Research design and data analysis in realism research

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Abstract

Purpose – The aim of this paper is to apply principles of the realism paradigm within qualitative research projects.

Design/methodology/approach – The paper starts by establishing the usefulness of realism research for investigating marketing management phenomena, and then considers the implications of the realism paradigm for research design.

Findings – Issues such as the level of prior theory required, the use of replication logic and triangulation are discussed. In addition, guidelines for realism data analysis and reporting are developed.

Originality/value – This paper provides an explicit set of principles for realism research design and data analysis that is different from those in other types of research.

Keywords Research, Design, Data analysis

Paper type Conceptual paper

Introduction

Many researchers are concerned with the choice between a quantitative and a qualitative methodology. Essentially, quantitative researchers use numbers and large samples to test theories, and qualitative researchers use words and meanings in smaller samples to build theories (for example, Easterby-Smith et al., 1991). Some researchers use only one type of methodology while others suggest that both types may sometimes be appropriate (Borch and Arthur, 1995; Hyde, 2000), even though the two methods may produce contradictory findings about the same phenomena, or at least unrelated ones – “it is likely that quantitative methods and qualitative methods will eventually answer questions that do not easily come together to provide a single, well-integrated picture of the situation” (Patton, 1990, pp. 464-5).

However, a core issue for researchers is not related to choice of methodologies but related to acknowledgement of the research paradigms. A methodology is only one of the three elements of a paradigm that researchers either explicitly or implicitly work within – a paradigm includes the other elements of ontology and epistemology (Guba and Lincoln, 1994). Essentially, ontology is “reality”, epistemology is the relationship between that reality and the researcher, and methodology is the techniques used by the researcher to discover that reality. In brief, a paradigm is an overall conceptual framework within which a researcher may work, that is, a paradigm can be regarded as the “basic belief system or worldview that guides the investigator” (Guba and Lincoln, 1994, p. 105). Philosophical assumptions that support four different paradigms
of science – positivism, realism, constructivism and critical theory – are summarised in Table I.

Underlying these four paradigms is the question of knowledge creation: how can the findings of one research project be generalised to other situations? In the first of the four paradigms, positivism, knowledge is statistically generalised to a population by statistical analysis of observations about an easily accessible reality. In the second paradigm of realism, the findings of one study are extended by analytical generalisation that shows how the empirical findings of a research project nestle within theories (ontology cells, Table I). In other words, the aim of realism paradigm is to generalise to theoretical propositions and not to populations (Yin, 1989, p. 21). In the other two paradigms of constructivism and critical theory, “reality is perception” and so generalisation of one research finding about someone’s perceptions to another person’s “theory” about reality, cannot be done. For example, in constructivism, findings are related to individual views of the world and create a world of multiple constructed realities. Such views cannot be usefully compared with those of other

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<td>Reality is real and apprehensible</td>
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<td>“Virtual” reality shaped by social, economic, ethnic, political, cultural, and gender values, crystallised over time</td>
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<td>Common methodologies</td>
<td>Mostly concerns with a testing of theory. Thus mainly quantitative methods such as: survey, experiments, and verification of hypotheses</td>
<td>In-depth unstructured interviews, participant observation, action research, and grounded theory research</td>
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**Note:** Essentially, ontology is “reality”, epistemology is the relationship between that reality and the researcher and methodology is the technique used by the researcher to discover that reality

**Source:** Based on Perry *et al.* (1999), which itself was based on Guba and Lincoln (1994) from which the quotations come

Table I. Four scientific paradigms
individuals (as in post-modern research) (Bazeley, 2004). Similarly, in the critical theory paradigm, perceptions are judged by their appropriateness to subjective conventions such as beauty and justice (as in feminist research) (Perry et al., 1999).

Of the four paradigms, this paper will focus on marketing knowledge creation within the realism paradigm. In contrast to this paradigm, the positivism paradigm position on knowledge creation about an easily apprehensible reality through value-free procedures is well known, although it may often be inappropriate for reasons developed in the next section. In addition, constructivism and critical theory research will not be covered in detail here because they are explicit or implicit in much qualitative research literature. Their assumption that reality is a subjective construction is sometimes inappropriate for marketing management for reasons discussed in the next section.

