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The positive and the negative

Assessing critical realism and social constructionism as post-positivist approaches to empirical research in the social sciences

Justin Cruickshank

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Abstract

The argument developed in this paper holds that critical realism is stronger than many other forms of post-positivism but that it is itself open to criticism. While critical realists are polemical about positivism they do share with positivism the concern positively to develop knowledge. This stands in contrast to social constructionism which embraces relativism and scepticism in an attempt to delegitimize knowledge claims by exposing them as symptoms of underlying discursive power relations. For critical realists we need to defend knowledge from relativist and sceptical challenges while seeking to avoid the empiricist theory of knowledge that underpinned positivism. To do this critical realists turn from empiricism – and epistemology more generally – to ontology, and argue that the natural and social sciences need to be based on a coherent definition of reality. As regards the social sciences, critical realists argue that a meta-theory which defines social reality in terms of agents interacting with structural emergent properties is required to underpin empirical research. This non-positivist emphasis on generating knowledge about causal processes in society is stronger than social constructionism, which cannot move beyond the purely negative position of scepticism. However, we may consider problem-solving challenges to critical realism. These focus on the need for conceptual revision in contrast to the critical realist argument that the meta-theory of structure and agency is the condition of possibility of a mature social science.

Author: Justin Cruickshank, Sociology Group, Department of Politics and International Studies, School of Government and Society, University of Birmingham; Email: j.cruickshank@bham.ac.uk

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1 Introduction

Critical realism is an increasingly influential approach in the social sciences and although its initial impact has been restricted to theoretical debates, more interest is now being shown in the empirical application of critical realism. One rival perspective to critical realism in the social sciences is social constructionism. Both critical realism and social constructionism are motivated by a critique of positivism. Whereas positivism wanted to base the positive development and application of knowledge on an empiricist vision of science, critical realists seek to base the positive development and application of scientific knowledge on a realist vision of science, while social constructionists reject any notion that the social sciences ought to attempt to be scientific, as part of a broader rejection of the notion that knowledge can be positively developed and applied. Instead, social constructionists take a negative approach and argue that all knowledge is a symptom of underlying power relations and that the task of the researcher is to undermine such power relations by fostering a sceptical attitude to the prevailing knowledge–power nexus.

After discussing how critical realism and social constructionism construe the post-positivist problem situation in terms of constructing a realist and a sceptical alternative to it, some critical issues with social constructionism and critical realism will be discussed. It will be argued in this paper that critical realism and social constructionism fail to recognize the true import of the post-positivist problem situation for research. All three positions (positivism, critical realism and social constructionism) are concerned with the source of knowledge. This source is construed differently by each theory: it is the mind for positivism; ontological assumptions acting as the condition of possibility for scientific knowledge with critical realism; and the underlying metaphysic or discourse for social constructionists. For positivists and critical realists the focus is on the source of knowledge to justify knowledge claims, and with social constructionism the focus is on the source of knowledge in order to de-justify knowledge claims. The upshot of this, it will be argued, is that positivism collapses into idealism and cannot maintain the notion of a real world beyond our ideas of it; critical realism inaugurates a condition of permanent Kuhnian normal science that precludes the growth of knowledge; and social constructionism has to contradict itself to avoid negating itself with its negative approach. In other words, none of these positions is able to offer a coherent account of how empirical research can facilitate the growth of knowledge or how taking a sceptical approach to the attempt to gain knowledge can be a meaningful endeavor. Of the three positions, critical realism is the stronger – or perhaps it is better to say it is the less weak – because it recognizes that knowledge is fallible and thus open to revision and replacement through empirical research. However, this recognition is compromised by the concern with developing a transcendental answer that posits the condition of possibility of the sciences, because this forecloses the development of new theories with new ontological assumptions. Finally it is suggested that the correct way to construe the post-positivist problem-situation is to focus on the fallibility of knowledge, as critical realism does and, unlike critical realism, argue that fallible knowledge claims should be revised and replaced through criticism, with the focus being on theories' ability to solve explanatory problems rather than their adherence to a set of ontological assumptions that are posited as the condition of possibility of the social sciences.

Before discussing critical realism and social constructionism we can turn to positivism to clarify what we mean by this; to see how it approached the positive

development and application of knowledge which critical realism sought to explain in a different way; and to see how its suspicion of metaphysics has congruence with the negative approach of social constructionism.

2 Positivism

As the exchange between Popper (1976) and Adorno (1976) on the issue of positivism illustrated, any dialogue about positivism can start and end in mutual misunderstanding. The reason for this problem is that the meaning of positivism has broadened out considerably over time. For critical theorists, all contemporaneous thought outside critical theory, some branches of philosophy and high culture, was deemed to be a form of instrumental rationality and this was taken to be synonymous with positivism. The problem with instrumental rationality, for such theorists, is that it destroys individual creativity and debases culture, with all cultural items becoming commodified and devoid of intrinsic value. One contemporary critical theorist, Clarke (2006), goes so far as to say we live in an 'age of terror' caused by positivism/instrumental rationality. His argument is that the mindset established by positivism/instrumental rationality extends a desire for manipulation and control over nature to control over people, with the result being 'modern genocide', as populations that do not conform to some utopian blueprint are killed. The task undertaken here will not be that of trying to establish the innocence of thought, or at least some thought, outside the favoured domains of critical theory and high culture. Rather, the task here will be to outline the problem-situation that motivated those thinkers who referred to themselves as positivists.

