ONE

Introduction

When you undertake a qualitative research study, there are a number of prior aspects that will need addressing: your proposed topic area, is it suitable for the collection of qualitative data?; then yourself, what impact will your prejudices have on the research and how will you treat your potential readers?; and finally, which paradigm would best fit your research question: Realism/postpositivism, Critical theory, Interpretivism/Constructionism, Postmodernism, Poststructuralism or Mixed/multiple methods? Then, having dealt with these decisions, it is always useful to know how to evaluate a piece of qualitative research in order to ensure that your design ticks all the right boxes.

KEY POINTS

- The characteristics of qualitative research
- The best topic areas for qualitative research investigations
- Issues you need to think about prior to commencing research
- Research paradigms
- How to evaluate qualitative research

Introduction

Qualitative research is a fascinating topic. It provides detailed information and can progress knowledge in a variety of areas: it can help assess the impact of policies on a population; it can give insight into people's individual experiences; it can help evaluate service provision; and it can enable the exploration of little-known behaviours, attitudes and values.

Knowledge is a key term here. This can take a variety of forms, and in most cultures there are various claims to knowledge:

1 The first is *tenacity* – this refers to a belief that has been held for a long time, for example doing good to others is viewed as the right thing to do because eventually this good will be reflected back to you; there may be no evidence to prove this is true but we still tenaciously claim that this is so.

2 *Intuition* or our gut feeling is another source of knowledge – for example, we may feel that in a particular situation X is the best thing to do or the right answer; there may again be very little evidence that this is so but if it feels right, we tend to follow that particular path.

3 *Authority* – in particular religious or legal authority provides directions for the way we ought to behave in order to lead a 'good' life … but good for whom? In addition, would another way be more beneficial to us as individuals or as part of a group?

Research tries to step back from knowledge claims developed through tenacity, intuition and authority, by carefully constructing a question and a study design in order to provide the best views of a particular issue so that conclusions can be derived from available evidence. Sometimes findings will challenge the other three sources leading to conflict; for example, when scientists said the earth was not flat but round there was a huge uproar as traditional beliefs about falling off the edge of the world were challenged.

In doing research we try to advance knowledge by aiming to get closer to the 'truth' of the matter while realising that truth is a very elusive concept, which shifts depending on whose truth is being portrayed and whether that 'truth' is:

- *Subjective* (your own view)
- *Relative* (your view compared to others)
- *Objective* (taking a distant perspective)
- *Absolute* (as in philosophical arguments).

So rather than getting too caught up in the notion of 'truth' and the bases of various claims to knowledge in research, instead we seek to reduce uncertainty by using the best and most transparent approaches available.

There are two important aspects to any kind of research: the first is that your data should be collected from the real world … from situations or people involved in whatever the defined research problem is. This real world evidence is termed *empirical* data. Understanding the nature of this data is an *ontological* process and is related particularly to the wider structural and cultural issues that influence claims to truth. Then these understandings need to be further interpreted in a more abstract way using existing theories of knowledge – *epistemology* – to explain your findings about the world and to enable your interpretations to be more globally applied. For example, I might research the experience of being blind by interviewing people who are blind (empirical data). Understanding their experiences would require knowledge of the culture and the health system and other supports available for these people (ontological) while interpreting their experiences might lead me to use the concepts of stigma or normal versus abnormal (epistemology) to make sense of their experiences.

What are the characteristics of qualitative research?

Qualitative research favours certain styles of design, collection and analytic interpretation. The underpinning ideology or belief system asserts that:

- *subjectivity* has value (meaning that both the views of the participant and those of you the researcher are to be respected, acknowledged and incorporated as data, and the interpretation of this data will be constructed by both of you (the researcher is not a distant neutral being)

- *validity* (trustworthiness) is seen as getting to the truth of the matter*, reliability* (dependability) is viewed as a sound research design and *generalisability* is local and conceptual only
- *power* lies predominantly with the researched (who are viewed as being the experts on the research topic)
- *an holistic view* is essential (so the structures impacting on the setting such as policies, culture, situation and context need to be included)
- every study is *time- and context-bound* (so that replication and generalisation are unlikely outcomes).

Which areas are best for researching?

Qualitative research can best help us explore or assess:

- culture
- phenomena
- structural processes
- historical changes.