Thus the aim of this paper is to explain how realism research can be designed to build knowledge about the external reality of marketing. Essentially, we argue that working within the realism paradigm requires procedures that are different from procedures in positivism, constructivism and critical theory paradigm research. In particular, procedures relating research design and about data analysis and reporting require explicit acknowledgment, although none appear to exist. Our contribution is therefore explicit sets of principles for realism research design and data analysis that are different from other types of research.

In addressing this aim, this article concentrates on research design and data analysis. Other issues in realism research, for example, arguments about philosophical details (Hunt, 1994; Zinkhan and Hirschheim, 1992) or how to judge the quality of realism research (Healy and Perry, 2000; Thompson and Perry, 2004) have been dealt with elsewhere.

The article has four sections. We begin with a brief introduction to realism’s core ideas and compare them to those of the other three paradigms. Then research design building on prior theory and using replication logic in realism research is described. Next, appropriate analysis and reportage techniques in realism research are discussed.

**Positivism paradigm**

Before examining realism research design, its particular appropriateness for much marketing research needs to be established vis-à-vis other research done within other paradigms. In essence, a paradigm reflects a researcher’s understanding of the nature of existence that is beyond “logical” debate because each paradigm is “rational” within its own constructed logic (Lincoln and Guba, 1985). That is, there is no “objective” ground for choosing a paradigm. All that one can do is work within a paradigm that is consistent with a researcher’s own presumptions, presumptions that cannot be tested on any empirical or logical grounds. Thus assumptions behind some paradigms need to be discussed first, to try to determine how closely or not they “fit” the perceived values and needs of the stakeholders of research projects.

The first, positivism paradigm is the most widely used paradigm for business school research (Orlikowski and Baroudi, 1991) and assumes implicitly or explicitly that reality can be measured by viewing it through a one way, value-free mirror (this discussion of paradigms is based on Perry (2002)). Engineers, for example, use these assumptions to research a physical science phenomenon like a bridge. This “received
view” (Guba and Lincoln, 1994, p. 106) of science has dominated the formal discourse in the physical and social science for some 400 years.

However, the positivism paradigm has been criticised for its exclusion of the discovery dimensions in inquiry and the under-determination of theory (Deshpande, 1983; Guba and Lincoln, 1994). For example, the assumptions of positivism noted above are appropriate in a physical science such as zoology, but may be inappropriate when approaching a complex social science phenomenon, which involves reflective humans, such as marketing.

Indeed, some research has shown that these almost “default” assumptions of business school research are sometimes inappropriate for research about social science phenomena like marketing and management. Consider some of this research in turn. First, replication of positivism research does not usually produce the same results as the prior research, as one would expect from the value-free methods of positivism research about an easily apprehensible reality. Hubbard and Armstrong (1994) found that only 15 percent of replication studies in the social science of marketing fully confirmed the prior findings and only 25 percent partially confirmed them. Indeed, fully 60 percent of replication studies provided results that conflicted with their predecessor. Of those few studies that support prior research, over half were done by the same researcher as did the prior research (Hubbard and Vetter, 1996), confirming that the research did not appear to be done in the value-free way that positivism supposes.

Second, meta-analyses of several positivism studies often confirm this picture of the inadequacy of positivism for investigations of social phenomena. A meta-analysis compares several quantitative studies on a common scale. For example, the correlations over many studies between customer satisfaction and these constructs cover a wide range of values that even spread across positive and negative values (Szymanski and Henard, 2001):

- expectations – −0.13 to +0.66;
- disconfirmation – −0.24 to +0.87; and
- performance – −0.37 to +0.81.

Other research has confirmed this picture of positivism’s somewhat incomplete handling of social science phenomena, despite its predominance in business school research. For example, a study of thorough investigation of senior managers on business school advisory boards, new MBA recruits into firms, their superiors and consultants found that many of these business people considered much academic research coming out of business schools was irrelevant. In the researchers’ own words, they found that (Porter and McKibbin, 1988, p. 180, emphases added):

As far as we could tell, many key managers and executives pay little or no attention to such research and findings [of business academics] . . . the direct impact appears nil . . . not a single [manager] who was interviewed cited the research of business schools as either their most important strength or their major weakness . . . The business world is . . . ignoring the research coming out of business schools.

