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Reclaiming Rational Theory Choice as Central: A Critique of Methodological Applications of Critical Realism

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My central claim is that texts introducing and explaining critical realism focus on its ontological insights, and even though issues of judgemental rationality and theory choice are central to research these often become peripheral and/or are not stated in the way Bhaskar presented them. This claim is defended by comparing Bhaskar's statements and arguments about theory choice to texts introducing critical realism and its potential research implications. The method of rational theory choice and the key criterion for it are presented: immanent critique combined with retroduction to determine whether a theory has greater explanatory power than its rivals, where greater explanatory power is defined as having greater (but not final) epistemic credibility because it can explain more significant phenomena and has a greater ability to integrate knowledge; and multitheoretic-linguality as a prerequisite for applying the criterion of greater explanatory power. Greater explanatory power may be assigned to competing theories, metatheories and interpretations. Lastly, a more detailed example of the disparity between Bhaskar's specifications for rational theory choice and those found in a methodology text is provided.

KEYWORDS greater explanatory power, immanent critique, judgemental rationality, multitheoretic-linguality, rational theory choice

> I shall argue that although ontology is important, we also have to pay attention to other features of the intellectual landscape, including epistemology and issues to do with judgemental rationality — issues that have been of secondary importance for critical realists until recently. (Bhaskar 2007, 192)

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Ontology

Ontological realism for epistemic relativity

Critical realism supports a transcendental conception of reality. This means that reality is absolutely or relatively independent of our enquiries, and we therefore do not get direct or immediate access to the reality we study. Epistemic relativity, the view that 'there is no way of knowing the world except under particular, more or less historically transient descriptions' (Bhaskar 2009, 99), is thus an actuality in all knowledge endeavours. This understanding helps the researcher to be more aware of and reflective about the complicated relation between their research and reality, and brings to the fore some important questions. When we understand that we do not have direct or immediate access to reality, *how* do we go about choosing one theory over another? As a social researcher I believe there is an 'external' and objective reality and I am seeking to understand it, but I am aware that all my thoughts, categories and theories are relative to what I have come across previously and that my knowledge is fallible. I can critique the theories and worldviews of others, but how can I know, even provisionally, that mine are true? *How* do I argue for a conclusion, rationally, in a relativist epistemology? And when should I change my beliefs? These are questions that the concept of judgemental rationality with its related criteria is designed to answer, and this concept is thus central to social research and methodology.

Critical realist ontology and methodology texts

When critical realism is introduced or explained, along with its implications for research, it is primarily the ontological insights that are presented. Some themes often mentioned are open and closed systems, emergence and stratification, agency and social structure, the relations between natural and social science, aetiology (such as mechanisms as opposed to constant conjunctions, and the real, actual and empirical domains), and the distinction between the transitive and intransitive dimensions.[1] These ontological insights generate several methodological prescriptions for the social researcher. Researchers should identify generative mechanisms in the domain of the real rather than verifying or falsifying event regularities at the level of the empirical. Discovering mechanisms is effected through asking retroductive and/or retrodictive questions and developing retroductive and/or retrodictive answers. Researchers may locate mechanisms at several strata that together create a more powerful explanation of some phenomenon. Social science deals necessarily with relational open systems that preclude the possibility of direct experimentation. Social science must also include a double hermeneutic, an 'interpretation of other people's interpretations' (Danermark et al. 2002, 32), whereas natural science only requires a single hermeneutic. Though social science is hermeneutic it should often go beyond merely collecting and repeating interpretations to search for underlying mechanisms that explain why people think as they do, thereby

[1] The transitive dimension covers epistemology, but the focus when introducing these two dimensions is to distinguish them from one another ontologically and to critique the epistemic fallacy. There is rarely a discussion about what the transitive dimension, along with its extrinsic and intrinsic aspects (Bhaskar 2009), means methodologically for discovering mechanisms.

correcting and refining common-sense understandings. Finally, although epistemology is contained within ontology, it is important to acknowledge an ontological distinction between reality and knowledge of reality, otherwise language and interpretations refer only to other parts of languages and interpretations and not to an existentially intransitive reality.

A social researcher is greatly benefited by being aware of the above statements about reality. It is very helpful to know what we are looking for (mechanisms and not constant conjunctions, for example), and to have clear ideas about what are the most abstract features of the reality that enables and constrains various research endeavours. However, there are some important arguments made by Roy Bhaskar, not mentioned above, which both epistemically situate the ontological claims and which help the social researcher know *when* and *if* a mechanism is found. I will briefly discuss the former first and then focus on the latter.

