

REALIST METHODOLOGY

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SAGE BENCHMARKS IN SOCIAL RESEARCH METHODS

REALIST METHODOLOGY

VOLUME I

Practical Realist Ontology

Edited by

Wendy Olsen



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Editor's Introduction: Realist Methodology – A Review

Wendy Olsen

Critical realists offer a set of philosophical underpinnings for social research. Critical realists also engage constructively with social theory, but they are more than just theorists. In this chapter I list and describe various innovative methodological contributions made in recent years by realists. I point out ways in which research methods (i.e. techniques) fit with particular methodological assertions. There is a historical legacy of empiricism which critical realists often use as a foil to make their own position more clear. However, among realists, a wide variety of methods are used, and the range of realist methodological assumptions is wider than one might expect because of their efforts to work with social theory.

The introduction to the chapter covers ontology as it relates to research methods. The second section of the chapter introduces retroduction, a major methodological starting-point common to most realists. The third section reviews concretely the realist debate over statistics and some realist contributions to qualitative methodology, qualitative methods, and action research as used by realists. The fourth section takes up the challenge of realist claims about knowledge (debates usually known as epistemology). An important aim in the introduction is to argue that 'factual' statements usually embody layers of meaning, and thus are contestable; that enquiry using quantitative methods can coherently be done from a realist perspective; and that among realists qualitative enquiry is a broad and useful set of methods which have made genuine innovations in methodological knowledge.

Meta-critique and pluralism are widely-used realist contributions to the methods tool-basket in social science, and the realist approach to social statistics is a much better guide to how statistics is, in practice, done than any currently available empiricist quantitative textbook (Ron, 2002). However "quantitative" research always rests upon conceptual, theoretical and qualitatively derived frameworks and is therefore derived from qualitative work, whereas the converse is not true; qualitative research does not require any quantitative research. In the current scene, mixed methods also play a key role as a growing area of research methods.

In this way, within sections one and two, the reader is given an overview of Volume 1 of this collection. Sections two and three of this chapter review Volumes 2 and 3 (realist methods, and empirical examples, respectively). Section four reviews the epistemological theme that is at the core of Volume 4. This introductory chapter thus roughly parallels the contents of the rest of the volumes.

Overall, the methodological aspects of critical realism have much in common with strong social constructivism but would strongly alter its underlying assumptions; and they have little in common with empiricism. Realism also has a lot to offer for novel empirical methods of research such as action research. In part, its helpfulness is in clarifying what can be known whilst recognizing that the various standpoints of insiders within a social situation are likely to produce vivid disagreement and the possibility of multiple interpretations of one scene, each of which may be viable but of different social import.

A brief glossary is included in this chapter in order to give a brief introduction to some of the technical terms used. Readers may also consult the *Dictionary of Critical Realism* (Hartwig, 2006).

1. Review of Realist Methodology

Realists have offered a whole series of contributions to methodology. Among these, the most important are the focus on ontic depth and the proposal that retrodution is an excellent logic of enquiry. In Figure 1, a series of standard research activities (methods) are listed alongside the kind of special activities

<i>Data Collection</i>	<i>Data Analysis</i>	<i>Writing-Up; Interpretation; Elaboration</i>
Questionnaires	Induction (as a technique)	Critical Social Science
Complex Sampling and Associated Survey Methods	Retrodution About Data	Configurational Analysis
Systematic Case-Study Methods	Qualitative Comparative Analysis	Explanatory Analysis
Comparative Data Collection	Action Research Evaluation	Explanatory Critique
Historical Enquiry	Grounded Theory	Critical Theorising
Oral History	Realist Social Statistics	Reframing of Hypotheses
Interviewing	Testing Hypotheses	Pluralist Modelling
Ethnographic Research	- about causal mechanisms - about discourses	Re-Theorising
Participatory Research	Explanatory Analysis at Multiple Levels	Meta-Theorising
Gathering Texts and Translating		
NVIVO Database Construction	Content Analysis	Moral Realism
Qualitative Case-study Development	Critical Discourse Analysis	Theoretical Pluralism
Organising Data in Spreadsheets	Retrodution From Data to "What must exist in order for these data and these patterns to have been observed?" i.e. <i>Why</i>	Dialogue About the Good Across Geographic Space and Across Layers Of Stratified Societies
	Dialectical Retrodution From Future To Present Interpretations	Methodological Pluralism

Key: The intention is only to give examples of various types of methods. The white areas are consistent with Williams (2005, 2006), Bryman (1988, 1998). See Hunt (1994) regarding falsification of hypotheses. The grey areas are consistent with May (2000), Bhaskar (1997), Sayer (1992, 2000), Flyvbjerg (2001), Danermark, *et al.* (2001), Carter and New (2004, chapter 1), and Olsen (2006).

Note: The activities listed above are not intended to be thought of sequentially or in any particular order.

Figure 1: Selected methods used within realist methodological frameworks

that arise among realists due to their methodological orientation. Figure 1 uses white to highlight the more widely accepted, standard methods, and grey to highlight some relatively more controversial methods of critical social science associated specifically with critical realists. Let us begin by defining a depth ontology and then explore the implications for research methods.

Ontic Depth

Ontic depth refers to having a conceptual map of the world's nature that allows for multiple layers, complexity, interweaving and dynamic interaction of the parts of that world. The challenge of having ontic depth has been laid by realists at the door of two opposing groups – firstly methodological individualists, whom they accuse of being both simplistic and empiricist; and secondly post-modernists, whom they accuse of avoiding the possibility of the existence of structures. Ontic depth is indeed missing if one simply looks at individual preference data (for example, data about consumers) and assumes that each maximizes utility and tries to achieve their bliss point. For such researchers, no allowance is made for the social construction of 'luxury', 'income', 'utility' and so on. A particular loss in this example is the capacity to imagine altruism in such frameworks; another problem is the absence of any concept of intrahousehold power. A review of the realist attack on methodological individualism and on positivism is found in Smith (1998: Ch. 3); see also Archer (2000), Gimenez (1999), Elder-Vass (2007), and Fleetwood (1997), all in Volume 1 of this collection, on the existence of structures. The realist attack on post-modernists (e.g. Lopez and Potter, eds., 2001) also strongly urges the reality – but not the deterministic effects of – social structures in the world. By carefully defining structures, and 'cause' and 'effect' as real but difficult to observe, realists argue that it is possible to carry out many post-structuralist research practices without becoming committed to an excessively relativist or totally constructivist ontology. My own research on poverty discourses is an illustration (Olsen, 2009a); I question whether it would be sufficient to argue that poverty itself is constituted by (created by) discourses about poverty.