That is, there seems to be a gulf between academics who usually work from the positivism paradigm and practitioners. Confirming this gulf was a thorough textual analysis of all theory and practice articles on organisational culture in industry (read
by practitioners) and academic journals from 1975 to 1985 that found practitioners were not influenced by academics (Barley et al., 1988). In a more recent investigation of this gulf between practitioners and marketing academics in particular, McKenzie et al. (2002) found very low readership of academic marketing journals by practitioners. Finally, after reviewing recent research about academic research in the UK, France and Germany, Tapp (2004, p. 493) concludes that academic research agendas “are seen as significantly removed from practitioners and their problems”.

In brief, we argue that using positivism as the default paradigm in social sciences like marketing has not been fruitful. This paper will investigate another paradigm that may make academic marketing research more so.

**Constructivism and critical theory paradigms**

The major alternative to positivism in the social sciences is constructivism and critical theory. Essentially, these paradigms argue that the world is “constructed” by people and that these constructions should be the driving forces investigated in social science research. For example, some people perceive Levi jeans are the best jeans and worth buying, even though tests done within a positivism framework by consumer magazines show their cloth, stitching and buttoning are not as well constructed as other brands’ jeans. Similarly, a person can commit suicide because of the black world they perceive themselves to be in, whether that eternal world is “really” as unwelcoming as they perceive it or not. That is, a core element of these two paradigms is that each person’s constructed reality is so powerful an influence on their behaviour that any external reality is relatively unimportant and, moreover, there is no way of comparing the multiple constructed realities of different people.

However, this incommensurability of perceptions, that is, the relativism at the heart of these paradigms, makes the two paradigms a cul de sac for many academic researchers. For example, Hunt (1994) asks how these paradigms can help in trying to research whether the Holocaust occurred to Jews in the 1940s – some people perceive that it occurred and some that it did not, and these differences cannot be compared within the two paradigms of constructivism and critical theory:

It is indeed true that one of the “multiple realities” that some people hold … is that the Holocaust never occurred … An alternative “multiple reality” is that the Holocaust did in fact occur … Which “multiple realities” is correct? Sincere … advocates of reality relativism must stand mute when confronted with this question.

One way offered out of this cul de sac is negotiations between people with different constructed worlds, to arrive at some shared understanding. But will these negotiations be possible when they have unequal power? For example, will burglars who perceive that taking possessions of wealthier people is equitable, and wealthy householders who do not want their homes burgled, be able to negotiate some shared understanding? Pawson and Tilley (1997, pp. 16-21) answer that question with a clear “No”:

It is hard not to snigger when [constructivists like] Guba and Lincoln talk about getting stakeholders to agree to and formally sign “conditions for a productive hermeneutic dialectic” … [Their] hermeneutic dialectic circles (not surprisingly) go round in circles, rather than constituting a linear advance on truth.
In particular, constructivism and critical theory are not especially relevant in research about an organisation having to survive within a market, because marketing managers have to deal with a world that is external, that is out there and that does not particularly care about the perceptions of an individual manager:

In marketing, the company’s external environment is always more important than the internal. The real decisions are made in the world outside – among consumers, middlemen, competitors, politicians, legislators and trade organisations. The external environment is neither particularly knowledgeable nor interested in the company and its development (Gummesson, 2000, p. 105, emphasis added).

In brief, subjective “meaning” within an individual’s constructed realities may indeed determine some outcomes like individual customers’ choice of jeans but not issues concerning the marketing management of those perceptions. Overall, constructivism/critical theory may be useful for research about important social science phenomena like suicide, falling in love, family life, office power politics in big organisations with slow or blurry feedback loops to the outside, political ideologies, racism and nationalism. In this constructivism and critical theory research, findings are related to individual views of the world and create a world of multiple constructed realities. Such views of individuals cannot be usefully compared with those of other individuals (Bazeley, 2004), as noted above.