For Comte (1974) and the Vienna Circle (see for instance Ayer (2001) and Carnap (2002)) the most important problem to deal with was the replacement of speculative thought based on metaphysics with the positive development and application of empirical knowledge. For Comte speculative thought could serve a limited negative function, whereby criticism based on speculation about human nature being rational could be used to undermine clericalism. This phase, which Comte termed the metaphysical phase, and which was used to refer to the Enlightenment, was however transitional and helped pave the way to the positive phase, when progress would be guaranteed by scientific knowledge. Such scientific knowledge would help the state generate policies rationally to plan society. By contrast, for the Vienna Circle, speculative thought about metaphysics could serve no useful (albeit transitory) function because it was necessarily meaningless.

Whereas Comte (1974) was ambivalent about whether or not empirical science had to be empiricist (see Giddens 1995), the Vienna Circle were committed to empiricism and the notion that new knowledge stemmed from observation of empirical patterns. For the Vienna Circle meaningful statements did not have to be restricted to empirical statements, but only empirical statements could give us new knowledge. Statements, for the Vienna Circle, could be placed into one of three categories, which were: metaphysical, analytic and synthetic. Metaphysical statements were deemed to be both unscientific and literally nonsense because they were empirically and logically unjustifiable. Analytic statements (such as 'a bachelor is an unmarried man') were tautological statements of logic that were true by definition and meaningful, but incapable of furnishing new knowledge of the world. Synthetic statements were both meaningful and, if verified, true statements that could furnish new knowledge. Such synthetic statements would be verified inductively, with an

observation of an empirical pattern allowing one to infer that one had observed a relationship of natural necessity – or cause and effect.

Underpinning this concern with science was the conviction that science was the exemplar of human rationality and that progress depended upon protecting science from irrationalism and, in some cases, extending the remit of science. For Comte (1974) scientific knowledge had to be extended from nature to society. This, for him, would entail the development of a science of society (or 'social physics' – later renamed 'sociology') that would be the 'Queen of the sciences' because its subject matter was the most complex. For the Vienna Circle (with some exceptions, such as Otto Neurath (1973), who wanted a scientific reformist sociology based on statistical research), this task of protecting science from irrationalism meant focusing on just clarifying the language of the natural sciences (with natural science meaning mostly physics). Whereas metaphysics could lead to irrationalism or, at best, a failure to provide a secure basis for the progression of knowledge, science would allow for the positive development and application of knowledge. That is, with positivism, knowledge could be positively developed from a secure empirical (rather than metaphysical) source and positively applied to drive technical progress and, for some, policy progress too.

This reference to the positive development of knowledge brings us to the issue of justified true belief. The issue here is knowing that one can know that one knows something rather than having a true view which is accidentally true. So, for example, if one thinks the train will arrive at 7am and it does so not because it is scheduled to but because it is running late, then one's belief is true but only in an accidental way. By contrast, the knowledge produced by science – positive knowledge – obviously has to be more robust, by being justified true belief. Science could not be a series of fortuitous guesses which appeared to explain nature but which could unravel at any moment. For the Vienna Circle scientific statements can give us justified true belief because they are empirical statements that are verified inductively; that is, our ability to know the world via sense-data inputs, such as ideas of observed empirical regularities, is sufficient for us to have certainty. The authority of science thus rests on the authority of the senses.

One may say that if the post-Enlightenment period saw the disenchantment of nature and the enchantment of science, that enchantment in the twentieth century was tinged with an implicit pessimism about the ability of extending the exemplar to human rationality beyond the domain of the natural sciences (with some exceptions). The realm of meaningful statements was truncated to analytic and synthetic statements and the role of philosophy was not to pose speculative questions about reality, aesthetics or ethics, but to underlabour for the natural sciences by policing their language. Whereas Comte (1974) was very optimistic about the positive application of knowledge, with his vision of sociology being the 'Queen of the sciences', the Vienna Circle were more circumspect.

The problem for the Vienna Circle of course was that metaphysics was not so easy to expunge. This brings us to the classic problem with the subject–object dualism that underpinned the Vienna Circle positivism (and the rationalist tradition too in epistemology). If one started by separating the mind of the subject from the world of objects (including the corporeal form of the subject), then one had to reunite them by arguing that ideas in the subject's mind must correspond to the objects outside, otherwise scepticism sets in and we cannot know anything. With empiricism it is maintained that the ideas the mind received through sense-data inputs are ideational copies of the objects outside the mind. However,

as we cannot step outside the ideas in the mind to compare them to the objects we hope they correspond to and act as ideational copies of, it is an act of metaphysical speculation to maintain that ideas of sensation are ideational copies of material objects.

