NEW ESSAYS IN CRITICAL REALISM

Kathryn Dean, Jonathan Joseph and Alan Norrie

Critical realism (CR) is most closely associated with the work of Roy Bhaskar and is fundamentally concerned with the nature and possibility of human freedom. In attempting to convey the nature of CR to a new readership this introduction will begin by providing a brief account of the major developments and dimensions of Bhaskar's philosophy. It will then focus on some differences within CR regarding these developments and dimensions and will conclude with an introduction to the papers which make up the collection.

BASIC DEVELOPMENTS IN CRITICAL REALISM

The first stage of Bhaskar's philosophical project is his realist philosophy of natural science set out in *A Realist Theory of Science (RTS)*. The second is his proposal for a critical naturalist social science, in *The Possibility of Naturalism (PON)*. The third involves the dialecticisation of critical realism (DCR) in *Dialectic: the pulse of freedom (DPF)*, in which work, as the subtitle makes clear, the topic of human freedom comes to the fore. Subsequently there was further reconfiguration towards a synthesis of eastern and western philosophy (Transcendental Dialectical Critical Realism or TDCR) and the displacement of freedom by self-realisation. There follows a brief discussion of each of these.

A Realist Theory of Science

Bhaskar's critical realism began as a philosophy of the experimental physical sciences. This is a philosophy which attempts to transcend the one-sidedness of, on the one hand, positivisms and, on the other, conventionalisms. Transcendence is effected by carrying forward what is true in each of the competing positions (or rough clusters of positions). Against positivisms, Bhaskar conceptualises natural lawfulness in terms of powers or tendencies, rather than of regular recurrence of specifiable events. Against conventionalisms, he insists that natural things exist independently of human theories about them. Conceptualising lawfulness as powers which may or may not be actualised in events gets determinism out of the way and leaves space for understanding the possibility of historico-cultural differences in descriptions of nature. Hence CR incorporates a perspectivalism (what conventionalisms stress) while also insisting that perspective is not freely adopted but is constrained by the real nature of objects of study (what

- 1. Roy Bhaskar, A Realist Theory of Science, Verso, London, 1997; The Possibility of Naturalism: a philosophical critique of the contemporary human sciences, Harvester Wheatsheaf, London, 1989.
- 2. Roy Bhaskar, Dialectic: the pulse of freedom, Verso, London,1993. See also Plato Etc., Verso, London, 1994.
- 3. The relevant texts here are From East to West: odyssey of a soul, (FEW), Routledge, London, 2000; Meta-Reality, vol. 1: creativity, love and freedom, Sage Publications, London, 2002a; Reflections on Meta-Reality: transcendence, emancipation and everyday life, Sage, London, 2002b.
- 4. See Roy Bhaskar, *Reclaiming Reality*, (*RR*), Verso, London, 1989, chs 1 to 4 for a lucid elaboration of these matters.

positivisms stress). What is produced is a philosophy which espouses ontological realism and epistemological relativism. Ontological realism insists upon a world of intransitive things which exist independently of human activity. Transitive things are those things which have been saturated with human activity or knowledge; they are historico-culturally specific. From this point of view we can have true knowledge of real objects in nature but we must recognise that our knowledge is time and space specific and that it may be overturned in the future. The relativism here is not of the 'anything goes' variety but is, rather, a relativism which admits of the possibility (and indeed necessity) of truth. While knowledge lacks guarantees, its anchorage in things of the world ensures the possibility of judgmental rationality in the choice between different accounts of reality: a limited and provisional epistemological sense of the true and the false. To ignore or reject the distinction between the intransitive and transitive is to ignore or reject the constraints which reality places on our knowledge. It is to perpetrate the epistemic fallacy, or, to reduce reality to our knowledge of it.

It is important to note that the realism of CR is a 'depth' realism: a realism that insists upon the structured, stratified and orderly nature of reality. Different sets of distinctions are used in CR to convey the nature of a reality with depths, or, a reality which must not be conflated with appearances. One set of distinctions enables us to understand the necessity of science. Another set of distinctions enables us to avoid producing reductive scientific explanations. Regarding the former, we need to distinguish between the real, the actual and the empirical; regarding the latter we need to distinguish between (most significantly) the physical, the chemical, the biological, the psychological and the socio-cultural.

The real is the foundational level, beyond direct experience, which consists in a multiplicity of powers which may or may not be actualised as empirically-accessible 'events'. The actual is the level in which some of those real powers are actualised as events. The empirical is the level at which these events are experienced. Thus there is a gap between the whole of reality and what is experienceable. Hence the necessity of science, which fills the gap between the real and the experiential by attempting to attain true knowledge of specific powers or mechanisms as these are located in the different layers of which nature is composed. In identifying our object of knowledge we must attend to this layering if we are to provide explanations at the correct level. We can explore this point further by turning to the second important development in Bhaskar's work.

The Possibility of Naturalism

Carrying forward from *RTS* the idea that the specificity of the natural sciences consists in uncovering the real powers of things, Bhaskar considers that the human sciences can be sciences in this sense, but not in exactly the same way. They cannot be sciences in the same way because the human species is

one which can act for reasons.

Critical realism allocates two crucial tasks to the human sciences – tasks which point to their specificity vis-à-vis the natural sciences. These are, first, the uncovering of specifically human powers - the powers involved in intentional, causally efficacious activity and second, providing an explanatory critique of false beliefs. A critical realist naturalism is one which attends to both the distinctiveness of humans as meaning-producing animals (what hermeneutics stresses) and humans' necessary and specific physicality and their necessary interaction with non-human nature (what positivism stresses). As with his philosophy of experimental physics, we notice here again a synthesising logic at work as Bhaskar seeks to heal and transcend the dichotomy - characteristic of debates in the philosophy of social science between explanation and understanding (verstehen). This dichotomy implies a choice between determinism (explanation) and freedom (understanding/ verstehen) and is expressed in different social scientific positions in terms of the structure/agency debate. For CR, the reality of human and non-human nature demands that these dichotomising perspectives be transcended. In PON Bhaskar's Transformational Model of Social Activity (TMSA) is intended to do this job. ⁵ Before discussing this topic it will be useful to consider the crucial concept of emergence by means of which Bhaskar begins to theorise the non-determining, constitutive nature of human physicality and biology.

