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DOI:

[10.1080/23254823.2016.1162664](https://doi.org/10.1080/23254823.2016.1162664)

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Document Version

Peer reviewed version

Citation for published version (Harvard):

Cruickshank, J 2016, 'Dialogue and the development of ideas in the political and social sciences: from critical-realism to problem-solving via Colin Hay and the rejection of the epistemic fallacy', *European Journal of Cultural And Political Sociology*, vol. 3, no. 1, pp. 72-96. <https://doi.org/10.1080/23254823.2016.1162664>

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This is an Accepted Manuscript of an article published by Taylor & Francis in European Journal of Cultural and Political Sociology on 19th April, available online: <http://www.tandfonline.com/10.1080/23254823.2016.1162664>

Checked April 2016

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**Dialogue and the development of ideas in the political and social sciences:
From critical-realism to problem-solving via Colin Hay and the rejection of the
epistemic fallacy**

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Abstract

Colin Hay's extensive work on politics helps illustrate that ideas can have significant traction of their own which inhibits change. Therefore accounts of conceptual development in the political and social sciences should examine the possibility of slow dialogue, as a form of communication hospitable to innovation. For critical-realism, justified explanations must avoid the 'epistemic fallacy' of conflating ontological questions about what reality is with epistemological questions about how we know reality; it prefers basing explanations on an ontology of structure and agency. I argue, using Popper and Lakatos's problem-solving epistemology, that the critical-realist construction of the epistemic fallacy is untenable, and that attempts at justification entail what I call 'speedy' dialogue, with putatively 'unjustified' positions being simply rejected; unlike the slow dialogue that problem-solving demands. I also use Hay to show how problem-solving needs to include ontological references, once they are separated from the attempt to justify ideas.

Keywords:

Critical-realism, epistemic fallacy, Hay, Popper, problem-solving

Introduction¹

Colin Hay has written extensively on politics and political economy, with two key themes in his work being the way ideas develop in academic and policy-making dialogue, and the important role of ontological assumptions about what constitutes political and social reality in analysis and critique. For Hay (2007), politics is about the ability to ‘make a difference’, and ideas are of central importance, because these motivate agents. The political and social sciences can make a difference too, not least by developing ideas for analysis and critique. The problem that can arise is that these sciences may be undermined by a failure to develop ideas in the most useful way, and to develop the most useful ideas, that is, ideas which lead to more useful explanatory problems to explore. To explore these two issues, I argue that it is necessary to address epistemological questions about ideational change, and ontological questions about the definition of political and social reality that shape our ideas of how political and social processes operate. These two approaches are usually considered antithetical to each other. Going against this convention, I will argue here that ontology can complement epistemology, and I will do this by comparing and criticising Popper’s problem-solving epistemology and the critical-realist turn to ontology. Popper’s work is often neglected, despite a resurgence in Popper scholarship (see, for instance, Benesch, 2012; Hacohen, 2000; Sassower, 2006), whereas critical-realism is an increasingly influential position (see, for instance, Archer, 1995; Bhaskar, 1997, 1998; Sayer, 1992, 2000a, 2000b). The argument I develop here is that Popper’s work on problem-solving is, with revisions, of more use than critical-realism.

To facilitate discussion of epistemology and ontology I undertake an analytic reconstruction of Hay’s work which distinguishes three different Hays, which I refer to as the ‘unorthodox Kuhnian Hay’, the ‘unorthodox critical-realist Hay’ and the ‘problem-solving Hay’. The unorthodox Kuhnian Hay helps

¹ I would like to thank the anonymous reviewers for their helpful feedback. Any errors that remain are entirely my own.

to highlight what I term the ‘problem of dialogue’. This problem concerns the traction that ideas can have, which means that ideational change can often take significant time.

Popper (1972, 1976, 2003) rejected the traditional definition of knowledge as justified true belief. The attempt to secure justification entailed appealing to an ‘authoritative source’ of justified explanatory knowledge. Empiricism provides an example of this. With empiricism, the ‘authority of the senses’ is held to guarantee that immediate sense-data impressions of objects gives us accurate knowledge of those objects. So on this view, a table, for instance, can be known immediately because of the sense data impression created by sight. Here ‘immediacy’ means known directly without any conceptual mediation, with the idea of the table, created by sight of the table, being an ideational copy of the object. For epistemologies, such as empiricism, that define knowledge as justified true belief, error arises because individuals choose not to apply their inner epistemic authoritative source. Another way of putting this is to say that justificationist epistemologies seek certainty in knowledge by holding that there is an inner ‘foundation’ that justified ideas can be built upon to be ideational copies of reality; error may be created by individuals choosing to hold beliefs that are unjustified because they do not conform to the foundation. For an empiricist, a belief in unobservable social structures would be an example of an idea that was unjustified, because it was not formed using the inner epistemic authority of the senses.

For Popper, the problem of justification was a pseudo-problem, because error does not arise from a wilful negligence to pay heed to an inner source of knowledge; it is rather our epistemic condition. Knowledge is fallible, not certain, and so rather than try to banish error in pursuit of certainty, the task is to learn from error. Furthermore, the problem of justification is a pseudo-problem because attempts to solve this by positing a source of knowledge is to predefine reality to fit the putative source. So, with empiricism, reality is predefined as that which we can sense. The outcome of this, Popper argues,

is actually idealism, because all we could know on this view would be ideas of sensations (Popper, 1976, 1996). For Popper, the most useful way for ideas to develop is through a problem-solving dialogue that criticises existing explanatory solutions, with the most useful ideas being those that can open up the most useful problems: a critical dialogue is most successful if it finds the most useful problems to engage with, and is unsuccessful if it is used to defend one position and reject others. All positions are fallible, so all positions need to be capable of being changed in the search for more useful problems to engage with. Using the everyday meaning of ‘justification’, I argue that Popper’s rejection of the narrow technical meaning of ‘justification’ in philosophy, which pertains to the search for certainty, is justified.