Epistemically situating critical realism

Retroduction and immanent critique

Retroduction is a mode of inference that seeks to explain what the world must be like for phenomena to exist and act as they do (Danermark et al. 2002, 80; Bhaskar 2009, 12). Along with retroduction, Bhaskar applies the method of immanent critique, sometimes called internal critique, in his transcendental arguments for 'what the world must be like'. (Transcendental arguments are a species of retroduction.) The application of immanent critique and the knowledge it provides curbs the epistemic certainty and generality suggested by retroduction on its own. Bhaskar explains that the intent of his transcendental arguments for what the world must be like is not at all to create a final truth built on some absolute foundation: 'Someone who denies that our knowledge is experimentally established and practically applied and that science develops in time need be bound by *none* of the results of this book' (Bhaskar 2008, 252, emphasis added). He seeks to replace and develop *existing* theories of reality (such as empiricism (Bhaskar 2008), 'superidealism' (Bhaskar 2009, 74), and lay and phenomenological understandings (Laclau and Bhaskar 1998, 12; Collier 2007, 210)) by applying *their* premises, and more broadly grounds and assumptions, to argue that transcendental realism has greater explanatory power. Immanent critique is based on an understanding that theory development is always internal to some history, either one's own tradition or that of others.

Such an understanding of immanent critique has implications, however, for the generalizability of various retroductions, both those of Bhaskar and of social researchers. Retroductions are relative to the premises from which they depart. They are not more correct than all other possibly competing theories available in other fields and disciplines: they show only that the position argued for is the best theory currently known. To make the case for greater explanatory power with a non-critical realist audience, there is a need to argue immanently from *their* premises (Bhaskar 2013, 14). Bhaskar explains that, not only are conclusions always relativized to their premises, there are also an infinite number of premises (Laclau and

Bhaskar 1998, 12). Although critical realism cannot claim that it is better than all other possible conceptions of reality, Bhaskar has argued coherently that it has greater explanatory power relative to its main rivals' own positions, and thus it gains epistemic credibility. Critical realist argument 'is designed to situate or replace an existing theory; and may of course come, in time, to suffer a similar fate' (Bhaskar 1998, 6).

The role of immanent critique in Bhaskar's philosophical method has two implications for how we should understand critical realism and its role as an underlabourer for the sciences. Firstly, critical realism is not a sure guide to research methodology in the sciences, though it arguably offers the best orientating metatheory we have. Bhaskar (2009, 36–7) distinguishes rigorously between philosophical and scientific ontologies, and argues that each science, although guided by metatheory, must develop an ontology, epistemology and methodology specific to its own particular domain and be aware, moreover, that the categories of philosophical ontology, such as open and closed systems, emergence and stratification, are epistemically relative. Secondly, it is not uncommon to see critical realism presented as a philosophy that can effectively regulate research practice with no mention of research practice in turn potentially affecting the philosophy. However, as the premises of critical realist philosophy in the various immanent critiques are forms of human practice, the insights of scientific research can certainly affect critical realist philosophy. Though I agree that all research necessarily has metatheoretical assumptions, and it is therefore important to apply the best metatheory, the two points just mentioned help deflate over-zealous claims that critical realist research is better than other research primarily because of its ontological understanding (Ackroyd 2004, 146). I argue that the ontological categories of critical realist philosophy by themselves are not sufficient to claim greater knowledge of any regional domain.

Immanent critique also has implications for the application of retroduction in social research. Retroduction on the above understanding becomes retroduction relative to a certain tradition, not retroduction of 'what the world must be like' as such. Retroductive knowledge is thus local and transient rather than general and certain. To broaden retroductive generality and plausibility the social researcher can carry out immanent critiques in *several* traditions or disciplines, as Bhaskar does, to describe a portrayal of reality that consistently has greatest explanatory power.

Epistemically situating critical realist causal explanations

For a researcher, just as important as knowing *what* we are looking for, such as mechanisms and not principally constant conjunctions, is knowing *when* and *if* we have actually found what we are looking for. In critical realist methodology texts a great deal of space is devoted to explaining and defending the critical realist concept of causal explanation vis-à-vis empiricist conceptions such as verification or the deductive-nomological model. I will not here rehearse the arguments for critical realist causal explanation over rival approaches, which have been well

developed by others (e.g. Danermark et al. 2002; Sayer 2000a; Pratten 2007a). Rather, the critical realist explanatory schemes will be portrayed in a way consistent with critical realist methodology texts, following which necessary *additional* components will be suggested.

DREIC and RRREIC

Empirical studies are important for critical realists precisely because we believe there is *some* connection between mind and mind-independent reality (Bhaskar 1999; Sayer 2000b, 2). The primary approach to discovering mechanisms theoretically is called the DREI or DREIC schema. First we start with a previously accepted Description of some empirical regularity or pattern, then we imaginatively conceive of mechanisms which, if they were real, would cause the events as described to occur (this mode of inference is Retroduction). The next step is to Eliminate the imagined mechanisms through further empirical analyses until we are left with one mechanism or a combination of mechanisms which is then Identified as real. This new knowledge will normally necessitate the Correction of previous theories.