As another illustration, one might consider the argument that *divorce is constituted by discourses of marriage and discourses of exit*. Post-modernists and post-structuralists alike might use this word 'constitute'. The word 'constitute' has an ambiguous meaning here. It would be wrong to interpret the thing which constitutes divorce as an *agent* which can create, change, and manipulate divorce. Realists say the phrase '*divorce is constituted by discourses of marriage and discourses of exit*' is poorly framed because it avoids naming the agents who can work to cause both normal divorce and innovations in divorce institutions. In brief, the common constructivist dependence on concepts to 'do' the work of agency in the world is an ontological mistake. Morgan's challenge to the phrasing used by Hardt and Negri makes this argument:

(Their book, *Empire*) fails to articulate a differentiated social ontology, and thus collapses the stratified differentiation of aspects of the social, and the distinction between the human and the social s/he reproduces. . . . (Morgan, 2003: 96).

Morgan thus suggests that a human is an agent, while the social is the result of agency, emergence, and dialectics. By contrast, a social constructivist may lack any conceptual apparatus that can offer emergence or dialectics. By contrast, with ontic depth, realists recognize concepts which have a place in the world, but also recognize other real agents (people, courts, lawyers, mediators) as sources of action. Realists also appreciate the role that structural locations play in creating standpoints from which people and other agents begin to act. Divorce, once it is framed in a complex ontology, rests upon both historical and structural foundations and is not simply 'constituted' in a timeless way or as a purely discursive construct as post-modernists might perhaps suggest.

Sayer (1997) is particularly careful to explain the ways in which an accusation of essentialism, which can result from the apparent reification of structures that realists advocate, is not a fair accusation against structuralists of the realist kind. By virtue of the arguments offered so far, nearly all the contemporary realists cited so far here are critical realists.

Research as Personal and Relational

A further impact of ontic depth is to bring the world of the researcher and the world of the research theme into political and social contact. New, refreshed forms of critical social science have become possible. A broad statement of this insight is offered by Williams and May (2002). Whilst not negating the possibility of objectivity, realist researchers have argued for an integration of the subjective world of the researcher's discourses with the lay worlds of the socialised people and scenes who/which are being researched. Williams (2006) clarifies the issue of objectivity. Flyvbjerg (2001) argues that an invigorated social science will result from what he calls the Aristotelian (and I call the realist) approach. (Naturally an Aristotelian thrust covers a wider range of issues in politics and philosophy than does realist social research methodology; many of these details are explained by Flyvbjerg (2001)). Another realist work that helps researchers to imagine a world in which social research is progressive as well as useful is the text on research methods by Danermark, *et al.* (2001). In this text, the main 'steps' of research, such as data collection, analysis and theory-development, are placed in a context of exploration. The steps are not meant to be carried out in a pre-specified sequence. Instead, during a research exploration one expects to revisit earlier steps and re-work the earlier conceptual or data-collection framework (*ibid.*). An example to illustrate this kind of process, designed by Crinson as a realist research project, is the online paper by Crinson (2007) along with the co-authored publication,

Crinson *et al.*, 2007. Focus groups and interviews were conducted iteratively, along with exploration of existing and new theories in the broad context of a depth ontology that covered management structures, organizational culture and sub-cultures, and discourses of nursing practice. In terms of research methodology, these works by Crinson, *et al.*, illustrate not that realist practices differ from others' but that their methodological underpinnings are quite distinct from post-modern and methodological individualist approaches (see also Layder, 1985).

Theoretical Innovation

Realist authors try to rework and re-assess conceptual frameworks, which they argue are representations of the real. These realists, even when doing empirical research, aim to develop better underpinnings for descriptions of the world – the ontology. On these underpinnings, people build theories and do empirical research. These 'underlabouring' works by realists, e.g. Lawson (1999a) and Bhaskar (1998), have been helpful, though also controversial, in broadening and deepening ontological knowledge. Lawson (1997) argued that orthodox economic theory had lost its contact with reality through its methodological individualism and its idealism. He later (1999b) integrate this broad theoretical point with his own ethical orientation by trying to integrate feminist standpoint theory with realism. Williams (2005) deals carefully with feminist arguments about knowledge standpoints, citing and re-working arguments offered by Longino (1990; see also New, 1998). Fleetwood (2001) reviews Lawson's theoretical work on causality and Fleetwood (2005) provides a direct application of realist theory to changing organizations and management strategies. Thus as these examples show, the methodological and theoretical contributions made by realists have begun to affect empirical research of a whole variety of kinds. Further underlabouring for methodology of research includes Brante (2001) who shows how theories can be built using realism; Fairclough (1999) who analyzes globalization using a sociological-linguistic lens; and Dow (2004) who has shown that the relevance of competing theories to a single social world tends to imply that realists must be rather tolerant of theoretical differences.