A rational and ethical society for Popper (1972, 1976, 2002a, 2002b) is one where academics, policy-makers, politicians, scientists, and lay agents, are happy to change their ideas – including their most cherished beliefs – quickly, so as to hold ‘better’ ideas as soon as possible. Popper had what I term a ‘speedy’ conception of dialogue, with the view that dialogue would drive an ideational ‘permanent revolution’. This prescription for ideational change obviously fails to solve the problem of how dialogue can realistically be envisaged. Using the work of Lakatos (1970), I argue that Popper’s philosophy can be revised to replace the notion of an ideational permanent revolution with a conception of the dialogic development of ideas as a sustained process that could take significant time.

In addition to being unable to solve the problem of dialogue, Popper is also in error, I argue, to hold that all attempts to develop a political and social ontology are fallacious. For Popper (2002a, 2002b), attempts to develop a political and social ontology entail ‘methodological essentialism’, which is an ontological attempt to solve the pseudo-problem of justification. Empirical explanations based on methodological essentialism cut the data to fit the prior ontological commitment, with explanations

taken to be justified if they explain events using the definitions posited by the ontology. So, for example, someone adhering to a structural-determinist ontology would ‘see’ every event as caused by structures, with justified explanations defining all events as caused by determining structures (Popper, 2002a, 2002b). As Popper describes the commitment to methodological essentialist positions, ‘[O]nce your eyes were thus opened you thus saw confirming instances everywhere: the world was full of verifications of the theory. Whatever happened always confirmed it’ (1976, p. 35).

Critical-realists, *contra* Popper, maintain that knowledge is both fallible and justified. To say how empirical explanatory knowledge may be justified, critical-realists turn from epistemology to ontology. For critical-realists, all epistemological questions about *how* we know the world draw on explicit ontological definitions or implicit ontological assumptions of *what* the world is. Therefore it is important to have philosophy prescribe justified ontological definitions, because empirical research needs to be based upon a justified definition of *what* reality is, in order to avoid producing empirical explanations that fail because they misdefine political and social reality (Bhaskar, 1997, 1998). This means defining political and social reality in terms of agents being conditioned by structural emergent properties (Archer, 1995; Bhaskar, 1998; Sayer, 1992, 2000a, 2000b). For critical-realists, an epistemological position such as Popper’s would commit the ‘epistemic fallacy’ of ‘transposing’ ontological questions concerning *what* reality is into epistemological questions about *how* we know reality (Bhaskar, 1997, p. 16).

I argue that critical-realism has a speedy conception of dialogue, referred to here as ‘justificationist speedy dialogue’, that operates in the opposite fashion to Popper’s permanent revolution approach to speedy dialogue, by using criticism to protect the ideas taken to be justified and reject ideas taken to be unjustified. This justificationist speedy dialogue, I argue, fails to solve the problem of what dialogue should properly entail. This is because instead of having a sustained dialogue to arrive at

more useful definitions of problems, with this entailing the revision and replacement ultimately of all ideas, it uses dialogue to prevent some ideas changing, and to remove the critical force of opposing ideas by holding that they are unjustified. Explanations based on the putatively-justified critical-realist ontology are taken to be justified, and explanations from other positions are taken to be unjustified, because they are based on an ontology different from that of critical-realism.

I go on to argue that the critical-realist construction of the epistemic fallacy is erroneous because the problem is with justification, not epistemology *per se*. Empiricist epistemology attempts to justify knowledge claims by basing them on the authority of the senses, with this entailing idealism. Critical-realism attempts to justify empirical explanations by basing them on what is taken to be a justified ontology of structure and agency. This not only entails justificationist speedy dialogue. It also ends up misdefining reality because there is no possibility of using any ‘dialogic’ feedback from empirical research to revise or replace the putatively-fallible ontological definitions. This is because using empirical knowledge of *how* phenomena interact to change an ontological definition of *what* political and social reality is, would be taken by critical-realists to commit what they interpret as the epistemic fallacy. But attempts at justification end up producing erroneous explanations of political and social reality. By contrast, a revised problem-solving approach can get more useful ideas of reality, I argue, because it engages in a sustained dialogue to revise or replace our fallible ideas over time.

Nonetheless, I contend here that a problem-solving epistemology needs to draw on ontological assumptions, providing these are not linked to the pseudo-problem of justification. The unorthodox critical-realist Hay argues that a justified ontological definition of *what* political and social reality is cannot be used as a source of justified explanatory knowledge for empirical explanations. The problem-solving Hay goes a step further, to separate ontological definitions from the pseudo-problem of justification, while showing that ontological definitions can raise useful empirical problems. A sustained dialogue is the most useful way for ideas to develop, and the most useful ideas may include ontological definitions, providing they are separated from the pseudo-problem of justification.

What I term ‘speedy’ dialogues are not the most useful way to develop useful ideas. Popper has been rightly criticised for his view that we need to engage in dialogue of this kind to facilitate an ideational permanent revolution (Lakatos, 1970), but justificationist speedy dialogues are just as problematic and are commonplace in the political and social sciences. Instead of seeking to seal putatively - justified positions off from critical dialogue and rejecting opposing positions for being unjustified, we should engage in sustained dialogue to replace all ideas over time in the search for more useful problems. We can, as Popper (1972, 1976) argued, learn from error, and that means taking time to engage in meaningful dialogue, with ideas that can have significant traction, so we do not ‘talk past’ each other.

The unorthodox Kuhnian Hay

Before discussing the Kuhnian Hay, it is necessary to outline Kuhn’s (1970) philosophy of ideational change. Kuhn (1970) held that in conditions of ‘normal science’, explanations would cut the data to fit the paradigm, or world view, of the scientists. With this approach, empirical research was a matter of puzzle-solving not problem-solving. Rather than address problems which could require the revision or replacement of paradigms, empirical research solved puzzles which had their solutions predefined by the paradigm. Revolutionary science, which is very infrequent, occurred when anomalies were seen to accrue within one paradigm. How anomalies could be recognised is a problematic issue for Kuhn: he veers between saying that the paradigm determines how we see the world, which may well preclude ideational change, and saying that scientists can see reality undermining our ideas, which suggests a move from puzzle-solving to problem-solving. Some critics have argued that this approach entailed an irrationalist conception of scientific change, because on Kuhn’s own account there could be no extra-paradigmatic criteria to assess the development of paradigms; and that it entailed relativism with all knowledge being wholly relative to a paradigm (Bhaskar, 2011; Popper, 1970).

