Qualitative Market Research: An International Journal

Anthropology and consumer research: qualitative insights into green consumer behavior

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Abstract

Purpose – The purpose of this paper is to introduce a new qualitative method that is theoretically underpinned by cognitive anthropology. This research strategy is introduced to further advance the understanding of complex green consumer behavior – in this case life-cycle analysis.

Design/methodology/approach – This paper examines the contextual aspects of problem-solving behavior of green, environmentally concerned consumers. Cognitive anthropology develops a different, yet complementary, understanding of consumer cognition to a psychological approach. Through the concepts of practical thinking and bricolage, cognition and behavior are conceptualized on a contextual basis. Such an approach encourages a reassessment of how consumer research has traditionally conceptualized problem framing, information search, information processing and related concepts. The paper draws upon in-depth, qualitative interviews with a wide range of green consumers from both the UK and Germany.

Findings – The findings provide some interesting clues regarding the nature of information search and information processing. In the sample, the green consumers of the top clusters were able to see and retrieve life-cycle information as it was offered by a shopping context and it was this context, as it is perceived by the bricoleur that ultimately limits information search and processing. Within the "objective" bounds of a choice context, skilful practical thinking and bricolage was shown in different degrees amongst the clusters, with considerable creativity shown in "seeing" life-cycle information.

Research limitations/implications – Given that the research outlined in this paper is mono-paradigmatic, it is suggested that a future avenue for research in green consumer behavior would be the use of a multiple paradigm approach.

Practical implications – The paper outlines a stepping approach to marketing communications directed towards the green, or potentially green consumer, suggesting that some form of community based social marketing program might be a useful educational tool given the findings presented.

Originality/value – The introduction of a new research strategy – cognitive anthropology to the study of green consumer behavior.

Keywords Social anthropology, Consumer research, Green marketing

Paper type Research paper

Introduction

Both those affiliated with psychological and consumer research have expressed concern regarding the epistemological, methodological and view of human nature underlying their respective approaches to empirical research on cognition (Herrmann and Gruneberg, 1993; Shimp, 1994; Sternberg and Grigorenko, 1997; Straughan and Roberts, 1999; Wagner, 2003; Wells, 1993). Concomitant with this concern, and despite

Qualitative Market Research: An International Journal
Vol. 9 No. 1, 2006
pp. 8-25

1352-2752
DOI 10.1108/13522750610640521

some four decades of intensive consumer research, our knowledge about the information search behavior of consumers in relation to buying decisions or how they develop expertise in the process of choice behavior remains limited (Alba *et al.*, 1991; Aoyagi-Usui *et al.*, 2003; Bettman *et al.*, 1991; Gatersleben *et al.*, 2002; Mitchell and Dacin, 1996; Moorthy *et al.*, 1997; Parkash, 2002; Prelec *et al.*, 1997; Sheth, 1992; Wagner, 2003; Wells, 1993). In response to this regrettable state of affairs, we outline an anthropological approach to cognition, which approaches consumer cognition in a practical sense as "knowing is doing". Contextual factors in consumer choice processes are not viewed as a "black box", "constants" or as "independent" variables. Instead they are treated as dependent, endogenous variables. This approach encourages the reassessment of how we, as academic researchers, conceptualize the information search and processing behavior of consumers, their problem framing and problem-solving behavior, and the role of experience in choice processes.

Practical thinking and the bricoleur

Traditionally, cognitive anthropology has explored the nature of tribal knowledge by examining how indigenous people think, what classification patterns their knowledge content reflects and how their experience – knowledge accumulated in the past – affected present information processing and problem solving (Levi-Strauss, 1966). Over the past 30 years, the gradual realization that anthropological research can contribute to our understanding of consumer behavior has encouraged a number of researchers to advocate closer contact between these two disciplines (Allen, 1971; Gordon and Valentine, 1996; Grafton-Small, 1987, 1993; Sherry, 1983, 1986-1987). What has merited less interest, and somewhat undeservedly, is cognitive anthropological research. Not so, however, in our sister disciplines where there have been a number of important applications of the conceptual tools of cognitive anthropology, ranging from the analysis of teaching behavior in the classroom (Hatton, 1989), organizational structuring of computer firms in Silicon Valley (Ciborra, 1996) and managerial intelligence (Sternberg, 1997). So it would seem that our engagement with this area is long overdue.