General works on ontology date back to Aristotle (e.g. his *The Politics*, 2002, originating between 384–322, B.C.), where moral value and 'the good' were traced to real existing societies and their valued practices. Flyvbjerg (2001) offers a review. Byrne (2002) utilises similar ontological underpinnings to develop a new way to approach statistical work and cluster analysis. Another new methodological variant is offered in Byrne (2005) where realism is found to underpin a refreshed form of case-study analysis. Byrne and Fleetwood's ontological expertise is consistent with the arguments of Ekstrom (1992). A seminal work, offering ontological clarity for social research, is Sayer (1992) who argued that realism would only be coherent if it departed from both

positivism and empiricism. Sayer's work on realism led him from his starting-point discipline, which was human geography, toward sociology and his current view that the social science disciplines need not be separated as they are all part of a common effort to understand and improve society (Sayer, 2000a). The important central claim of Bhaskar's realist writings 1975–1993 is summarised in his often-reproduced argument about the real, the actual and the empirical (1975: 13; copied in Collier, 1994: 44). A summary is offered by Warner (1993):

For Bhaskar (1978 [i.e. 1975]), natural and social phenomena do not exhaust the category of what really exists in the world. He makes an ontological distinction between what he calls the domains of the empirical, the actual, and the real. Each of the three domains is relatively autonomous from the other two. The first two can be distinguished as follows: The domain of the empirical is made up of human sensory experiences and perceptions, while "the actual" refers to events occurring in the world. . . . [P]erception can sometimes be misleading or unreliable. The third of Bhaskar's domains is . . . the real. The real consists of those mechanisms and structures that have causal powers and whose generative capacity creates the order we see in the world. . .

Finally, the real is not the same as the empirical. The empirical gives us an avenue of access to the real, but only when the former is guided by theory. That is, for the realist, the goal of science is the theoretical identification of things and their causal powers. (Warner, 1993: 312)

Bhaskar (1975) argues that empiricism makes reference only to experience (the empirical), but that events go far beyond what is experienced and that the domain of the 'real structures' and other generative mechanisms requires a larger conceptual map of reality. Those who wish to study the real get access to it via experience. But experiences can be misleading and they are often themselves couched in conceptual frameworks. Therefore, argues Bhaskar, empiricism rests upon a deeply flawed confusion. It conflates the experiences with the real, instead of separating them out carefully. Bhaskar argues that retrodution is an advantageous form of argument – notably an improvement over description and simply explaining events by other events. Collier summarized Bhaskar's critical realist argument thus:

Bhaskar is, no doubt, a transcendental realist. . . The contrasting term, empirical realism, is used . . . for one who denies the reality of underlying mechanisms, structures, etc., which don't appear in experience, but cause phenomena which do. A transcendental realist, by contrast, is one who claims that such mechanisms can be shown to be real by means of transcendental arguments. (Collier, 1994: 26)

Bhaskar's initial point that science can make errors by wrongly inferring closure from data regularities has led to a boom in methodological debate (Bhaskar, 1975).

2. Realists Do Retrodution

Retrodution is one form of transcendental argument. (Other forms include dialectical argument and the argument about emergence.) When retroduting, researchers ask 'why things appear as they do'. Thus critical realists try to move from what is experienced toward knowledge of what is really there. Bhaskar has explicated in numerous places the various ways in which falsehoods and experiment can or cannot be invoked in these attempts to develop knowledge (e.g. Bhaskar, 1989). Chindarkar (2007), for example, illustrates how retrodution enables a researcher to move from an observed pattern of suicides in India to explanatory claims about what has been causing suicides.

Retrodution has been strongly contrasted with induction and deduction. Recall that as logics of inquiry, induction focuses on deriving general statements from an experience involving lots of small concrete data points or observations. Deduction works the other way – given a law or general claim, the deductivist can develop a concrete statement about a particular situation. A major problem with induction as a research strategy has been described as its prior engagement with un-acknowledged frames of reference (Hacking, 2002). Blaikie uses a parable of 'a team of researchers from another planet to illustrate the impossibility of really open-minded induction (Blaikie, 2000). Deduction, on the other hand, has been branded (in methods terms) as a facet of the deductive-nomological model of science in which scientific laws (*nomos*) are tested through empirical enquiry in particular situations. The Duhem-Quine paradox showed a serious flaw with deduction in this specific context; no hypotheses could be generated without some prior knowledge of the conceptual framework, and hence of the society, where the research is to be carried out. As a result, said Duhem and Quine, the deductivist is holding up a pretence of 'testing' when they are in fact already committed to numerous *a priori* (untested) claims about the situation. In the specific case of suicide for example, the researcher may test 'whether agricultural debt problems cause farmer suicide' but they are implicitly assuming that debts are felt by persons, and not households, and thus that methodological individualism can be valid for suicide when in fact a wiser assumption would have more ontic depth. The testing would be unlikely to question the individualism that had crept in at the hypothesis stage. Retrodution has been a key method offered by realists as a solution to the induction and deduction impasse (Potter, 1999). However the empiricists would insist that even with a depth approach, which generates a new hypothesis, testing is needed.

Retrodution refers to asking why things are being observed as they seem to be. This is a complex question which includes up to three sub-elements: why do evidence and data appear to follow the patterns they do? why are theories about the world sometimes wrong and what kind of bodies of evidence are used to substantiate and underpin each theory? and finally, how do we explain the phenomena that we are currently interested in? The third of these sub-elements is the explanatory task which most realists take up in a very direct way. They offer causal explanations without having a deterministic approach

to cause. The second of the sub-elements is an attempt to re-examine existing theories as part of research about the final phenomena (Carter and New, 2004, ch. 1). Most realists have a reflexive mentality about theories. The reflexive approach uses a mixture of reflection, critique, and reworking to arrive at new findings. Thus a new theory can be a 'finding'. And finally, the first of the three sub-elements is about the retrodution of science itself. Here the realist questions evidence, allows for it to possibly give false impressions to a naïve observer, allows evidence of different kinds to be compared, and like any good social observer carefully assesses the provenance (origin, standpoint, biases and dating) of given evidence sources. In summary, for any given topic, retrodution involves asking 'why' about the evidence, about the theories and about the causes of the thing itself.