The Kuhnian Hay holds that ideational change can be slow because ideas have traction but, unlike Kuhn, he regards this as a problem to be tackled - although, unlike Popper, he does not want to

replace the Kuhnian concept of normal science with a permanent revolution. Instead, for Hay, sustained critical dialogue needs to be used to move people out of paradigms that no longer furnish, if they ever did in the first place, the most useful approach to defining problems and their possible solutions. Hay, unlike Kuhn, is clear in accepting that there are extra-paradigmatic criteria to assess paradigms, and that these pertain to the empirical problems – not puzzles – that paradigms try to solve. Two examples can be given here.

Discussing the post-2008 economic problem, Hay (2013) argues that the prevailing paradigm in government policy-making defines the problem to make it fit with the ‘Anglo-liberal growth model’ in the UK. This model can be summarised in terms of the reliance on debt to fuel consumer-based growth in a low inflation – low interest rate economy, with debt increasing substantially (Hay, 2013, pp. 2-3). Furthermore, the mortgage market became heavily securitized, which encouraged extensive lending thus fuelling a housing boom. The social policy corollary of this was variously known as ‘asset-based welfare’ or ‘privatised Keynesianism’. Like Keynesianism it sought to encourage growth via spending, but unlike Keynesianism, it relied on private debt and presumed there was no longer a tendency for market economies to go through cycles of boom and bust. Whilst people invested in houses and did not save, their welfare could come from remortgaging or trading down, but if the bubble burst they would face problems. When the bubble did burst, a virtuous circle of low interest rate and low inflation growth became a vicious circle of unemployment, mortgage defaults, falling house prices and collapsing consumer demand. Whilst the collapse of the US housing market would have caused major problems on its own, it is not the sole factor behind the UK recession. Hay argues, ‘Britain would almost certainly have experienced a deep and painful recession without it’ (2013, p. 38). A rise in oil prices, inflation and interest rates all served to undermine the housing market and consumerism.

Politicians are seeking no alternative, though, to the Anglo-liberal paradigm and define the problem as one of government debt, with the solution being that of austerity, when actually it is a problem of growth, requiring policies to boost this (Hay, 2013, p. 49). Reflecting on the meaning of the word ‘crisis’, Hay argues that it originally meant ‘decisive intervention’ and that ‘the transitions we associate with crisis periods take a long time to arise – typically a decade or more’ (2013, p. 64). Hay argues that the Anglo-liberal paradigm is unlikely to be replaced in the short to medium term because financial services play a vital role in the UK economy, and because there is no compelling case for an alternative paradigm which rejects austerity being argued for in policy making circles (Hay, 2013, p. 60).

Turning to the second example, Hay (2007) discusses the problem of falling voter turnout. Hay argues that the main paradigm focuses on what he terms the ‘demand’ for ‘political goods’, with advocates of that paradigm arguing that there is a fall in demand because the electorate are now less interested in politics. One prominent group of examples of the main paradigm are the explanations based on Putnam (2000), which link a decline in ‘social capital’ to a decline in demand. Against this, Hay makes three points. First, such approaches are tautological: increased apathy is explained in terms of increased apathy. Secondly, whilst in the US civil and political decline have occurred together, this is not the case in other states. Furthermore, Hay argues that those who are most withdrawn from formal politics may also be amongst the most politically active in the extra-parliamentary arenas (2007, p. 46). Thirdly, defining the problem as a decline in demand caused by apathy can ‘depoliticise’ the problem, leading politicians to take a fatalistic attitude to their ability to make a difference.

For Hay (2007), the problem has to be defined as a lack of ‘supply’ of meaningful political goods. His argument focuses on the way public choice theory has reinforced the rise of neoliberalism. Public choice theory developed as a form of rational choice theory that sought to replace ‘welfare

economics' as the 'science of market failure' with a pro-market forces 'science of political failure' (Hay, 2007, p. 96). Hay distinguishes two phases of the development of public choice theory and neoliberalism. In the first phase, public choice theory saw the problem as the 'overburdened state' and legitimised 'normative neoliberalism'. This sought to redefine political and social problems as privatised problems, concerning individuals' ability to make a difference for themselves in competition, as part of the attempt to 'roll back the state'. Once neoliberalism was established, public choice theory legitimised 'normalized neoliberalism' which presented neoliberalism not as normatively superior but as the only serious option and beyond question. With this 'necessitarian' view, policy-making is 'depoliticised' in the sense that politicians become fatalistic about their ability to use politics over markets to make a reformist difference. The lack of supply of meaningful political goods then undermines electoral demand.

So, with these two examples, Hay is making the point that ideas which do not define problems in the most useful way still have significant traction. Indeed, at one point he notes that ideas have such traction that a crisis may not be properly defined and responded to for years. Hay has, in each case, shown why the prevailing paradigms need to change, but as ideas in paradigms can have significant traction, they will not be replaced immediately. The problem of dialogue is thus that of finding a position that can recognise the traction of ideas and seek to engage with this by motivating a sustained dialogue that will, over time, change paradigms, to arrive at more useful definitions of problems.

Problem-solving: Popper and Lakatos

We can now consider how problem-solving epistemology can deal with the problem of dialogue. I described in the introduction how Popper rejected the pseudo-problem of justification in epistemology and ontology. This meant, respectively, rejecting empiricism, which appealed to an inner authoritative source of knowledge, in the form of the authority of the senses, and rejecting methodological

essentialism, exemplified by structuralist determinism, which treated a definition of political and social reality as the source of knowledge, ‘seeing’ empirical data as an expression of structural forces (Popper, 1972, 1976, 2002a, 2002b). In opposition to both of these, he argued that as knowledge was fallible it would develop through critical dialogue, based on seeking out problems with existing explanatory solutions. We learn from error, and learning is most effective when seeking out the most useful problems to engage with, whereas those seeking justification wish to remove error, protecting ideas taken to be ‘justified’ and rejecting those taken to be unjustified.