5. See Bhaskar, *PON*, ch 2.

Emergence

The concept of emergence is intended to provide the basis of non-reductive explanations of complex phenomena.⁶ By emergence is meant a process whereby a new power or entity results from the coming together of existing powers or entities. The most frequently-cited example is water which is the result of the fusion of hydrogen and oxygen. The properties of water could not exist without, but should not be reduced to, the properties of its constituents. There is a relationship between hydrogen-oxygen and water of the 'without which not' rather than determining kind. This is the kind of non-determining necessity to which the concept of emergence draws our attention.

The relevance of emergence to an understanding of human powers is that it opens up the possibility of understanding the human mind in a non-reductive way. An understanding of the human mind requires that its correct 'location' in nature's stratified reality be identified. Bhaskar's position is that the mind cannot function without the brain and the brain cannot function in the absence of physico-chemical processes. However, the physico-chemical-biological is the multi-levelled realm of non-determining necessity out of which emerges the mind. A reductive form of explanation would be one which attempted to reduce mind to brain and to consider the brain as *nothing but* neuro-chemical processes. Physico-chemical-biological powers are the basis of psychological and socio-cultural powers, but the latter cannot

6. See ibid., pp97-107. See A. Collier, Critical Realism: an introduction to Roy Bhaskar's philosophy, Verso, London, 1994, chs 4, 5.

7. For Bhaskar's tentative exploration of the mind-brain connection (which he sets out in terms of 'synchronic emergent powers materialism'), see *PON*, ibid., pp97-101. See also Collier, 1994, ibid., pp156-160

Bhaskar's Transformational Model of Social Activity (TMSA) is relevant here.

The Transformational Model of Social Activity

The TMSA is set out as the fourth model in a series attempting to understand the nature of human activity. The first, described by Bhaskar as a voluntaristic 'Weberian stereotype' sets up a distinction between society and the individual and considers the former to be the unintended consequence of the free activity of the latter. The second, described as the 'Durkheimian stereotype' of 'reification', begins with the same distinction but views the individual as the outcome of a necessary encounter with society. In the first case, the causal arrow runs from individual to society; in the second case, from society to individual. In both cases there is a reductive logic at work: with voluntarism, society becomes a kind of accidental artefact of individuals' free activity; with reification (or determinism) the individual becomes an artefact of society. A third dialectical model which is intended to avoid both of these extremes, is, from Bhaskar's point of view, a failure because it encourages both voluntaristic idealism in relation to the understanding of social structure and a mechanistic determinism in relation to the understanding of individuals. The TMSA is intended to achieve successfully what the third model intends, but fails, to accomplish. Successful achievement is a matter of retaining the ontological distinctiveness of people and society while advancing an understanding of their necessary relationship.⁸

be reduced to the former.⁷ What, though, of the relationship between the

psychological and socio-cultural, between 'individuals' and 'society'?

For Bhaskar, neither individual nor society is a 'thing' which can stand alone. In the absence of society there are no individuals, in the absence of individuals there is no society. Society is the necessary condition of human activity; human activity is the necessary means of societal reproduction. However, in reproducing society through their activity, humans can, and do, also transform society. In this model of human action, the extremes of determinism and voluntarism are softened to those of constraint and enablement. In this model of human action, critical realists hope to have overcome the theoretical straitjacket of the structure-agency debate.⁹

CR and the problem of false beliefs

Understanding the nature of human powers is crucial to the nurturing of human freedom. *PON* elaborates on the nature of human powers via the TMSA through reflection on the relationship between causes and reason; a reflection intended to advance an understanding of how human reasons become causally efficacious. Only where reasons have this power can we speak of freedom. Having sketched the logic of the TMSA as a device or technique for disclosing the nature and limitations of human powers, let us now consider the second essential task allotted to critical social science: the

8. Bhaskar, *PON*, ibid., ch 2; *RR*, ch 5.

9. See Margaret Archer Realist Social Theory: the morphogenetic approach, Cambridge University Press, Cambridge, 1995 for a comprehensive discussion of different approaches to the structure/ agency problem.

explanatory critique of false beliefs. The freedom which CR seeks to promote is not the unconstrained freedom implied at least in some radically individualist theories. It is, rather, a freedom which consists in the recognition of necessary constraints. False beliefs constitute an unnecessary constraint on the enjoyment of human freedom. In providing an explanatory critique of the sources and nature of false beliefs CR hopes to hasten the arrival of human freedom.

We noted before that, for CR, there is a gap between the real, the actual and the empirical, such that the last does not provide complete and transparent cognitive access to the first, or indeed the second. Society, as well as nature, is composed of complex powers, an understanding of which may not be available in events or through experience. The gap between the real and the everyday, empirical world is the space into which false beliefs can be inserted or out of which they can emerge. They are a standing possibility because the world (of nature and of society) does not present itself to us in an immediately-intelligible form. Critical realism thus believes in the possibility of making a distinction between true and false beliefs and also of providing an explanatory critique of the latter. An explanatory critique here involves studying both beliefs and what the beliefs are about. Such a study will reveal the causes of these false beliefs as well as demonstrating their falsity. While false beliefs can be found in any society, CR is particularly concerned with the false beliefs (or ideology) generated by and in capitalist societies. As beliefs which are systemically engendered, their acceptance is not due to differential individual endowments of reason but to the nature of everyday life in such societies. To provide an explanation of the source and misleading nature of these beliefs is to help people to develop their powers to differentiate between necessary and unnecessary constraints, thereby helping them to move towards a more emancipated way of life.

The concept of explanatory critique, Bhaskar goes on to argue, connotes a concept of objectivity which is compatible with the refusal to observe positivist strictures regarding the 'naturalistic fallacy', or, is a science which refuses the distinction between fact and value. It conveys the notion that the adoption of an explicit value position need not be incompatible with the production of objective explanatory science. Beyond this, it invokes the possibility that values may be discovered as part of such a science, or that there may be well-grounded arguments which reveal the conditions of human (and indeed of non-human natural) flourishing.¹⁰

Dialectical Critical Realism

Dialectical Critical Realism is intended as a particular kind of elaboration of CR: one which opposes 'pure presence', or the world as it positively presents itself, by stressing the primary ontological status of absence. In fact, Bhaskar considers the essence of the concept of dialectic to be, simply, the 'absenting of absence'. In stressing the constitutive nature of absence, Bhaskar is also

10. See Roy Bhaskar, Scientific Realism and Human Emancipation, Verso, London, 1986, ch 2, reproduced in CR, op. cit.. See also Andrew Collier, In Defence of Objectivity, Routledge, London, 2003; Alan Norrie's, Crime, Reason and History, Butterworths, London, 1993.