Empirical regularities, as described in the first stage of the DREIC schema, assume a (basically) closed system where a single mechanism produces almost all the effects that researchers observe. When studying open systems, such as social reality or more generally outside laboratories, there are usually a multitude of mechanisms causally affecting what happens in the actual (and empirical) domain. As the social sciences cannot have recourse to experimentation to create closed systems for analysing mechanisms in isolation, there need to be other ways to retroduce without systemic closure. One way forward is to see experimentation as a particularly powerful type of investigation that *contrasts* one situation with another (Pratten 2007b). Experimentation is powerful, when it is possible, precisely because it can make the distinction between contrasting situations so clear, and this contrast is often repeatable. Viewing experiments as involving a species of contrast explanation paves the way for other types of contrast explanation in social science, for though social reality is multiply determined it does not follow that it is uniform in such multiple determination. There may be situations in which one or a few causal mechanisms have greater relative influence than others, for example those that bring about a crisis, which the crisis itself renders more transparent or easier to detect (Collier 1994, 164–5). We can also search for demi-regularities or 'demi-regs' (Lawson 1998, 149–55) in open systems, such as women in general having lower-paying jobs than men. Such a demi-regularity is not an exceptionless regularity, as posited by classical empiricism, but there is enough of a regularity to notice a difference, and apply the DREIC schema to such a description.

When the goal is not to discover new mechanisms, but rather to understand which mechanisms are functioning in an open system to create some event, Bhaskar proposes the RRREI or RRREIC model. The first stage is to Resolve the complex reality into the several causes that created the observed outcome. Secondly, there is a need to Redescribe these causes in an explanatory significant way on a scale from abstract to specific. Third, tendencies of mechanisms previously identified through the DREIC pattern are applied to understand which mechanisms could

have been involved in the event (this is Retrodiction). The fourth stage is to Eliminate explanations until we, in the fifth stage, have Identified some that provide a coherent explanation. This new knowledge may necessitate the Correction of previous theories.

The first step of RRREIC, resolution into component parts, is based on awareness that causes in open systems are multifaceted and differing disciplines and fields have expertise in various causes. The importance of interdisciplinarity in applying the RRREIC model has been understood to be pertinent to open systemic studies since the inauguration of the philosophy of critical realism (Bhaskar [1975] 2008). An approach to interdisciplinarity has since been developed into a framework called laminated systems (Bhaskar 2010). Laminated systems are presented as adding insights from various disciplines, scales and temporalities, in the same way as adding various materials in layers produces a material laminate. A material laminate produces strength synergistically. Bhaskar and Danermark (2006) deployed this concept as a metaphor for explanatory power in laminated systems and to highlight the irreducibility of the layers.

Rational criteria for eliminating and identifying causal mechanisms

While DREIC and RRREIC call for the elimination of hypothesized mechanisms and the identification of those actually at work, as general models they do not tell us much about how to tell *when* and *if* we have found a mechanism. They do not explain by what criteria we may rationally eliminate some proposed mechanism. I start to do this by outlining Bhaskar's approach to rationally choosing some theories over others, and then present and compare various other proposed approaches in critical realist texts.

Greater explanatory power

Because our situation is one of epistemic relativity there are a multitude of competing theories, and the theories may have no descriptions in common (i.e. be incommensurable) in their competing explanations of what causes observed phenomena. Thomas Kuhn and Paul Feyerabend argue that such lack of commensurability precludes the possibility of comparing two theories (Bhaskar 2009, 74). If we cannot compare, then neither can we choose one theory over another in rational terms. Bhaskar explains that Kuhn and Feyerabend forget to distinguish what is being studied from our theories about what is being studied. The theories may have no descriptions in common, but the reality being explained by the competing theories necessarily has features in common (at least to some extent). Bhaskar points out that the very notion of incommensurability *presumes* such a commonality: It makes no sense to say that two theories clash in their descriptions if they do not refer to some *same* features of reality — if there is no 'referential overlap'.

Bhaskar provides a criterion for rational theory choice, adapted from Imre Lakatos, which is able to accept incommensurability yet move beyond it because of the distinction between various theories' descriptions and the common reality being studied; 'a theory T_c is preferable to a theory T_d, even if they are [incommensurable], provided that T_c can explain *under its descriptions*, almost all the

phenomena that T_d can explain under its descriptions, plus some significant phenomena that T_d cannot explain' (Bhaskar 2009, 73, original emphasis).