Popper’s rejection of the attempt to develop ontological definitions of political and social reality did not mean he was opposed to metaphysics, and he did adhere to ‘metaphysical realism’, but this just holds that reality exceeds our representations of it – it entails no substantive definitions of what reality is (Popper, 1972, 1996). Metaphysical realism is simply the denial of the idealist view that reality is constituted by our ideas of it (Popper, 1972). Popper also famously distinguished three worlds, namely world 1 (the physical world), world 2 (subjective states) and world 3 (objective knowledge) (Popper, 1972). Popper states that ‘[E]xamples of objective knowledge are theories published in journals and books and stored in libraries; discussions of such theories; difficulties or problems pointed out in connection with such theories; and so on’ (1972, p. 73). His point in talking about world 3 is to move his epistemological position away from the notion that epistemology has to be based on a conception of a ‘knowing subject’. Popper (1972) advocated ‘epistemology without a knowing subject’, in order clearly to contrast his dialogic epistemology from earlier – ‘subjectivist’ – epistemologies, such as empiricism, which focus on how the mind of an epistemic subject knew the world via an internal source of justified explanatory knowledge.

Popper’s approach to the growth of knowledge is ethical and then epistemic. Individuals who seek justification take comfort in dogmatic certainty and have incorrect ideas as a consequence. By

contrast, individuals who are always on the lookout for opportunities to improve themselves by improving their ideas will engage in speedy dialogue, happily rejecting previously-cherished ideas immediately when confronted by a criticism that is accepted as sound, in an ideational permanent revolution. Ethically diligent individuals will be rewarded with epistemic efficiency.

Lakatos (1970) revised Popper's problem-solving epistemology, to replace the notion of a speedy dialogue generating an ideational permanent revolution, with the notion of a sustained critical dialogue changing ideas over time. Lakatos's argument is historical and normative. For him, the history of science is not characterised by a permanent revolution and nor should it be. This is because often when a theory encounters one falsifying instance it can be usefully revised, to produce more useful problems to engage with; whereas replacing a theory *in toto* as soon as one falsification is discovered will close off potential discoveries. For Lakatos, 'auxiliary hypotheses' could be replaced quickly when falsified empirically, but the 'hard core' of assumptions in a 'research programme' would have more traction. Replacing auxiliary hypotheses would enable a research programme to be 'progressive', that is, to maintain coherence and lead to new and useful predictions. Eventually though, a sustained critical dialogue would lead to the 'degeneration' of a research programme, with it becoming incoherent and unable to create new useful predictions. At that point, a new research programme with a different hard core of assumptions would be needed. *Contra* Popper, ideas may have traction without this entailing unethical and irrational dogmatism. *Contra* Kuhn, in place of paradigms that can only change *in toto* during infrequent revolutions, a research programme could be revised through a sustained critical dialogue by replacing its auxiliary hypotheses, until the hard core of its assumptions was no longer useful for framing problems and their solutions, at which point it could be replaced.

Critical-realism defined and criticised

We can now go on to assess the contribution of critical-realism, starting with a position that commends itself to many social scientists: it holds that explanations based on positivism are unjustified because positivism has an unjustified implicit ontology. It holds positivism to commit the epistemic fallacy, because it tacitly defines reality to fit an empiricist epistemology. *What* exists is defined in terms *how* empiricism holds that we may know it. Knowledge of causal laws is taken by positivists to be based on direct observation of empirical regularities, which in turn tacitly defines reality to fit empiricist epistemology, by presuming that reality is constituted by causal laws which are observable regularities that are closed to change. Yet critical-realists stress that while artificial closed systems may be created in laboratories, the world outside is an ‘open system’, involving change at the level of observable events (Bhaskar, 1997, 1998).

To avoid the epistemic fallacy and arrive at justified explanations, critical-realists turn from epistemology to ontology. For them, a justified explanation would be one based on a justified ontology. They reject individualism because putatively individualist accounts of political and social action always have to make reference to broader social contextual factors. An explanation of a banking transaction, for instance, must make reference to roles and institutions (Archer, 1995). They reject structuralist accounts for reifying structures and being deterministic (Archer, 1995; Bhaskar, 1998, 2011). To produce a justified ontology in the political and social sciences, critical-realists seek to link structure and agency (Archer, 1995; Bhaskar, 1998). Critical-realists argue that political and social reality can be defined in terms of emergent properties conditioning agency. Emergent properties may be primarily material, such as capitalism, or cultural, such as gender norms, with the former being ‘structural emergent properties’ (SEPs) and the latter being ‘cultural emergent properties’ (CEPs) (Archer, 1995). Both SEPs and CEPs are ‘structures’ in a generic sense, so linking structure to agency means linking SEPs and CEPs to agency. On SEPs, Archer argues that:

What differentiates a *structural* emergent property is its *primary dependence upon material resources, both physical and human*. In other words, the internal and necessary relations between its constituents are fundamentally material ones. [...] Thus certainly material relations may and frequently are legitimated by reference to ideas, but the two should not be elided, for a material relationship can be sustained by coercion and manipulation, thus its legitimation is not a matter of necessity (1995, p. 175).

Capitalism may exist in liberal democracies or authoritarian regimes. In the latter, coercion may be more important than the use of legitimating ideas. The point for Archer though is that as an economic system, driven by the need to extract profits, capitalism is to be understood in terms of its primary dependence upon material resources, including human labour. Thus, as we will see later, when Carter (2000) uses Archer (1995) to explain post-war UK immigration policy and racism, he talks of the SEP need for labour in a capitalist economy undergoing growth.

Political and social reality is also a stratified system because there are emergent properties ‘beneath’ the realm of observable events, and it is also an open system because SEPs and CEPs interact in contingent ways and are open to change by agents too (Archer, 1995; Bhaskar, 1998; Sayer, 1992). Archer (1995) argues that we need to study the interplay of CEPs, SEPs and agency over time, because emergent properties take a long time to change, using the ‘morphogenetic method’ which divides explanations up into three phases, namely ‘structural conditioning’ (the context shaped by CEPs and SEPs); ‘socio-cultural interaction’ (agents interacting with emergent properties); and either ‘morphostasis’ or ‘morphogenesis’ (the context reproduced or changed by agency, respectively).

