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Abstract

This article aims to contribute to the methodological discussion initiated by Pawson and Manzano-Santaella (2012). It proposes a possible elaboration of the ‘trio of explanatory components’ (Pawson and Tilley, 1997: 77) used as a strategy in realist evaluation – the Context-Mechanism-Outcome configuration (CMOc). This temporarily diverts attention away from social programs to focus on the pre-existing context of action and related mechanisms that may be operating within it. It draws on the conceptual and theoretical guidance offered in Roy Bhaskar’s Transformational Model of Social Action (TMSA) and elaborated later by Margaret Archer in *Realist Social Theory: The Morphogenetic Approach*. The article concludes by articulating how the CMOc elaboration complements the work on realist evaluation.

Keywords

Context-Mechanism-Outcome configurations, critical realism, realist evaluation, realist social theory

Introduction

The purpose of this article is to attempt an elaboration of the Context-Mechanism-Outcome configuration (CMOc); these serve a proposition-building function (Pawson and Manzano-Santaella, 2012) and are explanatory components in realist evaluation (Pawson and Tilley, 1997). The elaboration of the CMOc that follows looks for conceptual and theoretical guidance in the meta-theoretical framework offered by Roy Bhaskar and other critical realists, in particular, the work of Margaret Archer (1995, 1996).

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The elaboration is understood as being complementary to the work on realist evaluation developed by Pawson and Tilley (1997). Both derive methodological explanations by drawing on critical realist assumptions about the society/person connection outlined in Bhaskar's (1998) Transformational Model of Social Action (TMSA). This model was later modified and extended in Archer's (1995) Realist Social Theory: The Morphogenetic Approach. These realist theoretical frameworks offer a perspective on how social change and social reproduction take place in society. In adopting them in realist evaluation, researchers assume that institutions in the health, educational, prison and other social domains are micro-scaled versions of society; and institutional changes resulting from the introduction of social programs can be understood and explained in the same way that realists explain the society/person connection.

In *Realistic Evaluation*, Pawson and Tilley (1997: 63) began by asking 'What are social programs?' This article, however, begins with context. It makes social context rather than social programs the subject matter of interest and proposes that *social contexts are relatively enduring and are what social programs aim to transform (rather than reproduce) by activating various structural, cultural, agential and relational mechanisms to produce various outcomes*. It suggests that in order to understand the effects of social programs and to explain change, there has to be a deeper understanding of pre-existing contexts and the mechanisms in operation prior to the introduction of any social program. Realist social theory, both Bhaskar's TMSA and Archer's morphogenetic approach, provide a framework which can be applied in realist evaluation.

The article is organized so that it first delineates the nature of the realist perspective in realist evaluation. The aim is to prepare a basis for teasing out, later in the paper, possible lines of inquiry that may be acceptable to practitioners who affiliate themselves with the critical stance of Campbell and Popper (e.g. Pawson, 2006; Pawson and Manzano-Santaella, 2012) and the possible pathways of investigation that may be acceptable to practitioners of critical realism (e.g. Connelly, 2007; Porter and O'Halloran, 2012). The next section provides a very brief introduction to realist social theory. Terms adopted both in realist evaluation and the morphogenetic approach are clarified under the sub-headings: 'Elaborating context', 'Clarifying mechanisms and emergence in a context of action' and 'Elaborating outcomes'. This is followed by an elaboration of the CMOc and an example explaining how a social program or intervention might reconfigure the mechanisms pre-existing in a context for action. Some implications for realist inquiry are then outlined. The paper concludes by highlighting the manner in which the elaboration of the CMOc, informed by realist social theory, continues into the realist evaluation strategy developed by Pawson and Tilley (1997).

Delineating the realist perspective adopted by Pawson

Realist evaluation is a form of theory-driven inquiry (see Marchal et al., 2012: 193) developed by Pawson and Tilley (1997). Over time and in the context of growing interest in the possibilities of evidence-based policy (Pawson, 2002, 2006) and evidence-based practice (see Clegg, 2005), the research strategy proposed in realist evaluation extended its reach to include realist syntheses/reviews (Pawson, 2002; Pawson and Bellamy, 2006; Pawson et al., 2004, 2005). The suggested scope of the application of these theory-driven strategies in practice include 'programmes of all types (local to transnational) and evaluation tasks of all modes (developmental to impact assessment)' (Pawson, 2006: 340).