11. See Bhaskar, DPS, op. cit., p3

12. Ibid.

13. Ibid., p335.

14. Ibid., pp8-14.

15. Ibid., p198.

16. See Roy Bhaskar and Alan Norrie, 'Introduction: Dialectic and dialectical critical realism', in *Critical Realism: essential readings, (CR), M.* Archer, R. Bhaskar, A. Collier, T. Lawson and A. Norrie (eds), Routledge, London, 1998.

17. See Andrew Collier, 'The power of negative thinking', Radical Philosophy, 69, January/February, 1995, pp36-9 for some critical comments on the particular universalising thrust of Bhaskar's dialectics. This review of DPF is reproduced in CR, ibid.

stressing the normal status of change. He is doing so in order to theorise the conditions for attaining human freedom. Absence of freedom is conveyed in terms of different kinds of master-slave relations. Casting oppressive human relations in these terms, Bhaskar also argues that the 'moral goal of universal human autonomy' is already prefigured in the first human act of 'referential detachment'. This goal, he maintains, is something towards which humans, somehow, actively strive. Here an inherent desire for freedom is attributed to all humans, change towards the realisation of freedom via the 'absenting of its absence' being driven by this inherent desire. At the same time, the achievement of universal human freedom requires an understanding of how humans live in social and natural conditions: this involves a sense of the relation between freedom and the totality of relations in the world.

In elaborating on the nature of a dialecticised CR which can understand and work towards this development, Bhaskar sets out four 'degrees' of critical realism, or the MELD schema.¹³ The first degree is referred to as 1M (first moment) and is broadly compatible with the earlier critical realist ontology of structure, stratification, emergence and change. These categories are developed and 'dialecticised' by the second degree, referred to as 2E (second edge) which emphasises absence and negativity. These in turn ground a dialectics of process, change, interchange and transition and determinate transformative negation. 2E brings the concept of change under that of absence in that it sees changes as absentings and regards human agency as embodied intentional causal absenting.¹⁴ The third degree, referred to as 3L (third level) is that of totalisation. Totalisation is implicit in 2E in that an absence or incompleteness generates contradiction, split or alienation that can only be contained or remedied through resort to a wider, deeper or more encompassing totality. 3L is the domain of dialectical totality where phenomena are seen as part of a whole. Finally, the fourth degree is referred to as 4D (fourth dimension) which concerns dialectical praxis. 4D is the place where the theoretical understanding of totality attained at 3L is realised in transformative practice.15

The dialectical turn in CR brings to the fore what is already present, more or less implicitly, in the earlier work, namely the historicity of human life. Yet, in conceptualising history as the absenting of absence of freedom, it also brings with it a strongly universalising, teleological logic which is manifested in the claim that the master-slave relationship expresses the essence of human unfreedom. ¹⁶ Not only this, but the 'pulse of freedom' is held to have been beating from the earliest moment of identifiably human action, as noted before. It is beating within each individual, notwithstanding the countervailing power of false beliefs and it beats more strongly over time, eventually becoming a movement for the absenting of unwanted constraints. ¹⁷

At this point it will be useful to consider the new dialecticised schema of human agency which Bhaskar outlines in *DPF*. The dialecticised schema replaces the TMSA by the 'social cube' of '4-planar social

being'. 18 The four, dialectically interdependent planes of social being are (a) material transactions with nature; (b) inter-personal relations; (c) social relations and (d) intrasubjectivity. This schema is intended to promote understanding of human complexity beyond that achieved with the TMSA. It appears to involve the rejection of the 'ontological hiatus' between 'society' and 'individual' on which the 'pre-dialectical' Bhaskar had insisted. 19 However, there remain hints that individuals can somehow, in part, escape the constraints of society and that such escape is necessary if freedom is to be attained in Bhaskar's account of freedom. 20 This involves the idea that 'agency' (in the strong sense of intentional, consequential individual activity oriented to freedom) may triumph even in the presence of radically disabling 'structures'. A discussion of the fourth development of CR will enable us to consider this question further.

Transcendental Dialectical Critical Realism (meta-reality)

In the texts which have been published since 2000, Bhaskar has moved further away from the historico-cultural specificity of his earlier, more academic work. He does so by carrying forward from DCR ideas about the inherent, originary and indefatigable character of human desire.²¹ At the same time, the dialectic of freedom becomes the 'odyssey of a soul' as the dialectical turn evinced in DPF becomes reconfigured as the spiritual and transcendental turn which eventuates in the conception of meta-reality.²² Bhaskar claims that meta-reality is part of the totality with which CR and DCR have been concerned all along. It is transcendental in the sense that it is a level beyond embodiment, beyond direct experience, beyond history and culture. The task for CR should be reconfigured so as to take account of this reality, rather than confining itself, as it has done up to now, to the 'demi-reality' which is the everyday world. The empirical world of direct experience - the world of embodied human relations - requires that we live dualistically rather than non-dualistically, or, it requires that we take the dualistic position of the ego-centric 'I', thereby effecting a radical disconnection from our true human essence. Living a truly human life consists in living 'non-dualistically', in other words living connectedness rather than disconnectedness or experiencing 'oneness' with the world (both human and non-human). Living connectedness is living in a condition of fulfilled being; living in meta-reality rather than demi-reality.²³

Whereas in his earlier work Bhaskar is philosophising as the underlabourer of the critical social sciences, in his meta-realist phase he is addressing directly the unhappy, desirous soul, his expectation being that, through a reminder of the truth of human meta-reality, individuals will be energised to think their way back to a reconnection with this true essence, the nature of which is conveyed by the notion of the 'ground-state'. In introducing the concept of the ground-state Bhaskar is invoking the earlier

18. Bhaskar, *DPF*, op. cit., ch 3.

19. Ibid., pp152-173.

20. Bhaskar, *RR*, op. cit., ch 5.

21. Bhaskar, *DPF*, op. cit., p276.

22. For a discussion of the continuities and discontinuities between DCR and TDCR see Nick Hostettler and Alan Norrie, 'Do you like soul music?', *Alethia*, 3, 2, November 2000: 2-8.