Using an analytic reconstruction of critical-realism, I argue that there are three approaches to the justification of empirical explanations based on the critical-realist ontology, which I term here the ‘conventional approach’, the ‘translation approach’ and the ‘retro-justification approach’. The conventional approach to justification within critical-realism follows on directly from the description above, concerning how, for critical-realists, a justified empirical explanation has to be based on a justified – critical-realist – ontology. With this approach, the abstract ontology of emergent properties in open systems has to be converted into an ontology of specific substantive emergent properties, and then the ontology of specific emergent properties is used as the source of justified empirical knowledge, with empirical explanations based on that definition of political and social reality. This is advocated in the works of major critical-realist exponents such as Archer (1995), Bhaskar (1997, 1998, 2011), and Sayer (1992, 2000a, 2000b). Here I use Andrew Sayer’s (2000a, 2000b) work to illustrate the conventional approach to justification in critical-realism. I draw on Sayer because he discusses markets, bureaucracy and patriarchy, whereas the work of Archer and Bhaskar tends to be more abstract, and more removed from substantive debates.

Considering specific examples of emergent properties, Sayer (2000a) initially argues that we need to accept a form of essentialism. He argues that ‘essential properties’ exist in the sense that, for example, capitalism has to be defined as a system based on the constant increase in profit: the drive for profit is an ‘essential’ – or defining – feature of capitalism. Sayer (2000a) then notes that that because the term ‘essentialism’ has too often been misused in theories of human nature, it is better to talk instead of structures as emergent properties with necessary internal relations that define them.

Next, Sayer (2000b) argues that there is a substantive connection between markets, bureaucracies and patriarchy. He argues that as markets are ‘socially embedded’ they will inevitably be gendered and ‘raced’ (2000b, p. 714), and that as regards bureaucracies, ‘[T]here is no question that concrete

organisations are strongly gendered' (2000b, p. 717). Sayer then holds that we must be careful in 'distinguishing what merely can go together from what must go together' (2000b, p. 717). His argument is that if we define these phenomena as causally interconnected, because they are substantively connected, then we will be relying on an unjustified mode of thought that stems from positivism. Sayer (2000b) argues that while positivism is rejected by many, the implicit acceptance of an unjustified closed-systems ontology still continues to be used to define research problems and frame their solutions. This ontology implicitly underpins 'associational thinking', which 'is a form of analysis which attaches significance to empirical associations or regularities according to their pervasiveness rather than according to their necessity, and which is resistant to abstraction in the social sciences' (2000b, p. 708). This stems from the epistemic fallacy, because it defines *what* reality is in terms of *how* we know it, via substantive associations or regularities.

Against associational thinking, Sayer (2000b) argues for 'counter-factual thinking'. This entails posing a counter-factual question about whether these three phenomena could exist separately from each other and, as the answer is that they could, then we have to avoid thinking that they must go together simply because they can go together. For Sayer, associational thinking leads feminists to misdefine markets and bureaucracies as intrinsically patriarchal, when in fact the substantive connection between markets, bureaucracies and patriarchy is a relationship of contingency rather than causal necessity. Empirical explanations based on associational thinking will be unjustified, because they will misdefine political and social reality. By contrast, critical-realist empirical explanations of the relationship between markets, bureaucracy and patriarchy would be justified because they would be based on a justified definition of political and social reality. In other words, we cannot move from *knowing* patterns in the data to defining what political and social *reality* is, for Sayer, but must instead start with ontology to define political and social reality independently of observed patterns.

John Holmwood (2001) takes issue with this approach of Sayer's. On the issue of bureaucracy, Holmwood argues that putatively 'informal' factors are 'integral to complex organisation' (2001, p. 956). Informal factors, including patriarchal attitudes, influencing the operation of bureaucracies are not anomalies or contingent deviations from a more 'real' set of processes defined independently of those deviations, but central to their operation. In that sense, the theory of organisations needs to be conceptually reformulated to include those 'informal processes' as part of how complex organisations operate. Holmwood also argues that, in similar fashion, relations of production are influenced by relations of reproduction and cannot be understood separately. He argues that there is a causal relationship between fertility and mortality rates on the one hand, and modes of capitalist exploitation on the other. Holmwood argues that a period of high fertility and high mortality gave way to a period of lower mortality and high population growth, which led, in part, to the development of the proletariat, with a ready supply of labour meaning that labour could be hired cheaply. Now fertility rates have dropped, but at a higher population level, with 'proletarianization no longer evident as a defining characteristic of work' (2001, p. 957). The outcome of this is that 'current pressures towards gender justice at work are produced by the equalising effects of transformed demographic conditions and changes to fertility and life cycle' (Holmwood, 2001, p. 957). In other words, there is sufficient labour if women are now routinely included in the labour force, and this entails pressure for workplace equality.

These empirical points lead to Holmwood's argument about problematic features of the style of theorising undertaken by Sayer. Holmwood notes that

When Sayer justified abstraction in social scientific constructs as an alternative [to associational thinking], he does so by arguing that their counterfactual status can establish

necessity. If it can, the form of necessity is logical, or conceptual, established by definition, rather than by research (2001, p. 952).

Sayer's (2000b) counter-factual thinking can tell us that capitalism and bureaucracy could potentially have developed without being intrinsically gendered. However, the problem arises that Sayer's counter-factual thinking becomes a block on understanding the real operation of markets, bureaucracy and gender. The problem, for Holmwood, is that Sayer's approach conflates concrete causal necessity into logical / conceptual necessary and precludes the possibility of there being any 'dialogic' empirical feedback loop from empirical data to the ontological definitions. We can define markets, bureaucracy and patriarchy as phenomena that could exist independently from each other. However, in reality they are casually interconnected in a non-contingent way and therefore we need to define reality in a way that can account for this, by moving from the data to the definitions of political and social reality. For the conventional approach to justification in critical-realism though, the task is to move in the opposite direction, by going from an abstract ontology of discrete emergent properties in an open system to specific substantive examples of such properties (with markets, bureaucracy and patriarchy defined as discrete structures), with explanations of the data then being based on this ontology of discrete structures. The alternative, which is to start with the data, is rejected by critical-realists (following the conventional approach to justification in critical-realism) for being based on associational thinking and thus committing the critical-realist construction of the epistemic fallacy. In trying to avoid their construction of the epistemic fallacy, however, critical-realists misdefine reality, by not recognising that markets and bureaucracy are intrinsically gendered.