In defining the realist perspective associated with this body of work, Pawson et al. (2005) map it to its philosophical roots as theorized by Roy Bhaskar, Rom Harré, Hillary Putnam and Andrew Collier. Pawson, however, distances himself from the normative turn taken in critical realism and

aligns his work instead with those who have tried to develop realism as an empirical method. This stance follows from a view that the critical realist ‘leap into the arms of the normative (Sayer, 2000) is precisely the political embrace from which evidence-based policy is trying to escape’ (Pawson, 2006: 19). He, nevertheless, still subscribes to the need for researchers to be critical in a cognitive sense and aligns with the critical stance of Campbell who saw criticism as ‘something that scientists apply to each other, and this “competitive cross-validation” is the means by which they get closer to the truth’ (Pawson, 2006: 20). This stands in contrast to the more ideological critical stance Pawson feels Bhaskarians adopt whereby grounds for criticism can be based on ‘the analyst’s privileged understanding of the oppressive aspects of the social condition and those responsible for it’ (Pawson, 2006: 20). Others, however, have suggested some potential advantages of reinstating the critical realist perspective in realist evaluations and syntheses/reviews.

Clegg (2005), in her discussion of evidence-based practice in educational research, observes that at the socio-political level Pawson’s work on designing evaluations maintains the social engineering rather than the critical mode. She suggests that adopting ‘a critical realist perspective can contribute to a critique of some of what currently counts as “evidence-based” while at the same time not abandoning the idea of evidence altogether’ (p. 416). Connelly (2007: 938) in highlighting the possible contributions of adopting the critical realist meta-theoretical framework in research in health sciences, points out that Bhaskar’s TMSA (1998) could be adopted and used to potentially provide ‘a social epidemiological understanding of power, as indexed by position and wealth’. Others associated with the evaluation of health services have also mentioned the need to analyze the power dynamics operating among different interest groups (e.g. Barnes et al., 2003; also Porter and O’Halloran, 2012). Keeping with the view that ‘realist inquiry is a broad and welcoming church’ (Pawson and Manzano-Santaella, 2012: 177) the purpose of distinguishing between the cognitive and ideological critical stances possible in realist evaluation is to try to ensure that the proposed elaboration of the CMOc provides some leeway for accommodating both kinds of research efforts.

The next section briefly introduces realist social theory and clarifies terms adopted in Bhaskar’s TMSA, Archer’s morphogenetic approach and also in realist evaluation (see Marchal et al., 2012: 208).

A brief introduction to realist social theory

In research inquiry, realist evaluation has adopted for its explanatory focus, ‘what works for whom in what circumstances’ (Pawson and Manzano-Santaella, 2012: 177). Such an explanatory focus, seeks to understand the workings of social programs and evaluations of their operational successes and failures for various interest groups functioning in a certain context.

Where methodology is concerned, implicit within such a focus is a social theory about individuals being in society – how individual and society are related and the possible interactions between them that might bring about or hinder change in the social context of interest. Realist social theory provides an explicit, though rather challenging framework for this social interaction that realist evaluation can draw on.

In addressing the social, Bhaskar (2008: 129) defines society as referring to, ‘(i) the totality of social forms or . . . (ii) the totality of social structures or generative mechanisms or . . . (iii) the totality of human relations within which praxis occurs’. Since realist evaluation has tended to direct its interest primarily on social systems and generative mechanisms (Pawson, 2006; Pawson and Tilley, 1997; Pawson et al., 2005), Bhaskar’s second usage of society as ‘the totality of social structures or generative mechanisms’ will be the definition adopted here.