23. For references see note 1 above.

theory of a stratified reality: of a human reality, beneath embodiment and perception, beyond society and history. He is urging us to look for the true human essence which is present within each individual behind the false appearances presented to us by society. This true human essence is a kind of rational kernel in which inhere the innately human powers of love and creativity: powers on which societies necessarily draw for their own reproduction but which they also corrupt and subvert. By taking thought, humans can break the shell of socio-culturally constituted delusions which get in the way of self-realisation and release themselves into true human freedom.

ISSUES IN CRITICAL REALISM

It will be seen that CR has developed in a number of directions, in the process offering much room for debate, dispute and elaboration. Those working within the field have been required to ask themselves whether or to what extent they accept or reject the new turns to dialectics and the spiritual. While some have remained with the original CR position, others have accepted the move to DCR but not to the spiritual turn. A third group have declined DCR but accepted the spiritual turn, while a fourth have followed and accepted every development that has occurred. The essays in this collection are also split in terms of the extent to which they draw on or discuss these different trends. We have grouped them so that we start with essays reflecting on original CR positions, then move through a group of essays concerned with applying CR to various contexts to a group of essays on DCR, and then on to a final pair on the spiritual turn. Whatever their precise focus, however, most of these essays reflect in one way or another on the developing tradition outlined in the previous section. In this section, we briefly identify four underlying issues emerging from these theoretical developments. These are: CR's 'underlabourer' status; the relationship between DCR and critical and poststructural theory; DCR's account of freedom and universality; and the relationship between CR and meta-reality (the spiritual turn).

Critical realism as 'underlabourer' for science

Bhaskar's earlier work, particularly A Realist Theory of Science and The Possibility of Naturalism, examines the ways in which the philosophy of CR works with the natural and social sciences. This relationship becomes problematic particularly with regard to the social sciences insofar as the distinct roles of philosophy and science are not clear-cut. CR is given a philosophical role in contrast to that of the specific social sciences, which is to make substantive claims. However, the two cannot be neatly separated as social science is always philosophically informed while philosophy is entangled with and expressed through social enquiry. Concepts deployed by social actors are

necessarily philosophically linked, and philosophers' concepts are socially loaded. Can the role of critical realism be limited to that of a philosophical underlabourer as this early work suggests? Can one make a distinction between philosophical or conceptual analysis on the one hand and social analysis on the other? If not, the idea of CR as underlabourer is rendered problematic.

With the 'dialectical turn' this distinction is broken down and critical realism starts to make more ambitious claims about a number of issues. For example, under DCR, the philosophical problem of a 'flat' ontology of events and experiences ('ontological monovalence') is a reflection in philosophy of underlying socio-historical issues, in particular structured power relations. The philosophical critique of this problem is thus itself embedded in a set of socio-historical claims about power and what Bhaskar calls generalised master-slave relations. Dialectical Critical Realism is a more ambitious project as far as claims about the relationship between philosophy and the nature of the social world and human activity are concerned. Clear lines between philosophical underlabouring and the work of the substantive sciences are hard to come by.

The point is a general one. Bhaskar's book *Dialectic* represents not just the 'dialecticisation' of critical realism as is often claimed. The process of dialecticisation systematises CR in its outlining of the four dialectical realms of structure and emergence, negativity and absence, totalisation and the fourth dimension of transformative praxis. Bhaskar argues that the dialectical process moves from dialectical explanation to explanatory critique to dialectic as the axiology of freedom.²⁴ This dialectical turn poses a dilemma for critical realists. On the one hand, it undoubtedly enriches CR and deepens its concepts. It also weaves together a number of concepts in a rich and insightful way. On the other hand, the dialectical turn commits us to a far more elaborate and systematic framework of analysis based on contentious claims like the primacy of negativity over positivity and a universal ethics. Does the whole dialectical critical realist package have to be accepted? Is it possible to accept some parts of DCR while rejecting others? Or is the whole thrust of the dialectical drive too overpowering?

24. For a clear account of meta-Reality see J . Morgan, 'What is meta-Reality?', Journal of Critical Realism, 1, 2, (May 2003): 115-146.

Dialectical critical realism, poststructural and critical theory

Some see the emergence of DCR as positive in that it dialecticises earlier concepts and makes them fuller. Others might argue that existing concepts like stratification and emergence and the transformational model of social activity are already dialectical concepts related to issues of contradiction and co-determination. Maybe the strongest aspect of DCR is its critique of 'ontological monovalence' or a purely positive account of reality. This critique bears similarities to the negative dialectics of Adorno²⁵ and Derrida's deconstruction but has the advantage of asserting the ontological in its account of the nature of reality, as opposed to the primarily epistemological

25. Bhaskar, *DPF*, op. cit., p202.

focus of Adorno and Derrida. Whereas Derrida and Adorno target theories - namely logocentric and positivist accounts of the social world - Bhaskar asks what the world itself must be like in order for conflict, change and radical alterity to be possible. When one compares DCR with these philosophies, one can appreciate how it leads to an enrichment of the ontology presented in earlier CR work. For example, Bhaskar begins his project by distinguishing between three domains - the empirical, the actual and the real. Whereas positivist science concentrates on observable phenomena and the constant conjunctions of events, critical realism points to the need to examine the domain of the real – the underlying structures and mechanisms that generate these. Reworked in DCR we can now see actualism operating not just as a reduction of structures to the constant conjunction of events, but as the denial of the possible as real-yet-absent in favour of the manifest, evident or apparent. 26 Bhaskar's approach provides us with a radically new way of seeing the world. The real includes the possible and the actual with the possible a ground of real potentialities whether or not they are actualised. This offers a deeper understanding of CR and also more of a challenge to actualist approaches than does poststructuralism. We still find in poststructuralism the actualist error of reducing the real to the actual – failing to account for underlying structures or, in Foucault's case, reducing power to its exercise.

26. See H.Engelskirchen, 'Powers and Particulars: Adorno and Scientific Realism', Journal of Critical Realism 3,1, (2004): 1-22; A. Norrie, 'Bhaskar, Adorno and the Dialectics of Modern Freedom', Journal of Critical Realism 3,1, (2004): 23-48.