A core claim of realist ontology is that causal mechanisms do not work deterministically unless an experimental or a temporary closed system has been set up (Bhaskar, 1975, 2008). The experimental situation is contingent, they would say. Another claim is that some evidence in society is misleading and tends to cause epistemic confusion, particularly for empiricist interpreters (Bhaskar, 1989; Sayer, 1997). A specific reason is that the future need not be like the past, even if trends are strong up to the present (Patomaki, 2006). Another reason is that many real cases are situated within a unique, one-off situation (Sayer, 1992). Thus although the observed events may have a series of concrete, real causes, we could not have predicted the outcome because some causal mechanisms may kick in suddenly and would be outside of our necessarily limited mental models. Among realists, the study of causality has been enriched by moving to a transdisciplinary frame. Rose for example argues (1976, 2003) that human brain evolution is dialectical not deterministic, and that biological explanations of social human behaviour have a limited purchase on mental patterns because of reflexive human agency. Memory is an emergent property of a mind, says Rose. Realists are expert at proposing how to study emergence and the holistic properties of things.

3. Realists' Use of Quantitative, Qualitative, Participatory, and Mixed Methods

For the sake of convenience, this section on methods begins with statistical interpretation then moves on to other types of research methods.

Statistical analyses of society are often implicitly structuralist. A discussion of structure helps clarify arguments about realists' use of statistics. Realists argue that structures exist, and realist presuppositions therefore tend to support the use of structural variables as either independent or dependent variables in regression. Realists also often interpret data tables causally. Lawson argues that a data table may reflect 'demi-regularities' (1997). Social class, sex, age-group, ethnic group and region of residence are examples of indicators of structures. Tables using these variables often reflect strong structural

positioning in contemporary society. I will define structures and then go on to discuss other related (and some unrelated) quantitative methods that realists have used and commented on.

The word *structure* can have two closely related meanings. It can refer to an ensemble of various objects whose relationships create a single overall object which 'has' a structure. Examples include social structures such as a city, marriage as a social institution, the class structure, or the age-group structure. A second definition of structure stresses that the whole has emergent properties that differ from the properties of the things inside the structure. These emergent properties of the whole are changing over time, if it is a social structure, whereas they might be somewhat constant over time within a specific physical structure (e.g. water molecules). For example the structure of marriage (including the elements husband, wife, ring, spousal relationship) has changed considerably with the introduction of civil partnership (same-sex spouses, etc.) and cohabiting coupledom. Thus the structure of the institution of marriage could be said to have many of the same basic internal objects and relationships, but gradually changing emergent properties which both reflect and cause change in the internal objects. It is hard to see how the whole can change without either the object elements or the relationships changing. Thus the word 'structure', when used by a realist, usually refers to both the internal organization of something and to the relations between that thing's parts that make it work/act the way it typically does. A single structure is not determining of action because so many different structures and institutions are overlapping and interwoven in the social and natural worlds at one time.

The two usages of 'structure' – a set of things as an ensemble; and the properties of wholes – relate closely to each other and can be seen as mutually consistent (Gimenez, 1999). Structuralists differ on whether they wish to focus on the properties of the relationships within the structure, or on the whole as caused by the parts (Elder-Vass, 2006) and as influenced by exogenous factors (Pawson and Tilley, 1997). Archer argues that structures are typically transformed from within and have organic, dynamically transformative properties (Archer, 2000a). There is wide agreement among structuralists that social structures are undergoing continual change (Sayer, 1992, ch. 2–3) and that they are geographically diverse. Elder-Vass (2007) uses the term regional ontologies to refer to diverse variants within a larger social reality. Realists claim that some structures are relatively durable (Lawson, 1999) and that those which are durable need to be called structures and to be seen as part of the context of other social action (Williams, 2000). My research experience in Indian villages convinced me to think of the local caste hierarchy and caste institutions as a structure (Olsen, 1998); Archer's empirical work in the UK used interviews to argue that human differentiation is not simply determined in any obvious, strongly patterned or deterministic way by structure (Archer, 2003). Realist discussions of structure – notably Sayer, 1992, chs 1–4, Archer, 2000b, and Outhwaite, 1987 – frankly reject structural determinism. Indeed, a strong opposition to structural-functionalism forms a grounding for the critical

realist ontology (Layder, 1979). Functionalism would argue that each element operates to reproduce social structures. The problem for non-functional structuralists is to account for non-functional behaviour. Challenges to social statistics from insiders sympathetic to critical realism include Cruickshank (2004), Holmwood (2001; see Sayer's reply 2001), and Harré (1998, in May and Williams, eds., 1998). Harding's objections to realism redefined but did not drop the supposed objectivity that is often associated with statistically based research (Harding, 1995, 1999, 2003; Lawson, 1999b). Williams argues that the prior conditioning effect of structures as causal mechanisms is, in some instances, a matter of fact and not of social construal (2005), but can be phrased in diverse ways, including probabilistically (Williams, 1999). Causal mechanisms that are not deterministic in their impact operate via 'transfactual effects'. Another way to look at them is to see them within a context of fundamental complexity (Byrne, 2002). These realist approaches withdraw from the certainties of positivist 'laws' and empiricist 'regularities' (Smith, 1998, chs. 3 and 7). However some regularities may persist and realists distinguish a durable structure from other, more fluid, formations.

If quantitative methods can use indicators of structure to seek patterns of association of variable factors with outcomes, as argued by Olsen and Morgan (2005), then perhaps quantitative methods can also be used to seek latent factors that are only implicitly (not directly) measured in data sets. Statistics textbooks such as Tabachnik and Fidell (1996) can be read as implicitly realist in the sections on confirmatory and exploratory factor analysis and discriminant analysis. Defending the use of factor analysis (Olsen, 2001), I argue that studies of latent factors also require qualitative background research. Quantitative methods may be useful to realists, but they are not sufficient for good realist research. Sayer, on the contrary, argued that a research design that meets his epistemological criterion of practical adequacy would not use extensive survey data (1992, ch. 8). He argued in favour of intensive, qualitative methods. However Byrne (2009) and Olsen and Walby (2004) have successfully used statistical methods to examine social patterns in school performance and the gender pay gap, respectively. What Sayer means by 'practical adequacy' would apply to the research design in these successful research projects. Sayer's argument might benefit from distinguishing statistical inference from other uses of quantified data.