In more detail, *culture* could involve anything from investigating the behaviours and rituals of a particular tribe or group of people in a particular setting (street kids, pupils or staff in a classroom, patients or clinicians in a hospital ward or an individual in a particular cultural context). *Phenomena* involves detailed investigations over time of a particular experience (for example, marriage breakdown, illness etc.). *Structural processes* might involve investigating policy change and its impact on a specified setting or group (such as increasing taxes or closure of mental institutions). And *historical changes* might involve documented changes in discourses (ways of communicating over time; for example, changes in treatment of an illness as recorded in medical journal articles).

The question focus is usually the *what, how, when, where* or *why* aspects of the chosen topic.

One important issue the qualitative researcher needs to consider prior to commencing research is the choice of research paradigm to work within.

Research paradigms

As researcher, you can choose which of the available broad paradigms (worldviews of beliefs, values, and methods for collecting and interpreting data) that you would prefer to work within.

There are five options:

1 *Realism/postpositivism* (expert researcher documenting reality from a centred position).
2 *Critical theory* (with a focus on class, power and the location and amelioration of oppression).
3 *Interpretivism/Constructionism* (mutual recognition and use of symbols and signs in reality construction).
4 *Postmodernism and poststructuralism* (the questioning of 'truth' and 'reality' and the sources of 'knowledge').
5 *Mixed/multiple methods* (using the best set of tools for the job).

Let us explore each of these in a little more detail.

1. Positivism to realism (postpositivism)

The eighteenth century in Europe was an era, termed the Enlightenment, when positivism (the School of Philosophy that asserts that reality lies only in things that can be seen with the naked eye), optimism, reason and progress became the dominant discourses (ways of thinking, speaking and writing) and all knowledge was believed to be accessible through processes of reason. The 'rational man' was believed to have the capacity to uncover a singular knowable reality through pure understanding and rigorous intellectual reasoning. These processes of broader reason, needed to gain knowledge, included a focus on observation in order to gain 'facts' via scientific deduction. Scientific knowledge gained from observation and based in logical thought processes was seen as having the potential to displace ignorance and superstition, which were the tools of power of the church. Scientific knowledge was seen as having the capacity to facilitate freedom from religious influences and to lead the way to a New World built on the notions of progress and a universal foundation of knowledge.

However, researchers' ability to provide predictable and replicable outcomes and to control variables came under debate as Einstein's theory of relativity and later Heisenberg's theory of uncertainty challenged these views and postpositivism eventuated ... The assumption that a world that could be precisely measured and documented exists independently just waiting for us to gain sufficiently sophisticated tools to discover it, was questioned, and the belief that absolute, knowable truth existed became sidelined and provisional truths became a more likely outcome. The ultimate essence of external reality was also challenged by Sigmund Freud's exploration ([1900]1913) of the unconscious mind as a source of reality construction. He suggested that 'reality' was not only constructed from internal as well as external sources but that this reality changed continually in interaction with the environment, especially in interaction with others, and that what had previously been considered as externally and objectively 'real' was also closely linked to the maintenance of power.

More recently within *postpositivism* it has been argued that scientists are inherently biased by their education and life experiences and that their observations are value-laden and fallible, making errors likely. Our ability to know reality with certainty is thus problematic and no findings can be viewed as absolute or universally generalisable. This has led some positivists to the modified epistemology of realism. *Realism* asserts that structures creating the world cannot always be directly observed and when and if they are observable their genesis is not always clear; thus we also need our creative minds to clarify their existence and then to identify explanatory mechanisms. For example, we cannot see gravity but we know it exists and that it requires a mixture of intuition, various intellectual processes, and the laws of physics in order to clarify the workings of this force. The focus for research in a realist approach involves the identification of the linking of different realisms, for example in nursing, the biological and psychosocial models of nursing can be linked to a biopsychosocial model that has bridging links to interpretations of biological mechanisms and to the psychosocial empirical world as well as to patients' and researchers' influences on these.

Types of research   In terms of qualitative research, both postpositivism and realism draw from positivism in that the researcher is seen as occupying a pseudo-objective distant neutral role where their influence in the construction of reality is seen as minimal.

Classical ethnography (see Chapter 4) and Straussian grounded theory (see Chapter 7) are sometimes seen as fitting in to this orientation. Careful description, truthful depiction, studies with clear aims, objectives, a reliable design, a focus on neutrality, objectivity and theory-testing characterise these approaches.