Explanations are comparatively better or worse, meaning that they are on a continuum, not absolute. Bhaskar makes some important clarifications and additions to this criterion. He states that the *meaning* of greater explanatory power is not merely about counting the quantity of phenomena; indeed this is often insufficient where there are only a small number of claims that clash. In such cases we also need to consider the relative *significance* of the phenomena that are explained by the opposing theories. Another consideration is based on the recognition of the stratification of reality. In choosing which theory has greater explanatory power it is important to consider the relative depth and comprehensiveness of competing explanations. Thus we can add to the criterion introduced above,

> especially, or even only, if it can either (a) identify and/or describe and/or explain a deeper level of reality; and/or (b) achieve a new order of epistemic (explanatory and/or taxonomic) integration, or at least show grounded promise of being able to do so. (Bhaskar 2009, 82)

So the explanation that can explain most significant phenomena at a given moment is preferred, especially if it can explain a deeper level of reality or achieve a greater order of epistemic integration. This criterion can be applied to incommensurable explanations and thus makes rational theory choice possible despite epistemic relativism. Bhaskar (2009, 83) adds an important caveat based on an understanding that we do not have direct access to reality: we can accept that a theory is better, deny that it is better, or stand undecided on the issue for the time being. Even if there may be cases where social researchers cannot choose between competing theories at a given point in time, it does not mean that rational theory choice has not occurred. It has, in that the social researcher has provisionally chosen *these* theories, for the time being, over a multitude of other potential theories.

The greater explanatory power criterion in relation to other proposed criteria

It is not uncommon to find no proposed criteria for eliminating and identifying mechanisms. Often it is merely stated that this is what should be done. '[Critical realism] helped me to see that it is important to be able to offer many causes, although the most improbable are then rejected' (Ryan et al. 2012, 308). It is not clear from Ryan's article *how* to choose, according to rational and objective criteria, which mechanisms are most improbable; it is only stated to be important. One researcher might hold that proposed mechanism A is most probable, while another researcher might say that mechanism B is.

Kempster and Parry (2014, 107) suggest one way for accepting or rejecting theories. Accepting that truth is relative rather than absolute, they consider two types of testing for some proposed social explanation. Social researchers should test their proposed explanation with their respondents by asking them whether it seems plausible or not, and whether the respondents find evidence to support such a position or not. Further, the social researcher, through publication of

results, provides other researchers the opportunity to test the proposed mechanism in other cases (while being aware of the contextual differences). 'Testing' a proposed mechanism of people's actions by entering into dialogue with research participants about its possible existence is an important first step. However, Kempster and Parry do not explain what should be done if the respondents disagree with the social researcher rather than seek agreement. In one situation Kempster gave examples to the respondents of how the underlying mechanisms worked in specific situations rather than modifying the model (105). These examples were presumably sufficiently accepted (for the researcher) by the respondents. At another time Kempster revised his theory based on respondent feedback (104). From this it is clear that what is being offered is less a criterion for rational theory choice than a claim for the insights of intersubjectivity. 'Agreement between agent and student, if and when it can be reached, hardly seems either sufficient or necessary for an adequate identification at the level of the deep, underlying or strange' (Bhaskar 2009, 167). What is required is to find the explanation with greatest explanatory power (168).

Ackroyd (2004, 153), concerned that critical realists may defend non-existent mechanisms by arguing that their effects are not present because of counteracting mechanisms, suggests that we should reject a proposed mechanism if it does not with reasonable consistency produce some phenomena. It is not clear, however, what a reasonable amount of consistency is. What is reasonably consistent to one person may not be so to someone else. A more adequate rendering of this criterion would be that a proposed mechanism should be rejected if it produces some phenomena with less consistency than competing proposed mechanisms.

Lawson (1998, 157) argues that his concept of demi-regs, which I invoked earlier, may be applied not only to discern differences in order to postulate mechanisms, but also to assess their reality. As the social sciences do not have the option of experimentation within closed systems to produce event regularities the appropriate criterion must be to choose the theory that can explain the greatest amount of demi-regs. This is one way that Lawson defines greater or relative explanatory power. He clarifies that in some cases two competing explanations may seem to have equal explanatory power, in which case we either grant equal epistemic status to both or choose not to prefer one to the other for the time being. Lawson explains further that in society mechanisms only exist because people reproduce and sometimes transform them. If a social explanation can explain the social conditions for some proposed mechanism, this provides greater confidence in the proposed mechanism because the explanation is more encompassing. This is the other part of Lawson's greater explanatory power. Lawson admits that there may be several competing explanations of an explanation, and in such a situation the social researcher is referred back to the first quantitative aspect of greater explanatory power. This explanation includes an explicit statement that at a given point in time the social researcher may not be able to choose one theory over another. It also includes a concept of epistemic comprehensiveness. However, the criterion is cashed out in quantitative terms only; there is no mention of the relative *significance* of phenomena. If two theories agree on many aspects, and only disagree on a few, it would, according to Bhaskar, be the theory that can explain the most significant phenomena that should be chosen. This consideration is not available in Lawson's presentation.

Danermark et al. (2002, 110) describe greater explanatory power as the ability of a proposed mechanism to adequately describe the necessary conditions for the observed phenomena or not. A further discussion of this is provided later. For now it suffices to say that such a conception does not take into account the possibility that two proposed mechanisms have similar explanatory power. If a social researcher were to experience a case where two proposed mechanisms both seemed adequate, it would not be clear what the researcher should do.