Drawing on some ideas from Bhaskar's TMSA, Archer (1995: 135–61) proposes that society is only like itself and that the work on realist social theory has generally directed its efforts on how to explain society and its transformations or reproductions; rather than on saying what society is (e.g. Archer, 1995: 5; Bhaskar, 1998: Chapter 2). In order to explain and describe the dynamic workings of society, realists have adopted certain terminology. These include, 'social structure', 'context of action', 'structure', 'culture', 'agency', 'relations', 'mechanisms' and 'emergence'. The term 'social structures' and 'structures' seem to be used variously by Bhaskar and Archer sometimes to refer to institutional structures (e.g. Archer, 2010a: 239), sometimes to institutional and cultural structures (Archer, 1995: 202), and sometimes the term 'social structures' encompasses 'agency', 'culture', 'structure' and 'relations' (e.g. see Archer, 1995: 165–7). In this article, 'social structures' is used to encompass 'agency', 'culture', 'structure' and 'relations'. 'Structure' on the other hand, will be used interchangeably to also refer to 'institutional structures'.

It is important to note that the strategy realists adopt to explain society is abstraction, which 'isolates in thought a one-sided or partial aspect of an object' (Sayer, 1992: 87). The object of interest, society, is a unified entity. The various terms adopted are analytical distinctions made about different aspects of society. The distinctions allow for explanations of each aspect of society and explanations of how the interactions between the various aspects may or may not lead to social transformation. In adopting such strategies, realists aim to increase the explanatory power of findings about their objects of study (see Archer, 1996: xvi).

Keeping in mind that realist social theory aims to address the society-person connection (see Archer, 1995: 136) the term 'structure', for example, enables researchers to suggest that individuals acting under the influence of prevailing institutional structural conditions, tend to produce a certain outcome. The term 'culture' would allow researchers to investigate how dominant ideas or prevailing cultural conditions affect individuals' perceptions of what can or cannot be done in a certain social context. These terms are clarified below.

Elaborating context

Context of action. The context of action refers to the context delineated for investigation by researchers. Critical realists propose that social action or intentional behavior (e.g. teaching) presuppose the existence of certain conditions (e.g. schools, teacher training institutions) for engaging in those actions (see Bhaskar, 1998: 90). Realist evaluators similarly state that '[p]rograms are always introduced *into* pre-existing social contexts and . . . these prevailing conditions are of crucial importance when it comes to explaining the successes and failures of social programs' (Pawson and Tilley, 1997: 70). The prevailing conditions in a context of action encompass 'material resources and social structures, including the conventions, rules and systems of meaning in terms of which reasons are formulated' (Sayer, 1992: 112).

A comprehensive understanding of the workings of a new social program in a defined context of social action, therefore, would *ideally* include information about the workings of structure, culture, agency and the relations and interplay between them (see Pawson and Tilley, 1997: 70). However, practical constraints often make this difficult and challenging to achieve.

Structure. Structure or institutional structure refers to sets of internally related objects (which may be physical, material resources) and practices (carried out by human resource). It represents the realm of interests (Archer, 1996: xi). Institutional structure relates to the context of action in that 'all structures manifest temporal resistance and do so generically through conditioning the context of action' (Archer, 2010a: 239).

Culture. Culture represents the realm of intersubjectivity and deals with ‘relations pertaining between ideas and the ideational influences operating between people’ (Archer, 1996: xiii). The cultural dimension of an action context, like the structural, both shapes and is shaped by groups of individuals. It defines what prevailing ideas inform the actions of individuals and what actions and outcomes are possible. The realm of ideas have the capacity to inform action. They have pre-existing logical relations that exert influence in the form of costs and benefits for an individual, or groups of individuals, who may choose to adopt certain ideas over others (Willmott, 2000: 108).

Agency. Individuals in society engage in action or non-action under the influences of structural and cultural conditions. Critical realism also assumes that they do so with intention and reflexive self-monitoring of their own individual interventions in the world (Bhaskar, 1998: Chapter 3). Bhaskar (1998) argues that for the concept of agency to be saved, it is imperative for reasons, given by individuals, to be accepted as causes. The generative causality Bhaskar advances when talking about reasons agents give for action or non-action refers to ‘that factor which, in the circumstances that actually prevailed, “so tipped the balance of events as to produce the known outcome”’ (1998: 91).

In relation to social structures, agents are said to slip into designated slots or positions to engage in the practices designated by the social position held. It is through this inter-relationship between society and positioned practices engaged in by individuals, that social structures in society are reproduced or transformed (Bhaskar, 1998). Pre-existing social structures may impose limits on individual actions but they do not determine them.