3 Post-Positivism 1: Critical realism and the turn to ontology

Bhaskar's (1997, 1998) critical realism is in agreement with the positivist tradition concerning the notion that knowledge should be positively developed and positively applied. Bhaskar though is in disagreement with the positivist tradition concerning the way in which knowledge may be positively developed and applied. For Bhaskar the problem with modern philosophy, which is exemplified by the positivist tradition, is that it is based on epistemology not ontology. This is a problem for Bhaskar (1997) because it commits the epistemic fallacy of translating ontological questions about what reality is into epistemological questions about how we gain knowledge of reality. Or, to put it another way, reality is cut to fit a model of how the mind gets ideas of reality and doing this misconstrues reality. So, with empiricism for instance, it is maintained that the mind gets knowledge of the world through sense-data inputs such as observation, smell, etc. and so the reality we may know outside the mind has to be knowable via such inputs. Empiricist epistemology may be described as the foundation for positivism because positivist methodological prescriptions are based on the notion that knowledge may be positively developed from observation. Thus with induction one observes relations of cause and effect and with the hypothetico-deductive (H-D) method one tests a theory's predictions by observing the fixed effects of underlying causal laws. In this case we end up with what Bhaskar (1997) calls a 'closed systems ontology', meaning an ontology that defines natural reality in terms of fixed empirical regularities that are closed to the possibility of change. As knowledge is taken to come from observation, scientific method has to be in accord with this approach to knowledge, which means basing scientific method on observing fixed empirical patterns and assuming that nature is a closed system. Bhaskar (1997, 1998) argues that while one may create an artificial closed system in a laboratory, the world outside the laboratory is actually a stratified open system. The ontology is described as a stratified ontology for two reasons. First, there is a distinction drawn between the realm of observable events and the realm of underlying causal laws which are not directly observable. Second, the different causal mechanisms or processes are emergent properties with the causal mechanisms in the chemical and biological world being higher level properties than those studied by physics. The ontology is held to be one of open systems because the underlying causal laws interact in contingent ways to produce change at the level of observable events. While positivists would reject talk of a realm of unobservable causal laws as meaningless, because it was metaphysical and not empirical, for critical realists the empirical sciences can only explain causal processes by going from the realm of observed and changing effects to the realm of causal laws that are not directly observable.

To arrive at this position Bhaskar (1997, 1998) asks a transcendental question concerning the condition of possibility of the natural sciences and answers it by drawing on the ontological assumptions he takes to be implicit in the history and practice of the natural sciences. That is, the condition of possibility of natural science is that scientific theories are premised on the assumption that causal laws operate in a stratified open system. Thus the positivist tradition, on this reading, cannot account for the condition of possibility of the natural sciences because it misconstrues reality. To derive a methodology from a closed

systems ontology is to produce a methodology that has incorrect assumptions about reality informing it, and so positivism cannot account for the positive development and application of knowledge.

The task of philosophy, given this, is not to prescribe a method that is in conformity with an empiricist foundation but to 'underlabour' for the natural sciences by clearing away the conceptual confusion over reality caused by positivism and to help ensure theories are congruent with the ontological condition of possibility of science. This does not mean that science can achieve epistemic certainty by basing its theories on the correct ontological assumptions. Instead, for Bhaskar (1997), all scientific theories will be fallible not certain. Theories may be based on the correct assumptions about how to define reality but the substantive contents of a theory about specific causal processes will be a theoretical interpretation of how underlying and unobservable mechanisms work, which may be revised and replaced with another theory at a later date. This leads Bhaskar (1997) to draw a distinction between the intransitive domain of reality and the transitive domain of our theories, which is referred to as the transitive domain obviously because fallible theories are open to change. With this approach scientific theories will be justified epistemically if they are congruent with the ontological condition of possibility of science, but justified theories will not yield epistemic certainty, because all theories remain fallible.

Whereas the natural sciences are held to have one set of implicit ontological assumptions that act as the condition of possibility of the success of those sciences, the situation is different from this in the social sciences, because the latter have no coherent or tenable ontological assumptions. The ontological assumptions in the social sciences pertain to the structure–agency problem, i.e. the problem of defining social reality in terms of structures, agents or some form of structure–agency interplay. Bhaskar (1998) criticizes structuralist positions for determinism, and individualist positions for failing to account for the social context, with the consequence being that for him the task is to link structure and agency. To do this he turns to his natural scientific ontology to argue that social reality is a stratified open system. It is stratified because social structures are held to be emergent properties that exist in interaction with agents who are conditioned but not determined by structures. Archer (1995) complements this with the argument that culture is an emergent property too. On her rendering of critical realism we have: the interplay of structural emergent properties (SEP) such as capitalism; cultural emergent properties (CEPs) such as religion; and agents, which Archer talks of in terms of people's emergent properties (PEPs), meaning the groups within which people exercise agency, such as religious groups, political groups or trades' union groups. Given that the outcome of this interaction is contingent and given that structural and cultural emergent properties can interact in contingent ways, the social system has to be an open system characterized by change at the level of observable events. The role of theory in social science therefore is to interpret empirical phenomenon in terms of how observed events are the contingent outcomes of the interaction of unobservable processes.

For Archer (1995) the method that stems from the critical realist commitment to a stratified open systems ontology is what she terms the morphogenetic method. Archer holds that while SEPs, CEPs and PEPs are all entangled in reality it is necessary artificially to separate them (using an 'analytic dualism' between structure (meaning here SEPs and CEPs) and agency) so that one can then study their interplay over time. Time is of crucial importance for Archer because as SEPs and CEPs are emergent properties they cannot be

changed immediately by agents and, instead, when change occurs, it takes time (and agents' attempts to change structures may also fail). So, to study this, an analytic dualism has to be drawn between the structural and cultural conditions, and agents, which is called time point one. The researcher then has to study the interplay of these factors (i.e. 'socio-cultural interaction') over time (time point two) in order to conclude by showing that agency either changed structures or reproduced them (time point three). If change occurs, this is referred to as morphogenesis and, if structures are reproduced, this is referred to as morphostasis.

