases attributions of motives, intentions and reasons explain a performance by characterizing it as an action of a certain kind»⁵⁵. Rather than assimilating explanations in terms of reasons to causal explanations Tanney suggests that explanations in terms of reasons are similar to other kinds of explanations that are clearly not causal. An example she gives to illustrate this is of somebody walking out of a chemistry classroom and seeing the letters 'c', 'a', 't' written on the board. They might ask one of their classmates, 'why did the teacher write the word 'cat' on the board?' and their classmate could explain what was going on by saying that 'the teacher was starting to write the word 'catalyst' and you left the classroom before they finished writing'. This is clearly not a case of the model of causation Davidson subscribes to where there must be two logically independent events entering into the causal relation. In this case there is just one event (writing on the board by the teacher) which has not been understood and so an explanation is called for⁵⁶. Explanations in terms of reasons are similar to this in that what they do is to place an event in context and make sense of it. They are also similar, Tanney suggests, because they do not require two independent occurrences causally related to each other.

The fact that explanations of human action in terms of reasons are categorially distinct from explanations in terms of causes gives us some reason to think that social sciences are not like natural sciences. As noted in section II, the existence of explanations in terms of reasons (and in terms of goals and motives) undermines the kind of materialism that says that we are to explain things simply in terms of what they are made of and this in turn undermines reductionists who think that this kind

⁵⁵Tanney, J. *Rules, Reason, and Self-Knowledge*, Cambridge: Harvard University Press, 2013, p. 154.

⁵⁶Tanney, J. *Rules, Reason, and Self-Knowledge*, Cambridge: Harvard University Press, 2013, pp. 156-7.

of materialism lends support to their view. Thus far we have two broad reasons for rejecting the view that social sciences are of a piece with the natural sciences. Social sciences are not reducible to natural sciences (section II) and they employ different kinds of explanations to the natural sciences, namely explanations in terms of reasons, rules, motives, and so forth (section III). In the next section I will examine whether we might claim that social sciences are like natural sciences by claiming that they employ the same methodologies.

IV. METHODOLOGY IN THE NATURAL AND SOCIAL SCIENCES

Claims that the methodologies of the natural sciences are appropriate for use in the social sciences and that they are the only methods appropriate for use in the social sciences are driven by similar kinds of considerations to those that have motivated people to become reductionists. The enormous *progress* made in the natural sciences suggests that there is something right about the methodologies used in them and hints at the desirability of those methods in areas other than natural science. The rejection of dualism has led people to think that they should adopt a kind of monism, namely materialism or physicalism, and if social sciences study the same kinds of things as the natural sciences, namely physical things, then they should use the same kinds of methodologies. Another motivation for the claim that we should use the methods of the natural sciences to study social phenomena is verificationism. We might think that we cannot verify claims about, for example, other people's mental states or claims about ethics and so all we can do in these areas is study relevant quantifiable physical attributes such as behaviour (construed in physicalist terms). The logical positivists argued that ethics as traditionally conceived was unverifiable and

should be replaced by science. Otto Neurath heralded a new era in which, «[i]nstead of the priest we find the physiological physician and the sociological organizer. Definite conditions are tested for their effect upon happiness (*Glückswirkungen*), just as a machine is tested to measure its lifting effect»⁵⁷.

A method is a way of establishing or accomplishing something. The ways in which the natural sciences establish truths within their domains include using observation and experiment. Observations might give us knowledge or they might lead us to infer that something is the case (perhaps something unobservable) or they might lead us to hypothesize that something is the case (which we might then test using further observations). Scientists have also had success by using explanations of phenomena in terms of their causes and by using mathematical notions to quantify and compare things.

It is certainly true that social scientists make observations, that they can sometimes quantify the things they are observing, and that they can test hypotheses that they formulate on the basis of observations. However, as noted above, there are explanations within the social sciences which are not causal explanations. In the social sciences we explain actions in terms of the reasons that people have for doing the things they do, their motives, and their goals. This suggests that there will be significant differences in the methods used by social scientists which reflect the fact that they are investigating the reasons and motives for human action rather than the causes of events involving non-human agents. So, for example, social science research involves questionnaires, surveys, and interviews, in which human beings are asked about the things they do and why they do them. Although social sciences, like the natural sciences, involve observation, the character of the observation is different in each. Coming to understand human action through observation in-

⁵⁷ Ibid. p. 50.

volves knowledge of social practices, norms, and conventions and the explanations arrived at by social scientists are not *nomological* explanations as they are in the natural sciences⁵⁸. No *laus* of human behaviour or of human psychology have been discovered and we have no good reason to think that they will be.