2. Critical emancipatory positions

Changes in the economic system through industrialisation around the turn of the twentieth century led to Karl Marx's critique ([1867]1999) of capitalist exploitation, profit, power and class conflict, being recognised. The outcomes of such economic change became viewed as resulting in societal fragmentation. During the 1960s and 1970s social critics such as feminists identified power imbalances and pointed to the long-term oppression of women by men, while others pointed to inequalities in social justice. Reality was now being viewed as power directed and multiply constructed. The origins of 'truth' were seen as lying in obscure history and/or layered aspects of the present and access required a range of approaches including those beyond the scientific. The simplicity of such notions as the integration of the individual, the power of the author, the universality of knowledge and concepts of uniqueness and originality, came under question.

Types of research   In research, critical positions view reality not as existing 'out there' but as being produced by particular exploitative social and political systems comprising competing interests where knowledge is controlled to serve those in power. Issues of race, gender, poverty, politics and culture are seen to shape individual identity. Researchers attempt to identify those who are powerless (usually exploited by those in powerful positions) in order to document their unequal situation and to bring about change through an active process of emancipation through knowledge-sharing or the transformation of society. Any qualitative approach that has taken a critical stance, including grounded theory, phenomenology, ethnography, hermeneutics, sociolinguistics, narratives, and feminist research (see later chapters for these) can fit into the critical emancipatory grouping.

3. Constructionism/Interpretivism

These positions assume that there is no objective knowledge independent of thinking. Reality is viewed as socially and societally embedded and existing within the mind. This reality is fluid and changing, and knowledge is constructed jointly in interaction by the researcher and the researched through consensus. Knowledge is subjective, constructed and based on the shared signs and symbols that are recognised by members of a culture. Multiple realities are presumed, with different people experiencing these differently. The research focus is on exploration of the way people interpret and make sense of their experiences in the worlds in which they live and how the contexts of events and situations and the placement of these within wider social environments have impacted on constructed understandings. The understandings researchers construct and impose through interpretation are seen as limited by: the frames derived from their own life experiences; subjectivity (the researcher's own views and how they have been constructed); and intersubjectivity (reconstruction of views through interaction with others through language and written texts).

Types of research   Qualitative methodologies including grounded theory, phenomenology, ethnomethodology, ethnography, hermeneutics, sociocultural narratives, and feminist research (see Chapters 4–20 for more on these approaches).

4. Postmodernism and poststructuralism

As we moved through the last decades of the twentieth century, unified, powerful, centred individuals with an authoritative point of view became rejected in favour of anti-heroes and complex multidimensional individuals (see Chapters 9 and 14 for more detailed explanations of postmodernist ideas and applications). Literature began to mirror the changes in the economy, science, art and architecture by portraying reality as shifting and uncertain rather than set, and by incorporating multiple perspectives from a range of disciplines such as music, philosophy, psychology, sociology and drama as well as including visual possibilities.

Postmodernism views the world as complex and chaotic and reality as multiply constructed and transitional – unable to be explained solely by grand or meta narratives (such as Marxism and Buddhism, which make universal claims to truth). Postmodernism is very sceptical of such narratives, viewing them as containing power-laden discourses developed specifically for the maintenance of dominant ideas or to enhance the power of certain individuals. The search for reality 'out there' is qualified by the understanding that society, laws, policies, language, discipline borders, data collection and interpretation are culturally and socially constructed. In recognition of this socially constructed world, disruption, challenge and a multiplicity of forms are essential in order to pull these constructions apart and to expose them for what they are. Meaning rather than knowledge is sought because knowledge is limited by 'desire' (lack of knowledge or the imperative to bring about change) and constrained by the discourses developed to protect powerful interests and to control the population's access to other explanations. Truth is multifaceted and subjectivity is paramount.

Poststructuralism, with its emphasis on the fluidity of language and meaning, forms an important subset of postmodernism. It developed as a reaction to structuralism, which sought to describe the world in terms of systems of centralised logic and formal structures. In structuralism, patterns provided meaning and all words were seen as having recognised meanings that could be learned. Language was seen as a system of signs and codes, rules and conventions – and the deep structures that enable a language to operate within a cultural system – were sought. Poststructuralism (see Chapter 14) seeks the deconstruction of the discourses (ways of thinking, speaking and writing) that have been established to control ways of thinking.