Although a realist philosophy would have deep concerns with poststructuralism's refusal to commit to ontology (despite this being implicit in it), there are clear parallels between Bhaskar's critique of ontological monovalence and Derrida's critique of pure presence. Connections between the two schools of thought can be extended further to examine the connections between power and knowledge and the need for epistemological relativism. A realist position would insist, however, that this does not entail judgmental relativism and that the independently existing intransitive domain, while necessitating epistemic caution, also provides a basis for reasoned claims to be made. A commitment to social ontology leads to a focus less on contingency, more on historical specificity. Historically specific conditions are not themselves necessarily contingent in the way that poststructuralism suggests, for they may be relatively enduring and open to investigation and explanation. CR can accept poststructuralist claims about the relativity of the transitive domain and problems of knowledge while maintaining a strong social ontology that recognises the limitations in their emphasis on contingency, fragmentation and unknowability.

Dialectical critical realism and emancipation

The dialectical turn also deepens critical realism's emphasis on emancipation by making freedom its central concern. The dialectic of freedom is based on the absenting of constraints in order to satisfy desire. Therefore 'dialectics depends upon the positive identification and transformative elimination of absences'27 and 'absenting constraints on absenting absences is the alethia of dialectic'. 28 Bhaskar talks of an inexorable logic of dialectical universalisability, absenting of all such constraints, all master-slave type relations and other inequalities, leading to a society where the free development of each is the condition for the free development of all: 'So the goal of universal human autonomy is implicit in every moral judgement'. 29 This has opened up a debate among critical realists about ethics and universalism. Andrew Collier has argued that Bhaskar is following Habermas and Kant in promoting an ideal of human solidarity and the idea that every action or desire implies a claim for freedom from constraint that commits us to an ideal of universal freedom.³⁰ For Collier, the goal of universal freedom is inherently unrealisable so that 'emancipation consists in the prioritising and rationing of freedoms, not their indiscriminate affirmation'. 31 This points to the need to ground freedom and emancipation in actual socio-historical conditions rather than in a transcendental logic of universal interests. Others have argued that the Habermasian element in Bhaskar's thought has always been present, tracing it back to the pre-dialectical work.³²

Critical realism and meta-reality

The arguments of the dialectical turn are wide-reaching in their scope and pave the way for Bhaskar's spiritual turn. For once we move to a transcendental universal notion of freedom as the absenting of constraints inherent in all human activity, then we move from a structural analysis of social relations implicit in the transformational model of social activity to a more transcendental approach to human freedom. The pulse of freedom now manifests itself as a dialectic of self-realisation – and God-realisation – where self-centred subjects flourish in selfless solidarity.³³

For the Bhaskar of meta-reality, the issue is not to engage in a study of society, but to develop an awareness that the alienated world in fact depends upon free, loving, creative, intelligent energy and that in becoming aware of this we begin the process of transforming the oppressive structures we have produced.³⁴ The world of oppression is therefore only a half-world or demi-reality that exists because a deeper level of truth is denied. And because it is us and not capitalism or some other social process that is responsible for this denial of our true natures, it is we who can solve the problem by realising this. The social ontology outlined in the earlier works is now dismissed as demi-real for the oppressive structures we encounter come, not from a particular social system, but from something transcendent, that is to say, our own selves and our fundamental errors in seeing such structures as constitutive of our social life (the error of duality). 35 Bhaskar's argument is that there is a primary or essential level that is good, true and autonomous and a secondary or derivative level that is evil, false and oppressive. This secondary level comes to dominate the primary level on which it is dependent. The process of liberation therefore consists in the shedding of

- 27. Ibid., p234.
- 28. Ibid., p43.
- 29. Ibid., p147.
- 30. Ibid., p264
- 31. Andrew Collier, 'Realism and Formalism in Ethics' in M. Archer, R. Bhaskar, A. Collier, T. Lawson, and A. Norrie (eds), *Critical Realism: Essential Writings*, London and New York, Routledge, 1998, p696.
- 32. Ibid., p701.

- 33. N. Hostettler and A. Norrie, 'Are Critical Realist Ethics Foundationalist?' in J. Cruickshank (ed), Critical Realism: the Difference It Makes, London, Routledge, 2003.
- 34. Bhaskar, From East to West, op. cit., p4.
- 35. Bhaskar, *Meta-Reality*, op. cit., ppvii-viii.

36. Ibid., pxv.

37. Ibid., p52.

38. Bhaskar, Reflections on Meta-Reality, op. cit., p229. the secondary level.³⁶ Quite simply, 'all we have to do is shed everything which is inconsistent with our true, most essential nature'.³⁷

Bhaskar's later work is implicitly critical of all preceding philosophies, perhaps even his own (Bhaskar writes that 'realism about transcendence leads into the transcendence of realism itself'38). The question whether the philosophy of meta-reality completes the Bhaskarian system or represents the point where his work turns against itself remains a matter for serious debate amongst critical realists.

NEW ESSAYS IN CRITICAL REALISM

The papers in this collection reveal something of the richness and diversity in recent CR work. Three different forms of argument can be discerned. The first concerns theoretical reflection within CR itself as authors consider and contend with developments within its three main stages: CR, DCR and the recent transcendental turn. The second involves engagement between CR or its dialectically developed form and other theoretical approaches with which writers find both common cause and disagreement. The third examines the contribution that CR can make with regard to particular issues in the world and the disciplines that engage with them.

The papers cannot be easily allocated to one or another of these three 'slots' in a simple fashion. Many in fact combine two, or even three, forms of argument, giving more or less emphasis to one or another. In working out a running order, they have inevitably been grouped in a way that brings out one aspect, hopefully the central one, over another in their argument. This has led to four sections as follows. We begin with two papers which provide a solid grounding in and introduction to central themes in CR (Agar on its philosophical foundations and Jessop on its extension to social science and the structure/ agency debate). We then move to a group of papers which apply such theories to particular issues (New on sex and gender and Dean on the new biology). These papers all identify the crucial role of the epistemic fallacy (the reduction of being to knowledge of being) in its various forms (for example the linguistic or discursive turns) in misunderstanding how the world works. They are completed by a philosophical paper (Calder) which acts to summarise problems of the epistemic fallacy that continue to dog even critical (in a broad sense) forms of philosophy. With its emphasis on how Cartesian doubt infects postmodern or poststructuralist thinking, Calder's paper forms a bridge to three further papers which are rooted in theoretical engagements involving DCR and postmodern concerns (Norrie on DCR and deconstruction, Roberts and Joseph on DCR and poststructuralist theory, and Coole on DCR and the dialectics of Merleau-Ponty). We conclude with two papers on the recent transcendental or spiritual turn in CR (Morgan and Porpora).