Moreover, the methods employed by philosophy, of clarifying concepts by presenting overviews of their grammar, are categorially distinct from the methods employed by those working in the natural sciences. Grammatical claims are not hypotheses or reports of observations. They are not justified or tested by reference to empirical reality at all. As Wittgenstein said, «[t]here should be no theories, and nothing hypothetical, in philosophy»⁵⁹. Getting clear about the meaning of the expressions one uses is something that one should do before one embarks on any scientific investigation.

So it seems that natural sciences and social sciences, as a matter of fact, employ a variety of different methods. What of the motivations for thinking that perhaps they should employ the same methods – verificationism, materialism, and the progress made by science? Problems with materialism have already been discussed in section II (iii) in discussing problems with reductionism. Verificationism, especially the variety presented by the logical positivists is now widely rejected by philosophers with good reason. Wittgenstein made sharp criticisms of the view that the ‘inner’ world is hidden from us and all we can see is bare behaviour (although Wittgenstein’s criticisms have still not been heeded by many philosophers today). We do not *infer* that somebody is in pain when we seem them stub their

⁵⁸ See Bennett, M. R. and Hacker, P. M. S. *Philosophical Foundations of Neuroscience*, Oxford: Blackwell, 2003, pp. 362-366 for more on this.

⁵⁹ Wittgenstein, L. *Philosophical Investigations*, Revised fourth edition by P. M. S. Hacker and Joachim Schulte, translated by G. E. M. Anscombe, P. M. S. Hacker and Joachim Schulte, Oxford: Wiley-Blackwell, 2009, §109.

toe and cry⁶⁰. In that case we can see that they are in pain and we can distinguish that case from one in which we do make an inference, e.g. when we see a packet of paracetamol opened next to a half drunk glass of water on the table. There is a *logical* connection between pain and pain behaviour, namely that pain behaviours are (defeasible) criteria for someone being in pain. So neither materialism nor verificationism provide us with good reasons for thinking that methodology in the social and natural sciences should be the same. The issue of progress in the social and natural sciences will be discussed in the next section below.

V. PROGRESS

As already noted above, the impressive progress made in the natural sciences is one of the motivations to have the social sciences emulate the natural ones in one way or another. Academic philosophers and scientists have been unimpressed by the results of psychological theorising and philosophical argument by contrast with rapid developments in physics, biology, and chemistry as well as by the lack of agreement amongst social scientists by contrast with natural scientists. For example, Semir Zeki, an academic working in neuroaesthetics, has complained about «the poverty of the results» in philosophy «in terms of understanding our brains and their mental constitution»⁶¹ and the philosopher Paul Churchland has lamented the lack of progress made by 'folk psychology' (the name he gives to our ordinary framework of psychological concepts, which he takes to be a theory of human behaviour) which he thinks has not progressed in 2,500

⁶⁰ Ibid. \$246, §§250-251, \$253.

⁶¹ Zeki, S. 'Splendours and miseries of the brain', *Philosophical Transactions of the Royal Society B* 354 (1999), pp. 2053-65.

years⁶². More recently the physicist Stephen Hawking has declared that «philosophy is dead» and claimed that it has been superseded by developments in science. Zeki thinks that neurobiology should take over problems about the mind (as well as problems concerning justice and honour) from philosophy, Churchland thinks that 'folk psychology' (our ordinary framework of psychological concepts as well as concepts employed in psychology) should be abandoned in favour of a neuroscientific psychology, and Hawking thinks that philosophers should give up on questions like 'why are we here?' and 'where do we come from?' and leave them to science⁶³.

There is surely something to these worries about a lack of progress in philosophy. Philosophers still puzzle over Zeno's paradoxes from 2,500 years ago. There are contemporary Aristotelian ethicists but there aren't any contemporary Proletarian scientists. Philosophers are still troubled by sceptical doubts about our senses and by disagreements about what it is that we see and hear. More than two millennia ago Plato made attempts to define knowledge and philosophers today are still making similar attempts. Is it any wonder that people like Hawking think that philosophy might as well just be abandoned?