However, much marketing management is about managing many transactions in an external marketplace and necessarily involves comparing and managing many constructed realities. In this sort of world, research has to be like a court room trial where evidence is sought about the external reality of “guilty or not guilty” that exists independently of what did or did not drive a person to commit the crime, even though that external reality can only be known imperfectly. We need a picture (even though it will be an imperfect one) of how managers can manage the perceptions of many customers within an external market, at a profit. In short, constructivism and critical theory are cul de sacs for much marketing management research.

**Realism paradigm principles**

In turn, the fourth paradigm is realism. Realism is an increasingly useful worldview for some social scientists. Indeed, it is a “growing movement transforming the intellectual scene” in management research. Its philosophical position is that reality exists independently of the researcher’s mind, that is, there is an external reality (Bhaskar, 1978; Harre and Madden, 1975). This external reality consists of abstract things that are born of people’s minds but exist independently of any one person, it “is largely autonomous, though created by us” (Magee, 1985, p. 61). A person’s perceptions are a window on to that blurry, external reality. Realism refers to this external reality as consisting of structures that are themselves sets of interrelated objects, and of mechanisms through which those objects interact. For example, a realism researcher considers a buyer and a seller are “objects” that interact, and their interaction is not merely the creation of someone’s imagination, as noted in the quotation from Gummesson (2002, p. 105) above that “the company’s external environment is always more important then the internal. The real decisions are made in the world outside . . . ”. That is, marketers cannot do whatever they feel like doing in a post-modern fashion (Brown, 1998) because they must aim to meet the needs of an external market place at profit. Thus realism research is searching towards an understanding of the common
reality of an economic system in which many people operate inter-dependently. That is, realists believe that there is a “real” world “out there” to discover.

However, that real external world is only imperfectly and probabilistically apprehensible (Guba and Lincoln, 1994; Tsoukas, 1989; Merriam, 1988). Realists acknowledge differences between the real world and their particular view of it and try to construct various views of this reality in terms of which ones are relative in time and place (Riege, 2003). As such, the underlying structures investigated in a social science are only contingently linked to the experiences that a researcher has in the field. In other words, the combined effects of underlying structures and mechanisms result in patterns in experiences, but those patterns will not always occur. Thus social phenomena by their nature are fragile, so that causal impacts are not fixed but are contingent on their environment. Accordingly, the contexts of observed phenomena are very important. Consequently, the desire of realism research is to develop a “family of answers” that covers several contingent contexts and different reflective participants (Pawson and Tilley, 1997, p. 152). That is, the results sought are not based on an experiment that shows that A directly causes B, like a match directly causes gunpowder to explode in a science like physics. In social science phenomena, there are few direct A to B causality links because any links are strongly influenced by the context. For example, whether the installation of extra lights in a car park influences the crime rate in the car park depends on the four Ps of context – place (where), period (time), people and process (after Pawson and Tilley, 1997; Carson et al., 2001).

Consider more closely the four Ps of context in our lights and car park example. Whether lights affect the crime rate depends on the place of the car park – where it is. If it is in an affluent suburb, what little crime does occur may be reduced; but in low income, high-crime area with inadequate policing, the crime rate might be unaffected. Similarly, if most car parking occurs during the period of daytime, lights may not affect the crime rate. Furthermore, if the people who might steal cars are hardened criminals who have successfully stolen cars before, the existence of lights will not deter them; but if the people are inexperienced, the lights might deter them. In brief, treating people as independent, standardised objects is inappropriate because doing so “ignores their ability to reflect on problem situations, and act upon this” (Robson, 1993, p. 60). That is, the issues are longitudinal over time, as well as being investigated at a particular point in time. Finally, consider the core process of lights shining in cars. If the cars in the car park are expensive products like Mercedes cars, lights may not deter would-be criminals; however, if the cars are cheap “near-bombs”, the lights may make the small payoff from a theft not worth the risk of being caught. In brief, this car park and lights example illustrates the complex cause-and-effect links within the context of a complex, science situation that makes the realism paradigm appropriate for this type of research problem. It is these complex cause-and-effect links grounded in the context of a situation that are referred to as “causal tendencies” or powers (Bhaskar, 1978, p. 20) that are influenced in different ways by hard-to-control contexts and other factors.