Each of the above has relevant insights, but none of them invokes the greater explanatory criterion as defined by Bhaskar. It is this criterion, according to Bhaskar, that supports the possibility of judgemental rationality, and thus scientific progress, in the context of ontological realism and epistemic relativism (Bhaskar 1998, xi). Considering their importance and relevance it is surprising that the greater explanatory power criterion or judgemental rationality are not discussed more often, and in greater detail, in critical realist texts. The only texts I have come across that argue that both the number of significant phenomena *and* explanatory depth are important aspects of the greater explanatory power criterion are *A Critical Realist Perspective of Education* (Shipway 2011, 110) and *Education, Epistemology and Critical Realism* (Scott 2010, 67–8). Neither of these, however, nor the other texts cited, mention the necessary condition for the application of the greater explanatory power criterion.

Multitheoretic-linguality

Bhaskar explains that the greater explanatory power criterion is insufficient in itself for carrying out rational theory choice, especially of incommensurable positions. The criterion provides the possibility for rational theory choice, but a person who understands the competing theories so as to be able to *apply* the criterion in actuality is also required. Someone who understands two theories (or more) *internally* Bhaskar calls *bitheoretic-lingual* (or *multitheoretic-lingual* as there is often more than two relevant theories) (Bhaskar 2009, 74, 82). Bhaskar observes that Kuhn and Feyerabend may disagree with him by arguing that a person cannot understand incommensurable theories (73–4). However, Kuhn and Feyerabend are here claiming (at least implicitly) that they know incommensurable theories well enough to know that people cannot know incommensurable theories! Bhaskar shows that their argument falls apart because it is self-refuting.

Bhaskar takes the argument for the possibility of understanding competing theories further by referencing our shared natural world and our common biological makeup. As humans we have a need to understand the world we live in and thus we identify and relate to material objects so as to function in this world. This provides humanity with the means of constituting a common 'object language' (Bhaskar 2009, 89–90).[2] Bhaskar does not claim that this object language is somehow a more representationally correct language: there is still a gap between mind-independent reality and thought; this is not a foundationalist claim. The claim is that we have sufficient basis for constituting this 'language' in *common*.

[2] Bhaskar calls this 'a mensurating material object language' (Bhaskar 2009, 90). 'Mensurating' means 'measuring', as in measuring geometric lengths and spaces.

It is this shared 'language' of a shared world that provides justification for the possibility of understanding others. It provides the practical *possibility* of a common starting point to understand other people, and also as a possible starting point to learn and understand competing and incommensurable theories. Bi- (or multi-) theoretic-linguality is also a precondition for immanent critique; to critique another perspective from its own premises, practices, data, values, and even form of rationality, it is necessary to understand the position *internally* (cf. Macintyre 1990).

Making multitheoretic-linguality an actuality, based on the possibility of mutual understanding through a common object language, seems in several cases to require more than understanding the other theory cognitively or linguistically. Michael Polanyi argues that understanding some skill or theory is more than cognitive comprehension, it is also bodily and lived. Polanyi (1962, 53) talks of immersing oneself in what 'the master' says so as to reproduce traditional knowledge. But there is another side to it. Because the researcher immerses herself in the rules of the other, as the anthropologist does when studying other cultures, the researcher can learn another perspective in ways that could not be learned through mere cognitive and linguistic comprehension. Following a 'master' is therefore not just about submitting to authority and thereby upholding the status quo. Submitting to some authority also seems to be necessary for understanding perspectives deeply, and perhaps for changing them. It is the task of the social researcher to make the possibility of multitheoretic-linguality an actuality, thereby becoming capable of applying a rational criterion for theory choice.

Interpretation

Though understanding another perspective is not just about understanding it cognitively and linguistically, this is part of it, and therefore a method of interpretation becomes relevant. Furthermore, a social researcher will be interested in how to 'interpret other people's interpretations' (Danermark et al. 2002, 32), because of the double hermeneutic nature of social reality. Such an interpretive approach does not help us to find a more correct theory or a mechanism, but it does help us understand the position of others better. A thinker who could be relevant in relation to this is Ricoeur (1986) when he says that 'if it is true that there is always more than one way of construing a text, it is not true that all interpretations are equal' (160). The method of interpretation Ricoeur proposes is to carefully study each text to seek interpretations by inferring potential meanings and checking if they are probable. He accepts the hermeneutical circle where the method of interpretation is to consider how the text coheres as a whole with its smaller sections and parts, such as words, sentences and paragraphs. In similar fashion to critical realists, he argues that the hermeneutical circle is a central part of the human experience (Sayer 2000a, 76), but it is not a vicious circle because language has referents that provide the possibility of epistemic checks.