Ludwig Wittgenstein had an explanation for why it is that philosophical confusions have endured for millennia. It is that these problems are conceptual problems, i.e. problems that result from misunderstanding certain concepts, and that the 'traps' set by language – the features of language that cause confusion – have remained in place:

⁶² Churchland, P. M. 'Folk psychology', in S. Guttenplan (ed.), *A Companion to the Philosophy of Mind*, Oxford: Blackwell, 1994, pp. 310 f.

⁶³ Hawking made these claims at Google's Zeitgeist conference in 2011. See 'Stephen Hawking tells Google «philosophy is dead» in *The Telegraph*, 17th May 2011, <http://www.telegraph.co.uk/technology/google/8520033/Stephen-Hawking-tells-Google-philosophy-is-dead.html> (accessed 24th Oct. 2016).

One keeps hearing the remark that philosophy really makes no progress, that the same philosophical problems that had occupied the Greeks are still occupying us. But those who say that do not understand the reason it is // must be // so. The reason is that our language has remained the same and seduces us into asking the same questions over and over again. As long as there is a verb 'to be' which seems to function like 'to eat' and 'to drink', as long as there are adjectives like 'identical', 'true', 'false', 'possible', as long as one talks about a flow of time and an expanse of space, etc. etc. humans will continue to bump against the same mysterious difficulties, and stare at something that no explanation seems capable of removing⁶⁴.

It could be claimed that progress, of a sort, has been made in philosophy but that some philosophers and scientists have failed to recognise it as such. In his later work Wittgenstein laid out some of the confusions that have troubled philosophers over the centuries and contrasted their confused formulations with 'surveyable representations' of the problematic expressions. Surveyable representations clarify the meaning of expressions that are causing confusion, showing the way in which the relevant expression is ordinarily used, and perhaps contrasting it with other similar expressions or giving examples of conceptual connections with other expressions – whatever helps to reduce confusion and produce clarity and understanding. One example of this is Wittgenstein's discussion of the concept of 'knowledge' (discussed above, in section II (iii)). Elsewhere he dissolves problems from the pre-Socratic philosopher Heraclitus 'Can one step into the same river twice?'⁶⁵, clarifies a centuries old question from Augustine, 'how is it possible to measure time?'⁶⁶, describes the correct use of words like 'know', 'believe', 'certainty' and 'doubt' in dissolving sceptical problems⁶⁷, discusses

⁶⁴ Wittgenstein, L. *Big Typscript*, pp. 423-424.

⁶⁵ Wittgenstein, L. *Typscript 220*, §111.

⁶⁶ Wittgenstein, L. *The Blue and Brown Books*, p. 26.

⁶⁷ Wittgenstein, L. *On Certainty*.

problems resulting from thinking of sensations as private⁶⁸, as well as many other philosophical problems from over the past centuries.

Whereas progress in science consists in making empirical discoveries and devising ever more powerful theories, progress in philosophy consists in clarification of concepts which are causing puzzlement and does not involve constructing theories at all. Philosophy should not be blamed for failing to uncover or discover truths about our brains since that is the task of biology and of neuroscience. What philosophers can do is clarify concepts employed in neuroscientific and psychological research (and in other areas of scientific and social scientific research) and thus help to formulate appropriate questions and to ensure that the results of research are expressed clearly. As Bennett and Hacker say in *Philosophical Foundations of Neuroscience*, philosophy's task, «is to clarify the conceptual scheme in terms of which our knowledge is articulated. Its achievements are its contribution to our reflective understanding of the logical structure of our thought and knowledge about the world. It cannot contribute to knowledge about the brain, and it should not be expected to. Philosophers are not closet scientists...»⁶⁹.

People like Semir Zeki, Paul Churchland, and Stephen Hawking are confused if they think that philosophy is to be blamed for failing to solve problems that science might solve, since philosophy is of a different nature to the natural sciences. We hope for increases in our knowledge and improvements in theory from science; discarding falsehoods and accumulating truths along the way. However, we cannot hope for such things from philosophy because philosophy is not a cognitive discipline. It aims at developing our understanding rather than contributing to our knowledge of the universe and the natural

⁶⁸ See, for example, Wittgenstein, L. *Philosophical Investigations*, §246.