This imperfection of the realism view of an external reality implies that a search for just one negative result to disprove a theory may not be as appropriate in realism research in the social sciences as it is in the physical sciences (or as straightforward as Yin (1994, p. 31) suggests). This kind of search for a negative result was advocated by Popper (1959, cited in Easterby-Smith et al., 1991) who said a theory about the colour of swans should not be stated in the positive form that “all swans are white” but in the
negative form that “no swan is black”. Then if a search for black swans results in one sighting, the negative form of the theory will have been falsified, and the theory will have to be recast to become possibly “all swans are black or white”. However, in realism research, one negative result is not proof that the underlying mechanisms have been misunderstood, because the negative result may be a result of the context’s intervention.

Instead of looking for single instances, realism research should be consistently asking why a result has been found, because the observed findings are merely “outcroppings” of a deeper, unobserved and unobservable reality (Neuman, 1994, p. 423) or the tip of an iceberg (Gummesson, 2000). Moreover, quantitative results from a positivist method like a survey are unlikely to provide understanding of this deeper reality and therefore should not be a major part of any realism research project. Easton (1999, pp. 79, 81) sums up the overall implications of the realism position for careful probing of underlying explanations in this way:

... the researcher [has] to identify the contingent causal powers that are operating in the particular situations under research and the ways they combine and interact in order to create the particular events observed ... to seek for the underlying reality through the dark veil that hides it.

Research design in realism research

In the previous section we examined the realism paradigm core ideas and argued for its appropriateness to investigate marketing phenomena. However, in order to build knowledge about the external reality of marketing within this paradigm, explicit principles for analysing and reporting data within this paradigm realism research need to be developed. The aim of this section is to do so. In addition, issues such as the level of prior theory required, the use of replication logic and triangulation are discussed.

Prior theory

Consider how principles of the realism approach have implications for the design of a realism research project that are different from those of constructivism and critical theory research. First, realism researchers enter the field with prior theories. In contrast, grounded theory researchers, for example, gradually construct a theory from interacting with their own accumulating data, without any inputs from other people’s theories in the literature. For example, a researcher investigating beer drinking was not allowed to read any other research about beer consumption until after all her data had been collected (Carson et al., 2001). For realism researchers, there is an external reality and other people have usually researched or experienced aspects of that reality before, and so their perceptions are some of the many “windows” on to that reality deserving some consideration before realism data collection starts (Perry et al., 1999, p. 18). In other words, realism researchers can support Miles and Huberman’s (1994, p. 17) advice that a preliminary conceptual framework about the underlying structures and mechanisms should be developed from the literature and/or from people with experience of the phenomenon, before entering the field to collect data – “at the outset ... [develop a] rudimentary conceptual framework ...” However, Miles and Huberman base their position on the practicalities of efficient research and aim their advice at beginning researchers, while realism researchers base their position on their ontology.
A practical effect of this realism approach to research design is that realism research will often consist of two stages. The first stage will be relatively exploratory, while the literature is step-by-step “enfolded” around sequential interview data, as in the analytic induction method or convergent interview methodology, for example (Carson et al., 2001; Hyde, 2000). In this realism research, the researcher should start reading the literature about the phenomenon before the first interview and continue reading it while the interviews are proceeding, enfolding the literature around the findings as they emerge from the interviews. Having prior knowledge also helps in the selection of interviewees, and allows the opening and probe questions in the first and later interviews to be more effective and efficient. It also helps the researcher to make more believable, small encouraging noises during the “conversation” of the interview, as well as helping the researcher to recognise when something important has been said (although the interviewee should not be biased towards comments that please the interviewer but do not reflect their own perceptions of reality). In these ways, rapport and interview dynamics are assisted through a sharing of concerns. In brief, prior theory is precious and is gradually built on in stage one. How that prior theory and its initial framework are incorporated is dealt with below.