For realist inquiry, when explaining about agents engaging in social practice (either prior to or after the introduction of a social program), Sayer (1992: 112) proposes moving from observable actions --> to reasons individuals give for engaging in action or non-action --> to finding formal and informal rules existing in the context of social action within which the reasons given make sense --> to identifying the existing social structures (or the aspects) that generate these rules, influencing the perceptions and actions of agents (see also Pawson and Tilley, 1997: 207).

Relations. The critical realist conception of society is relational (Bhaskar, 1998; Collier, 1994) whereby one is only a teacher because of one’s relation to a student. Collier (1994: 140) says that ‘[o]ur social being is constituted by relations and our social acts presuppose them. Yet relations and the related individuals may be ontologically independent’. He suggests as an example that the designated relationship between the Head of Department and staff of an academic group at a university existed before Mr X joined as head, just as Mr X had a prior existence before taking up the position. In realist inquiry, such distinctions imply that even when intervening in social reality, a sense of agency and individual reality can be sustained without contradiction. Collier (1994: 149–50) adds:

while all relations *include* interaction between the related, they do not all *consist* in such interaction. The relation between a citizen and the state, for example, comprises a whole range of rights and duties which are by no means always exercised.

Relations exist and may be left unexercised by related parties. Nevertheless, the recognition that a relation exists means that there is always the potential for one party to govern and affect the actions of another (Archer, 1995: 143).

This section has focused on context. It has proposed that a context of action comprises aspects of structure, culture, agency and relations and attempted a clarification of these various aspects. The next section elaborates mechanisms and emergence operating in a context of action.

Clarifying mechanisms and emergence in a context of action

Mechanisms. Bhaskar has suggested that generative mechanisms ‘exist as the causal powers of things’ (2008: 40). Pawson and Tilley (1997: 68) understand mechanisms as ‘a theory which spells out the potential of human resources and reasoning’. Collier (1994: 62) defines generative mechanism as ‘a technical term, designating a “real something” over and above and independent of patterns of events’. In relation to brain structure, for instance, he says a generative mechanism is the particular aspect of an individual’s brain-structure (which is real) by which he or she has the potential and capacity to acquire language.

Generally, the definitions speak of a real potential capacity. What is of interest, particularly in Collier’s illustration, is not so much what mechanisms are but his identification of where they are located. All objects, material or social, have certain structures and potentials and Collier (1994) suggests that it is possible to examine the structures that generate these potentials and to some degree, predict the potentials that structures can generate. Under certain conditions or given some input, structures of objects cause potentials to be exercised and, in doing so, a change or event is generated. Given Collier’s explanation, it is possible to suggest that mechanisms in an action context are located within institutional structure, culture, agency and the relational properties between them (see also Archer, 1995: 139; Sayer, 1992: 105).

Collier also states that in explaining mechanisms, ‘it is possible to distinguish *horizontal explanation* (the explanation of events by mechanisms and antecedent causes) and *vertical explanation* (the explanation of one mechanism by a more basic one)’ (1994: 48). Vertical explanations of mechanisms are possible because realist ontology holds that reality is stratified (Bhaskar, 2008: 47; Pawson and Tilley, 1997: 64). This implies that generative mechanisms exist at different strata (Sayer, 1992: 119).

Since social contexts exist prior to the introduction of social programs, it becomes possible to suggest that mechanisms already exist and are operating at the level of social contexts. Researchers will then need to ask about the kinds of mechanisms currently operating in that context that have a tendency of reproducing the existing social structures that may be problematic and which social programs, when introduced, aim to change. Having gained some understanding about mechanisms already operating in a social context, it then becomes possible to ask what program input needs to be introduced. The program input would aim to reconfigure or activate the existing contextual mechanisms differently so as to transform (rather than reproduce) the action context.

In the context of realist evaluation then, it is possible to regard a social program as the input that will reconfigure or differently activate the underlying causal mechanisms situated within pre-existing social structures to generate change or a different potential existing within the action context.

Emergence. Bhaskar (2011: 63) has argued that ‘emergence characterizes both the natural and human worlds’ and that it implies ‘a reconstruction of the historical processes of their formation out of “simpler” things’ (see also Archer, 1995: 140).