⁶⁹ *Ibid.* p. 404.

world. Its progress can be measured in terms of problems that have been clarified rather than in terms of knowledge gained.

As for psychology, Churchland is confused if he thinks that it can be replaced by neuroscience. Our ordinary psychological expressions do not constitute a theory, although various theories might be formulated employing psychological expressions. Churchland's position involves various paradoxes (philosophical or conceptual problems). For one thing he cannot fault 'folk psychology' for failing to explain memory or the ways in which learning transforms us if he is correct in thinking that psychological expressions should be eliminated, since psychological expressions are employed in formulating the problems.⁷⁰ Given that our ordinary concepts are not a theory we cannot expect theoretical progress from them although we might expect some kind of progress from theories that employ psychological terms – from psychological theory – and it is indeed the case that empirical theories in psychology have advanced⁷¹.

Psychology cannot be reduced to neuroscience and nor is it similar to sciences like physics in the way that some psychologists have thought. For example, Wolfgang Köhler thought that psychology in the present day was like physics in its infancy. Physics had succeeded in moving from qualitative observations to quantitative measurement and psychology can hope to do the same, he thought⁷². But Wittgenstein objected that, «[t]he confusion and barrenness of psychology is not to be explained by its being a 'young science'; its state is not comparable with physics,

⁷⁰ See Bennett, M. R. and Hacker, P. M. S. *Philosophical Foundations of Neuroscience*, pp. 376-7 where they develop this criticism of Churchland and present other similar criticisms. There are detailed objections to both Zeki and Churchland on pp. 366-377 and 396-407 of *Philosophical Foundations of Neuroscience*.

⁷¹ See Bennett, M. R. and Hacker, P. M. S. *Philosophical Foundations of Neuroscience*, p. 373 for a discussion of progress in psychology.

⁷² See chapter 2 of Köhler, W. *Gestalt Psychology*, Liveright: New York, 1929.

for instance, in its beginnings... For in psychology, there are experimental methods and conceptual confusion...»⁷³. The 'objects' of psychology - mental states, events, and processes - are not hidden to others and only observable in their effects, like electrons. As Wittgenstein observed, we can see (at least sometimes) that someone is sad⁷⁴ or that they are fearful⁷⁵ or in pain⁷⁶. However, none of this implies that psychology is not a science at all. Psychology can be said to have an empirical subject matter, to engage in systematic gathering and accumulation of knowledge, and psychologists might engage in experiments and gather data from those experiments.

Similar things might be said about other social disciplines. Given that they are not reducible to natural sciences, that they employ different kinds of methods and different kinds of explanations, we should not expect exactly the same kind of progress from them. However, political scientists, economists, human geographers, anthropologists and sociologists *do* add to our stock of knowledge; these disciplines *can* be said to have an empirical subject matter, to aim at truth, to gather data and to make useful generalisations from that data.

⁷³ Wittgenstein, L. 'Philosophy of Psychology – A Fragment' in *Philosophical Investigations*, 4th edition, §371.

⁷⁴ Wittgenstein, L. *Last Writings on the Philosophy of Psychology*, Vol. 1, ed. G. H. Von Wright and H. Nyman, tr. C. G. Luckhardt and M. A. E. Aue, Blackwell: Oxford, 1982, §767.

⁷⁵ Wittgenstein, L. *Remarks on the Philosophy of Psychology*, Vol. 1, ed. G. E. M. Anscombe and G. H. Von Wright, tr. G. E. M. Anscombe, Blackwell: Oxford, 1980, §§1066-8.

⁷⁶ Wittgenstein, L. *Philosophical Investigations*, §246.

VI. CONCLUSION

In the preceding sections I have presented arguments in favour of saying that social sciences are not *reducible* to natural sciences, that they involve different kinds of *explanations* to the natural sciences (i.e. explanations of action in terms of reasons, motives and goals), that the *methodologies* involved in social sciences are at least sometimes different to those employed in the natural sciences, and that the kind of progress that might be expected in social sciences differs from the kind of progress that might be expected in natural sciences (and progress in social sciences amounts to something different than progress in philosophy).