Types of research   Most forms of qualitative research now have an established postmodern position: for example, ethnography, grounded theory, action, evaluation research, phenomenology and feminist research. Postmodernism favours descriptive and individually interpreted mini-narratives, which provide explanations for small-scale situations located within particular contexts where no pretensions of abstract theory, universality, or generalisability are involved. Within structuralism and poststructuralism two data analytic approaches have become popular and are available for use by qualitative

researchers. The first is discourse analysis, where the dominant ways of writing and speaking about a particular topic become set in place over time and require historical tracking back to identify who has benefited from one particular discourse and how other competing discourses have been marginalised. The second analytic approach is deconstruction, where words are viewed as containing power-laden discourses with multiple meanings requiring careful deconstruction in order to break down artificially constructed boundaries before putting the text back together in transitional form.

5. Mixed/Multiple methods

This is the most recent approach and follows postmodernism's exhortion to cross barriers and to break down boundaries. The two approaches, qualitative and quantitative – for decades seen as poles apart – have now become integrated into mixed/multiple method studies (sometimes called the third wave/third movement). In this situation, they are seen less as two approaches ideologically poles apart and more as an eclectic set of tools which you the researcher – very like the bricoleur (creative handyman) of postmodernism – can use to provide the best answers to your research question. Clearly the issues involved in utilising these very different approaches can be somewhat thorny but this has not prevented researchers from tackling these issues head on and providing ways of dealing with them. The changes in classical physics which provide the underpinning for quantitative approaches, particularly the movement into chaos and complexity theory, have reflected many of the postmodern thought changes seen in qualitative research (Grbich, 2004) and these changes may have facilitated this cooperation. The ensuing paradigm has often become termed 'pragmatism' – a mix of postpositivism and social constructivism, a leaning toward postmodernism, and an emphasis on empirical knowledge, action, triangulation and the changing interaction between the organism and its environments (see Chapter 3 for more detail regarding mixed methods).

Example of paradigm choice

Let us take a research topic, *'An exploration of the lives of young people who are homeless'*, and see how your position as a researcher would differ in each of the above five paradigms:

- *Realism/postpositivism* (expert researcher documenting reality from a centred position). Here an authoritative researcher would assume that truth can be found by gathering detailed accurate observational and interview data of the lives of young people living on the street.
- *Critical theory* (with its focus on class, power and the location and amelioration of oppression). Here the interpretation of the data you collect would focus on power – where does it lie? And the assumption would be that the structures of society (education, health and the socioeconomic influences of the culture) would be determining aspects for a situation where young people became homeless. Action research – working with the homeless to bring about change – might be an outcome.
- *Interpretivism/Constructionism* (mutual recognition and use of symbols and signs in reality construction). Both the aspects of individual choice and lack of choice would be taken into account here as each individual case is explored by you in conjunction with a homeless person.
- *Postmodernism and poststructuralism* (the questioning of 'truth' and 'reality' and the sources of 'knowledge'). Previous explanations would be rigorously questioned and the discourses of

'homelessness', 'begging', 'mental illness' etc. examined and deconstructed. Your assumption would be that the reasons young people are homeless are individual, complex and always changing and no one solution will fit all.

- *Mixed/Multiple methods.* Both qualitative and quantitative data will be needed to see broader aspects of individual circumstances within policy, practice and the views of the wider community.

Evaluation of qualitative research

How can we assess the quality of our qualitative research and that of others? The techniques by which quantitative research are evaluated are not appropriate but sets of guidelines for evaluating qualitative research have been suggested (Kitto et al., 2008) and these guidelines are detailed below seven headings to show the essentials that need to be accounted for in a good piece of qualitative research:

Clarification

- What is the research question/s?
- What are the aims of the research?
- What did the researcher seek to investigate?
- Does the research question reflect what has been investigated?
- Have the aims been translated into the design so that all of them have been accounted for?

Justification

- Why is a qualitative approach the best option to answer this question?
- Why was the particular qualitative research design chosen?
- Why was the study undertaken the way it was? Are the questions, aims and design a perfect match?
- Were any forms of data triangulation evident? For example, multiple sources, i.e., documents, interviews, survey data, observation; multiple methods, i.e., mixing methodologies such as ethnography and phenomenology; and multiple theories, where multiple theoretical and conceptual frames have been applied to the research to enhance insights into phenomena.

