Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm

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Introduction

In essence, the aim of much marketing research is to describe and explain complex, social science phenomena. An appropriate scientific paradigm within which to research these marketing phenomena is realism (Hunt, 1991; Perry et al., 1999). Scientific research paradigms are overall conceptual frameworks within which some researchers work, that is, a paradigm is a world-view or "a set of linked assumptions about the world which is shared by a community of scientists investigating the world" (Deshpande, 1983, p. 101). There are four such paradigms of:

(1) positivism;
(2) critical theory;
(3) constructivism; and
(4) realism.

The aim of this paper is to develop criteria by which to judge research from within the fourth of these paradigms, the realism paradigm. This realism paradigm is implicit in much qualitative research, but no criteria for judging its quality are available. That is, no quality criteria have been developed for realism research, even though they have been for positivism and constructivism research. Essentially, we establish six comprehensive and explicit criteria that should be used to judge the quality of realism research that span each of the three elements of a paradigm: (1) ontology; (2) epistemology; and (3) methodology.

Our contribution is that establishment of those criteria.

The paper has three main parts. We begin by noting the four scientific paradigms and showing how relevant the realism paradigm is for much marketing research. Then the six criteria for realism research are developed. Finally, the implications of those criteria are demonstrated in an example of realism research.

Four scientific research paradigms and the importance of the realism paradigm to qualitative marketing research

Guba and Lincoln (1994) synthesise scientific paradigms into the four categories:

(1) positivism;
(2) realism;
(3) critical theory; and
(4) constructivism.

Each with the three elements:
(1) ontology;
(2) epistemology; and
(3) methodology.

Briefly, ontology is the “reality” that researchers investigate, epistemology is the relationship between that reality and the researcher, and methodology is the technique used by the researcher to investigate that reality. Guba and Lincoln’s categorisation is summarised in Table I; it is the basis of the discussion in this section, along with Perry et al. (1999).

Essentially, positivism predominates in science and assumes that science quantitatively measures independent facts about a single apprehensible reality (Guba and Lincoln, 1994; Tsoukas, 1989). In other words, the data and its analysis are value-free and data do not change because they are being observed. That is, researchers view the world through a “one-way mirror” (Guba and Lincoln, 1994, p. 110). However, a positivism view is inappropriate when approaching a social science phenomenon like marketing networks which involve humans and their real-life experiences, for treating respondents as independent, non-reflective objects “ignores their ability to reflect on problem situations, and act on these” in an interdependent way (Robson, 1993, p. 60). That is, positivists separate themselves from the world they study, while researchers within the three other paradigms acknowledge that they have to participate in real-world life to some extent so as to better understand and express its emergent properties and features.

In contrast with positivism’s relevance to much quantitative research, the next three paradigms are relevant to much qualitative research. The second paradigm, critical theory, emphasises social realities incorporating historically situated structures. Thus critical theory researchers aim at critiquing and transforming social, political, cultural, economic, ethnic and gender values. Thus research inquiries are often long-term ethnographic and historical studies of organisational processes and structures. Assumptions are essentially subjective and hence knowledge is grounded in social and historical routines and is therefore value-dependent and not value-free (Guba and Lincoln, 1994).

However, this paradigm is also not appropriate for much marketing research unless the researcher aims to be a “transformative intellectual” who liberates people from their historical mental, emotional and social structures (Guba and Lincoln, 1994, p. 112). For example, most business network research aims at understanding the actions of the decision makers involved, rather than changing them or their approaches to strategy formulation.