Ron (2002) discusses the underpinning arguments for social statistics in detail. Ron argues that partial and temporary closures in society help realists to interpret regression from a scientific realist viewpoint. If it is not clear whether there is a particular temporary closure or not, then the knowledge claims arising from statistical investigation must have fallibility, as do most scientific knowledge claims (Morgan and Olsen, 2007, 2008).

Institutions are one of the many social objects which can be represented in statistics. An institution is a set of social norms which, in a given context, shape and influence human interaction, often through rules or customs. Marriage, civil partnership, and the caste hierarchy are three examples of

social institutions. Williams (2005) argues that values are invoked at the stage of measurement when cardinal measurement is introduced, and this would apply to statistical studies of social institutions. Thus for critical realists the quantitative stage of a piece of research is not value-neutral. Quantitative research is value-laden (Olsen, 2007; 2009b). Hunt (1994) argues that the underlying concepts and theories cannot all be tested at the same time. Following Quine, Hunt argues, part of the theory must be accepted *a priori* before tests can be run. Using theories, I would argue, is a valuey activity. Statistical modelling can be temporarily agnostic about theories while testing a plurality of theories (Olsen, 2007). Values are invoked even when inserting a binary or multinomial indicator variable into a regression.

In addition to representing structures, latent factors, and institutions, people can also use statistical models to represent actions and agency. The capacity to act and to develop has been re-theorised as capabilities by the realist Nussbaum (1999), with many operationalizations across the world (Chiaperro-Martinetti, 2005; Clark and Quizilbash, 2008). These overlap somewhat with happiness studies, which realists argue refer to a reality that is simultaneously objective and subjective (Neff and Olsen, 2007). The use of statistical inference in the interpretation of social statistics is accepted under specific assumptions by Downward, Finch, and Ramsay (2002). Finch and McMasters (2003) note that there are about four main epistemological paths through the econometric analysis process, so there is not a single quantitative methodology to which realists can refer. Downward, Finch, Ramsay, Martinetti, Neff, Olsen and Morgan all distinguish acts of interpretation from acts of calculation. The manipulation of numbers is part of quantitative research, they argue, but it does not exhaust quantitative method. Instead, people who use methods to study the world via numbers actually also conduct a qualitative stage of compiling numbers (into either theoretical categories or scales), making corresponding assertions about the measurement units, and later doing a further qualitative stage of interpretation. Thus these more recent authors question the arguments made by Sayer (1992) and Lawson (1999) that put the usefulness of any quantitative method into doubt.

Realist discussions of economic modelling include Eriksson (1998; see also 2006). Attacks on the feasibility of critical realist modelling include Kemp and Holmwood (2003) who do not dispute the existence of event regularities. The difficult question, they argue, is whether the regularities indicate causality or not. Accepting Sayer's (1992) argument that regularities do not necessarily indicate causality, and that the absence of regularities does not necessarily indicate the absence of causality, they are quite sceptical about truth arising from the analysis of quantitative data. Some authors suggest that the interpreter's subjectivity enters in when deciding which co-associated factors are to be considered causal (Harré, 1998, in May and Williams, eds., 1998) while others think this is a matter of good theory (Olsen and Morgan, 2005; Olsen, 2006) or of providing supplementary qualitative evidence (Sayer, 1992)

or contrastive demiregularities (Lawson, 1999, 2003). The whole discipline of orthodox economics may need to be changed by introducing the underlabouring of realism (Lawson, 2003). A more qualitatively informed science might result. Some statisticians are implicitly rather than explicitly realist (examples include Dorling and Simpson, eds., 1998; Jarvis and Dunham, 2003).

The discussion so far has suggested that in the research process there are close linkages between qualitative methods and the analysis of quantitative data. The converse is not true. Qualitative data analysis can be conducted without any recourse to numbers. I now turn to qualitative methods.

Realism and Qualitative Methods

A basic overview of the realist approach to the study of meaning was offered by Outhwaite (1987). This clear and highly readable book on hermeneutics (the study of meaning) offered an innovative approach to narratives, texts, meanings and social norms about discourse. The reality of these textually-grounded objects was to be checked via the analysis of what social outcomes appeared to be caused by them. A social object (such as a narrative) which has effects can be seen as real, Outhwaite argued. He noted that such 'real' causal mechanisms are not necessarily universal, nor are they necessarily material or easily observable or permanent or globally existing. Thus Outhwaite's book, like Sayer's (1992, originally published in 1984) explored the possible use of the term "The Real" to include reference to immaterial and impermanent objects which *for a caused event or for a specific observer at a point in time* are causal and very important. Retroduction is the method used to move backward from an observation (e.g. the Prime Minister announcing a new bank regulation) to the causes of that observation (e.g. a financial crisis, a bank closure, or the more hidden reality of the banking structure within which some banks are at a strong risk of closure). Outhwaite argued that studying how a narrative works, how it has its effects and what it means to different observers is helpful in exploring how that narrative is part of real structures and institutions.

In the background to these claims, Bhaskar's distinction (1975) between natural necessity, where A is simply part of B so appears to be causal for B, and contingent causality is very useful. This distinction is also spelt out by Sayer (1992) and Lawson (1999). Contingent causality occurs when a causal mechanism's working can be offset by other interacting mechanisms or contextual conditions. In discourse, we might expect to find that each causal mechanism is rather easily disabled by other mechanisms in a fluid and malleable scene, e.g. of words and images. For example, blatant sexism in advertising is occasionally offset by attempts to portray women as powerful, business-minded, and unmotherly. There are still strong sexist stereotypes about women – which are the causal mechanisms – but these are offset by some other agents' attempt to present a new narrative, to offer a surprising alter-ego of woman, or to create a shocking portrayal.