The conventional approach to justification in critical-realism, discussed above, represents, I argue, a contemporary form of methodological essentialism. For Popper, methodological essentialism derived from Aristotle,

who taught that scientific research must penetrate to the essence of things in order to explain them. Methodological essentialists are inclined to formulate scientific questions in such terms as ‘What is matter?’ or ‘What is force?’ [...] and they believe that a penetrating answer to such questions, revealing the real or essential meaning of those terms and thereby the real or true nature of the essences denoted by them, is at least a necessary prerequisite of scientific research, if not its main task. *Methodological nominalists*, as opposed to this, would put their problems in such terms as ‘How does this piece of matter behave?’ or ‘How does it move in the presence of other bodies?’ For methodological nominalists hold that the task of science is only to describe how things behave, and suggest that this is to be done by freely introducing new terms wherever necessary, or by redefining old terms wherever convenient while cheerfully neglecting their original meaning. For they regard *words* merely as *useful instruments of description*. Most people will admit that methodological nominalism has been victorious in the natural sciences (2002b, pp. 25-26).

In the introduction I mentioned structural determinism as one example of methodological essentialism in the political and social sciences for Popper. For Popper though, the key issue is not deterministic accounts of political and social ontology, but the attempt to develop *any ontology* of political and social reality. In other words, the problem for Popper is the view that empirical research can be driven by answering ‘*what*’ questions, *however they are addressed*. Methodological essentialism was well established in early natural science, but now it has been replaced by methodological nominalism and, for Popper, the same needs to happen in the political and social sciences too. Popper’s problem-solving is a form of methodological nominalism, which holds that concepts can be redefined as ideas are revised, and replaced through problem-solving critical dialogue. Lakatos’s (1970) approach develops this, by splitting *how* questions into auxiliary hypotheses and a hard core of assumptions about *how* phenomena will interact.

The conventional approach to justification in critical-realism, as illustrated by Sayer, is thus a form of methodological essentialism, because it prioritises answers to the ontological question about defining *what* political and social reality is over epistemological answers about *how* phenomena interact, in order to avoid critical-realist construction of the epistemic fallacy. The abstract answer to the *what* question, in terms of emergent properties in open systems, is used to inform the definition of specific emergent properties; this definition then acts as the source of justified explanatory knowledge. To be justified, an empirical explanation must be premised on the critical-realist answer to the *what* question. Thus a justified explanation, as we saw for Sayer (2000b), had to explain the interaction of markets, bureaucracy and patriarchy as three contingently-related phenomena, to be justified; any empirical explanation of intrinsic linkages between these phenomena was taken to be unjustified, because it was taken to stem from associational thinking.

All critical-realists argue that all concepts, including the ontological definition that answers the *what* question, are fallible. However, I argue that because the conventional approach to justification entails methodological essentialism, its recognition of fallibilism becomes redundant. While critical-realists obviously correctly distinguish between empiricist epistemology and empirical research, they would see using empirical research to revise or replace the ontological definitions as committing the critical-realist construction of the epistemic fallacy, just as much as any commitment to empiricism and positivism would do. This is because one would have ‘stepped outside’ the ontological definitions to gain some form of knowledge independent of the ontology, and then used an epistemological answer to an epistemological question, about *how* we knew certain empirical processes, to revise or replace the ontological answer to the *what* question. As there can be no empirical feedback loop there is no way to revise or replace the ontological definition that is taken to be the source of justified explanatory knowledge because it answers the *what* question. Therefore the critical-realist

commitment to fallibilism becomes redundant. The data would always been seen to furnish verifications of the commitment to the critical-realist answer to the *what* question.

Furthermore, the conventional approach to justification in critical-realism cannot usefully address the problem of dialogue. If the conventional approach was used to engage in dialogue with other positions it could only motivate a justificationist speedy dialogue. Whereas Popper was criticised for holding that a speedy dialogue should entail an ideational permanent revolution, a justificationist speedy dialogue would not be based on changing *all* ideas, but on protecting those ideas taken to be justified and rejecting other ideas, removing the critical force of alternative positions by holding that they were unjustified. So, in this case, someone holding to the conventional approach to justification within critical-realism could argue that their ontology and the explanations based on it were justified, and that other explanations and the theories that informed them were to be rejected for being unjustified. This would certainly not constitute learning from error with all ideas being revised over time through a sustained critical dialogue driven by the recognition that as all ideas are fallible they all need to be open to criticism via attempts at empirical problem-solving.

Now, a critical-realist could argue that the problem of dialogue was not the problem to address, because if one was able to solve the (pseudo-) problem of justification then the main task would be producing justified empirical explanations based on the justified ontological source of explanatory knowledge. In terms of fallibilism, a critical-realist might then argue that justified explanations are still fallible and so there ought to be critical dialogue within critical-realism, rather than between critical-realism and other, unjustified, positions, with existing justified critical-realist explanations being revised or replaced by other, more useful, critical-realist explanations. However, each critical-realist, as a methodological essentialist, would perceive different renderings of the structure – agency interaction in their data. There could thus only be justificationist speedy dialogue here, because each

critical-realist would hold that their explanation was justified whereas an opposing critical-realist explanation was not. Hence, there could be no basis for dialogic development of critical-realist explanations by critical-realists.

Before considering the next alternative, one more problem with the conventional approach needs to be discussed. Arguing that individualism and structuralism are problematic and in need of being replaced by an alternative ontology that links agency and structure, by defining the latter in terms of emergent properties, can only, by itself, supply the necessary condition for the justification of the ontology. The sufficient condition would have to be that this ontology of structure and agency *corresponded* to the defining features of political and social reality. However, as argued above, one could not obtain independent empirical verification of the ontology, because one could not ‘step outside’ the ontological commitment to test it against empirical data without committing the critical-realist construction of the epistemic fallacy. The justification for the abstract ontology, which then informs the definition of substantive structures, such as capitalism, is therefore logically flawed. The next two approaches to justification I shall consider do, I argue, seek empirically to establish a relation of correspondence between the ontology and the defining features of political and social reality.