<table>
<thead>
<tr>
<th>Table I</th>
<th>Four categories of scientific paradigms and their elements</th>
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<tr>
<td><strong>Paradigm</strong></td>
<td><strong>Ontology</strong></td>
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<tr>
<td><strong>Ontology</strong></td>
<td>Reality is real and apprehensible</td>
</tr>
<tr>
<td><strong>Epistemology</strong></td>
<td>“Virtual” reality shaped by social, economic, ethnic, political, cultural, and gender values, crystallised over time</td>
</tr>
<tr>
<td><strong>Common methodologies</strong></td>
<td>Multiple local and specific “constructed” realities</td>
</tr>
<tr>
<td><strong>Realism</strong></td>
<td>Reality is “real” but only imperfectly and probabilistically apprehensible</td>
</tr>
</tbody>
</table>

Notes: essentially, ontology is “reality”, epistemology is the relationship between that reality and the researcher, and methodology is the technique used by the researcher to investigate that reality; adapted from Perry et al. (1997, p. 547) based on Guba and Lincoln (1994)
The third paradigm is **constructivism**. Constructivism holds that truth is a particular belief system held in a particular context. Like critical theory, constructivism inquires about the ideologies and values that lie behind a finding so that reality actually consists of “multiple realities” that people have in their minds. Researching this constructed reality depends on interactions between interviewer and respondent, that is, the researcher has to be a “passionate participant” during his/her field work (Guba and Lincoln, 1994, p. 112). This constructivism approach may be suitable for some social science and consumer behaviour research like that about religion, beauty or prejudice but it is rarely appropriate for marketing management research because the approach excludes concerns about the important, and clearly “real”, economic and technological dimensions of business (Hunt, 1991).

Finally, **realism** believes that there is a “real” world to discover even though it is only imperfectly apprehensible (Godfrey and Hill, 1995; Guba and Lincoln, 1994; Merriam, 1988; T’soukas, 1989). Popper (Magee, 1985, p. 61) summarises the three ontological assumptions above in three “worlds”. World one is positivist and consists of objective, material things. World two is related to critical theory and constructivism, and is the subjective world of minds. World three is related to realism and consists of abstract things that are born of people’s minds but exist independently of any one person . . . “the third world is largely autonomous, though created by us”. Thus, Popper distinguishes realism’s world three from the very objective world one and the very subjective world two.

In particular, this distinction between the two qualitative paradigms of realism and constructivism is captured in Stake’s (1995) distinction between intrinsic and instrumental case research. In an intrinsic case study, the case itself is the focus. In an instrumental case study, the case is being used to understand something else, that is, to understand world three in Popper’s terms. In other words, a participant’s perceptions are being studied for their own sake in constructivism research, but in realism research, these perceptions are being studied because they provide a window on to a reality beyond those perceptions.

In brief, qualitative research actually operates within three paradigms and the realism paradigm is one of the most important of these for marketing researchers. Figure 1 summarises this importance in a representative range of methodologies from theory-building to more theory-testing methodologies, and shows that realism research could underlie many of the methodologies used by marketing researchers.

To begin at the top left side of Figure 1, the grounded theory methodology is clearly constructivist because no “outside” reality is meant to intrude into the research, for example, grounded theory researchers are urged not to read reports of similar research done before. However, realism becomes relevant when moving on from this very theory-building methodology to in-depth interviews and focus groups methodologies that have an interview protocol with probe questions based on what the researcher wants to find out about a predetermined outside reality. Further on, instrumental case research (Stake, 1995) is clearly interested in an extrinsic reality which could be discerned through the perceptions of interviewees.

In turn, even the relatively quantitative methodology of structural equation modelling is also within the realism paradigm. In those research situations when complex phenomena have already been sufficiently understood to warrant an attempt at generalisation to a population, structural equation modelling may be the only appropriate survey analysis technique for a realism researcher to use, for it has two attractive features:

1. it models structures with complex interdependencies; and
2. it explicitly allows for multi-item scales and some measurement error in its “unobservable” constructs (Hair et al., 1995; Hunt, 1991, p. 397).

In conclusion, realism is a relevant paradigm for many qualitative researchers in marketing. But how should the quality of realism research be judged, if it is so different to research conducted within other paradigms? That question is the focus of the rest of this paper.