In their book *There is No Such Thing as a Social Science* Phil Hutchinson, Rupert Read, and Wes Sharrock argue that due to these considerations about reductionism etc. there is no such thing as a social science. In the introduction to the book they consider the possibility that the analytical rigour of social studies, the responsiveness to evidence in social studies, and the willingness to learn from other modes of enquiry found amongst those studying the social realm might be reasons to call social studies *social sciences*. However, they reject this on the grounds that neither of these considerations is sufficient for calling something a science.

In contrast to Hutchinson, Read and Sharrock, I want to stand by the claim that social sciences are indeed scientific – that there is such a thing as a social science. Although the kinds of considerations alluded to by Hutchinson, Read and Sharrock are not individually sufficient to call something a science they might nonetheless be jointly sufficient (or it may be that together with other considerations they are jointly sufficient). One reason to claim that social studies are, or at least can be, scientific is that calling something ‘scientific’ plays a role in legitimising that discipline. As John Dupré has recently point-

ed out, the term ‘unscientific’ is used as a term of criticism⁷⁷ and we live in a world where social sciences and humanities come under attack from governments for being unscientific⁷⁸. The mere fact that social sciences are unlike natural sciences in various ways does not imply that they are illegitimate courses of study or that they are any less valuable than the natural sciences. Psychologists, economists, anthropologists, sociologists and human geographers uncover truths and increase our knowledge of man geographers uncover truths and increase our knowledge of human society. Understanding ourselves as human beings and being able to make progress in the way that we relate to each other as economic, political and social beings are all immensely important.

F. R. Leavis, mentioned in the introduction above, emphasised the importance of social studies. One point that he made was that the objects of study in social studies are in a sense *prior* to studies in the natural sciences:

...there is a prior human achievement of collaborative creation, a more basic work of the mind of man (and more than the mind), one without which the triumphant erection of the scientific edifice would not have been possible: that is the creation of the human world, including language⁷⁹.

⁷⁷ Dupré, J. ‘Social Science: City Center or Leafy Suburb’, *Philosophy of the Social Sciences*, May 2016, pp. 8-9. Dupré asks «Is there... anything in principle unscientific about the delineation of the rules that exist in a particular society?» and answers «I cannot see why. Language is profoundly normative, but this does not make the science of linguistics impossible.»

⁷⁸ See, for example, ‘The war against humanities at Britain’s universities’ in *The Guardian*, 29th March 2015 <https://www.theguardian.com/education/2015/mar/29/war-against-humanities-at-britains-universities> accessed 26th September 2016.

⁷⁹ Leavis, F. R. ‘Two Cultures? The Significance of C. P. Snow (1962)’ in *Two Cultures? The Significance of C. P. Snow* with Introduction by Stefan Collini, Cambridge: Cambridge University Press, pp. 73-4.

Leavis thought that the study of the human world, including language, was immensely important for various reasons. Social disciplines can work in conjunction with natural sciences by helping to decide the ends which (largely instrumental) natural sciences aim at. Thinking carefully about human ends and more generally about what makes human lives significant, meaningful, happy, and rich as well as about how to bring about rich, interesting, happy human lives is the work of social sciences and the scientism of C. P. Snow that Leavis was responding to does not recognise the importance of this. Simply aiming at a 'rising standard of living', as Snow did, fails to engage with questions about what makes life worth living. So, social disciplines are to be called 'sciences' partly because they are important and so *worthy* of the title.

Another consideration in favour of calling social disciplines 'sciences' is that practitioners within these disciplines, for the most part, consider what they are doing to be science of sorts. In his recent book *The Puzzle of Modern Economics: Science or Ideology?* Roger Backhouse defends the idea the economics is a science despite recognising that economics differs from natural sciences in many ways⁸⁰. Similarly, the economist Ha-Joon Chang considers his discipline to be a science despite recognising that «economics can never be a science in the sense that physics or chemistry is»⁸¹. Psychologists also very often talk about their discipline as a science. Recent introductions to psychology include *Thinking About Psychology: The Science of Mind*

⁸⁰ Backhouse, R. *The Puzzle of Modern Economics: Science or Ideology?*, Cambridge: Cambridge University Press, 2010.

⁸¹ Chang, H.-J. *Economics: The User's Guide*, London: Pelican Books, 2014, p. 5.