Consider an example of convergent interviewing in stage one of a realism research project. Woodward (1997) was investigating how brand equity was measured in services. Although the literature about measuring brand equity of goods was extensive, little was known about measuring the brand equity of services. In the first stage of her research project, she had to find out what was done in the real world. So she arranged to interview three consultants in her region and two by telephone in the country’s capital city, to find the major issues involved in the measurement of the brand equity of services. Her first interview’s questions were based on her limited, initial reading and asked questions like “Is there a difference between the marketing of goods and services?”, “Can brand knowledge of a service be made up of brand awareness and image?”, and “What would be an interesting service brand for me to study?” As the interviews proceeded, she added questions based on the previous interviews and on her increasing knowledge of the branding literature. After five interviews, she understood the critical issues involved in her study and had gathered examples of service brands – she was confident she was on track for the rest of her research project.

In brief, prior theory in realism research can be viewed as additional evidence, that is, perceptions, which can be used to clarify the imperfectly apprehensible external reality by triangulating on that reality (Riege, 2003; Perry, 1998).

**Triangulation**

Triangulation (Denzin, 1978) has been used as a synonym for mixed methods (Bazeley, 2004). However, the idea of triangulation assumes a single reality and thus is only appropriate within the realism paradigm and is not appropriate within constructivism or critical theory research – those two paradigms assume that there is not a single objective reality but rather multiple subjectively constructed realities that are incommensurable. Although Denzin (1978) initially argued for triangulation in all qualitative research, he backed away from that position for constructivism and critical theory research (Denzin, 1989) (except to overcome personal biases of the researcher).
In other words, why use different methods to try to validate a constructivism or critical theory reality that cannot be related to the many other such realities?

However, in realism research, triangulation provides a “family of answers” (Pawson and Tilley, 1997) that covers its reality’s several contingent contexts, to capture a single, external, and complex reality. For example, different interviewees are asked the same question to test whether they answer with the same perceptions. Sometimes, these different triangulation sources will provide different perceptions, but those different perceptions should not be considered to be confusing glimpses of the same reality, rather they should be considered to foster understanding of the reasons for the complexities of that reality. This is another reason why mere numbers should not be used in realism data analysis and why the data analysis should concentrate on “reasons why”.

Replication

Another implication of the realism paradigm for research design concerns selection of cases, usually called replication. (Here, the term “case” refers to the unit of analysis, that is, an example of the realism structure and mechanism that is being investigated, and so is not limited to cases study research.) Replication in positivism research refers to repeating a study in various ways, expecting the results to be the same (Hubbard and Armstrong, 1994). In contrast, in realism research, replication refers to choice of cases where the results are expected to be the same or different. In other words, careful choice of cases should be made such that they either produce (Yin, 1994):

- similar results for predictable reasons, that is, literal replication; or
- contrary results for predictable reasons, that is, theoretical replication.

For example, a researcher might predict that brokers in a distribution chain would say roughly the same thing in interviews (literal replication), and that end-consumers would say different things from the brokers (theoretical replication).

Two issues about theoretical and literal replication in realism research require further discussion. First, as noted, contingencies in the context of phenomena are critical in realism research. Thus the two types of replication should be based on a priori contextual issues, such as level in the distribution chain above. Studying the effect of the contexts will help to provide better understanding of the underlying structure of objects and mechanisms, which are the core concerns of a realism researcher.

This issue of contextual replication implies that realism research usually involves multiple cases. These several cases should be regarded as “multiple experiments” and not “multiple respondents in a survey”, and so replication logic and not sampling logic should be used for multiple-case studies (Yin, 1994, pp. 45-50). Thus relevance rather than representativeness is the criterion for case selection (Stake, 1994).