**Six criteria for judging the quality of realism research**

Because a paradigm is a world view, spanning ontology, epistemology and methodology, the quality of scientific research done within a
paradigm has to be judged by its own paradigm’s terms. For example, positivism researchers consider internal validity, reliability, construct validity and external validity to be essential criteria for quality (Chia, 1997; Neuman, 1997). In turn, constructivists view “truth” or credibility, neutrality or confirmability, consistency or dependability and applicability or transferability to be the essential criteria for quality (Lincoln and Guba, 1985) and critical theory researchers appear to hold somewhat similar positions. However, no criteria for quality have yet been developed by realism researchers, instead they appear to use a mix of the criteria that have been developed for positivism and/or constructivism research (for example, Riege and Nair, 1996; Yin, 1994). We now fill that gap.

When quality criteria in realism are contrasted with those of other paradigms, there appears to be six major differences and these will be discussed in this section as each of the realism criteria are justified. The criteria are summarised in columns (i), (ii), (v) and (vii) of Table II. The Table can be used to compare the criteria for realism in column (i) that are developed in this paper, with the criteria in other paradigms. For example, the blank cell in row g, column (vi) shows that positivism does not explicitly address the same issue of analytic generalisation as does this paper’s discussion of realism.

Incidentally, the criteria for qualitative research in general from Miles and Huberman (1994) are included in column (vi) of Table II but their criteria have little explicit recognition of the differences between constructivism and realism research and so little reference will be made to column (vi) in the discussion below. In other words, that column has been included only to make the table a comprehensive one. The other columns of (iii) and (iv) in Table II refer to case study research in particular and are an example of how the criteria can be implemented in a particular research project conducted within the realism paradigm.

First, consider ontology. The ontology of realism assumes that the research is dealing with complex social phenomena involving reflective people; in Popper’s terms, this reality is world three (Magee, 1985) and is the world of realism, as noted above. World three consists of the independent creations of minds or living creatures, that is, it is “the world of ideas, art, science, language, ethics, institutions . . .” (Popper, cited in Magee, 1985, p. 61). In contrast, positivism operates in the objective world one and constructivism operates in the subjective world two.

Given this range of worlds between paradigms, it appears that the first step to assessing realism research is to ask if the world being investigated is appropriately world three, that is, our first quality criterion is “ontological appropriateness”. No other list of criteria does this, as row c of Table II shows.