There will undoubtedly be a wide variety of interpretations of any complex text. Rather than accepting the first interpretation we come across it would be beneficial to *actively* search for different interpretations; in this way we can more fully apply

the insight gained from epistemic relativity, that there is always more than one way of construing reality. When several interpretations have been considered it is necessary to go beyond this relativism to choose some interpretation(s) over others. Ricoeur accepts something akin to a greater explanatory power criterion when he says: 'An interpretation must not only be probable but *more* probable than another' (Ricoeur 1986, 160, emphasis added). Relative comprehensiveness is a criterion he proposes to decide whether one interpretation is more probable than another. Such comprehensiveness relates not only to the text as such, but various texts by the same author, and the author's life history and the society the author lived in. Ricoeur also explicitly states that sometimes we may stay undecided on the issue. This method of interpretation could be applied in all aspects of a social research project, from the literature review to empirical investigation. Bhaskar (2009, 168) argues for a similar approach to that of Ricoeur when he advocates a need to consider whole explanations, including life story and society. Bhaskar also supports the criterion of comprehensiveness. However, I have here presented Ricoeur's method as this is more developed.

Judgemental rationality

It is relevant at this point to situate the above discussion. The issue is not only how social researchers can rationally choose one theory over another. It also concerns the very possibility of judgemental rationality in research, given the actuality of epistemic relativity. If there is no rational criterion for theory choice presented in texts on how to apply critical realism, or if the social researcher is not told what knowledge is required to apply it, the possibility of judgemental rationality remains only a theoretical one. My argument here is not primarily that Bhaskar is right and critical realists should therefore accept the greater explanatory power criterion and multitheoretic-linguality, though I do accept this. My main argument is that critical realists who accept the possibility of judgemental rationality do not consider or seek to realize the conditions that Bhaskar argues are necessary to make the possibility an actuality. I am arguing from the premise that the possibility of judgemental rationality is a necessary condition for rational theory choice, and that it can be realized in practice.

When Bhaskar introduces the concept of judgemental rationality he presents it as a *possibility* (Bhaskar 2009, 24). The argument for its possibility is a philosophical defence of the theoretical and general possibility of rationality once transcendental realism and epistemic relativity have been accepted. It is not of course a claim that researchers always are rational in their theory choices. Nor is it a claim that science in practice is only, or necessarily primarily, motivated by rationality.

The theoretical and general possibility of judgemental rationality is, however, a necessary precondition for researchers to be able to make rational choices in their research. Even self-professed social constructionist and postmodern inspired researchers who deny the possibility of rational theory choice implicitly accept such a possibility in their research (Bridges 2003, 81–8). However, implicitly or explicitly accepting such a possibility does not by itself support the idea that rational

theory choice or scientific progress actually occurs. It is the task of researchers to attempt to make the abstract possibility of judgemental rationality an actuality in their research. Placing more emphasis on greater explanatory power and multitheoretic-linguality in critical realist texts would do much to assist them in this.

Tentative summary

To sum up the points made so far we can say that, though critical realism accepts the importance of epistemic relativity and judgemental rationality, the focus has generally been on ontology. To bring epistemological considerations more powerfully to bear on critical realist methodology, researchers should apply retroduction immanently within one or more disciplines and/or fields. This is the approach of critical realist meta-methodology. Such retroductions can have greater explanatory power relative to the disciplines or fields within which they are carried out, but by no means can they attain final truth. The insights from these analyses cannot automatically be generalized without immanent critiques in other disciplines or fields which may have competing conceptions of explained phenomena. However, when a theory has greater explanatory power within or across several disciplines or fields, this provides greater credibility relative to other theories that do not have such comprehensiveness. To argue from within distinct traditions, multitheoretic-linguality is required. The greater explanatory power criterion as defined by Bhaskar supports the possibility of rational theory choice, and thus the possibility of judgemental rationality. Multitheoretic-linguality in turn makes the application of the greater explanatory power criterion possible. For critical realist researchers to argue that they rationally choose between competing claims, and thus may develop scientific knowledge, they need to either apply the criterion as described by Bhaskar using multitheoretic-linguality, or show why Bhaskar's argument does not apply. Because social science requires a double hermeneutic, there is a need to choose rationally between competing interpretations of other people's experience. Greater explanatory power in union with something like Ricoeur's method is relevant here.

At the start of this article I made a claim that much of the critical realist literature does not provide sufficient information for the social researcher to know *how* to choose rationally between two competing theories. I now discuss this claim in relation to the book *Explaining Society: Critical Realism in the Social Sciences* (Danermark et al. 2002). This book is chosen both because it represents well the position I am critiquing and because its methodological advice has been followed in many research projects.

The case of *Explaining Society*

Explaining Society presents both critical realist social theory and its methodological implications for social science. It does so in a lucid and systematic manner. The book has made critical realism more accessible to researchers and students wishing to understand and apply critical realism. There is no space here to discuss all the commendable features of *Explaining Society*, nor the positive contributions it has made

to critical realist research. My main concern is to identify what is nonetheless missing for the social researcher.