Traditional approaches to context in consumer research

Context has been treated in a variety of different ways in psychology and consumer research. On the one hand, it is seen as if it were a constant black box that could be ignored when it came to analyzing actual behavior. Alternatively, it has been viewed as an independent, exogenous variable that influenced dependent, endogenous variables such as motivation, cognition or choice behavior (Belk, 1975; Mitchell and Dacin, 1996; Moorthy *et al.*, 1997). Unpacking this, admittedly somewhat simplistically, in its most extreme form, cognitive psychological research has largely ignored the influence of context on decision-making. In contrast, cognitive anthropology places context centre stage in its analyses by virtue of its contextual orientation. Here cognition is explained through actual behavior, as it occurs in a specific task context, using two-key concepts for the analysis of reasoned behavior: practical thinking and bricolage. Practical thinking relates to an intellectual, theoretical plane of reasoning and yields practical know-how for problem solving by being based on an application-oriented concept of reasoning, learning and intelligence that proposes that knowledge is acquired in daily life through learning-by-doing, i.e. through trial-and-error. Bricolage, on the other

hand, relates to a technical, practical plane where knowledge is generated through actual practice and problem-solving behavior in everyday life. More prosaically, it refers to the idea of "tinkering", to "do-it-yourself" behavior, with the bricoleur seen as a kind of handyman – someone who uses simple tools for problem solving.

The concepts of practical thinking and bricolage are interlinked for the analysis of reasoned behavior since cognitive anthropology does not conceptually separate behavioral "doing" (bricolage) from cognitive reasoning and learning (practical thinking). In this way lived human experience is researched on the basis that "knowing is doing" with the framing and solving of a choice problem and related ideas like "product" or "task environment" conceptualized as processes and systems of sensibility which are subjectively perceived by a consumer and, in turn, emerge out of the interaction between practical thinking and bricolage (Berry and Bennett, 1992; Maturana and Varela, 1992). This view is intuitively appealing. Since in our everyday lives many of the problems that we must negotiate have some shape but few, if any, have optimally correct responses. Accordingly, problem framing is an integral part of choice behavior in our day-to-day routines and it follows that through practical thinking and bricolage, i.e. through the interaction of knowing and doing, with problem formulation and problem solving taking place nearly simultaneously, that consumer problem framing behavior can be seen to be connected, with the actual attempts to problem solving providing a means to understand consumer problem framing behavior via the actual experiences of consumers trying to negotiate their everyday consumption practices.

Here context is assumed to emerge through practical thinking and bricolage and is consequently not defined through imposed, a priori categories. Instead, the researcher refrains from pre-determining what product attributes or situational factors could influence choice behavior, which are instead seen to emerge through the personal-historical categories of consumer experience; and these are explored and documented by the cognitive anthropologist. Context, in other words, is analyzed in relation to the enacted problem framing behaviors of the individual consumer, with the consumer viewed less like the linear computer chip model that Belk (1987) finds so unappealing, and more like introspective experience tells us consumers act namely, as "an active, if less precise, interpreter of his environment" (Nakamoto, 1987, p. 25). This is because "tool usage" is, quite naturally, contingent upon both the information processing and problem-solving ability of the individual, and the material availability of the tools in a specific task context. Nor should we assume, again a priori, that the bricoleur will begin their problem-solving activities by reflecting on the project they are about to undertake in the typical rational manner assumed by cognitive psychology, i.e. by carefully and logically thinking through what tools and materials are required for its completion. Rather, the bricoleur is more likely to review the materials they have to hand, and then subsequently think through how these materials might be used to satisfactorily complete the project at hand (Hatton, 1989). The focus here, then, is on the contextual intelligence that a given respondent exhibits in their attempted solution of current practical difficulties and this depends on the context in which the individual is emplaced. In this way "logical" thinking is related to the solution of practical problems (Berry *et al.*, 1986). As such, in everyday life, intelligence has little to do with abstract, numerically exact reasoning as has traditionally been presupposed in IQ-testing. Traditional IQ-tests are, on their own, inadequate for

assessing human intelligence and the implications of this are, for consumer research, manifold. Consider the following brief example which problematises the assumptions underpinning a cognitive psychological orientation and illustrates the space for an alternative, anthropological approach.