Process

- Has ethics approval been obtained?
- Have the techniques of data collection been clearly documented?
- How were participants/settings accessed?
- What sampling techniques have been used to answer the research question?
- Who was interviewed/observed? How often? And for how long?
- What interview questions were asked?
- What was the purpose of any observation/s?
- Which existing documents were accessed? And how were they assessed?
- How was collected data managed?
- Are all the forms of data analysis completely transparent?
- What were the major outcomes of the analytical process in terms of findings?

In more detail, the exposure of what the researcher actually **did** needs to be very explicit.

- How were participants accessed?
- Who were these participants?

- How was rapport achieved?
- Were any sampling techniques used?
- What data collection techniques were used?
- How did interviews occur? Face to face? Telephone? Focus group? Teleconference? Video conference? Email? Skype?
- Who was observed? When? How often? For how long? For what purpose? What existing sets of documentation were collected?
- How was data managed?
- What forms of data analysis were undertaken – transparency of process is essential here.

Representativeness

Notions of comprehensiveness and diversify of results is sought in qualitative research in preference to conformity and homogeneity. An audit trail, monitoring changes and decisions taken in the project, should be recorded in the researcher's diary and made transparent where applicable. In addition:

- Have all the results been reported? Display of results is one aspect of this, and hypertexts to the original data set so the reader can see where your quotes have come from is becoming common.
- Has a holistic answer to the research question been achieved?

Interpretation

Has a conceptual discussion of the results and linkage to existing theory/new theory/ models of practice been developed to explain the relevance of findings to a targeted audience or discipline?

Reflexivity

- Has a clear statement of the impact of the researcher's views upon the data and the methods chosen been included?
- How has researcher position and perspectives shaped the vision, slanted the design and questions and affected the interpretation of results? Has the researcher changed previous views on this topic? And has the researcher provided a critique of her/his self in the research process regarding their own history, culture, class, experiences and level of empathy?

Diversity of process, capacity to connect and intertextuality (connections with other relevant sources of influence) as well as the researcher's own epistemological positioning and ongoing response to research outcomes, should also be evident.

Transferability

- Has a critical evaluation of the application of findings to other similar contexts been made?
- How do results match/contradict others on this topic?
- Has the relevance of these findings to current knowledge, policy, and practice or to current research been discussed?
- To what extent are findings applicable to other similar settings, situations and experiences? And to what extent has this study successfully contributed to knowledge?

Newer ethnographic approaches

The newer ethnographic practices (documented in Chapters 10–13) are very challenging to evaluate, assess and/or review as few established criteria exist. The simplest assessment would be a personal one:

- Do you feel that you as the reader have been brought as close as is possible to the voice or images perceived or heard by the researcher?
- **OR,** Do you feel you have been led into a mish-mash or collage of bits and pieces so that you are no closer to experiencing the feelings and emotions of others than you would reading a dry academic text centred wholly in the authoritative voice of the researcher?

Researcher position

Subjectivity is crucial here.

- What have been the experiences of the researcher? Exposure of who the author actually is (past influences, beliefs, values and experiences as well as their responses in all situations) should be available.
- Has the researcher been highly involved as a participant in his/her own right or what has been her/his position?
- How close to the participants' view, voices, emotions and feelings is the display of data and how much 'shaping' (changing or manipulating) has the researcher been involved in?

Process

If the design involved small-scale mini-narratives where *reality* is seen as multiply constructed, multiple methods (both qualitative and quantitative) are often needed to present a holistic view of any situation or experience. *Juxtaposition* will often be called upon to identify voices/perspectives that have previously been marginalised or silenced by powerful discourses. The emphasis will be on the *complexity* of both situations and language – in particular via double coding, irony, paradox, the longevity of particular discourses, discursive practices and deconstruction. The seeking of *multifaceted realities* and the exposure of complex individuals with past lives as well as current issues and experiences, is desirable. There is no assumption of universality or generalisability or even transferability of any findings – these are seen as localised and transitory

Truth – has this been viewed as a complex constructed entity? If so, many voices and many approaches may be required to expose it. Language, discourse and discursive practices obscure truth and need tracking to enable new but transitory representations to emerge. If truth is sought through one individual then the multifaceted nature of that individual is important to demonstrate rather than the display of one simple dimension.

The reader

Has the reader been allowed to interpret data rather than have it interpreted for him/herself by the researcher? The role of the researcher is to take the reader as close to the experiences under study as possible with minimal or no researcher interpretation so the reader can share these experiences.

