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SHORT COMMUNICATION

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Covid, critical realism and category-mistake

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Correia and Willis's editorial[1] in this journal raises some important issues. The confused and sometimes contentious, indeed contested, relationship between science and politics has been widely exposed by the Covid-19 pandemic. In some countries, politicians have falsely or dishonestly claimed to be following the science, when what they mean is following that part of 'the science' which suits them if and when it suits their agenda. In other countries, the science which politicians have honestly sought to follow has sometimes been partial or seemingly divorced from the possibility of evidence-based action in the short-term. The corrective offered by Correia and Willis to simplistic assumptions is therefore welcome. To move from science to action or policy, one must take into account evidence from a wide range of sources.

To wrap their key points in the flag of 'critical realism' may however be misleading and, in part, involving a 'category mistake'.[2]

The original motivation for critical realism as a theory in science was as a reaction against positivism. The late philosopher of science Roy Bhaskar coined the phrase transcendental realism[3] for the natural sciences and, later, critical naturalism[4] for the social sciences. The merging of these terms to produce critical realism was accepted by Bhaskar. A continuing, and welcome, motivation for adopting critical realism was in reaction to the trendy doctrine of post-structuralism, which was psychologically if not logically the theoretical cousin of the even-trendier post-modernism. These doctrines have had a long-lasting and baleful effect on the human sciences, leading to relativism and infinite regress. While political progressives have often been seduced by them, especially with the decline of 'modernist' theories of progress such as Marxism, they are a dead-end as regards any meaningful link between theory and practice, as well as simply wrong ontologically: language does not constitute reality.

Therefore the import of critical realism may well have been positive in many senses. But to contrast it with positivism, or shall we say Humean empiricism,[5] requires a pejorative caricature of the latter approach. Equally, the Popperian amendment[6] to positivistic scientific method can be used more creatively than its detractors allow. Falsification of a theory as a result of experiment or empirical data, and the resultant amendment of that theory, need not be unduly conservative in its approach to science. In short, critical realism and various versions of positivism are often forced into a false antithesis: they may be compatible. It is a question of 'horses for courses'.

In natural—sometimes called 'hard'—science, critical realism has had little import, although Bhaskar's founding work was about natural science, or science generally, and only later about the social or human sciences. I suspect that this is because, to many natural scientists, 'the philosophy of science is as useful to scientists as ornithology is to birds', to use the quotation attributed rightly or wrongly to Nobel-prize winning physicist Richard Feynman. Indeed

the eminent biologist Lewis Wolpert went further,[7] claiming that philosophy in general, never mind philosophy of science in particular, has not told us anything that is not obvious or trivial.

To which one might add— 'or false'. Classical philosophy contains much that is not only pre-scientific but also misleading or simply false. This was the essence of Hume's rejection of Kant, for example, The latter's 'transcendental idealism' was an unnecessary solution to a problem which philosophy has often created rather than attempted to solve: the disjunction between perception or cognition and external reality in its essential form. This is in essence anthropocentrism posing as philosophy—if man did not exist, the natural world and what man has sought to understand through science would be fundamentally unaltered. Empiricists such as Hume did not ignore essence and causality so much as providing a corrective to obsessing about it. Similarly, critical realism has provided a corrective to obsessive positivism which—ironically like its modern 'opposite', Continental philosophy in the form of post-structuralism—is *too* suspicious of reality and causality.

Natural science does not need to, indeed should not, take account of 'politics', except in the obvious and negative sense of ensuring that political agendas do not corrupt the scientific process. This is not to deny that scientific communities have their unconscious biases and that what Kuhn[8] called 'paradigm change' may be stimulated by factors outside science. But too much of *social* science has turned Kuhn into the relativist that he was not.

In the social sciences, theory is less stable; indeed it is often essentially contested,[9] rather than subject to generally long-term evolution (with or without 'paradigm shifts') as in the natural sciences. In part this is because the object of study—humans—can change their behaviour in response to their own reflections or the observations of others, including those who study or 'research' them.

Social scientists who wish to argue that their disciplines are just as scientific as the natural sciences have sometimes pointed out that there are some 'hard' sciences in which observation or experiment changes the phenomena under research. But to extrapolate from this restricted phenomenon to argue that the natural and social sciences are similar is simply wrong. Given the instability of human behaviour and therefore theory, another tendency in social science (seemingly at odds with the modesty which unpredictability requires) is ironically enhanced—the tendency to propound 'grand theory' which is either empirically difficult to test, or partial, or false. Then an opposed theory will often replace it as the orthodoxy, and so on in a repetitive and cyclical (but arbitrary) manner.

Ironically such 'grand theory' may also be a trend within the field of the epistemology of research methods, called by some the philosophy of social science—and critical realism may itself be a grand theory or even a paradigm. The problem with paradigms in the social sciences is that, unlike in the natural sciences, they may be as relativist or at least subject to change as the (human) behaviour they seek to theorise.