An example of this is provided by Carter's (2000) research on post-war migration to the UK. Describing time point one, Carter notes that the key structural and cultural conditions were that: economic productivity was increasing; the Labour Government was committed to reforms which included raising the school leaving age; and British foreign policy required the continuation of conscription to support a continued military presence in the colonies (Carter 2003: 143–54). The upshot of all this was 'the central structural condition of labour shortage' (Carter 2003: 154) and the Government decided to deal with the labour shortage by turning to the colonies. The Government's position of having no controls on immigration from the colonies was supported by employers and of course immigrants themselves (Carter 2000:112). The Government could not force the movement of labour across the country, did not want to get into conflict with the unions with whom they, as a reformist party, had close ties, and could not use poverty as a spur to move the domestic labour force given the Keynesian welfare state set out to eradicate poverty. Therefore the only source for new labour was the colonies. So, a combination of SEP factors, concerning the need for more workers in the context of Keynesian welfare state policies, and CEP factors concerning a socialist commitment to working closely with the unions, meant the PEP of the cabinet had to turn outside the UK for the extra labour required.

This brings us to time point two, concerning the socio-cultural interaction between various PEPs (different groups in Parliament), the SEP (economic need for more labour) and CEPs (ideas of race, identity and Britain's self image as a tolerant and pluralist socially liberal country). The Labour Cabinet's plan to bring in labour from the colonies to meet the SEP need was in tension with CEP, which held that non-white immigrants would be unable to assimilate, and other politicians (PEPs), who were motivated by this CEP to press for legislation to restrict immigration. This CEP about white Britishness was not the only CEP though. The Labour Government did not want to introduce legislation to restrict access to the UK because that would clash with a CEP concerning Britain's political status as a global power based on its colonies. To use legislation to restrict immigration from the colonies would undermine this CEP by making Britain appear to be hostile to its colonies. And of course Britain had its economic (SEP) interest in importing cheaper non-unionized labour from the colonies. To deal with these tensions between the different emergent properties, the Government introduced a policy of 'covert control' based on trying to discourage immigration by giving immigrants negative propaganda about Britain (Carter 2000: 121).

When the Conservative Government came into office in 1951 they sought more direct control of immigration, based on the CEP concerning the restriction of Britishness to white British people on the grounds that others would not assimilate. The Cabinet PEP wanted empirical evidence to support the notion that immigrants were not assimilating to British culture and thought that there would be evidence of immigration causing social problems. The problem the new Government encountered, though, was that there was not any empirical evidence of social problems caused by immigration. The disturbances in Notting

Hill and Nottingham in 1958 allowed some politicians to talk of the need to legislate to restrict immigration from the colonies, but the Government was unable to do this because to do so after the disturbances would compromise the CEP of Britain being a non-racist, tolerant colonial power (Carter 2000: 127). While the Cabinet PEP was still wary of introducing legislation, the PEP of other Conservative MPs and Labour MPs pressed for legislative change, and eventually a bill restricting immigration from the colonies was passed in 1961. This brings us to time point 3 which is a condition of morphogenesis with changed CEP notions of Britishness (Britishness restricted to exclude those from the colonies), and a new SEP condition of labour shortages being met by employers reducing staff needs, and Government and employers eroding restrictive union practices (Carter 2000: 135).

So, from Bhaskar's critical realist perspective the natural sciences can positively develop knowledge (which can be positively applied in technological progress) by developing theories in the transitive domain to explain the working of causal mechanisms that operate in a stratified open system. This realist approach is taken to answer the transcendental question concerning the condition of possibility of the natural sciences, whereas positivism with its closed systems ontology is taken to be incongruent with the condition of possibility of natural science. As regards the social sciences, they will be scientific if they generate theories to explain the interaction of social structures and agents with social reality being conceptualized as a stratified open system. Here knowledge may be positively developed from explanations based on this ontology and positively applied through the use of criticism.

For those critical realists who regard critical realism as a form of neo-Marxism, the task of social science is not just that of *explaining* how structures and agents interact but also that of *criticism* (see Bhaskar 1998 and Collier 1998). Their argument runs thus. Any scientific account of how the capitalist structure works will show how it is oppressive and exploitative. It will also show how this structure needs to generate ideological beliefs to mask its nefarious character. Ideological beliefs here are defined as beliefs which are not only false but caused by a structural need for obfuscation and which serve the interests of the capitalist class by obfuscating oppression and inequality. From a discussion of such facts the social scientist can logically derive negative value judgements about capitalism: one can logically derive an *ought* from an *is*, with a scientific social science holding that capitalism ought to be replaced by socialism. Underpinning this is the view that truth is a good in itself and so any structure which necessitates false beliefs must be criticized – with criticism being based on value judgements that are logically derived from the facts.[1] One example of an ideological set of beliefs is positivism. Social scientific research which seeks to be scientific by basing causal explanations on quantitative research is held to be positivist – and thus ideological – because such research is premised on a closed systems ontology (of fixed patterns between variables) which precludes any analysis of underlying structures. Some critical realists (see Willmott 2002) also argue that there is an 'elective affinity' between quantitative research and neo-liberalism. The argument here is that the focus on relationships between variables with no reference to underlying structures is analogous to the notion that the social world is constituted by isolated individuals linked by contracts with no underlying structures furnishing enablements and constraints for agents.

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[1] For a critique of this see Cruickshank 2010.

So, with critical realism the post-positivist problem-situation is deemed to be that of developing a realist philosophy of natural and social science to account for the (non-positivist) positive application and development of knowledge, with such positive application in the social sciences involving ideology-critique. Central to this realist endeavour is the ontological concern to define reality (in terms of stratified open systems), with knowledge claims being justified by being congruent with such a definition. That is, before one can explain how processes operate one must first define what sort of processes constitute social reality.