In addition, the theory of constraints (Agar, 2004: 22–3 adapted) can also be applied to assessing the outputs from the approaches described in Chapters 10–13:

1 *The 'dialogue' consideration.* Is dialogue between the researcher, the participants and the audience facilitated?
2 *The 'scaling' consideration.* Do individual stories promote a broader view of society for the audience?
3 *The 'recognition' consideration.* Is the representation sufficiently 'realistic' so that audiences will recognise themselves in it?
4 *The 'appeal' consideration.* Are the audiences attracted to the style of presentation, narratives and issues?

You can see from this that the assessment of qualitative research is a complex process but general guidelines can be applied to both traditional and to newer approaches. These guidelines need to be flexible in the way they are interpreted so they don't become set in concrete – they need to retain the capacity to encompass and reflect the ongoing changes that are an intrinsic part of qualitative research.

Summary

The paradigms of positivism, postpositivism and realism, critical theory, constructivism/ interpretivism, postmodernism and poststructuralism, and mixed/multiple methods provide a complex field for you to navigate. Although each epistemology has achieved dominance at particular times, all are available for you to consider for your own studies. You need to choose the one that best reflects your research question and preferred orientation or you can choose to blend different traditions. In both cases, you will need to be familiar with the traditions on offer so you can adequately justify and evaluate the choices you have made.

Student exercise

You have been asked to evaluate a community phone-in support programme that provides counselling for people facing various crises. It has been funded by the government which is interested to know how useful the programme has been and whether to continue financing it.

Which paradigm would you choose within which to undertake this research and why?

Please visit the companion website **www.sagepub.co.uk/grbich2** for possible answers.

Further reading

Paradigms

Denzin, N. and Lincoln, Y. (eds) (2008) *The Landscape of Qualitative Research: Theories and Issues* (3rd edn). Thousand Oaks, CA: Sage. Part II looks at competing epistemologies (positivist, postpositivist, constructivist, critical theory) as well as specific interpretive perspectives, feminisms, racial discourses, cultural studies, sexualities, and queer theory.

Crotty, M. (1998) *The Foundations of Social Research: Meaning and Perspective in the Research Process*. Sydney: Allen and Unwin. A detailed and accessible discussion of positivism, constructivism, interpretivism, hermeneutics, feminism, critical inquiry and postmodernism is provided here.

Guba, E. and Lincoln, Y. (1994). Competing paradigms in qualitative research. In N.K. Denzin and Y.S. Lincoln (eds), *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage. The chapter by Guba and Lincoln examines various knowledge traditions that are relevant to qualitative research.

Mixed methods

Piano Clark, V. and Creswell, J. (2010) *Designing and Conducting Mixed Methods Research.* Thousand Oaks, CA: Sage. A very accessible how-to text, which also discusses many of the complexities involved in combining methods.

Tashakori, A. and Teddlie, C. (2010) *Sage Handbook of Mixed Methods in Social and Behavioural Research.* Thousand Oaks, CA: Sage. The authors discuss paradigmatic issues, the strengths and weaknesses of mixed methods designs, and provide specific examples as well as demonstrate how to teach and perform collaborative research using a mixed methods research design.

Evaluation

Goffman, E. (1974) *Frame Analysis: An Essay on the Organisation of Experience*. New York: Harper and Row. Goffman's book explores the concept of the framing of experience by individuals.

Kitto, S., Chesters, J. and Grbich, C. (2008) Quality in qualitative research: criteria for authors and assessors in the submission and assessment of qualitative research articles for the Medical Journal of Australia. *Medical Journal of Australia*, January 188 (4): 243–6.

MacLaren, G. and Reid, I. (1994) *Framing and Interpretation*. Melbourne: Melbourne University Press. McLaren and Reid show how the different levels of framing influences can impact on researcher interpretation of incidents and events.

References

Agar, M. (2004) We have met the other and we're all nonlinear: ethnography as a nonlinear dynamic system. *Complexity*, 10 (2): 16–24.

Freud, S. ([1900]1913) *The Interpretation of Dreams*. Trans. A. Brill. New York: Macmillan.

Grbich, C. (2004) *New Approaches in Social Research*. London: Sage.

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Marx, K. and Engels, F. ([1867]1999) *Das Kapital*. Washington, DC: Regnery Publishing.