A useful set of works by Archer specified that some actions in society are morphostatic – i.e. they tend to keep structures moving along appearing as if constant (Archer, 1996, 2000). The morphostatic causal mechanisms, such as banking's profit discourse, government's tax discourse, and savers' prudence discourse, are not universal or unchanging but they are real. It is possible that studying such mechanisms – mainly accessible to observation through qualitative methods – helps researchers see how an open system can stay pretty much constant over time (in some respects). In the banking example, the banking system stays open even if one bank goes bankrupt; the savers get their money back; the government keeps regulating banks in mildly modified ways that are morphostatic for the remaining banks. In the earlier advertising example, sexist stereotypes in the mind and sexist phrases in conversation are usually morphostatic. Morphostatic social agency is somewhat less common in the 21st century than it was in the past (Archer, 2000).

Archer contrasts morphogenetic causal mechanisms to the morphostatic ones. She argued that qualitative research can explore these mechanisms by looking at patterns, sequences, and tendencies evidenced in human speech, texts and discourses (Archer, 1996, 2000, 2003). A special focus on discourses is offered by Fairclough (2000, 2001); Chouliaraki and Fairclough (1999), Alvesson (2003), Alvesson and Karreman (2000, 2001), and Crinson (2007).

With its strong theoretical focus (mainly rooted in her theories of agency, culture, and reflexivity), Archer's work is rather different from the elucidation of meaning that many qualitative researchers do. Archer's work is different at the level of methods because it is not constructivist at the level of methodology. Methods are the routines and techniques of research. In qualitative research, we can focus on meanings of social phrases, and deconstruct the phrases and look at their histories both as representing real histories whose descriptions are socially framed as well as seeing them as nominal history stories which depict the past in ways that make sense for some contemporary people. The methods of qualitative research fall within realists' weak form of social constructivism (Sayer, 2000a).

Realists' weak constructivism is combined with an assumption that the world does have a partially intransitive existence, prior to current action in the world at any particular time. In this sense, qualitative research can also claim some background facts, as argued by Williams (2006), Morgan and Olsen (2007, 2008). The methodological position is not, however, objectivist. Instead, I as a knower am placed within the world that I'm trying to know about.

Realists also (in part because of the above) chase up the norms that are implicit in, get carried along by, and play an essential part of social discourses. Fairclough's writing on discourse analysis pays strong attention to norms in society (1992, 2001). Norms are not intentionally set up by agents; they are often inconsistent when taken in sets; and they are often diverse within organisations or 'schools of thought' (Olsen, 2009a). Therefore discourses are likely to be based upon a mixture of older discourses and newer innovations. Fairclough uses the term 'intertextuality' to indicate a mixing of discourses

in a single text or communiqué. It is useful to remind ourselves that intertextuality is not just a factual dimension of discourse. Intertextuality is pointed out by a purposive knower. The person who is doing research is an agent of knowledge. Intertextuality also creates tensions and moral contradictions within particular texts, making them hard to interpret.

My own interviewing experience has shown deep tensions within public discourses and some apparent contradictions in people's working strategies. For example I used discourse analysis to study people's self-contradictory views about banking (Olsen, 2005). Through a deep understanding we can usually make sense of contradictions. One is left with a feeling that a given text is the product of an ongoing dialectical tension. (A dialectic is broadly a situation where a thesis and an anti-thesis produce or require a synthesis. We also have material dialectics where two pressures exist and the observed result is a outcome with a clear and definite shape, e.g. the flat sea horizon is the result of pressures of gravity and water's tendency to flow.) Chouliaraki and Fairclough (1999) make it clear that our current 'late modern' society exists in a strong dialectic of old and new cultural practices as well as internationalization and new technologies. In such a situation we would not seek absolute event regularities. We are instead satisfied with the qualitative data as it comes, bearing messiness along with patterns.

Realists argue that social norms have causal powers. The meaning attributed to a phrase or an action is normatively considered either usual, or unusual, for that phrase or action in a specific context. Meanings therefore have effects and are real. Socially normal meanings are one among a variety of causal mechanisms. This area of qualitative research is worth further exploration in empirical contexts. Works by Nelson (2003), Layder (1993), Harvey (2002), Carter and Sealey (2000), Finch (2002) and Lee (2002) help construct a suitable research design for qualitative methods under these circumstances. Yet the methods are different from narrative analysis (see for example McNeill's historical study of "ideas" (2007), and Bhaskar's similar but more abstract analysis (1997)). Realists do not see narratives as merely textual, but as real social products of ongoing underlying social relations. Lopez and Potter (eds., 2001) help show how realism differs from recent variants of post-modernism. Cromby (2004) discusses the intersecting subjectivity that is involved. Examples of qualitative field research by realists include Alvesson and Karriman (2001), Fairclough (1992, 1993, 1999), and Connelly (2000 and 2001).

Realism and Participatory Research Methods

Some realists posit the intrinsic value of humans as an inevitable outcome of the nature of us as humans in society. Logically, if one applies an ethic of human equality to research as a result of this ontic commitment, it is not equitable for researchers to simply construe respondents as passive subjects. To do

so would place the researcher in a powerful position ascribing value and truth to some claims, and dismissing others. Numerous critical realists have advocated participatory research, e.g. Flyvbjerg (2001). Norrie has argued that a recognition of the ethics of researchers' relationships with respondents would refashion our expectations of research (2000). Byrne, Olsen and Duggan have argued that research plays a role in political power struggles (2009) and that truly mixed methods, such as the qualitative comparative method, have good prospects of challenging elite power in interesting ways. Byrne's own work is strongly mixed-methods but he also uses action research and dialogic engagement following the advice of Freire (1996).

Realism and Mixed Methods

Realists have promoted the use of methodological pluralism for several decades (Bryman, 1988; Carter and New, eds. 2004). This particular form of pluralism entails the use of both quantitative and qualitative methods (e.g. Olsen, 2004). However furthermore it is important to make coherent linkages between epistemological claims that arise during the interpretation of statistics and those that are used during a qualitative stage of research (Walby, 2001). As a result, the realists are taking to mixed methods like ducks take to water. The converse is also true – many mixed-methods writers are implicitly or explicitly realist (Ragin and Byrne, eds., 2009). In this section I'll explain why this form of pluralism is so entrenched in realism, and then give some examples.