4 Post-Positivism 2: Social constructionist scepticism

Social constructionism is a broad tradition and it will be described here in terms of the following problem-situation. Whereas positivism and critical realism are, in different ways, concerned with the positive development and application of knowledge, social constructionists replace this with a negative approach based on scepticism. For social constructionists, knowledge claims are neither certain nor fallible true statements about reality but are instead constructions of reality that are imbued with power. Given this, the task of the social scientist is not to address the problem of seeking out knowledge of reality and basing criticism on this via ideology-critique. Rather, the task of the social scientist is to be critical by taking a sceptical approach that recognizes and destabilizes constructions of reality that serve to reproduce existing power relations. Social scientists cannot penetrate beneath the veil of ideology to a realm of reality, which knowledge claims can generate (fallible) knowledge of, but instead social scientists can disrupt the discursive reproduction of existing power relations and the social construction of social reality.

Despite the switch from a positive to a negative approach to knowledge, social constructionists do agree with positivists on one issue, namely that metaphysics is a domain which may have nefarious consequences. Metaphysics for social constructionists is to be understood in terms of the backcloth that shapes subjecthood and assumptions about reality. Metaphysics shapes the way people see the world and themselves – it shapes how reality is constructed. A central area of concern is with the construction of reality in western metaphysics that is based on the subject–object dualism. As regards the subject–object dualism in epistemology the argument is that the epistemic subject is constructed with the male subject being able to use reason to master and control the passive domain of objects. Thus with empiricism and positivism the mind of the epistemic subject is able to master the external domain because that domain is defined in a way that complements the mind: the world is defined as that which will reveal itself to the masculine subject through his sense-data inputs giving him ideas of the world, and this will enable him to dominate that world which he can know with certainty. Similarly the idea of the liberal subject as an atomized individual was constructed from the same metaphysical backcloth. With classical liberalism the subject is constructed as a rational pursuer of self interest in a social universe populated by other such individuals with whom the subject is in competition, and material resources that the subjects compete over. The epistemic subject and the subject of classical liberalism are constructed as abstract entities explicitly devoid of sex, class or ethnicity but implicitly constructed as white bourgeois men. With this metaphysic, reason was gendered as masculine and nature as feminine, with the task of male reason being to know, dominate and exploit nature. As regards ethnicity, non-white non-Europeans were construed as being closer to nature too, and open to legitimate exploitation by rational 'civilisers'.

An example of how this approach to western metaphysics may be used to inform empirical research into inequality and prevailing 'knowledge' about which bodies represent the embodiment of reason, is provided by Puwar (2001) who describes the situation of senior black civil servants. She argues that liberalism proffers a notion of the abstract universal individual which is disembodied and devoid of gender or ethnicity. The liberal discourse of equality (such as equality before the law and equality of opportunity) is based on the sameness of humanity with humanity construed in such abstract and universal terms (2001: 656). The abstract individual of liberalism has, she notes, been subject to extensive criticism. So, from a class-based perspective, Puwar notes how Marx criticized the abstract individual in the context of criticizing Hegel's argument that the civil servant was the pinnacle of universal reason who stood above particular interests in civil society (2001: 653). For Marx, Hegel's view that the bureaucrats of the Prussian civil service were the pinnacle of abstract reason was fallacious because they could only be agents embodied into material reality and unable to transcend class interests (Puwar 2001: 653). The abstract individual is not just de-classed though, but also de-gendered and de-racialized (Puwar 2001: 654). Developing a critique of the notion of the de-racialized abstract individual, Puwar draws on Mills to discuss the 'racial contract'. She argues that:

> 'The Racial Contract norms (and races) space, demarcating civil and wild spaces' (Mills 1997: 41). Within the European imperialist project space was normed on three different levels: macro (countries and continents), local (cities and neighbourhoods) and micro (bodies). Black bodies are represented as coming from uncivilised spaces, wildernesses that need taming. [...] Mills notes that whiteness is defined by negation. Whites are differentiated and defined by what they are not; namely subpersons. In the racial classificatory schema it is only white Europeans, because they are designated to be fully human, 'lords of humankind', who are seen to have the right personal constitution to reside in political constitutions. Blacks in negation are defined as humanoids who are not human enough to reside in the body politic (2001: 655–6).

The 'somatic norm' in senior Civil Service of the post-Colonial British state is unsurprisingly taken to be that of white bodies which are raced and classed in particular ways with white men speaking in Received Pronunciation being the embodiment of the abstract 'legitimate' individual. Black bodies in the senior Civil Service are described by Puwar as 'space invaders' who disrupt the somatic norm, which is implicitly defined in opposition to bodies which are 'Other' in raced and classed ways (2001: 657). The co-existence of such 'space invaders', Puwar argues, 'renders visible that which has been rendered invisible' (2001: 657–8).

In her interviews with senior black civil servants she explores their experiences of being 'other' within the body politic, with some describing how, for instance, in meetings with EU officials (in contrast to US officials), white people do 'double takes' and are not quite sure how to respond to them (Puwar 2001: 659). The outcome of this is not 'knowledge' in the style of 'old School sociology', which produces facts from the application of a particular method. Rather, talk of facts seems to be taken to be intrinsically 'positivist' by Puwar and so her analysis of her empirical research may be better described as an attempt to negate the somatic norm. By de-naturalizing this norm and exposing the implicit background racism it is based on and perpetuates, which contradicts the official rhetoric of liberalism, the norm is taken to be undermined. Thus, rather than seeking positively to develop and apply knowledge, by talking 'dryly' of institutions, groups and discrimination, with research based on the notions of truth, validity and measurement being used to furnish

policy makers with facts (Puwar 2001: 651-2), Puwar seeks to undermine the metaphysic of the abstract individual by showing how the co-presence of its other exposes it as a classed and raced conception of the legitimate individual *qua* embodiment of reason.