Our second criterion also refers to ontology. In positivism research, internal validity is achieved by the extent to which changes in a dependent variable can be attributed to controlled variation in an independent variable (Lincoln and Guba, 1985, p. 290). In
<table>
<thead>
<tr>
<th>Developed for this paper (i)</th>
<th>Brief description of criteria for this realism research (ii)</th>
<th>Case study techniques within this realism paradigm (iii)</th>
<th>Criteria for case research (iv)</th>
<th>Criteria for constructivist or naturalist research (v)</th>
<th>Criteria for qualitative research (vi)</th>
<th>Criteria for positivism research (vii)</th>
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<tbody>
<tr>
<td>c  Ontology</td>
<td></td>
<td></td>
<td></td>
<td>(World 2 in Magee (1985))</td>
<td>(A single tangible reality consisting of discrete elements (World 1 in Magee (1985)))</td>
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<tr>
<td>1 Ontological appropriateness</td>
<td>Research problem deals with complex social science phenomena involving reflective people (world 3 in Magee (1985))</td>
<td>Selection of research problem, for example, it is a how and why problem</td>
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<td>d  2 Contingent validity</td>
<td>Open “fuzzy boundary” systems (Yin, 1994) involving generative mechanisms rather than direct cause-and-effect</td>
<td>Theoretical and literal replication, in-depth questions, emphasis on “why” issues, description of the context of the cases</td>
<td>Internal validity</td>
<td>“Truth value” or credibility</td>
<td>Internal validity/credibility/authenticity</td>
<td>Internal validity</td>
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<td>e  Epistemology</td>
<td>Neither value-free nor value-laden, rather value-aware</td>
<td>Multiple interviews, supporting evidence, broad questions before probes, triangulation. Self-description and awareness of own values. Published reports for peer review</td>
<td>Neutrality or confirmability</td>
<td>Objectivity/confirmability</td>
<td>Value-free, one-way mirror (Guba and Lincoln, 1990)</td>
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<tr>
<td>f  Methodology</td>
<td>Trustworthy – the research can be audited</td>
<td>Case study database, use in the report of relevant quotations and matrices that summarise data, and of descriptions of procedures like case selection and interview procedures</td>
<td>Reliability &amp; Consistency</td>
<td>Dependability</td>
<td>Reliability/dependability/audibility</td>
<td>Reliability</td>
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<tr>
<td>g  5 Analytic generalisation</td>
<td>Analytic generalisation (that is, theory building) rather than statistical generalisation (that is, theory-testing)</td>
<td>Identify research issues before data collection, to formulate an interview protocol that will provide data for confirming or disconfirming theory</td>
<td>External validity through the specification of theoretical relationships, from which generalisations can be made</td>
<td>Applicability or transferability</td>
<td>External validity/transferability/fittingness</td>
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<tr>
<td>h  6 Construct validity</td>
<td>Use of prior theory, case study database, triangulation</td>
<td></td>
<td>Construct validity</td>
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<td></td>
<td>Note: critical theory has not been included in this table as no quality criteria that distinguishes it from constructivism could be found</td>
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contrast, realism research deals with open fuzzy boundary systems (Bhaskar, 1979; Yin, 1994). This social world of realism is not a laboratory. In the social world, actors make choices but, as noted under ontological appropriateness above, these actors do not make choices in the mechanical ways that positivism researchers assume happens in the laboratory – that is, “The social world is an ‘open system’ … Unlike a laboratory where the conditions for the effective triggering of causal mechanisms can be created, no such opportunity exists in the social world” (Pawson and Tilley, 1997, p. 150). Rather than nomothetic, direct cause and effect paths, realism research discovers knowledge of the real world by naming and describing broad, generative mechanisms that operate in the world (Bhaskar 1979; Perry et al., 1999).

In other words, social phenomena by their nature are fragile, so that causal impacts are not fixed but are contingent upon their environment. Thus, in contrast to positivism research, the desire of realism research is to develop a “family of answers” that cover several contingent contexts and different reflective participants, albeit imperfectly (Pawson and Tilley, 1997, p. 152). In contrast, the existence of multiple realities within constructivism means that there is no “benchmark” by which to judge the quality of this family of answers (Lincoln and Guba, 1985, p. 295). Hence, our second quality criterion for realism research is “contingent validity”, that is, validity about generative mechanisms and the contexts that make them contingent. Thus our criterion is different from both constructivism’s and positivism’s criteria (row d of Table II).

Turning from ontology to epistemology, positivism research views reality through a “one way mirror” where the researcher is removed from the object or phenomenon under study (Guba and Lincoln, 1994, p. 110). That is, reality is “out there” to be discovered objectively and value free (Neuman, 1997, p. 64). In contrast, the constructivist and critical theory paradigms assume a subjective relationship between the researcher and the respondent whereby the researcher becomes immersed in the research through shared knowledge and social action (Manning, 1997). Thus constructivism and critical theory are value-laden.

In contrast, realism is neither value-laden nor value-free, rather, realism researchers are value-aware. That is, realists accept that there is a real world to discover even if it is only imperfectly and probabilistically apprehensible. In other words, a participant’s perception is not reality as constructivism and critical theory would suggest. Rather, a participant’s perception for realism is a window to reality through which a picture of reality can be triangulated with other perceptions, as noted above. That is, realism relies on multiple perceptions about a single reality, and this is the third of our six quality criteria. These multiple perceptions involve triangulation of several data sources, and of several peer researcher’s interpretations of those triangulations. Thus, this criterion is different from constructivism’s and positivism’s criteria (row e of Table II).