Examining cognition in an experimental setting, consumers were asked to evaluate multiple product alternatives on the basis of selected product attributes; information which was, itself, partial. The research objective of this study was to find out whether a person deduced a missing piece of information on a given product attribute, either by assessing information as it was provided on the other attributes of the same product (same-brand strategy), or by assessing information as it was provided on the same attribute of other products (other-brand strategy). Through the provision of product alternatives and their attributes, a formal structure was imposed on a research question (Brucks, 1991). The researcher thus formulated and largely supplied the relevant information for the choice decision that the consumer would normally have had to work through in everyday life. In this far too brief example, consumer cognition was separated and isolated from its natural context. More problematically, these results were highly significant in statistical terms, but because of their abstracted nature (from actual everyday information consumption behavior) the relevance of such research for the elucidatory function that we normally ascribe the practice of research or as an input into managerial decision-making, means that the relevance of this type of research strategy still remains largely undemonstrated (Ford and Smith, 1987; Johnson and Russo, 1984; Sirdeshmukh and Unnava, 1992; Tybout and Artz, 1994; Wright, 1975).

While we might be guilty in this example of over-emphasizing the extent to which a large proportion of consumer research does, in actual fact, engage with choice behavior, it remains valid to suggest that in the majority of studies, context and behavior are seen as interrelated and modeled as independent, exogenous variables (Alba and Hutchinson, 1987; Mitchell and Dacin, 1996). And while it is true that there have been calls for integrating context and choice behavior particularly from experimental psychologists, there is still a general predilection for modeling choice behavior in a more "positivistic"[1] style, with the researcher identifying context features a priori before they enter the field (Menon and Kahn, 1995; Meyers-Levy and Tybout, 1997; Mitchell and Dacin, 1996). Modeling context in this fashion, as an independent, exogenous variable, is underpinned by an epistemological position that postulates the existence of causal relationships between cognition and behavior and it is through this assumption, alongside the presupposed causal relation that cognition is conceptually separated from behavior such that an exceptionally limited view of cognition is generated that marginalizes the complex relationship between context and choice (Wagner, 2003). In cognitive anthropology, however, the conceptual relationship between practical thinking and bricolage is seen to be intricate, and in order to understand issues like problem formulation, information search and processing and the influence of context, an interactive relationship between the cognitive perception of context and actual problem-solving behaviors is adopted. This strategy, Prelec *et al.* (1997, p. 124) argue, is central to the development of a theory of consumer choice behavior which, if it aims to be comprehensive, will need to be able to account "for context-generated information".

Homo faber

In terms of its view of human nature, cognitive anthropology is rooted in an image of man as *homo faber* – as a handyman and improviser – who is defined through their practical know-how and ability to invent and use tools pragmatically for problem solving. "Sensible" problem solving is not necessarily undertaken through a process of abstract reasoning, but in relation to contextual "doing", with reasoning viewed as context-specific and closely intertwined with doing. Departing from the image of the consumer as a rational, information seeking being, the view of human nature held by the cognitive anthropologist presupposes that consumer cognition is far from optimal, and even where the individual is performing an unfamiliar task, they "seem to prefer to act rather than to reflect" (Hull *et al.*, 1988, p. 518) with consumers exhibiting very limited pre-purchase information search activity even for those goods with high-ticket prices (Moorthy *et al.*, 1997).

In contrast to a traditional cognitive psychological approach where this kind of acting before thinking would be explained as essentially irrational consumer behavior, or merely muddling through, cognitive anthropology begins with, what we think, is a more realistic, everyday understanding of what practical cognition and decision-making is likely to entail. As the sociology of science serves to remind us, even those apparent exemplars of rationalism, physical scientists, and exhibit the kind of handyman activities that we have gestured towards, by changing their behavior as their current task demands. Translating such findings into consumer behavior would seem to indicate that for understanding problem solving in the everyday world, the concepts of rational problem solving and the concomitant diagnoses of irrational behavior need to be re-examined.