5 Critical issues concerning the source of knowledge

It will be argued here that critical realism and social constructionist research have failed to recognize the real problem at hand with the move from the positivist to post-positivist problem-situation. All three positions (positivism, critical realism and social constructionism) fetishize the putative source of knowledge. With positivism, justified true belief was held to be possible and explained in terms of empiricist epistemology: one could have justified true belief about a causal law by observing a pattern of cause and effect using an inductive method. In this case the source of knowledge was the mind of the epistemic subject, with the authority of the senses underpinning the authority of the sciences. The problem that critical realists identified with this was that reality was cut to fit the source of knowledge, which meant defining causal laws in terms of observable patterns of constant conjunction. To this it was objected that natural reality was open to change at the level of observable events, and therefore scientific explanation needed to go beyond observable patterns to postulate the existence of unobservable laws of nature. Or, to put it another way, empirical explanation needed what empiricists would regard as metaphysical conjecture about unobservable mechanisms. Critical realists refer to this problem in positivism as the epistemic fallacy, and hold that the discovery of this fallacy is an original contribution to the philosophy of the sciences. However, other philosophers have identified the same problem. Thus Popper (1972; 1996) argues that empiricism leads to idealism because the emphasis on the source of knowledge being the mind's ability to know ideas of sense data means that the mind cannot know anything other than ideas. Such an idealist conclusion is of course not actually alien to the empiricist tradition, with Bishop Berkeley (1929) stating *esse est percipi* ('to be is to be perceived'), meaning that all we can claim to know with justification is that minds, ideas and - so as to ensure we share the same ideas and avoid solipsism, God acting as the ideational guarantor - exist. Here then the source of knowledge as the mind's ability to know ideas is connected directly to the idealist position that there can be no material reality because this cannot be known to obtain beyond the source of knowledge in the mind.

Now let's consider social constructionism. This stands the positivist problem-situation on its head by seeking to de-justify and delegitimize knowledge claims rather than establish how justified true belief may be acquired. However, this is also concerned with the source of knowledge, with the source, in this case, being the prevailing discourse or background metaphysic. Whereas positivism looked back to the source of knowledge being the mind's ability to have ideational copies of the world to say how justified true belief could be arrived at, social constructionists look back to the source of claims about the world and seek to de-justify them by showing how such claims are nothing but symptoms of a nefarious discursive or metaphysical backcloth. Thus Puwar (2001) seeks to de-justify the liberal construction of the abstract individual as the embodiment of reason by looking at the destabilizing effect produced when it is confronted by its other, which disrupts the somatic norm.

A similar example may be found with Armstrong's (1995) Foucaultian-inspired arguments about surveillance medicine. Here any notion of medical progress developing by

the discovery and application of new knowledge is eschewed (there is no positive development or application of knowledge). Instead, the discourse of hospital medicine has been replaced by the discourse of surveillance medicine. What this means is that whereas bodies classified as ill were originally only subject to the medical gaze when dispatched to hospital, after a diagnosis, bodies are now subject to constant surveillance and self-surveillance as the medical discourse has become part of common-sense thinking. In this context a lack of illness is not a healthy state but a state of pre-illness that has to be subject to surveillance by a variety of health professionals, and self-surveillance, as the medical discourse is internalized in subjects. Thus there is no positive development of medical knowledge and instead medical knowledge claims are symptoms of an underlying discourse concerned with the classification and control (via surveillance) of bodies.

By showing that claims, whether they are about institutional policies premised on abstract individualism, or medical claims about the need constantly to manage a state of risky 'pre-illness', are symptoms of a nefarious metaphysic or discourse, the social constructionist hopes to denaturalize such claims by unsettling their taken-for-grantedness. With this approach, then, one ought not to enquire whether a claim is a true, valid, etc. representation of reality but instead one ought to see the claim as a symptom of a power-imbued set of assumptions and take a sceptical attitude towards it.

So, with social constructionism, the point of empirical research is not positively to develop knowledge (as justified true belief). Rather, the task of the researcher is to take a negative approach to knowledge, based on the fostering of a sceptical attitude that conceptualizes knowledge claims as symptoms of underlying power relations. Similarly, whereas positivists wanted knowledge to be positively applied through technical and policy developments, social constructionists want to take a negative approach, by de-naturalizing and thus (it is hoped) destabilizing the prevailing power–knowledge nexus. Social constructionists cannot put forward a positive agenda for change because that would, for them, entail them 'privileging' their view over others, by speciously claiming some form of epistemic authority to impose truth claims on others.

The problem with social constructionism's negative approach is that a consistent application of it would entail silence. To be sure, social constructionists fight shy of 'privileging' their view as the truth when it comes to the *application* of knowledge – thus they do not put forward policy solutions or argue for socialism. Nonetheless, any attempt to *develop* knowledge in the first place is pointless if one assumes that all knowledge is a symptom of an underlying discourse or metaphysic. Even if one does not seek to 'privilege' one's knowledge by saying it is true and other views are false, the very act of undertaking research to *develop* knowledge will, *ex hypothesi*, entail the reproduction of some underlying nefarious discourse or metaphysic, unless, that is, one can step outside such discursive and metaphysical systems. Indeed, the very recognition that discursive or metaphysical systems are actually nefarious requires one to step outside their purview and see them from the 'outside'.