Methodological pluralism is useful for the kind of explanatory critique that Bhaskar and Collier advocated during the 1980s and 1990s. Explanatory critique, said Bhaskar, refers to first taking theories and exploring their origins. Then after looking at what caused a theory to be well known, we can develop conclusions about its correspondence with the world, how well evidence seems to support it or falsify it, and how it compares ethically and discursively (e.g. its affect aspect, its effects, or its role in everyday politics) with other theories. This insightful method does not require the use of statistics. Instead explanatory critique can also exist as a purely qualitative, multi-stage method of research (e.g. see Crinson who uses it in a nursing management context, 2007). However since so many governments and other powerful agents use statistics, and Foucault among others has shown that statistics are imbued with power relations rather than being mirrors of the world, we often need to deconstruct statistical evidence (see Foucault, 1980). This may actually mean engaging with statistical reasoning in general (Olsen and Morgan, 2005) or with the measurement metrics used by government at all levels. Thus methodological pluralism (a) authorizes the use of statistics by critical realists, (b) is required if realists are going to analyze data, and (c) is advised in order to temper all factual interpretations with a historical sense of why one is couching an interpretation in a particular discourse. Methodological pluralism has been interpreted in many ways (e.g. see Roth (1987) who associates

it with democracy; Olsen, 2005). Like mixed methods research design, methodological pluralism is a popular area showing rapid growth both in applied and theoretical work.

For most mixed methods writers, theories are discourses and they are embedded in particular concrete societies. In geography an elegant example of mixed-methods realism is Coe and Yeung, et al. (2001). Coe and Yeung also advocate mixed methods. Yeung argues that the methods themselves are important, quite apart from one's ontic commitments (Yeung, 1997). Case-study methods usually mix quantitative data with qualitative analysis (Ragin and Byrne, ed., 2009; Byrne, 2009). In health studies, Wainwright and Forbes (2000) and McEvoy and Richards (2003) have helped advocated mixed methods. Downward and Mearman offer a convincing case for triangulation which they link up with explanatory critique (2002, 2004). Triangulation as a means of exploring the world may lead to some confirmatory findings but is likely also to open up new avenues of discovery or deeper understanding compared with monomethod research.

In Figure 2, several examples of realist empirical research are listed under headings that designate them by their principle research technique. A typology is difficult to achieve because most mixed-methods research combine techniques. In Figure 2, some research outcomes must be designated as theoretical even though they involve empirical research. For realists, the re-assessment of other academics' work (and of government reports and other documentary sources) counts as empirical research even though there is no field component. In *The Possibility of Naturalism* (1998), Bhaskar used the word *epiphenomena* to refer to empirical data and claims about the world which are false. Epiphenomena are often found in research outputs. Culling the material for falsehood, poor ontic assertions, and self-limiting mono-theoretical orientations is considered part of the realist approach to research. In Figure 2, the work by Reckwitz (who may not fit easily into a realist school of methodology), and one work by Sayer are called meta-critiques, using a term introduced by Bhaskar to cover this kind of re-assessment. However most of the research cited does involve meta-critique and methodological pluralism.

4. Realists Writing about Knowledge in Research (Epistemology)

The realists who write about methodology have been urged to consider epistemological issues. Among these are authors' self-legitimizing practices, time, and avoiding essentialism. Aldridge (1993) reflects the critical approach that puts the writer of research into the frame rather than expecting them, as value-neutral observers, to write without making their presence visible/audible in the first person (as "I"). Many writers avoid "I" precisely in order to achieve credibility as scientists. The disengagement of people who have disabilities from research about disability would be an example of the problem of disinterested science (discussed by Bhaskar and Danermark, 2006).

<i>Type of Research</i>	<i>Action Research</i>	<i>Qualitative Research</i>	<i>Quantitatively Based Research</i>	<i>Case-Study Research</i>	<i>Meta-Critique and Meta-Theory</i>	<i>Methodologically Pluralist Explorations</i>
Examples and Dates	Floersch (2004) Lloyd (1995) Warner (1993)	Archer (1985) Carter & Sealey (2000) Cromby (2004) Porter (1993)	Ron (2002) Lawson (1989)	Chindarkar (2007) Connely (2000) Dobson (2001) Olsen (2009b) Rajin (1997)	Bhaskar and Danermark (2006) Morgan (2003) Reckwitz (2002) Sayer (1999) Skinningsrud (2005)	Connely (2001) Langan (2008) Lawson (1998, 1995) Olsen (2006) Patomaki (2006)

Figure 2: Exemplars of critical realist empirical research

Action research and participation are solutions consistent with critical realism (Warner, 1993). These solutions tend to change science and move it toward a post-structuralist framework. Once different types of non-researcher are also brought into the frame to shape and develop research, a range of standpoint issues arise. Starting from a critique in the 1970s and 1980s, expressed well by Haraway (1988), realists have offered solutions to the problem of multiple 'true' standpoints (Walby, 2001; New, 1998). Harding (2003) was critical of some aspects of realism but nevertheless developed a *praxis* approach called strategic real-ism. Her position then is similar perhaps to other critical realist feminists. Lloyd (1995) has written a detailed analysis of the issues of objectivity for feminists in particular.

A second epistemological problem is that terms used by realists seem to imply more permanence of social objects over time than can perhaps be justified. This problem is studied implicitly by Hodgson (2004) whose analysis of habits seems to suggest that habits involve ingrained rule-following behaviour. Archer (2000) shows that such claims must be tempered by an awareness of dialectics and of agency, in particular, as a source of change over time. If the regularities that offer science a chance at valid description are always fluid and without closure, as Kemp and Holmwood (2003) suggest, then in what sense can any social-science knowledge ever be valid? A spectrum exists, with Williams' confidence about truth at one end and Kemp and Holmwood's skepticism – perhaps even epistemic nihilism – at the other. A solution is offered by Patomaki (2006) and by Morgan and Olsen (2008). Bates (2006) also proposes that a new approach to time is needed to respond to the *in-situ* experience of change. One might pay attention to circadian rhythms, the *longue durée*, etc. A resolution can be reached. Grand narratives may sound timeless and labels sometimes excessively overarching over time (e.g. the 'class structure'), but a philosophy of *praxis* is needed and such a philosophy of knowledge does not make a fetish of referential validity. Instead realism offers good-enough knowledge for *praxis*.