Joly Agar's essay on the nature of scientific enquiry serves as an important reminder of the philosophical foundations of critical realism in a development of the modern philosophy of science beyond its Humean and Kantian origins. To Hume's question whether there are empirical regularities which are candidates for laws of nature, Kant had responded that, in addition to regularities, it was necessary to identify reasons why predicates in law-like statements should be seen as conjoined. Such reasons were to be found not in things themselves but through certain a priori capacities of the human mind to attribute concepts like causation and unity to objects in the world. Kant combined a metaphysics of the knowing subject with an empiricism of the object world in which the object in itself, whose existence could not be doubted, could nonetheless not be fully known. Bhaskar's resolution of this problem was the ontologically bold move of arguing that the conjunction of predicates identified on the basis of regularities rested not on the powers of mind but on the enduring power of things and the transfactually active mechanisms of nature. In proposing the necessity of a real world beyond our knowledge as a condition of our knowledge, Bhaskar laid the foundations for an ontological depth realism aligned with an epistemological relativism which are core features of the critical realist standpoint.

Bob Jessop's essay both extends the elaboration of these initial CR themes into the philosophy of the social sciences and contributes there to the debate on the problem of structure and agency, a debate in which CR, as we have seen, has played a central role. Jessop fills out the idea of depth realism with his account of the three levels of the world originally identified by Bhaskar as the real, the actual and the empirical. The real represents the generative structures and causal mechanisms which constitute the basis for tendencies to manifest themselves in actual events, and these are then experienced, observed and measured at the level of the empirical. Jessop uses this account of ontological depth to review the debate around structure and agency begun by Anthony Giddens (structuration theory) and Bhaskar (the transformational model of social activity (TMSA)), and then continued by Margaret Archer (the morphogenetic model) and himself (the strategic relational approach (SRA)).

From the point of view of critical realism, the crucial problem with Giddens's theory is that it lacks ontological depth, treating structure and agency at the level of the actual rather than in terms of real mechanisms, emergent properties and tendencies and material effects. These have to be filled in in a *post hoc* fashion in a theory which treats structures as rules and resources for action and structural change in terms of the consequences of action. Bhaskar's TMSA in contrast insists on the material effectivity of the emergent properties of structures and the non-identity of structure and agency. Archer's approach continues this line of thinking and builds in a specifically temporal dimension of structure, interaction and structural

elaboration. Jessop's approach then contributes to this evolving realist account by elaborating the relationship between what he calls 'structurally-inscribed strategic selectivities' and 'structurally-oriented strategic calculations'. Where the former explains how structures may privilege some actors, identities, strategies and spatio-temporal horizons, the latter explores how actors may work reflexively to take account of the differential privileging provided by structural selection.

Critical realism and the epistemic fallacy

Turning now to the application of CR analyses to particular areas, Caroline New begins her paper on sex and gender by introducing the distinction between the transitive and intransitive dimensions to knowledge, and the idea of the generative mechanisms that underlie our understanding of how causation works. The first distinction maps on to an understanding of the relationship between the social construction of knowledge (the transitive) and the ontologically real (the intransitive) which it more or less accurately reflects, but there is an important sense in which the transitive or socially constructed dimension is also ontologically real in the way that it works. These transitive constructions operate as significant elements of the real (intransitive) world. This is important in terms of establishing a CR account of the distinction between sex and gender in which sex represents a real foundation onto which different accounts of gender are read or constructed. For New, there are real differences between the emergent properties of male and female sexed bodies in terms of their physical capacities and vulnerabilities. These manifest themselves as causal tendencies in how they will act or be, but these differences must be distinguished from the uses and references to which they are put in gender orders which represent and legitimise particular forms of sexed bodies. Sex is the referent of gender (in a way that race is not the referent of racial thinking) because it is its real basis, but that does not mean that gender expresses sex or is reducible to it, quite the reverse. New distinguishes her position from that of a poststructuralist such as Judith Butler, for whom sex is constructed all the way through gender. For New, Butler downplays the causal powers of sexed bodies by focusing on the social and linguistic mechanisms which affect sexuality. To not give the extra-discursive body causal powers is to produce a form of the epistemic fallacy, that is, the belief that statements about being can be reduced to statements about knowledge. It is perfectly true that unmediated knowledge of the body is impossible, but that does not mean that its powers are limited to those humans themselves construct.

In her analysis of the new biology and its interventions in the world such as genetic engineering, Kathryn Dean begins by outlining some general CR considerations concerning scientific practice. These include the difference between conducting science in closed and open systems and between its pure and applied forms. Critical realism holds that scientific

experimentation in the laboratory involves the artificial creation of closed systems in which laws, understood as the natural tendencies of things, can be isolated. Of course scientists understand the artificiality of experiments and they tend to practice two different kinds of science, a pure form in the laboratory and an applied form in the actual world where open systems pertain. Whereas the former operates by bracketing all sense of context and relationality, acting in a radical way in relation to its subject matter, the latter takes these into account, and has a more conservative orientation to the natural world seen as a whole. What has happened with the new biology is that the distinction between pure and applied science has broken down as pure methods are increasingly adopted in relation to intervention in open systems, genetic modification being an example of this. A new 'scientific subjectivism' has come to dominate science which has the strong tendency to reduce nature to a means of satisfying human wants, and to do so by reducing natural kinds that have evolved over eons to social artifices that can be changed in the course of a generation. The artifice of the laboratory has been extended radically to the world itself.

For Dean, the underlying philosophical mistake here is essentially a version of the epistemic fallacy we have already encountered in New's essay. Biological organism is read through the language of cybernetics as no more than information flow or code, to be rewritten as seems appropriate to human demands. This 'practical Cartesianism' isolates the biological not only in terms of how it emerges from more basic chemical and physical processes, but also from how it operates in open systems. As a result, the emergence of new, potentially dangerous natural kinds becomes conceivable.