Merttens (1998) is a social constructionist ethnographer who is unsatisfied with the notion that social constructionism cannot *apply* its empirical research findings for fear of privileging the researcher's view. To get around the problem of privileging she argues that the research produced is not to be approached in terms of 'findings' by an expert researcher but in terms of 'stories' which are open to interpretation by lay agents, who may all find different meanings in the work. Thus Merttens (1998) uses her ethnographic work on

education to help empower lay agents without imposing an expert narrative on them. However, one may ask what motivates this commitment to empowering agents to change existing social and institutional relations. If the researcher stated that they were motivated by a commitment to ethical principles concerning empowerment, etc., then we could make sense of their work. If though one cannot make a truth claim about ethical principles for fear of privileging one's view, then one cannot make sense of what motivates the work. In other words, one may try to avoid privileging the view of the researcher, when it comes to the *application* of research knowledge, by talking of 'stories' not 'findings', but the attempt by the researcher to *develop* knowledge in the first place, and develop it to correct a perceived ethical wrong, presumes the researcher can step outside discursive and metaphysical systems to recognize wrongs and get some truth about them.

As Sayer (2005) argues, social constructionist work is based on what he terms crypto-normative ethical commitments. What this means is that there is a disjunction between the official and unofficial positions of social constructionism. The 'official position' of social constructionism eschews making positive claims about ethical commitments, for fear of privileging its own claims. By contrast, the 'unofficial position' of social constructionism is based on ethical commitments, with the task of empirical research being to advance these by encouraging people to try to change existing relations to make them more equitable. At the level of textual commitments, the social constructionist must deny all knowledge by treating all knowledge as a symptom of an underlying nefarious discursive or metaphysical system but, at the level of unstated motivation, the social constructionist believes in real ethical principles (not mere constructs) about equality, and wants to make quasi-covert truth claims about this to try and right a wrong. Tacitly then, in order to motivate research, social constructionists have to break from the notion that *all* knowledge claims are symptoms and their underlying source is in a set of power relations, in order to advance claims that are meant to have positive consequences.

So, positivism has ended up being unable to account for the positive development and application of knowledge because by making the authority of the senses the source of knowledge it ended up in idealism, which makes the empirical sciences pointless, and social constructionism violated its negative approach by assuming that one could gain some form of knowledge and know some real ethical principles beyond discursive and metaphysical systems. That is, positivism became unable to account for the positive development and application of scientific knowledge and social constructionism had to abandon its negative approach to make some tacit appeal to the positive development and application of social science knowledge. What then of critical realism?

Critical realism is to be commended for avoiding the pitfalls of positivism and social constructionism by focusing instead on developing a fallibilist approach to the positive development and application of knowledge. Now, if the recognition of fallibilism were put to work then justification would have to be replaced by criticism. This is because theories, as fallible interpretations of the world, could always be open to revision and replacement, and so one could not justify them by appealing to a posited source of knowledge; instead the emphasis should be on using criticism to locate problems in theories that require revision and replacement. The issue with critical realism though is that its attempt to use its ontological argument as the condition of possibility of social science precludes the full development of such a problem-solving approach to the positive development of knowledge.

As we have seen critical realists pose a transcendental question concerning the condition of possibility of the sciences. To this they answer that the condition of possibility of the sciences producing knowledge is that they are based on the correct ontological assumptions. Such assumptions therefore become the source of knowledge in the sense that correct causal explanations of natural or social processes need to be premised on a stratified open systems ontology. These ontological assumptions would not be a source of knowledge in the sense that they could furnish certainty in the realm of empirical explanations but they would be the source in the sense that any theory which sought to explain *how* particular phenomena interacted would have first to say *what* the causal processes were and how they operated. That is, any empirical explanation requires first a *definition* of reality (in terms of emergent properties interacting in open systems) and so definitions are the drivers of epistemic progress in the sense that the correct definitions furnish the condition of possibility of the natural and social sciences.

So, scientific explanations that work, and work in a non-accidental sense, are justified because their accounts of *how* phenomena interact are premised on a justified account of *what* these phenomena are. If the definition of reality is unjustified it follows that the explanations premised on it will lose their justification – in other words, the source of knowledge will disappear. Now, with traditional metaphysical realism (see for instance Trigg (1993) or Searle (1995)) a dualism is drawn between our representations of reality and a reality in itself which exists independently of our representations of it and which is ultimately unknowable. Critical realism is different from this because while it postulates the existence of the intransitive domain as a domain that exists beyond representations and a domain that is ultimately unknowable in itself, its concern with ontology is not restricted to postulating the existence of the intransitive domain. Rather, its main concern with ontology is not metaphysical speculation about the existence of the intransitive domain but rendering explicit the hitherto implicit ontological assumptions within scientific explanations (at least in the natural sciences); i.e. the concern with ontology is with rendering explicit the assumptions about reality that obtain within the transitive domain of fallible scientific theories. The problem here is that such a manoeuvre entails the epistemic fallacy as defined by critical realists. With this fallacy, it will be remembered, ontological questions about what reality is are transmuted into epistemic questions about how we gain knowledge of the world. In this case, questions about reality are turned into questions about our assumptions about reality situated within our knowledge claims about reality. The answer to the question 'what is reality?' does thus not lead to metaphysical speculation about the nature of the intransitive domain but instead is drawn from our theories which seek to know reality: what reality is becomes what we think reality is using our knowledge claims about reality (Cruickshank 2004).