While social structures and position practice systems pre-exist and are relatively stable, they are not pre-determined. Emergence occurs and emergent properties are said to arise and work through the process of social interaction (Archer, 1995: 11) – when individuals slip into designated pre-existing social positions to engage (or not) in social practices. In these social positions, individuals may choose to engage in the designated practices, modify or disregard them, often with consequences in the form of costs and benefits. This implies that emergence is always activity-dependent (Archer, 1995: 167).

In the human world, Archer points out that ‘there are a variety of emergent properties – structural, cultural and agential, each of which is irreducible to the others, has relative autonomy, and is also relatively enduring’ (1995: 175). These emergent properties are located in *component elements* of social structure and arise ‘from the relations between structures which constitute a particular system: social systems being seen as specific configurations of their component structures, where the emergent features of the former derive from the relations between the latter’ (Archer, 1995: 172).

The distinguishing feature of any emergent property is that the relations between its component elements are internal and necessary. Archer (1995: 174) points out:

Natural necessity only states that X cannot be what it is without certain constituents A, B, C, N and the relations between them. But what is it about X which leads us to attach the concept of ‘emergence’ to it . . . ? The crucial distinguishing property is that X itself, and itself being a relational property, has the generative capacity to modify the powers of its constituents in fundamental ways to exercise causal influences *sui generis*. This is the litmus test which differentiates between emergence on the one hand and aggregation and combination of the other. (Archer, 1995: 174)

The next section provides an outline of the kinds of societal change or outcomes possible within Archer’s morphogenetic approach.

Elaborating outcomes

The morphogenetic approach and kinds of social change (outcomes). Archer’s morphogenetic approach proposes a way of dealing with the dynamics of social reality. As previously mentioned in subscribing to realist social theory and the approach, researchers are assuming that social institutions are micro-scaled versions of society and that the kinds of possible societal changes can be similarly observed in an action context when a specific social program is introduced. This section briefly highlights the kinds of social change or outcomes possible. It does not explain the complex dynamics involved in societal transformation or reproduction. Archer’s work has focused primarily on doing this and, while challenging, is readily available (Archer, 1985, 1995, 1996, 1998a, 1998b, 2005, 2007a, 2010a; Archer and Elder-Vass, 2012).

In the morphogenetic approach, Archer suggests that ‘morphogenesis’ indicates ‘those processes which tend to elaborate or change a system’s given form, state or structure’. Morphostasis ‘refers to those processes in complex system-environmental exchanges which tend to preserve or maintain a system’s given form, organisation or state’ (Archer, 1995: 166). As social processes, the terms morphogenesis (transformation) and morphostasis (reproduction) only make sense when temporal distinctions are made so that three phases are identified – ‘a ‘before’ (pre-existing social forms), a ‘during’ (the process of transformation itself) and an ‘after’ (the transformed, since social structures are only relatively enduring)’ – and where the last phase is seen as the starting point of a new cycle (Archer, 1995: 140).

What is noteworthy is that a social system operates in cycles indicating the workings of what Byng et al. (2005: 89) called ‘feedback loops’ (see also Barnes et al., 2003; Marchal et al., 2010). It is also possible to suggest three kinds of outcomes: (1) the action context may undergo transformation from a previous state; (2) the action context may remain ‘invariant under certain transformations’ (e.g. the doctor-patient structure can remain relatively unchanged despite people of different age, sex, religion, race, etc. occupying these roles over time; Sayer, 1992: 94); and (3) the action context may reproduce or reinforce structure, culture and relations, crystallizing existing social structures over time.

There are two implications for realist evaluators to note when we make context the primary focus rather than social programs. Firstly, in order to assess the degree to which observed outcomes in the context of action may be attributed to the input (the social program), a baseline that takes into account the pre-existing structural, cultural, agential and relational conditions need to be established (see also Pawson and Manzano-Santaella, 2012: 183).

Secondly, it becomes possible to answer the question whether CMOs might possibly be MCOs (Pawson and Manzano-Santaella, 2012: 189; see also Astbury and Leeuw, 2010: 366; Pawson and Tilley, 1997: 122). Drawing from Archer's theoretical reasoning and the assumption that a 'position-practice system' pre-exists for subjects to slip into to engage in action that transforms or reproduces social structures (Bhaskar, 1998: 44), we can conclude that Pawson and Tilley (1997) were right in beginning their construction of the CMOc with context.