In identifying the practical Cartesianism of a knowing subject at the heart of the ontology of the new biology, another example of the dialectical relation between the transitive and the intransitive. Dean identifies the authorial root of the philosophical problem of the epistemic fallacy. If there is a consensus among modern philosophers from a variety of critical perspectives, it concerns the impact and the failure of the Cartesian subject as a satisfactory philosophical grounding for knowledge and human being in the world. Gideon Calder identifies the dualism that it produces and considers the continuing inability of much recent philosophy to get beyond it. Reflecting in particular on the work of Richard Rorty and Michel Foucault, he argues that these writers produce a pale rehearsal of Cartesian problems instead of solutions to them. For Rorty there are problems in terms of both the knowing subject and the object world that is known. While he seeks to deflate the significance of the subject, he still leaves a place in his philosophy for free self-redescription. At the same time, he denies the independent significance of the object world for our knowledge of it, yet comes close to adopting an orthodox positivist worldview. For Calder, Rorty repeats in a different key the old double of transcendental idealism (the elevation of the knowing subject) and empirical realism (the return to positivism) associated with modern classical philosophy. For Foucault too, and other poststructuralists such as Judith Butler, there is a primary move against Cartesian subjectivity in favour of the social construction of categories, but this leads willy nilly to a return to the subject, for example in Foucault's suggestion that the self can fashion its own singular script. In all such cases, Calder suggests, the subject re-intrudes at some point to avoid the more extreme effects of installing a poststructuralist idea such as discourse as prime or sole mover. Cartesian anxieties remain unresolved.

How then would critical realism find a way out of these problems? Drawing on Margaret Archer's work, Calder argues for an ontology of human being in which certain bodily and practical aspects of the human individual give rise to a primal relation with the world. Socialisation does not go 'all the way down', so that, recognising the claims for language, power or discourse, there is still the need to identify a certain dialectic between the bodily-material and the linguistic and discursive. The relationship between human beings and the world is not subject to radical Cartesian doubt, for we are always-already in the world. Our practical engagement with the world is conceivable without language, though not the other way around. If language evolves out of reference to the world, then there must be some non-linguistic access to that world before language embraces it. The same is true of the self: a shared property of all surviving members of the human species is a practical acting on the environment that precedes the linguistic development of a concept of an 'I' (a self). There is a practical order in human being that is more extensive than the linguistic or the 'knowing'. Being in the world precedes and is greater than our knowledge of it: ontology contains epistemology as one part of it. To reverse the formula is to commit the epistemic fallacy.

Dialectical critical realism, deconstruction and critique

We turn now to three papers grouped around the dialectical development in critical realism inaugurated by Bhaskar's *Dialectic: the Pulse of Freedom*, published in 1993. The need for this development is anticipated in two of the three papers we have just discussed. New acknowledges that the idea of two distinct dimensions, the transitive and the intransitive, must be sufficiently complexly stated so as to recognise that the transitive dimension, the way in which humans construct their world-understandings, operates recursively in the social sciences to become a crucial part of the world itself. The transitive from one standpoint becomes the intransitive from another. Dean makes a similar point about the real (intransitive) world effects of the discursive turn in (transitive) science in practices such as genetic modification. What these two essays indicate is the need for a subtle dialectical awareness of how the transitive and intransitive dimensions in knowledge relate to each other.

The need for a dialectical turn, however, is not only, as it were, endogenous. It is also required in order to make sense of the critical philosophies associated with poststructuralism and postmodernism which have had such an impact

in recent years. Two of the three papers in this next group are attempts to do just this by relating these philosophies to DCR as the basis for recognising the validity, but also the limits, of the critiques that have been developed. John Michael Roberts and Jonathan Joseph raise questions of ontology and epistemology with regard to the work of Jacques Derrida, Michel Foucault and Slavoj Zizek, though concentrating most on the last mentioned. Recognising the significance of all three theorists, they nonetheless argue that truth is not defined simply in relation to a 'regime of truth' (Foucault) or the production of texts (Derrida) or symbols (Zizek). Rather, it responds to a complex mediation of linguistic activities, processes and structures that together constitute the real. For all the sophistication, say, of Zizek's application of psychoanalytic concepts to social processes in history, there is more that can be said about the real in terms of its depth, its structures and its emergent shapes than talk of the Real and the symbolic Other provides. Indeed, these seem to work to close off consideration of the layers of the ontologically real. There remains a need to see problems of knowledge, truth, the text and the symbolic in their ontological connection with real reasons for, the dialectical grounds of, things, natural kinds, real structures, and so on. These of course exist within language, discourse, texts and the like, albeit often in confused and refracted ways, but the way to understand confusion or refraction involves moving beyond what is said, represented, understood to what lies in a significant though complex sense beyond. An appropriately realist ontology is required to do this.

Alan Norrie's essay covers similar ground in his discussion of ontology and ethics in Derrida's philosophy of deconstruction and DCR, though he argues that both have something to learn from the other. His focus is on the notion of 'the spectral' in Derrida, which he compares with Bhaskar's account of 'ontological monovalence'. Both emphasise the incompleteness of concepts and things such that they present in a blurred, ghostly or spectral way, and both attack simplistic foundational philosophies which rely upon what Derrida refers to as a 'metaphysics of pure presence'. However, they differ in terms of how their philosophies develop such critiques. Derrida argues generally against a notion of ontology, seeing it as the place where illicit metaphysical assumptions creep into thought. Yet, Norrie argues, his philosophy cannot itself escape ontology and it turns out that his sense of the messianic which accompanies the critique of pure presence rests on a metaphysical ontology, that of 'heterogeneous otherness'. Bhaskar's account of ontological monovalence on the other hand is frank about its ontological commitments in that it relates the problem of foundations and presence to questions of ontological depth, real relations and real absences within the present. If, however, Norrie sees DCR as ontologically preferable to deconstruction, he also argues that the former has something to learn from the latter with regard to ethics. Here, Norrie argues that Bhaskar's account of ethics as involving dialectical universalisability owes too much to Habermas and the Kantian tradition in philosophy, and that it breaks from a realist account of ontology

that would see ethics as a work of product and process in an open and incomplete world. Dialectical universalisability suggest an ethics too prioristic and abstractly metaphysical for comfort, and dialectical critical realism can learn from deconstruction's sense of the inchoate and still-to-come nature of ethical experience in modernity. Dialectical critical realism and deconstruction should learn from each other in matters of ontology and ethics.

What is at stake in these two essays is the relationship between a revived dialectics and poststructuralist theory. In the third essay in this group, Diana Coole enriches the debate by comparing DCR with the phenomenological dialectics of Maurice Merleau-Ponty, a philosopher who anticipated many of the issues raised by poststructuralism. In Coole's assessment, there is much in common between the two philosophies. Where DCR speaks of transfactuality and ontological depth, Merleau-Ponty talks of 'the invisible' and of the common need to explore the non-observable generative mechanisms and relations which engender real structures and forms. In the latter's work, the real is the lifeworld, the lived, pre-conceptual existence which is carried over into the actually existing world of subject-object relations and which acts as a force of critique upon it. This gives rise to a sense of the complexly intertwined relation between body and mind (a 'lived chiasm') that precedes and works against attempts to separate them. This in turn couples with the recognition of the structured and relational forms (Gestalten) in which the world appears, forms which express and mediate the human bond in more or less open and enriching, more or less closed and impoverishing, ways.