Methodological issues in empirical research

The favored empirical approach of cognitive anthropology is qualitative research based on systematic case studies (Eisenhardt, 1989; McClintock *et al.*, 1979; Yin, 1994). Indeed, as is the case with marketing and consumer research, calls for qualitative research in psychology have been echoed since the 1930s and 1940s. More recently, however, Gestalt psychologists have admitted that a "theory of human behavior that fails to make contact with man's conception of his world and his way of knowing, that sets these aside as epiphenomena – this will neither be an adequate theory of human behavior nor will it prevail in common sense" (Bruner, 1979, p. 43, emphasis added). This said, until comparatively recently empirical research in cognitive psychology and consumer research has continued to be dominated by more "positivist" and quantitatively oriented studies, often in research settings where context was sidelined or eliminated (Belk, 1975; Fishbein and Ajzen, 1975; Gregan-Paxton and Roedder, 1997; Meyers-Levy and Tybout, 1997). Of course, quantitative research does have clear benefits associated with it, especially with regard to the reliability and precision of research findings generated in this way, albeit at the expense of the external validity of its output. Qualitative research, in contrast, is comparatively weak on reliability and precision due to its phenomenological fecundity; but this is itself highly desirable, as the management, organization studies and marketing literatures are beginning to attest. This turn to qualitative research in relation to context-oriented empirical research is, however, not new and a number of early studies examining buyer behavior were qualitatively and contextually orientated (Lazarsfeld, 1933, 1935).

Like these early qualitative studies, an anthropological approach to consumer research adopts a contextual orientation, with the researcher approaching context in an explorative, discovery-orientated basis. The guiding heuristic principle here is "knowing is doing" with reasoned behavior researched as lived human experience, linked to context. Commensurate with this orientation, a contextual approach to cognition appears especially fruitful when it comes to understanding consumer experience and its different dimensions such as familiarity, expertise and intelligence, where experience is likely to be a key factor in explaining cognitive development (McClelland and Plunkett, 1995). In psychological consumer research on experience, for example, the idea of familiarity is generally approached on a quantitative basis, as the number of product-related instances of "doing" accumulated overtime (Alba and Hutchinson, 1987). Consumer cognition is expected to reflect familiarity effects and it is here that cognitive anthropology can supplement the insights derived from cognitive psychology by showing how familiarity develops and, in turn, how it shapes consumer behavior since besides habituation effects, the accumulation of "doing" would appear to have an important influence on cognitive development. This is obvious when we consider the development of practical skills, like learning to ride a bicycle.

In a similar vein, the development of conceptual skills are related to familiarity effects. Even complex conceptual reasoning such as learning how to play chess will improve overtime through continued practice or, in psychological terms, via a process of "familiarizing". This would appear to indicate that familiarity could not be separated from expertise and intelligence. Unlike the difficulties that this would cause for the cognitive psychologist, we can see no such difficulties for cognitive anthropology. To take one example, the diagnosis made by a cognitive psychologist that even in the case of unfamiliar tasks people seem to prefer to act, rather than to reflect, indicates that the qualitative impact of familiarity on cognition is discounted, and hence "acting before thinking", is viewed as irrational and unreasonable (Hull *et al.*, 1988). In contrast, a cognitive anthropologist would interpret this behavior as sensible on the basis that contextual knowledge is, at least to a certain extent, developed through doing, i.e. through familiarity.

To reiterate the review we have given above, in cognitive anthropology thinking and successful task performance are assessed with regard to the skills shown by the bricoleur in the way that context is utilized in problem framing and problem solving, with expertise and intelligence assessed in terms of the creativity, flexibility and simplicity shown with respect to tool discovery and tool usage. Such assessments of the quality of practical thinking are made on a comparative basis, by comparing the problem-solving skills of different consumers. As an illustrative study, we conducted a three-year project on the problem-solving behavior of the green consumer. In this project, we drew heavily on the conceptual and methodological apparatus of cognitive anthropology, while attempting to bracket, as much as was feasible, our own theoretical presuppositions, in order to allow our co-participants lived experiences of their problem-solving behavior to emerge etically from our their responses during the interview situation. As we shall demonstrate, the research yielded insights into how consumers frame choice problems, how they search for information and how they process information for making a buying decision. Despite the still tentative nature of our conclusions the results do still, we propose, take us closer to understanding the well-documented complexities of green consumer behavior

(Amine, 2003; Diamantopoulos *et al.*, 2003; Gatersleben *et al.*, 2002; Paladino, 2005; Peattie, 2001; Schlegelmilch *et al.*, 1996; Straughan and Roberts, 1999; Wagner, 2003; Yam-Tang and Chan, 1998).