The next section presents the elaboration of the CMOc in a table. It derives from realist social theory, what the component elements of an action context (structure, culture, agency and relations) and their associated mechanisms might be.

Elaborating the CMOc

It has been suggested that an action context comprises aspects of structure, culture, agency and relations. It has also been suggested that generative mechanisms are located within the component elements of each aspect and that an input, such as a social program, may reconfigure or activate these contextual mechanisms differently, changing the configurations of the component elements to produce outcomes leading to transformation, reproduction or invariant transformation of the action context.

Archer (1995) has also pointed out that the relations between component elements need to be internal and necessary in order to be considered as an emergent property. Given these guidelines, the following elaboration of the CMOc is proposed:

How a social program might reconfigure a context by activating mechanisms pre-existing in the action context

Structure. In Table 1, context is seen as comprising aspects of structure, culture, agency and relations, exemplified below from the field of education.

The aspect of structure in a context comprises four basic emergent and internally related properties without which public institutions and organizations could not exist. The components are inter-linked but are treated here as *analytically distinct* because of the explanatory power such distinctions afford. The components of the pre-existing structures – namely roles/positions, practices, resources and processes – can be modified by introducing, into a school context, an input such as an educational training program to prepare teachers for '21st century teaching'. Such a program often aims to transform existing school structures by:

- redefining *roles* (e.g. proposing that a teacher is 'a guide on the side rather than a sage on stage', requiring a parallel redefinition of the linked roles of students) – activating that mechanism in the structural aspect of the action context related to *roles*;
- retraining teachers to adopt new *practices* for their given roles (e.g. guided discovery approach instead of direct teaching) – activating that mechanism in the structural aspect of the action context related to *practices*;

Table 1. Proposed elaboration of the CMOc (pre-existing in an action context).

CONTEXT	MECHANISMS	OUTCOMES
comprises aspects of	related to the following emergent properties in an action context	
Structure	mechanisms related to roles or positions mechanisms related to practices mechanisms related to resources mechanisms related to processes	transformation, invariance or reproduction of that/those aspect/s of structure related to roles/positions, practices, resources, processes
Culture	mechanisms related to ideas or propositional formulations about structure mechanisms related to ideas or propositional formulations about culture mechanisms related to ideas or propositional formulations about agency mechanisms related to ideas or propositional formulations about relations	transformation, invariance or reproduction of that/those aspect/s of culture related to propositional formulations about structure, culture, agency, relations ‘networks of outcomes’ (Pawson and Manzano-Santaella, 2012: 181) leading to transformation, invariance or reproduction of an action context (institutional structure + culture + agency + relations)
Agency	mechanisms related to beliefs and reasons for action or non-action	transformation, invariance or reproduction of that aspect of agency related to beliefs and reasons
Relations	mechanisms related to duties/responsibilities mechanisms related to rights mechanisms related to power	transformation, invariance or reproduction of that/those aspect/s of relations related to duties/responsibilities, rights, power

- supplying 21st century *resources* such as computers instead of using chalkboards – activating that mechanism in the structural aspect of the action context related to *resources*; and
- changing *processes* both within and between structures – activating that mechanism in the structural aspect of the action context related to within and between structures *processes*. For example, by ensuring alignment between the newly suggested form of teaching and learning and the nature and format of classroom assessment (a within structure process). Or by ensuring alignment in the nature and format of national and state high-stake examinations (a between structures process) that oftentimes maintain traditional paper and pencil examination formats. These, for example, may test facts rather than skills pertinent to ‘discovery’, resulting in structural contradictions.

The example indicates that modifying one component has a tendency to affect the others, as the relationships between the component elements are internal and necessary. The choice of the rather cumbersome language is adopted purposefully and is perhaps essential for maintaining the notion

of multiple mechanisms functioning in an open system even though a particular evaluation study may only focus on one network of mechanisms in an action context.

Culture. The second aspect of social context of action is culture. Culture refers to ideas (Willmott, 2000: 105, suggests 'propositions'). The composition of the proposed emergent properties of culture are propositional formulations of 'theories, beliefs, values (and) arguments' (Willmott, 2000: 106) about structure, culture, agency and relations that affect agents' transactions and operate within an institution. These may be communicated to institutional collectives by employing various discourse strategies, documents, artefacts, symbols and representations; and may be initiated by sources internal to the context or sources external to it.