Ontological focus

In the concluding chapter the authors present their main methodological prescriptions based on the following insights: 'the idea of causality and mechanisms, the assumption that reality is stratified, the issue of closed and open systems, the transitive and the intransitive dimensions of reality, and finally the hermeneutic conditions of social science' (198). Causality, mechanisms, stratified reality, open and closed systems, and the transitive and intransitive dimensions: these are ontological insights that help social researchers know what to look for and to better understand the general features of the social world. As stated above, these insights, by themselves, do not help us know *when* and *if* we correctly describe reality or actually find the generative mechanism(s). I will mention the hermeneutic element later. The authors defend such a focus since they understand critical realism as basically bracketing epistemology in order to concentrate on ontology. Though critical realism does have much to say about ontology, it also has much to say about epistemology and theory choice. Though the authors do touch on theory choice (which will be discussed shortly) the weight of the text is on ontological insights and data producing. This can have the effect either of making it seem that rational theory choice is not very important or difficult or of losing the concept amongst all the other information.

Retroduction and immanent critique

The authors explain the role of retroduction as a mode of inference in a clear and concise manner (96–100). They explain that this mode of inference is unique to critical realist philosophy and social theory, but at the same time a natural part of any scientific endeavour. They explain how diverse thinkers, who probably would not identify themselves as critical realists, have applied this mode of inference to great effect. They also state in several places that it is important to start with existing theories and concepts (e.g. 23, 93). They are well aware that all research occurs in the transitive dimension. However, the concepts of immanent critique and retroduction do not come together in the way Bhaskar has applied them, as leading to a fuller, richer conceptual formation than the several traditions critiqued. The authors do not emphasize that readily available theories, data or traditions are heterogeneous and complex. Based on this lack of problematization of scientific knowledge the need to always make comparisons across disciplines does not become apparent. Successful retroductions can therefore fallibly be generalized, according to the authors, to say something objective about the world. They argue that it was Bhaskar's question, 'What must reality be like to make the existence of science possible?' in *A Realist Theory of Science* that produced understanding of the basic structures of science and the reality it studied (18). However, on the reading I have presented, *this* retroductive question provided comparatively greater knowledge *only* in relation to positions that accept experimentation as potentially providing knowledge about reality.

Greater explanatory power and multitheoretic-linguality

The authors argue (110) that there are two stages of research where relative explanatory power is relevant. The first consists of considering various descriptions and redescriptions. For example, should the researcher approach the research question with a biological or social framework, or both? In the second place, having decided the relevant redescription, the researcher then applies retroduction as a means of understanding the underlying mechanism. However, it is never made clear by what criteria choices among competing redescriptions should be made. In the research example presented, a study of gender relations and inequalities in knowledge-based companies (112), it is explained that the researcher chose to reject theories from a biological perspective. There is no criterion presented as to why this was a rational move. The stated reasoning for this is that gender relations are at the level of society, not biology. However, this precludes the possibility that gender may have *some* relevant connection with biology, yet here it is rejected a priori. It is allowed, however, that retroduction and redescription can go hand in hand in the research process, rather than redescription necessarily preceding retroduction. In such a scenario the social researcher could iteratively analyse proposed mechanisms within various frameworks and potentially choose more powerful explanations. If I read it right, however, greater explanatory power has a different meaning here than in Bhaskar.

After the social researcher has considered various causal explanations through retroduction within their chosen frame of reference (or iteratively within various frameworks), they should compare the proposed mechanisms. The mechanism(s) that can in fact furnish the necessary and sufficient conditions for what is to be explained should be chosen, according to the authors, and the others eliminated. The meaning of greater explanatory power here differs, however, from that of Bhaskar. Later the authors briefly mention further criteria: 'the ability of the theories to conceptualize fundamental social mechanisms and integrate central concepts from other theories, whether they are creative or not, and whether they are logically consistent' (148). Integration and internal consistency are parts of the greater explanatory power criterion according to Bhaskar. It is interesting to note that integration and consistency are not here seen as being part of the explanatory power criterion, but rather additions to it.

Based on their definition of explanatory power, it is argued that in some cases a researcher should choose one theory over others and at other times bring together several theories to explain an event. This approach to greater explanatory power however does not help the researcher *if* there is more than one mechanism that seems equally well to provide necessary and sufficient conditions for observed events. Such a scenario is not catered for in the following stipulation: either one chooses the mechanism that can explain the necessary and sufficient conditions *or* the proposed mechanisms that come together to produce said event (110). Again this seems to assume that science can, at least fallibly, neatly 'carve' reality at its joints. There is no discussion of what to do if two or more theories/mechanisms explain the phenomena adequately, which is the very point of Bhaskar's introduction of the greater explanatory power criterion: once we have found *more than one*

mechanism that can explain the phenomena adequately, what do we do *then*? The question here is not whether a particular mechanism or a coherent collection of mechanisms objectively *are* necessary and sufficient conditions. The question is whether and how to *know* this in a research project when epistemic relativity and potential incommensurability are accepted. Bhaskar also states explicitly that we need not always decide between two or more postulated mechanisms if, based on the available information, both seem to be equally powerful. As the choice for the authors is between choosing one mechanism or several that cohere, this option is not available to social researchers if following *Explaining Society*.