Thus there will be some within-case analysis of each case, as the first step in data analysis (as recommended by Patton, 1990, p. 388). However, these single case analyses are not as “useful or important” for understanding underlying structures and mechanisms, as the later cross-case analyses are (Yin, 1989, p. 106). Of course a single case should provide more in-depth data than multiple cases can, within the time and resource constraints of a research project. However, relying on just one case to provide the contextual conditions investigated in a realism research project requires an
extraordinarily rich case. Perhaps a longitudinal study of just one firm over several
years of business cycles and organisational structures might provide equivalent data
to multiple cases over one or two years. That is, a single case realism research project
should be considered only when one or more of the three special, single-case conditions
in Yin (1994) are present. Moreover, a single case project should include two or more of
the conceptual frameworks noted above, to be “triggers” for eliciting understanding
about underlying structures and mechanisms.

A second issue about replication in realism research is that different contexts may
or may not produce different findings. One reason for this situation is that research
findings may be affected by the way that interviews were conducted in different cases,
rather than by the contexts around the phenomena. For example, different levels of
rapport with different interviewees may provide findings that similar levels of rapport
would not have. To guard against this possibility, the second stage of a realism project
can aim at confirming or verifying the conceptual framework developed in the first
stage by using the same interview protocol across all cases. That is, the first stage has
a different aim from the second stage. Stage one emphasises explanation as it builds a
conceptual framework; stage two emphasises prediction of reasons for phenomena
while it confirms or disconfirms that conceptual framework.

In brief, replication is a tool used in realism research design to begin the process of
knowledge creation, but that process of knowledge creation depends on going deeper
than contextual issues in the analysis of data about outcroppings of observations,
further down to the underlying structures and mechanisms. Thus we now consider
data analysis in realism research.

Data analysis in realism research
Because realism research is about underlying structures and mechanisms, its data are
almost always qualitative data about meanings. How should transcripts of interviews
or reports of observations be analysed? Guidelines for data reduction and display can
be developed that fit the principles of realism.

Data reduction
The first guideline for realism research refers to how codes are generated for use in the
first stage of reducing the data to a manageable form. To begin, realism research is not
interested in virtually every detail of all the perceptions of respondents, like
constructivism and critical theory research is. There are usually three coding passes in
the data reduction phase of constructivist or critical theory data analysis. The first
pass is usually an open pass where codes are generated from the perception data
themselves (Neuman, 1994). All the perceptions in the transcripts are the reality being
investigated in constructivism research.

In contrast, in realism research, only those perceptions relevant to the external
reality are worth investigating. Thus the codes used to reduce data in realism research
are usually generated from the conceptual framework rather than from the data. In
other words, realism researchers can leapfrog the first pass used in constructivism
research and move directly to the second, axial coding pass where codes from the
conceptual framework are allocated to chunks of text. Then they proceed to the third,
selective coding pass of comparisons and interpretations.
There are two problems with this stage of data reduction in realism research. First, this realism procedure may be that some patterns, which are relevant to the underlying structures and mechanisms were not included in the conceptual framework, and so may be missed for the second axial coding pass. However, stage one of the research project should have picked up most relevant structures and mechanisms and included them in the conceptual framework. Moreover, the interviews of stage two will have begun with open questions that should uncover any structures and mechanisms missing from the initial conceptual framework. That is, in the interviews, issues in the conceptual framework will only be discussed in answers to closed, probe questions if they were not raised in the answer to the open questions. Finally, the last question in any interview should ask if there is anything relevant that has not been asked in the interview. If any new issues are raised in the interviews, they can be added to the data analysis codes based on conceptual framework. The risk of missing some issues about the underlying structures and mechanisms during coding is thus addressed, as far as possible.

A second problem with this stage of data reduction is that the researcher’s own biases may "corrupt" the process. This corruption will be minimised through his or her interactions with other researchers’ literature and with stage 1 interviewees while developing the initial conceptual framework. Nevertheless, this concern does raise the issue of how much a researcher’s own values can influence the picture of an external reality that is being developed in realism research. Perhaps the best that one can aim for value-awareness rather than value-removal. Thus the researcher’s own background and values should be stated explicitly in terms such as in the following example (Thompson, 2003):

I am a 42-year-old male European Australian with a wife and two children. I have lived in countries outside Australia for about 2 years. I have travelled extensively in Australia and overseas including having visited 20 countries, six of which were developing countries. I am trained in western management at master’s degree level and have worked as a manager of Australian enterprises for around five years. I have also studied cross-cultural management, and worked in cross-cultural situations including in emergency aid and development aid situations. I have studied participatory theory at master’s degree level. My understanding of technical issues is limited to that of an average Australian who has no formal training in technical areas . . . I have values that reflect my background above, but aimed to be aware of those values within my thesis research, and aimed to minimise the impact of those values on findings (Carson et al., 2001).