The three remaining criteria for realism research relate to methodology: methodological trustworthiness, analytic generalisation (that is, theory-building) and construct validity. The first of these, and the fourth in our list of quality criteria, is “methodological trustworthiness” (row f of Table II). Methodological trustworthiness refers to the extent to which the research can be audited by developing a case study database and by the use of quotations in the written report. Although this description of methodological trustworthiness may be regarded as similar to the concept of reliability within the positivism paradigm, reliability within the positivism paradigm is concerned with estimates of the degree to which a measurement is free of random or unstable error (Emory and Cooper, 1991). Our criterion of methodological trustworthiness is broader than positivism’s criteria and is somewhat similar to constructivism’s consistency or dependability (Lincoln and Guba, 1985).

Our penultimate criterion is “analytic generalisation” (Yin, 1994), that is, theory-building. Given the complexity of realism’s world, realism research must be primarily theory-building, rather than the testing of the applicability of a theory to a population, which is the primary concern of positivism. Realism researchers do not say this theory-testing should not be done, they merely say that the theory has to be built, and confirmed or disconfirmed, before its generalisability to a population is tested. Only constructivism has a similar criterion (row g of Table II).
Our final criterion is “construct validity”. It is similar to the construct validity of positivism research and refers to how well information about the constructs in the theory being built are measured in the research. This criterion is somewhat similar to our fifth criterion of theory-building above but is more precise in its reference to constructs. It is explicitly included as a criterion by Yin (1994), an authority on case study research (row h of Table II) and so is included here. Constructivism does not have a similar criterion because their theories are not about a world where the appropriateness of measures can be assessed.

Comparison of realism’s six criteria with criteria of other paradigms

As noted, Table II can be used to compare our realism criteria with those of positivism and constructivism. Consider this comparison for each paradigm in more detail. First, how different are the criteria from positivism’s? Our realism criteria make ontological assumptions explicit, rather than implicit. Given the importance of ontology within a paradigm, it seems to us that ontological appropriateness should be explicit in this way. Furthermore, the contingent context of realism is appropriately emphasised in our criterion of contingent validity far more than if positivism’s criterion of internal validity was merely transferred to realism research. Finally, realism emphasises the building of a theory rather the statistical testing of the generalisability of a theory to a population.

Second, how different are our criteria from constructivism’s? Ontological appropriateness is again explicit in our realism criteria but not in constructivism’s. Also, construct validity is included among our criteria, reflecting the concern of realists for a reality “out there” rather than “internal” realities.

Finally, compare our realism criteria with Yin’s (1994) criteria that are sometimes used to judge case-based research. Again we make ontological appropriateness explicit while he does not. Admittedly, Yin mentions ontological issues in his definition of a case, but he does not include them as criteria of quality research. Given the importance of ontology among the three levels of a paradigm, ontological appropriateness should surely be placed among the criteria for realism research. The same observation relates to our criteria of multiple perceptions – we make it an explicit criteria while Yin hides it somewhat under his definition of a case study. We prefer our more explicit approach for the reasons given above.

Implications for qualitative researchers and reviewers and examiners of their realism research

Above, we have identified six comprehensive criteria that could be explicitly used to judge realism research, in the first attempt to assess quality within realism’s own world-view. The practical implications for qualitative researchers and reviewers and examiners of their realism research are listed in column (iii) of Table II. Because the discussion above has necessarily been rather conceptual, these implications are presented next in a concrete example of a qualitative research project.