It is explained that creativity and imagination are useful skills for a social researcher to have and develop to recontextualize and redescribe phenomena in different ways (81). Multitheoretic-linguality, or something equivalent, is however nowhere mentioned in the text. Indeed, on an understanding that making real discoveries is fallibly possible and for which the heterogeneity of science is not of central importance, multitheoretic-linguality is unlikely to be seen as a particularly important value in research, nor perhaps would it be thought to be particularly difficult.

Interpretation

The authors in their conclusion cite the hermeneutic conditions of society as one of their main interests. When introducing hermeneutics (158–60) they specifically state that researchers bring with them some pre-understandings that are likely to affect how they interpret what other people say, do or write. The authors also explain the hermeneutic circle, how the method of understanding should oscillate between the various parts and the whole. They do not mention any criteria by which we can judge one interpretation to be better than another however. The social researcher who observes two competing interpretations has no indication of what to do in such a situation. Since how to adjudicate between competing interpretations are not mentioned, the impression can be given that arriving at the correct interpretation is quite easy. Indeed, the authors mention that it is 'not enough just to collect and repeat the interpretations and explanations that people themselves have of various social phenomena' (36). Their point is an important one for critical realists; for a causal explanation we must go beyond the interpretations of the people being studied to underlying causal mechanisms. However, the wording here is revealing of their take on interpretation: researchers 'collect' interpretations.

A more judgementally rational text

Explaining Society is a book that makes a lot of salient points, including many that have not been mentioned here. To make the text more attuned to judgemental rationality and how to make rational theory choices, I am proposing only a few *additions* and *modifications* to what already is a very beneficial methodological guide for the critical realist researcher.

There is a tendency to focus on the ontological implications of critical realism, giving much less space to issues of theory choice. However, I have suggested that theory choice is central to any research endeavour, and thus especially relevant to a book

on research methodology. Along with explaining the ontological insights of critical realism, a methodology *for* critical realism could be explicated, thereby situating its knowledge claims as greater than several competing metatheories, though by no means the last word. In general a greater awareness of the heterogeneity of the sciences might be emphasized, which would bring issues of incommensurability closer to the surface. On such an understanding the need for retroduction to proceed in tandem with immanent critique would be presented. Additionally, the book would explain the greater explanatory power criterion as Bhaskar presents it. Along with explaining the need for, and the method of, hermeneutics the authors might explore the criteria for choosing between competing interpretations in a manner similar to Ricoeur. As is stated in the book, the social researcher would need to go beyond interpretation if the goal was to establish causal connections. And, in addition to the other research skills mentioned, the need to have and develop multitheoretic-linguality, through the possibility of a shared object language, would be presented.

Situating the epistemic claims of this article

The purpose of this article has been to make a case that there is within texts describing the research implications of critical realism a lack of focus on, and sometimes misunderstanding of, the scope and status of knowledge and the centrality of rational theory choice. How to convince other critical realists that there is a *general* lack of interest in issues related to judgemental rationality has been a central concern. 'General' is of course a relative term. Suffice it to say that I here define it to mean that aspects of judgemental rationality are usually peripheral, both in critical realist texts on methodology as a whole and also within individual texts. On my own terms I must resort to the greater explanatory power criterion to thoroughly vindicate such a position. One approach could have been to search for underlying mechanisms that explain why the ideas are not discussed very much. However, while I have not entirely neglected this, my analysis has been mostly at the level of description, not explanation. This is a necessary preliminary to causal analysis, which must await another occasion. My claim that the peripheralization of judgemental rationality is a general problem is based on three tentative arguments: (1) the example of a commonly used methodology text; (2) a brief analysis of a small sample of other methodology texts; and (3) a citation of Bhaskar making a similar point. Critical realists can, of course, and should put my claim to the test of their own experience.

I hope it is clear that the *Explaining Society* example (1) is not as such meant to be taken as confirming my claim. It is more the extraordinary influence of the book that lends the claim support. It has been cited, according to Google Scholar, more than a thousand times and is well known in the critical realist community. It is interesting to note that the various methodology texts that were presented (2) differ so greatly in their understanding of what method of theory choice to recommend to the social researcher. This lends some credence to my view that Bhaskar's criterion is not as well known or applied as his more ontological insights. I have also (3) cited Bhaskar, an authority on the topic, in support of my claim.

These three arguments seem sufficient to establish my claim provisionally. Other arguments could well be made in support of the view that peripheralization of rational theory choice is not a general problem. If so, they would have to be countered in a further analysis. Whether peripheralization is generally the case or not is of course by no means the only question that can be posed, but it is the question that needs to be answered in the first instance, before embarking on the search for underlying generative mechanisms.

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