To continue with the earlier example, the components of culture – propositional formulations about roles/positions, practices, resources and processes in structure – will also need to be addressed in the educational training program. A sustained transformation of the action context from a previous state would require a corresponding shift not only in the structural, material and physical aspects of the action context but also in the ideational aspects. For example, there will be a need to present convincing ideas and arguments about what constitutes 21st century educational practices and why these are important for the action context. In doing so, mechanisms in cultural aspects of an action context related to propositions about structure (educational practices, roles, resources and processes) are activated. Propositions will similarly be needed about which of all the available ideas (culture) about 21st century educational practices should dominate in the institution, along with propositions about relations (e.g. between teacher-student) and agency transactions.

Agency. While it is possible to understand the ideational aspect as belonging to collectives, the agential aspect can be said to be more subjective. In a realist evaluation, client or agent reasoning is seen as a defining component (Pawson and Manzano-Santaella, 2012). When evaluators seek to understand these reasonings, they are activating agent related mechanisms in the action context related to beliefs and reasons that individuals draw on to justify action or inaction in the action context.

Relations. The proposed emergent properties of relations are duties/responsibilities, rights and powers. Duties/responsibilities relate primarily to the roles and accompanying responsibilities and expectations that are assigned to individuals within a pre-existing social system. Rights relate to established laws and rules that protect individuals within a social system, and powers relate to the positions individuals hold within a hierarchy from which access to material and ideational resources are assigned. While duties, rights and powers are said to be emergent properties essential to social relations, researchers may choose to focus on different component elements of relations.

If one adopts a social engineering mode of inquiry, 'duties/responsibilities' are examined, and is the assumed relations existing between structure, culture and agency. Here, roles, rather than positions in a hierarchy, are the focus. For instance, the success of an educational training program to inculcate 21st century educational practices in an action context may be determined by how competent teachers feel in carrying out their proposed duties/responsibilities as a 'guide on the side'. Success may also depend on how confident students feel in their corresponding proposed duties/responsibilities as physically and cognitively active learners rather than as cognitively passive listeners. Within a social engineering mode of inquiry, it is likely that established rights, though existing, are not overtly contested or examined.

When adopting a critical line of inquiry, 'power', or more accurately its distribution to different positions in the hierarchy within the action context, is examined; as is the assumed relations

between structure, culture and agency. Bhaskar (1998: 45) suggests one advantage of proposing a relational conception of society:

It allows one to focus on a range of questions, having to do with the distribution of the structural conditions of action, and in particular with differential allocations of: (a) productive resources (of all kinds, including for example cognitive ones) to persons (and groups) and (b) persons (and groups) to functions (for example in the division of labour). In doing so, it allows one to situate the possibility of different (and antagonistic) interests, of conflicts *within* society, and hence of interest-motivated transformations in social structure.

Returning to the previous example, a critical realist line of inquiry may evaluate the empowerment of the student in teacher-student classroom transactions given the guided discovery rather than direct teaching approach. Such power redistributions may put established rights under the spotlight and even challenge them. For example, the student may have the right to choose aspects of curriculum content of relevance and interest, and have teachers guide such selections rather than have content selected and assigned by teachers or state curriculum departments.

A point worth highlighting here is that a critical realist line of inquiry need not only or always mean a complete leap into the arms of the normative (Pawson, 2006) where a social structure or game is concerned. It could often just mean 'seeking better strategies within the existing one' (Sayer, 1997: 481). Sayer (1997: 483–4), however, notes that a weakness in this line of inquiry is the focusing on one aspect of relations, namely the distribution of powers, and being silent on the rights and duties/responsibilities that need to accompany redistributed powers. In the above example, it is not unheard of that students may not want to take full responsibility or accept empowerment (see McGrail, 2006: 1072).

Open systems, tendencies and the 'accordion effect' of action. An important assumption in realist inquiry is that researchers are investigating open systems (Bhaskar, 1998, 2008). Bhaskar (2008: 40) has pointed out that in such systems, 'causal laws . . . must be analysed as tendencies'. Where agency is concerned, Bhaskar (1998: 90) has spoken about the notion of the "accordion effect" of action – in which, in a single action, a number of different acts (some intentional, some not) are performed'. These suggest a need for researchers to sustain a degree of uncertainty and ambiguity in realist evaluations.