A third problem area for realists approaching knowledge is the accusation of essentialism. Essentialism is the error of asserting the existence of something with its basic ('essential') qualities, which are either embedded in the thing itself or are implied by the label we are attaching to that thing. Numerous authors from social constructivist and hermeneutic traditions are not convinced about realism's basic starting point. In particular, they argue, to say that structures exist is to oversimplify how they are constituted. Ironically, in the history of anti-essentialism, realists have played an important part. For example, the realists Berger and Luckmann (1966) are widely cited as primary innovators in social constructivist thought in the 1970s in Europe; Bryman (1988) is widely assumed not to be an essentialist although he takes a realist stance; and Williams acknowledges all kinds of social constructions even while asserting a realist philosophy and the existence of essentially causal mechanisms (2000, 2005). In other words the accusation of essentialism would be misplaced. The realists May, Blaikie, and Sayer have all written extensively on the social construction of 'things'.

However there are some weaknesses in the arguments that have been repeatedly set out by realists. One weakness is that they are linguistically developed and may at times be over-stated. To illustrate, consider a philosopher who explains realists' correspondence theory of truth, Alston (1996). Alston uses precepts which I find convincing, but which might simply be rejected by some of his critics because of being language games. The idea of a language game is that there are more than one possible meaning for the statements at the same time. Therefore the logical deductions made by such realist philosophers might be seen as falsely grounded by some critics. Alston argues that a proposition (i.e. a statement about the world) can have a true/false status according to the state of things in the world to which it refers. Of course if readers accept this starting point, a realist ontology can emerge. But this starting point, say some hermeneuticists, presumes that words like 'world', 'refer', 'true' and 'state of things', are already clearly specified within the rules of the given (English) language. However instead they might have ambiguous or multiple meanings (Outhwaite, 1987). Referential validity seems to avoid many issues of nuances.

There is no guarantee nor proof that concepts do refer to anything else that has an external existence. (For me, my experience of life is sufficient proof. But many authors challenge this proof as subjective.) Gadamer and Foucault are two examples of hermeneuticists who tended at times not to acknowledge any external reality. However Foucault was forced to admit that 'extra-discursive' aspects of society are important factors and therefore that social construction is not the only source of social power (1980). The extra-discursive may include nature, social structure, and tacitly held power, for example (see Joseph, 2004). Heil (2003) argues that realist discussions of the 'levels' of stratified reality cannot use a concept like 'level' in a facile or simplistic way because that would not correspond with real-world complexity. Hunt shows that linguistic constructedness and value-ladenness make hypothesis testing contestible (1994). Nelson challenges the attempt at non-emotive expressions among both philosophers and empirical researchers, specifically making reference to economics (2003). In attempting to resolve these epistemological issues, Morgan and I have argued that science is a purposive human activity (2005) and that procedures used do not simply have outcomes via an uncontrolled or mysterious black box. Selections presented in Volume 4 of this collection also explain the issue of multiple standpoints in specific contexts such as management (Alvesson and Karreman, 2000; Alvesson, 2003) and education history (Skinningrud, 2005). Epistemology, realists argue, cannot be worked on independently of ontological assertions (Morgan and Olsen, 2007 and 2008). The two are woven together. Our view is that *praxis* matters whereas arguments about theories could simply go on forever in a conceptual space. The view that some knowledge claims are fallible is widely held among realists. Therefore volume 4 has been presented last after the detailed implications of realist ontological work have been presented in volumes 1–3.

Overall a huge corpus on realist methodology is available to underpin transdisciplinary social research.

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Glossary

Please note the following definitions of some terms used in the chapter. See also Smith (1998) for a full discussion of most of these terms.

- Agent: An entity which has the capacity to act.
- Depth ontology: A set of assumptions that allows for the existence of inter-penetrating entities including people, households, institutions, regulatory systems, conceptual frameworks, and the inter-dependence of all of these entities.
- Epistemology: A theory of knowledge; the study of knowledge and how it is validated. In modern times, epistemology is thought to include various enquiries about knowing and the value or meaning of knowledge.
- Interdisciplinarity: The use of conceptual frameworks from different academic disciplines such as sociology and economics.

- Methodological pluralism: An approach to social science in which theories are examined using a meta-review, so that neither theories nor empirical evidence can be taken as 'given' or as factual. See Danermark, *et al.*, 2002, for details. In practice, methodological pluralism often implies the use of qualitative analysis not just of evidence, but also of the theoretical frameworks that couch and frame evidence.
- Ontic: Having relation to what exists; the existential aspect of something.
- Ontology: A theory of what exists; or a discussion of competing assumptions about the existence of things such as social structures. Thus ontological expertise might refer to being expert in discussing the nature of what exists, not simply being someone who asserts a monolithic, foundational theory of existence.
- Political economy: The study of the provisioning of societies through a variety of market and non-market mechanisms, firmly grounded in the study of social relations and of the various aspects of power which permeate them. See Lukes, 2005 (orig. 1974).
- Realism: A theory of existence which allows for the possible reality of each 'thing' in society and in nature, e.g. 'cells', 'classes', and 'patriarchy'. Realism has different branches such as naïve realism, scientific realism and critical realism. See Williams, 2000; Hartwig, ed., 2006.
- Pluralism: A stance that accepts the co-existence of competing ways of conceptualising the same things.
- Social structures: Patterned relations between objects in society, such as the social classes or the genders, which consist of more than merely the objects themselves. Structures are thought to have emergent properties that arise from the synergy of the elements within the structures. See Sayer, 2000; for the history of the debate about structuralism see Outhwaite and Bottomore (1993).
- Structuralism: The analysis of social structures, assuming that they exist, allowing for the factors which cause them to change over time.