Let us assume though that critical realism does not fall foul of its rendering of the epistemic fallacy. If it was maintained that the ontological assumptions did provide the condition of possibility of the sciences then we encounter the problem that critical realism would establish a condition of permanent Kuhnian normal science. For Kuhn (1970), what was scientific was defined not in terms of a particular method but in terms of the prevailing world view that constituted a 'paradigm'. Empirical research then set about solving explanatory puzzles in ways that conformed to the paradigm. Any research that was out of kilter with the world view of the paradigm was by definition non-scientific heresy unless a group of scientists managed to convince enough of the scientific community to accept an

alternative and, at that point, a revolution would bring in a new paradigm – and the previous revolutionaries would then be conservatives. Kuhn famously struggled to say how a paradigm change could be rational, but the point was he allowed at least for a social process for change to occur. Now with critical realism the ontological assumptions furnish the condition of possibility of the sciences and while they are held to be fallible there is no mechanism for changing them. In this situation no alternative ontological assumptions can be countenanced because they would be antithetical to the prevailing condition of possibility for science. In ensuring that explanations in the sciences were framed in terms of emergent properties in open systems, the critical realist would preclude the development of new ontological assumptions in new explanations because these would go against the condition of possibility of the sciences as posited by critical realists. So even though the ontological assumptions were held to be fallible, there would be no mechanism in the philosophy to change them if one held that they constituted the condition of possibility of the sciences. This would thus create a condition of permanent Kuhnian normal science whereby new theories with new ontological assumptions would be precluded (Cruickshank 2007).

At this point critical realists object and say that obviously they would not try to stop scientists using new ontological assumptions. To concede that, though, is to make the transcendental argument redundant. For if one concedes that science can progress by developing new ontological assumptions and one holds that science, so far at least, 'works', then one has immediately rendered pointless the attempt to search for the condition of possibility of science *per se*. At best one could say that for scientific period A, ontological assumptions X were the condition of possibility and for scientific period B, ontological assumptions Y were the condition of possibility. However, this is of no normative value, i.e. it does not allow the philosopher to underlabour for the sciences by saying what ontological assumptions the scientist ought to have to be in accord with the condition of possibility of science and, instead, it is a matter just for the history of science.

Applying this to the social sciences, one could then argue that the ontological assumptions that social reality was constituted by SEPs, CEPs and PEPs in an open system, held no normative, or prescriptive, power and that if social scientific research generated explanations that appeared to work, but which were incongruent with such assumptions, then such research should simply be accepted. Obviously what constitutes a scientific explanation that 'works' in the social sciences is more controversial than in the natural sciences but one may still talk of explanations that can be of positive use in assisting policy reform. So, for example, one may use survey research with its closed systems ontology that does produce valid and reliable data, or ethnographic research which provides powerful insights with no concept of social structures informing it. For example, survey research can be used to say that ethnic minorities suffer an 'ethnic penalty' in the labour market (Cheung and Heath 2007), or one could use ethnographic data to explore the many subtle forms of exclusionary practice that disadvantaged group suffer, or one could link both methods to get different types of data on the same problem (see Oakley 2000 on this). When a critical realist replies that research must be based on an ontology of structure and agency, operating in an open system, one may reject this by arguing that such research works, and as the critical realist has surrendered the claim that such ontological assumptions can furnish the condition of possibility of social science there is no prescriptive force to critical realism. Or, to put it another way, if one did really accept that critical realism provided the

condition of possibility for social science then one would have to say that all pre-critical realist social science was unscientific and erroneous (unlike the natural sciences which had the correct implicit ontological assumptions that critical realism simply rendered explicit) and all current non critical realist research was unscientific and erroneous. Such an outcome though would be dogmatic and, given the insights offered by other work, rather bizarre. One could not, for instance, plausibly say that Durkheim and Weber offered no powerful insights into the nature of modernity because they got their ontology allegedly wrong. Either one accepts that critical realism is a transcendental argument that furnishes the condition of possibility for the sciences and embraces the notion that non critical realist work is unscientific, or one drops the argument that it does supply the condition of possibility of the sciences and consequently drops the notion that the ontology of structure and agency has any normative force.

Summing up this section on critical realism, we may say that for critical realists knowledge can be developed positively by being in conformity with the ontological condition of possibility of the sciences, and it may be positively applied with the natural and social sciences producing causal explanations that can support technical progress and a correct understanding of how social structures impact on (and exploit) agents, respectively. However, the ontological argument fell foul of the epistemic fallacy and could not be used as the condition of possibility for science if one presumed that the condition of possibility of science should allow for the progress of science rather than the creation of a period of permanent Kuhnian normal science. In other words, the source of knowledge could not be justified and could not thus be used to give a non-positivist positive account of the development and application of knowledge.

The argument may now be made that the real lesson to learn from positivism is that the post-positivist problem-situation should turn neither on justification of positive claims nor the negative approach of fostering scepticism to positive claims, but on replacing justification with criticism and abandoning any notion of an epistemic or ontological source of knowledge. Such an approach could put the recognition of fallibilism to work by holding that all theories and methods were akin to tools to solve explanatory problems, and better tools would be found by criticism. As there can be no justification of knowledge by turning to a source of knowledge and as knowledge is fallible, it follows that knowledge will grow through the revision and replacement of fallible knowledge claims driven by criticism. When a theory or empirical explanation offers a solution to a preceding explanatory problem we should seek to find problems with that putative solution until a new theoretical or empirical tool is required. Thus it is problems that are the drivers of knowledge rather than ontological definitions. Instead of looking back to a source of knowledge to justify or de-justify knowledge we should look forward (in every sense) to problems.

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