Data display
After data reduction, the next step is data display. The conceptual framework and the data determine how the displays are constructed. However, four realism guidelines can be suggested. First, the displays can show numerical frequencies of empirical experiences, but the interpretation of the displays in the text should eschew numbers and concentrate on interpretations (although the numbers in the displays should be referred to for the reader to be able to follow the line of reasoning). For example, text could look like this:

Most respondents thought shipping was not important because schedules were reliable (row 2 of table 4.3). “Thank goodness the unions are tame” (A2).” No worries – we have good port agents and shipping lines” (B1).
After all, the cases were not a random sample and precise frequencies formed from them are not the end point of the analysis.

Second, every observation should have an explanation of why the observation occurred, as the example above showed. In realism research, these explanations should focus on contingencies, structures and mechanisms. Next, representative quotations in support of explanations should occur frequently in the text with links to the respondent who said it, to provide the in-depth understanding that realism researcher seek.

Finally, data analysis computer software like NUD*IST that are often used in constructivism and critical theory research can track and match every phrase of every perception in a transcript, but that approach is not essential in realism research. Constructivism and critical theory research need to thoroughly map a subjectively constructed world, but realism research is primarily concerned with only those perceptions about an external, objective reality. This software may help in indexing those limited number of perceptions that are relevant to the purpose of a realism research project but our experience is that the costs in time and effort of setting up and running the software outweigh the indexing benefits. Realism research emphasises relationships, connections, and creativity, and computer software may lead to a decrease in sensitivity about these (Carson and Coviello, 1996). That is, computer programs are suitable for subjective research that is “not aware of anything other than the text properties of the data and cannot interpret, make deductions or generalisations from the data” (Dembrowski and Hammer-Lloyd, 1995, p. 53), but realism research is different.

Conclusions about realism research and implications for further research

In summary, the realism paradigm appears to be appropriate for researching some marketing phenomena. Indeed, it appears to be more appropriate than the default positivism paradigm and more suited for research about the external reality of a market place than the very subjective constructivism and critical theory paradigms. The realism paradigm considers the external reality of the market place but acknowledges that the complexities of a market place need to be investigated with in-depth qualitative research methods instead of somewhat inappropriate positivism methods. Use of the realism paradigm favours a two-stage approach to a research project, one stage that builds one or two conceptual frameworks, and one or more stages that confirm or disconfirm the framework(s). Replication logic should be used to explore the effects of context upon the underlying structures and mechanisms that are the core of the frameworks. Above all, realism data analysis should concentrate on interpretations of the data to focus on underlying structures and mechanisms.

Finally, what are the implications of the discussion above for the research that follows realism research? Realists would correctly agree that other contexts of the studied structures and mechanisms need to be investigated, and other structures and mechanisms may be worth investigating. Nevertheless, some realists would argue that quantitative theory testing is not required after a realism research project, for two reasons. First, the positivism paradigm underlying most quantitative theory testing will investigate different and more shallow phenomena than the deep structures and mechanisms investigated in realism research. That is, quantitative methods provide answers to different questions than those of qualitative methods. Next, quantitative theory testing cannot deliver the statistical generalisation to a population of marketing
phenomena that it purports to deliver, as noted above. In brief, a realism project does not necessarily lead to a later, theory-testing project. Nevertheless, realism research could be used to generate empirically based conceptual frameworks that could be operationalized for later testing. However, the later research’s overall question will have to be changed from a “how” or “why” question into a “what” question (Yin, 1994).

References


Neuman, W.L. (1994), *Social Research Methods: Qualitative and Quantitative Approaches*, Allyn and Bacon, Boston, MA.


Further reading


About the authors

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