The ‘justification via translation’ approach concerns the dialogic engagement of critical-realism with the construction of empirical research problems within other positions. To illustrate this approach, we can turn to Carter’s (2000) discussion of post-war UK immigration policy and racism. Carter (2000, pp. 26-54) does not seek to challenge the empirical points made by previous studies of post-war UK immigration policy and racism, concerning the relationship between politicians, trades unions and public opinion, and the economic need for labour. Instead of raising new empirical problems for research to engage with, Carter (2000) draws on Archer (1995), and uses the morphogenetic cycle to explain the interaction between an anti-immigration racism and an economic need for immigrant

labour in terms of socio-cultural conditioning (the SEP need for labour and the CEP of racism); socio-cultural interaction between the different agents; and ‘morphogenesis’ (the use of immigration to meet the need for labour despite racism in government and trades unions).

Rather than start, as Sayer (2000b) did, with a set of definitions, which the data then have to conform to, Carter (2000) is starting with empirical research generated by positions outside critical-realism. He then holds that while these positions provide accurate empirical descriptions, they cannot produce justified explanations. The reason for this is that their accounts, which talk of agents interacting with collective beliefs and economic factors, implicitly make reference to agents interacting with a CEP and SEP respectively, but as this is not made explicit, the empirical factors are misdefined. The task therefore becomes that of translating these accounts into a critical-realism terminology, so as to arrive at justified explanations based on an explicit and justified ontology. In other words, these other positions are taken to furnish implicit independent empirical verification of the critical-realist ontology *corresponding* to the defining features of political and social reality. This is because their accounts ‘point to’ agents interacting with a CEP and SEP, even if their terminology fails to make this clear and explicit, because they lack an ontological vocabulary.

Critical dialogue here would be justificationist speedy dialogue, which operated in a way that was different from that entailed by the conventional approach to justification discussed above. Now, non-critical-realist empirical positions would not be rejected on the grounds that they were unjustified because they were based on an unjustified closed systems ontology stemming from associational thinking. Instead, empirical positions not explicitly based on critical-realism would be taken to be implicitly supportive of critical-realism. The task of dialogue then becomes that of showing why implicitly critical-realist explanations which furnished descriptions need to be translated into explicitly critical-realist ontological terminology in order to furnish justified explanations. This

justificationist dialogue would be speedy, because other positions would just be told they needed to be translated if they were to arrive at justified explanations.

This approach would commit the logical fallacy of begging the question. The data would only be a verification of the critical-realist ontological definitions if one had already presumed that this ontology was correct in the first place. One would redescribe the empirical data as emergent properties interacting with agents in an open system, and then take that redescription to be an independent empirical verification of the ontological commitments one was committed to, prior to engagement with the empirical material. All of which means that the attempt to supply the sufficient condition for the justification of the ontological source of justified explanatory knowledge would fail, because there could be no independent verification of the definitions corresponding to the defining features of political and social reality.

With the retro-justification approach, the ontological categories would not be taken to be a source of justified explanatory knowledge but simply a set of categories that could be empirically tested and, if the explanations based on them were taken to be empirically justified, then the ontological definitions that informed them could be retro-justified. If this approach was tenable, then the sufficient condition for justifying the ontology could be met, because one would be able to hold that the ontological definitions corresponded to the defining features of political and social reality. Porter (1993) seeks to move from the data to the ontology in this way. He starts with an empirical problem, namely needing to explain why racism was openly expressed in some NHS hospital units by some nurses to doctors from ethnic minority backgrounds, whilst in others, the expression of racism took an indirect form. He then seeks to solve this problem by defining it in terms of racism and professionalism as two CEPs that exist in an open system. Next, he argues that in an open system there can be no expectation of a fixed pattern with, for example, racism always being overt. Rather, in an open system, the CEP of

professionalism restricted the CEP of racism in some hospital units, whereas at other hospital units such open expressions of racism occurred because the CEP of racism prevailed.

This approach may seem to have the potential to engage in a sustained dialogue and thus solve the problem of dialogue. This is because it could base dialogue on the empirical testing of ideas, with this testing eventually leading to the revision and replacement of ideas over time, as more useful ideas are used to define and solve problems. However, this approach would commit the critical-realist construction of the epistemic fallacy, because it would move from knowledge of *how* empirical phenomena interacted to the ontological definition of *what* existed.

From the unorthodox critical-realist Hay to the problem-solving Hay

The unorthodox critical-realist Hay takes issue with the critical-realist definition of *what* political and social reality is. He argues that

the impression [Archer] seems to give is of structure as distant, external and long enduring, while agency is conceptualised, in contrast, as an ephemeral or fleeting moment. This seems to imply a residual structuralism punctuated only periodically yet infrequently by a largely unexplicated concept of agency. This appears from the shadows and disappears swiftly from whence it came, a perturbation or disruption in the otherwise pristine logic of structural reproduction (2002, p. 126).

His point here is that we cannot treat structure and agency as two separate ‘chunks’ of political and social reality because this will reify and ‘ontologise’ an analytic distinction (2002, p. 125). Hay draws

on Jessop's (1990) theory of strategic relations to replace the concepts of structure and agency with the concepts of 'strategic action' and 'strategically selective contexts' (2002, p. 127). Strategic action is defined as 'intentional conduct oriented towards the environment in which it is to occur' (Hay, 2002, p. 129), and the strategic environment is 'strategically selective', in that it 'favours certain strategies over others to as a means to realise a given set of intentions or preferences' (Hay, 2002, p. 129). Strategy is driven by ideas and this brings us to the process of 'discursive selectivity', where reflexive agents' knowledge 'evolves' through the de-selection of ideas by problems (Hay, 2002, pp. 209-211).

It may be thought that in making this case Hay, like the critical-realists, holds that a justified ontological definition of *what* political and social reality is plays the central role in explanations, by acting as a source of justified explanatory knowledge. That is, it may be thought that Hay is arguing that for an empirical explanation to be justified, it has to be based on a correct definition of reality, which is supplied by the justified strategic-relations ontology. However, Hay argues that we must 'not expect too much' from answers to such definitional questions concerning how we define *what* political and social reality is (2002, p. 93). He argues that 'social ontologies cannot be brought in to resolve substantive empirical disputes' (2002, p. 93). This contrasts with Sayer's (2000b) argument that such disputes can be resolved by replacing associational thinking with counter-factual thinking, to use justified ontological definitions to shape how the data is explained. Thus Sayer (2000b) uses the critical-realist ontology to reject arguments to the effect that markets and bureaucracies are intrinsically patriarchal. Nor, Hay argues, can ontologies be empirically tested to find out which one corresponds to the defining features of political and social reality. Hay argues that, while it is 'rather disconcerting' to realise that ontological accounts cannot be adjudicated empirically,

silence is not a very attractive option either [for] whether we like it or not, and whether we choose to acknowledge it or not, we make ontological assumptions – in Wendt’s terms, we ‘do’ ontology. These assumptions profoundly shape our approach to political analysis and *cannot simply be justified by appeal to an evidential base* (2006a, p. 82).