*and Behaviour*⁸², and *Understanding Psychology as a Science*⁸³. Universities throughout the world have faculties of social science incorporating departments of anthropology, economics, business, politics, psychology, sociology, and human geography (and, less often, departments of history and/or philosophy). It is fair to say that calling social disciplines 'sciences' is the way that we ordinarily talk about them. A divergence from ordinary use requires more than just showing that social disciplines differ from natural sciences in significant ways, since this is recognised by many of those who quite happily talk about social sciences⁸⁴.

So I conclude that social sciences *deserve* to be called sciences because they are empirical, knowledge producing, disciplines which, done properly, involve analytical rigour and responsiveness to evidence. The fact that people working in areas like economics, sociology, and psychology consider themselves to be doing science despite, very often, recognising differences between what they are doing and what biologists, physicists and chemists are doing speaks in favour of calling those disciplines social sciences. Here I take social sciences to include economics, sociology, anthropology, human geography, politics, linguistics and sociology. However, there are some disciplines which do not fit easily into either the natural or social sciences. Philosophy is one of them. As Wittgenstein pointed out, many of the problems of philosophy are the upshot of confusion about concepts and the way to tackle those problems is not to look at empirical evidence but to get clear about

⁸² Blair-Broeker, C. T., Ernst, R. M. and Myers, D. G. *Thinking About Psychology: The Science of Mind and Behavior*, Worth Publishers, 2007.

⁸³ Dienes, Z. *Understanding Psychology as a Science: An introduction to scientific and statistical inference*, Palgrave-Macmillan: Basingstoke, 2008.

⁸⁴ The British Wittgenstein conference at which John Dupré presented the paper I have mentioned was given the title 'Wittgenstein and the Social Sciences' (see <http://www.britishtwittgensteinsociety.org/news/annual-conference/20-2>, accessed 22/10/2016).

the problematic concepts. Literature and literary studies are also disciplines which are very worthwhile but which do not fit comfortably in either of those categories. There is such a thing as a social science but we should be careful to keep an eye on differences between the various scientific disciplines and not assimilate them in ways that lead to confusion.^{85 86}

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⁸⁵ Interestingly, even Hutchinson, Read and Sharrock suggest that it doesn't matter whether social studies get called social sciences «...so long as one keeps a clear view of what is thus named, and what its character is», *ibid.*, p. 51.

⁸⁶ I would like to thank participants in the Dimensões da Epistemologia conference, held at Universidade Nova de Lisboa on 6th September 2016, for their comments on an earlier draft of this paper. In particular, I would like to thank M. Gómez for his helpful comments after the event. I would also like to thank the Fundação para a Ciência e a Tecnologia for their generous support for my work while I have been at Universidade Nova.

Artículos / Articles

El legado aristotélico en la clasificación de la historia natural en el opúsculo *Descriptio Globi Intellectualis* de Francis Bacon

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ABSTRACT

This article analyzes the problem of classification of natural history in one of the lesser known works of Francis Bacon: the booklet *Description of the Intellectual Globe*, written 1612. It studies comparatively those elements of the Aristotelian-Thomist tradition concerning notions of regularity, commensurability and theoretical study of individuals who are still in force at the thought of Bacon. Also it analyzes those points where the Baconian proposals meant a radical break with the existing system of philosophy at the universities of his time, such as the inclusion of theology under the category of philosophy and his considerations regarding the ability of man to dominate, modify and recreate nature.

KEYWORDS

Francis Bacon, philosophy of nature, Aristotelianism, thomism, modern science.

RESUMEN

El presente artículo analiza el problema de la clasificación de la historia natural en una de las obras menos conocidas de Francis Bacon: el opúsculo *Descripción del globo intelectual*, escrito el 1612. Se estudian, comparativamente, aquellos elementos de la tradición aristotélico-tomista relativos a las nociones de regularidad, comensurabilidad teórica y estudio de los particulares que siguen vigentes en el pensamiento de Bacon. Asimismo se subrayan aquellos puntos en los cuales las propuestas baconianas significaron una ruptura radical con el sistema filosófico vigente en las universidades de su época, tales como la inclusión de la teología bajo la categoría de filosofía y las consideraciones en torno a la capacidad del hombre de dominar, modificar y recrear la naturaleza.

PALABRAS CLAVE

Francis Bacon, filosofía de la naturaleza, aristotelismo, tomismo, ciencia moderna.

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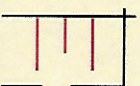
La conjetura, en cambio, responde a todos.

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