The example concerns a researcher who wanted to know how and why customers’ views of quality service changed over time and how he and his team could tap into that process (Teale, 1999). Case-based research was the most appropriate methodology to use (Perry, 1998). He read some of the literature about customer service and carried out preliminary interviews with industry consultants and a very experienced broker in another area. From this exploratory information, he drew up an initial theoretical model of what he was looking for, and wrote an interview protocol based on the model. Then he used that interview protocol as a template to investigate eight individual cases – these cases involved the relationships between the supplier of policies and a broker, and between a broker and the end-consumer. Most of his data about each case were gained from in-depth interviews with managers in firms that supplied insurance products, with managers in other broker firms, and with end-consumers. He also gathered data from brochures, trade magazines and from interviews with consultants and government regulators, to triangulate the picture he was discovering. He then compared the eight cases and built a final theory of how the relationships grew and what influenced each stage of that growth.

In his report, Teale explicitly addressed criteria that could be used to judge its quality.
Consider the first criterion about the ontology of realism. The ontology of realism assumes that the research is dealing with complex social phenomena outside people’s minds involving reflective people; in Popper’s terms, this reality is world three. Teale’s research about relationships between managers and customers was clearly of this type.

Second, social phenomena by their nature are fragile, so that causal impacts are not fixed but are contingent on their environment. Hence, our second quality criterion for realism research is “contingent validity”, that is, validity about generative mechanisms and the contexts that make them contingent. Teale ensured he met this criterion by concentrating in his report on why things happened and not just describing them, using theoretical and literal replication to ensure that information was obtained from appropriate, information-rich sources (Patton, 1990; Yin, 1994), and describing the context of his cases like the size of firms, dates of the interviews and the management position of the interviewee.

In contrast, realism is neither value-laden nor value-free, rather, realism researchers are value aware. That is, realists accept that there is a real world to discover even if it is only imperfectly and probabilistically apprehensible. In other words, a participant’s perception is not reality as constructivism and critical theory would suggest. Rather, a participant’s perception for realism is a window to reality through which a picture of reality can be triangulated with other perceptions, as noted above. That is, realism relies on multiple perceptions about a single reality, and this is the third of our six quality criteria. These multiple perceptions involve triangulation of several data sources, and of several peer researcher’s interpretations of those triangulations. Thus, this criterion is different from constructivism’s and positivism’s criteria (row e of Table II).

The three remaining criteria for realism research relate to methodology:
(1) methodological trustworthiness;
(2) analytic generalisation; and
(3) construct validity.

The first of these, and the fourth in our list of quality criteria, is methodological trustworthiness, which refers to the extent to which the research can be audited by developing a case study database, for example. Teale provided a summary of the contents of his case study database in an appendix to his report and said that that a reader could ask for any parts of it. He also used quotations and matrices that summarised his findings in the report, and carefully described the key procedures he used such as case selection and data analysis. He also described steps taken in the interviews to build rapport without introducing bias.

Analytic generalisation, or theory-building, is the next criterion. Given the complexity of realism’s world, realism research must be primarily theory-building, rather than the testing of the applicability of a theory to a population which is the primary concern of positivism. Thus Teale developed an initial theory which was confirmed or disconfirmed by his data (Miles and Huberman, 1994), and so he presented a final theory (and a model of it) at the end of his report, in a form suitable for testing at a later stage.

Our final criterion is construct validity. It is similar to the construct validity of positivism research and refers to how well information about the constructs in the theory being built are “measured” in the research. To meet this criterion, Teale used prior theory from customer service literature to define his constructs, as well as maintaining the case study database and using the triangulation mentioned above.

Conclusion

Realism is an important scientific paradigm in marketing research but criteria with which to judge its quality have not been developed. Consequently, we have established six comprehensive criteria that could be explicitly used to judge realism research. It is the first attempt to assess quality within realism’s own world-view. The practical implications for qualitative researchers and reviewers and examiners of their realism research were demonstrated in an example report of a case-based researcher.

In conclusion, realism is a scientific paradigm that is appropriate for much research in marketing and the use of these six criteria will facilitate the further, careful adoption of that paradigm by qualitative researchers.
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