Different people holding different ontological definitions or assumptions will all ‘see’ the data differently. Trying to resolve an empirical dispute using ontological arguments will just result in different conceptions of the data being cited as evidence for each ontological commitment.

So, while Hay seeks to revise critical-realism, to make it more *coherent* by overcoming a residual structuralism, the justified ontology he seeks to produce is not meant to act as a source of justified explanatory knowledge. For the unorthodox critical-realist Hay, trying to establish a relationship of *correspondence* between an ontology and the defining features of political and social reality is erroneous, because there can be no independent empirical confirmation of that correspondence. Furthermore, establishing internal *coherence* does not necessarily lead to the exclusive justification of one ontology. The unorthodox critical-realist Hay maintains that the most coherent ontology is a strategic-relational ontology, but he does not then arrive at the view that this could be the only coherent ontology.

Now, all of this raises a question about the redundancy of justification. As ontologies cannot be treated as sources of justified explanatory knowledge, they cannot decide the outcome of a critical dialogue concerning empirical explanations. Instead, the focus is on the most useful empirical solution to an empirical problem. One may therefore enquire as to what happens if the most useful explanation has incoherent ontological definitions. At this point the unorthodox critical-realist Hay turns into the problem-solving Hay. This Hay separates ontological definitions from any attempt at justification, and

holds that all ideas, including ontological definitions, can be seen as tools that can be adapted – revised or replaced – to help seek out more interesting and useful problems. Ontology may influence how we see the world, but if we are aware of this and if we have avoided the pseudo-problem of justification, we can see empirical problems with some independence from whatever ontological definitions or assumptions we hold. By not reading verifications into the data we can have a better purchase on them. We look for problems not verifications. Here the whole emphasis is on the ability of a position to move an empirical problem-solving dialogue forward, and not on justifying the claims used within the dialogue. Two examples will be given where Hay argues that incoherent – and thus ‘unjustified’ – ontologies can be empirically useful.

First, for rational choice theory, agents are conceptualised as instrumentally-rational utility-maximisers with perfect information. However, Hay (2002, 2004) argues that rational-choice individualism is actually a form of structuralist determinism because all agents *qua* utility-maximisers will, in a given context, pursue the same optimal course of action (Hay, 2002, pp. 103-104, 2004, p. 52). Rather than reject rational choice theory, though, Hay argues that it can be useful because it can pose ‘what if’ questions. An example Hay (2004) gives is that of formally modelling a ‘stylized dynamic’ between two parties competing in a ‘first past the post’ electoral system who appeal to citizens as if they were consumers, in order to ‘point to the positive and / or negative consequences of such a dynamic in the hope that it might either be encouraged or resisted’ (2004, p. 56).

Secondly, regarding constructivist institutionalism, Hay notes that ‘[I]nterests are social constructions and cannot serve as proxies for material factors’ (2006b, p. 64). He notes that constructivist institutionalism has internal tensions. So, discussing the work of Blyth (2002), Hay argues that interests are defined both as pure social constructs and as constructs that are ‘structurally-derived’. Furthermore, Blyth, he argues, discusses continuity and change in a way which holds that where

actors' interests are not problematized ideas matter less (and non-constructivist theory will explain events) and when they are problematized, ideas matter more and only a constructivist account will do (Hay, 2006b, pp. 69-70). Nonetheless, the theory is held to be of use for avoiding a reduction of interests to material positions and helping political and social scientists study the importance of ideologies, religious beliefs and culture in shaping decision-making.

We can build on these examples to illustrate how Lakatos (1970) can be applied to empirical research in the political and social sciences. The definitions about reality were, in the examples above, used to see what 'auxiliary hypotheses' they could generate, and all the time they could generate such hypotheses, the theory being engaged with would produce useful problems to solve. So, for example, rational choice theory could pose 'what if' questions to explore, and constructivist institutionalism could pose questions about the extent of ideational independence from material interests in different types of circumstances. When these paradigms ceased to produce useful auxiliary hypotheses, critical dialogue would show that their research programmes were degenerating and in need of replacement.

Finally, we need to consider why the critical-realist construction of the epistemic fallacy is untenable. The concern with this fallacy is that some positions misdefine reality by transposing ontological questions into epistemological questions. The problem though is not epistemology per se, with a turn to a justified ontology as the solution. Instead, drawing on Popper, I argue that the problem lies with justification. Clearly, some epistemologies, such as empiricism, can be rejected for misdefining reality. However, both empiricist epistemology and methodological-essentialist ontologies, including critical-realism, end up predefining the empirical data to fit an authoritative source of justified explanatory knowledge. This results in the misdefinition of reality, because there can be no empirical feedback process to revise or replace fallible theories. We may not be able to remove ontological definitions or assumptions, as Hay (2002, 2006a) argues, but this does not necessarily entail the

pseudo-problem of justification. Instead, as the problem-solving Hay and the Lakatosian application of that Hay has shown, ontological definitions separated from the pseudo-problem of justification can play a role in a sustained critical dialogue. The problem of dialogue is best addressed by avoiding the pseudo-problem of justification and revising Popper's philosophy using Lakatos and the problem-solving Hay. The traction of research programmes stems from commitments to explicit or implicit ontological definitions and assumptions, respectively, that shape how research problems are defined and solved, as well as financial, political, ideological, social and institutional pressures to retain particular outlooks. Here I have focused on the role of ontological definitions and assumptions in influencing the way explanatory problems are addressed. I have argued that the most useful way for ideas to develop, and the way to arrive at the most useful ideas, is to undertake a sustained critical dialogue to explore the usefulness of competing ontological definitions and assumptions, and to refrain from skimming over ontological commitments in the 'speedy' manner objected to in this article.

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Word count: 9983