Case study

In contrast to quantitative research in which a desirable sampling strategy would aim to establish the statistical control of internal validity, with random sampling obligatory in generating statistical generalizations, we approached our qualitative research in non-probabilistic fashion with interviewees selected purposefully (Eisenhardt, 1989; Glaser and Strauss, 1967; Kidder, 1981). The kind of theoretical sampling was used in order to investigate only particular instances of a certain phenomena, in this case, green consumption behaviors. As a sampling strategy, theoretical sampling was used to sample consumers with varying levels of green consumption experiences, with the experience of green consumption that an interviewee possessed, the only variable that was controlled. In ideal terms, this would have included consumers who had experience ranging from extremely high levels of green consumer experience, to those with comparatively little or none at all. In an attempt to ensure that all ranges of experience could be tapped we contacted members of an environmental pressure group. The medium and low levels of experience were sampled using the social contacts of previous interviewees or through door-to-door contact.

Qualitative research was conducted through semi-structured in-depth interviews of 30-60 minutes in length that sought to examine green shopping behavior. In the first part of the interview, only open-ended questions were asked relating to what green products the respondent had bought in the past. The scope of the interviews was limited to products that were bought on a daily basis (e.g. groceries, supermarket products). Sampling was conducted on a non-random, purposive basis, as is typical in qualitative research and over 100 consumers were interviewed (Eisenhardt, 1989; Glaser and Strauss, 1967; Kidder, 1981; Patton, 1990; Sampson, 1986). In order to increase external validity we sampled across different groups and these were subsequently organized in three sample groups: British green consumers, German green consumers and British non-green consumers. The latter two groups functioned as control groups for the sample of British green consumers.

Interviews were recorded, transcribed verbatim, coded and analyzed with respect to a number of knowledge variables. In order to effectively manage the quantity of data collected, an analytical framework was developed through which the data could coherently ordered, with the textual data condensed into text matrices which were compiled for "interviewees", "products" and "product attributes". For each interviewee, a "product/product attributes" matrix was composed; for each of the examined products (39), an "interviewee/product attributes" matrix was developed; and for each of the examined product attributes (29), an "interviewee/products" matrix was generated. "Interviewee/product attributes" matrices and "interviewee/products" matrices were separately compiled for the two samples. Text retrieved into the matrices was marked for:

- free recall vs being prompted; and
- actual buying frequencies of green products.

The latter information was gathered by examining co-participants discussion of buying frequencies. The text matrices provided the starting point of the analysis

of knowledge content variables. Four knowledge content features were measured: knowledge comprehensiveness, knowledge complexity, knowledge specificity and knowledge abstractness.

Knowledge comprehensiveness refers to the amount of knowledge that an individual possess with regard to a specific domain which, for this study, were green products. This was assessed on the basis of two indicators:

(1) interview extracts were subject to content analysis to establish freely recalled knowledge about the green product; and

(2) the total quantity of words were calculated for the entire interview.

Knowledge content was comprised of both products and green product attributes, with knowledge complexity being classified as the number of knowledge content features and the extent, and nature, to which these were interrelated. Hence, an examination of knowledge complexity deals with a frequency assessment of knowledge content features and also with an appraisal of the interrelationships between knowledge content. Both knowledge specificity and knowledge abstractness examined the use of language utilized by the co-participant. Knowledge specificity is used to denote the literal specificity of knowledge. Knowledge deemed highly specific includes: the co-participant making reference to specific product names, brand names and so forth. Knowledge abstractness is characterized by the co-participant proffering highly technical and conceptual knowledge of ideas such as "organic", "recycled", for example.