Undoubtedly, as stated above, critical realism has been valuable as a corrective. But there is a tendency to label both multi-disciplinarity, and its more rigorous sibling *inter*-disciplinarity, as examples of critical realism. This is usually a category mistake—applying a concept outside its field. 'The lack of recognition of the consequences of pursuing differing mitigation measures' for Covid is *not* a consequence of the absence of a critical realist approach. Critical realism would argue for an expanded theoretical framework of causality in researching *each* measure, looking for consequences both intended and unintended. Different measures produce different outcomes, in terms of both the prevalence and effect of Covid and the effect upon other social and economic outcomes. But it is *political pluralism*, different styles of policy-making, different values et al. which determine not only what is done, but what attention is paid to science.

To call for a wider consideration of different outcomes, across a wider range of social and economic measures, involving more social and global inclusion is desirable (to most readers of this journal, if not many short-term-obsessed politicians!), and Correia and Willis are right to call for it. But it is not 'critical realism', which is a *method for doing a science*—it is a call for the harnessing of different aspects of different social sciences to supplement narrower 'positivist' measures (presumably things like death rates from eradication, minimisation and, as in the UK latterly, 'running Covid hot'). To call this critical realism is to expand the term to motherhood-and-apple-pie.

Critical realism is right to remind us that a good correlation (the stuff of positivism) may miss other elements of the story. A good correlation between data sets derived from independent and dependent variables is neither

automatically sufficient nor even, as Bhaskar put it—more controversially—necessary for a theory to be valid. This is because of the core epistemological stance of critical realism: that reality is independent of the observer (unlike in post-structuralism or the radical empiricist versions of positivism) *but that* cognition circumscribes what one grasps of reality. Expanding one's cognition is therefore critical realism's answer, unlike the relativist blind-alley of post-structuralism or the complacency of the type of theory-free positivism which gets a correlation and is happy with it. But the latter is a straw-man: no decent positivist should behave like that, one might say!

Realist evaluation, a practical offshoot of critical realism, can help us elucidate the point. In studying, say, a complex political or organisational process, we might want to make hypotheses within our research as to why, for example, a plausible relationship or 'causality' between factors—which one does not want to dismiss too easily—is not borne out in the data whether quantitative or qualitative. Is it because of mitigating or confounding factors which conceal the relationship, which pertains nonetheless 'below the waterline'? Such is the likely approach within a case study. But to rescue a plausible hypothesis without resorting to mere assertion, one needs to undertake multiple case studies, in different settings, with and without the confounding factors, or with different prevalences of the confounding factors. Realist evaluation is better termed realistic evaluation: its essence is not an epistemological stance ('realism') - that should not be in question - but a plea to look for complex relationships and casualties which are not obvious from the surface data whether quantitative or qualitative (i.e. to be realistic rather than superficial.) To put it another way, it is realism in the sense of what is actually happening.

Just as critical realism is a corrective to empiricism rather than a denial of it, then equally, empiricism may—indeed must—come to the rescue of the hypotheses posed through a critical realist approach. Or, in Popperian terms, if our desired or 'sensed' hypothesis is falsified, we do not throw out the idea but we seek to make the hypothesis more sophisticated (e.g. instead of 'A causes B', we move to 'if and only if X is not present, then A will cause B'). It is only a caricature of Popperianism which argues that it cannot be creative enough in making hypotheses.

Correia and Willis want to remind us, using Covid, that both medical, clinical and epidemiological scientists, on the one hand, and social scientists, on the other, often only focus on part of the story in their research, or even in their whole discipline. That is sometimes true. But let us not confuse a call to investigate the hidden politics, the hidebound assumptions or the simply poor policy-making, on the one hand, with a research method. One is a social phenomenon; the other is an epistemological one. Hence the category mistake. To be fair to those who conflate the two, the tendency to do so is in fact embryonic in the work of the father of critical realism, Roy Bhaskar, in the sense that his critical work on scientific method seems to have been inspired by his critical concerns in another sense of that term—his normatively-founded political concerns.

Different perspectives, interests and values mean different *foci* for research, different emphases and different prescriptions. The response to a phenomenon such as a pandemic will ideally see the 'big picture'. This is not critical realism but the reconciliation of different concerns, with the state as referee—and where reconciliation is impossible, adjudication amongst competing priorities, with the state as significant actor. The question then becomes whether or not the state is seeking to act in the 'public interest' (problematic as that concept is) or whether it is 'captured' by special interests or elites.

In the case of Covid, some actors in the richer countries who wished to avoid restrictive measures for the sake of 'the economy' were simply protecting their own economic interests. Others who took this view may have been acting in better faith, but in response to short-term indicators which ignored wider research suggesting that longer-term minimisation of damage to 'the economy' was *not* incompatible with stringent measures to contain Covid—indeed that the two were complementary. In poorer countries, economic protection of those affected by lockdowns and other restrictions were of course more directly a matter of life and death.

Taking into account all the consequences of different approaches in different contexts is clearly vital, but is not a matter of 'critical realism'—it is a matter of politics, as is the need to expand the arena of action from the nation-state to the global level. This is another welcome reminder from Correia and Willis. Critical realism? It's much more than that!

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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