On this basis, Merleau-Ponty's philosophy has much to say to DCR concerning issues of agency and ethics. On agency, it breathes new significance into the critical realist view that mind is an emergent power of matter, and it asserts, like DCR, the reflexivity of human being. The human body/agent is a 'sensible sentient' so that when one hand touches another, it touches and is touched, and there is a necessary difference between these two aspects. It is in this difference that being in the world and human freedom both become possibilities, and agency is revealed as both distinct and inseparable from the world. Here, the similarities with CR, where Coole engages with Margaret Archer's work, and DCR, where Bhaskar speaks of 'perspectival shifts' (as between the toucher and the touched) and the 'hiatusin-the-duality' (as the moment of distinction), are clear and profound. Where Coole identifies common ground on agency, however, she raises significant concerns with regard to ethics, where she questions what she sees as the universalist and formalist, idealist and Kantian, view of the ethical that emerges from Bhaskar's moral realism. To this, she opposes Merleau-Ponty's phenomenology of embodied engagement with a world that is more or less open or hostile to human being. This leads to a naturalistic description of ongoing real processes of resistance to closures and power rather than the elaboration of a series of universalising 'oughts' that never seem to take their hold on the world.

Coole's essay raises important issues for critical and dialectical critical

realism, and we are grateful to her for participating in this collection. There is much room for further debate on issues such as the relationship between the transitive and the intransitive, where Coole sees critical realism's emphasis on the nature of science and causality as overly rigid. As suggested above, a critical realist response to this might involve arguing for the significance of the dialectical turn to make sense of the interweaving of the transitive and the intransitive. Similarly, Coole's criticism of Bhaskar's ethics points to the debate within DCR as to the nature of the relation between ethical naturalism and moral realism, where some (e.g. Norrie above) have adopted a position not unlike Coole's. From the other side, as it were, critical realists are likely to raise questions about the realism of Merleau-Ponty's strong reliance on a sense of the pre-conceptual and pre-cognitive body, and the work that this does in his philosophy, though the alignment of historical development with the human 'pulse of freedom' that underlies dialectical critical realism may be closer to this than some might think. (Compare here also Calder's essay with its reliance on both Archer and Merleau-Ponty). Another point of concern might relate to the ability of a phenomenologically based dialectics to penetrate sufficiently the structures of the 'object world' on the basis of concepts of negation, of openness and closure, or impoverishment and enrichment. There seems to be less here of an attention to what Adorno called the 'preponderance of the object' and its structured historicity than dialectical critical realism would prefer. Still, the striking affinities between these two dialectical philosophies makes their comparison and contrast extremely helpful in terms of exploring the nature of dialectical theory more generally, and how it might continue to be developed.

The spiritual turn

Turning finally to the last two essays, we move from consideration of DCR to the recent transcendental or spiritual turn. Jamie Morgan's essay serves as a helpful introduction to some of Bhaskar's concepts here before he proceeds to raise some sceptical questions as to their validity. The overarching concept with which Bhaskar operates here is meta-Reality, and Morgan suggests that the mode of this new work is ontological casuistry in the non-pejorative sense of articulating grounds for rules and distinctions as concerns the theory of being. In speaking of meta-Reality, Bhaskar drops reference to God in favour of an ultimate categorical structure which he refers to as the 'cosmic envelope'. He remains unwedded to any particular theological commitments in favour of the project of identifying the possibility of change based upon an overall sense of human spirituality. Emancipation derives from the characteristic powers of humans who are capable of non-dual states or transcendental identification with others and their environment. Such non-dual identificatory states are present even in relations of exploitation in which the master relies upon the active human cooperation of the slave. The condition of possibility of such non-dual states must be a fundamental non-duality or connection

underpinning all human relations. This gives rise to a sense of co-presence or commonality within an emergent stratified reality, and this co-presence is the underlying unity of being. There is in result a 'fine structure' of the universe which establishes the possibility for emancipation and provides every individual with a 'ground state' which is their essential or transcendentally real self. Being in one's ground state means being maximally aware of the here and now and one's responsibility for oneself and society. Morgan appropriately describes this strong ethical ontology of the person as a real Kantian thing in itself.

Morgan submits Bhaskar's claims to detailed philosophical probing, which can be summed up in the question whether such strong ontological claims are necessary to ground an impulse to emancipation in human being. Does the construction of value for self and others, or a yearning for freedom and flourishing, presuppose a *categorial* sense of reality or the good of being in itself? The existence of non-dual experience for example in the here and now does not necessarily imply a fine structure to the universe, only that non-duality is a feature of human being under certain conditions. Being may simply be being, to be understood in ethically natural rather than morally real terms. The possibility of non-duality need not indicate that being is intrinsically good, only that it is intrinsically real, with its own emergent properties. Spirituality is an emergent property of human being, but it adds nothing to speak of a meta-Reality that underlies it.

The collection ends with a more personal piece by Doug Porpora who has been heavily involved in the debates within CR as to the nature and validity of the spiritual turn. Porpora makes a number of important points about the nature of critical realism, the different turns that it has undergone, and the relationship between critical realism as a set of intellectual commitments and the work of one person, Roy Bhaskar. Reflecting upon the developments in critical realism, Porpora indicates how it is possible to find value in critical realism in its original 'philosophy of the sciences' mode without accepting either its dialectical or transcendental turns. He indicates his own commitment to CR and the transcendental approach without accepting the intermediate dialectical turn. Bhaskar initially argued that the developments in his thought were necessitated by inadequacies in its earlier stages, but he has more recently denied that this is the case with regard to the spiritual turn. Porpora indicates that, among those critical realists who have supported Bhaskar's interest in spirituality, different claims are held and that it is possible to see religious and spiritual questions as important without going so far as to support the idea of a meta-reality. However, Porpora argues that all critical realists should accept the challenge implicit in the transcendental turn to consider the place of ethical and spiritual processes in thinking about the phenomena of the world, and how they are to be explained in a non-reductive way. This challenge will continue to animate the work of those within the field of Critical Realism for many years to come.