The above elaboration of the CMOc, therefore, does not imply that one-to-one linear relationships exist between a mechanism and an outcome. Rather, they are interlinked and their interactions are addressed by the notion of emergence in realist social theory.

Some implications for realist inquiry

Some possible implications for realist inquiry follow from the proposed elaboration of the CMOc. First, while the strategy proposed in realist evaluation has highlighted the structural dimensions of social systems (e.g. see Pawson and Tilley, 1997: 63), there has been a tendency to leave the cultural dimension implicit within the structural (e.g. in Pawson, 2006: 31; Pawson et al., 2005: 23). The morphogenetic approach gives equal importance to both the structural and cultural dimensions in a social system and has argued that the understanding of social dynamics is hindered if the material and ideational aspects of social life are elided (Archer, 1995: xi). By assigning equal importance to the cultural dimension, the elaboration of the CMOc will further encourage investigations into intersubjectivities and the various discursive strategies operating in an action context.

Second, reinstating the critical aspect and highlighting relations as an aspect operating in contexts of action allow researchers to examine or evaluate the possible changes in the distribution of power in the delineated socio-structural context of action.

Third, acknowledging that reality is stratified reminds researchers that there are two possibilities when explaining mechanisms (see also Pawson and Tilley's, 1997: 65 clock example). A horizontal explanation might suggest how the input of a program has brought about certain outcomes in aspects of the context of action. A vertical explanation of mechanisms, deriving not from the program but from other strata of reality, is also possible. Sayer (1992: 112) suggests that, where social systems are concerned, managerialist solutions and interventions are generally preferred over more significant and difficult changes to socio-structural conditions of action that are often regarded as 'natural' and 'eternal'.

Finally, some possible mechanisms operating in an action context have been suggested and the usefulness of their identification has to be tested out in research practice. The mechanisms suggested thus far are not meant to be exhaustive or understood as being 'deal-breakers'. It would be more likely than not that more mechanisms will be identified, especially where agency is concerned (see Archer, 2000, 2003, 2007b, 2010b).

Adopting a cautious stance, I believe, would be in line with the kind of realism Pawson identifies with, in realist evaluation. It would also align with those who have chosen to adopt a more moderate interpretation of Bhaskar's critical realism (CR), who acknowledge critical realism's status as 'an ongoing programme' (Al-Amoudi and Willmott, 2011: 29), and suggest that 'CR does not deny that we can arrive at the truth of a matter, CR assumes it often will take us a while to get there and that along the way, we will make mistakes' (Porpora, 2007: 195).

Conclusion

The underlying assumption of this article has been that some of the methodological and practical issues highlighted by practitioners of realist evaluation (e.g. Marchal et al., 2012) may be addressed by adopting realist social theory as a guiding framework and by identifying aspects and component elements pre-existing in an action context. It was asserted, at the beginning of this article, that this theoretical framework is complementary to the work on realist evaluation developed by Pawson and Tilley (1997). The concluding part of this article articulates the manner in which the former continues into the latter.

Component elements pre-existing in an action context, comprising aspects of structure, culture, agency and relations are said to interact in a manner that reproduces an existing (usually problematic) social system keeping it in a state of morphostasis.

Social programs are often introduced as inputs into such action contexts in order to transform an existing social system. This transformation can occur through reconfiguring the component elements or activating them differently.

Program theories or middle-range theories describe the manner in which a suggested program input intends to reconfigure the existing component elements to produce a desired transformation. They are often 'based on a hypothesis that postulates: if we deliver a program in this way or we manage services like so, then this will bring about some improved outcome' (Pawson et al., 2005: 22).

A social program input, therefore, reconfigures or activates pre-existing contextual mechanisms differently and offer a limited range of possible configurations in the form of 'networks of outcomes'. From these outcomes evaluators may identify 'what works for whom in what circumstances' (Pawson and Manzano-Santaella, 2012). Evaluators may also assess if the social program

has led to transformation (morphogenesis), invariance or reproduction (morphostasis) in *aspects of the action context* or transformation, invariance or reproduction of *the action context as a whole*.

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