The cluster analysis is of interest to the present paper in so far as the assessment of practical thinking and bricolage focused on patterns of choice behavior shown by the different clusters and was selected since it is one of the few quantitative techniques that is appropriate for application in qualitative analysis and functioned to quantitatively triangulate the data (Frankfort-Nachmias and Nachmias, 1996). By using data on actual, past behavior, collected in a naturalistic setting, as input of cluster analysis, we adopted an iterative triangulation strategy with the cognitive anthropological re-examination of psychological clusters conceptually triangulating cognitive research, in order to increase the validity of our conclusions. Findings on knowledge content variables were quantified and crosschecked through correlational analysis and a series of sensitivity analyses. Five clusters of green consumers were distinguished through cluster analysis. Regarding the values of knowledge content variables, there was a strong relationship of dominance amongst the five clusters of green consumers: the "top" cluster dominated its lower neighboring cluster; the "second-highest" cluster dominated its lower neighboring cluster and continuing down the clusters.

The successful pragmatist: practical thinking and bricolage in action

The interview transcripts revealed that all our respondents searched for and processed information in a highly "subjective" and contextual manner. Of all the "objectively" information proffered by a product in relation to its packaging and referenced by its sale setting, only some information was sought out and interpreted by our green consumers. The information that was examined most frequently by all the clusters for assessing the greenness of a product was generally the easiest to obtain such as information related to the brand name, for example, "Ecover", "Green Care", shop

names, for example, the body shop or references to shop categories such as farm shops and health food shops. Other easily obtainable information included on-package information such as slogans or certain logos like, for example, a "little green tree". It was, however, in relation to the extent and quality of such knowledge that we found the greatest differences between the clusters. At the top end we found a small group of consumers who had a deeper, more concrete knowledge that they could call upon than the lower clusters. For information that was "not so easily" available the differences amongst the clusters in their attempts to assess the "greenness" of a given product became more dramatic. In ideal, normative terms, the greenness of a product should be assessed with reference to so-called "life-cycle considerations" which relate to the entire value chain process – literally the life-cycle of a product including the sourcing, production, transportation, consumption and disposal of the consumer good.

Life-cycle assessments are a highly complex task and even among those most likely to be able to undertake such analyses, significant methodological debate is found about how to put life-cycle analysis into practice. In idealized normative terms, it is possible to set out what should be done, but this tends not to be practically feasible because of complexity and information deficiencies (Troge, 1993). This was mirrored in the empirical data where those consumers with little, if any, knowledge about green issues, largely ignored life-cycle considerations when the greenness of a product was assessed. In contrast, those consumers with a greater knowledge base frequently took life-cycle considerations into account and did so, on a selective basis[2]. Of all life-cycle considerations made, transportation issues were most frequently focused upon with more than 50 percent of all life-cycle references made by British sample related to transportation considerations; for the German sample, this number was even close to 80 percent[3] – where transportation consideration signify issues such as a product being "locally produced and retailed", i.e. the impact of the transportation of a product on the environment. Other life-cycle considerations, such as disposal and production were less conspicuous. Nor did the occurrence of transportation considerations distribute evenly across the five clusters. There was a strong concentration in the top clusters: the British top two clusters comprised about 30 percent of all interviewees (about 40 percent in the case of the German sample), but accounted for about 60 percent of all transportation considerations (close to 90 percent for the German sample).

Information used for assessing transportation considerations including whether a product was locally produced/retailed was frequently of a simple and specific nature, with reference to transportation issues communicated through comments like "[situated] the premises at the end of the road", "[sourced] from a local farm that is only 12 miles away", "[we] try to go shopping where we live", "[we] don't buy South African or Australian wine". Frequently, places like streets, towns, regions, countries or continents were used as proxy values when the respondent considered an issue like "locally produced/retailed". Clearly, this is not the kind of optimal life-cycle behavior that the psychology literature makes reference to, and accuracy in general, and numerical accuracy in particular, did not play a significant role in these estimations (Hull *et al.*, 1988). In other words, a "better", more pragmatic solution rather than a numerically assessed and technically "correct" solution was aimed for.

These findings provide some interesting clues regarding the nature of information search and information processing. In our sample the green consumers of the top clusters were able to see and retrieve life-cycle information as it was offered by a

shopping context and it was this context, as it is perceived by the bricoleur, that ultimately limits information search and processing. As Grafton-Small (1993, p. 42) points out this is to be expected. The bricoleur "must always do with a finite set of tools and materials, including concepts, which is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it". Within the "objective" bounds of a choice context, skilful practical thinking and bricolage was shown in different degrees amongst the clusters, with considerable creativity shown in "seeing" life-cycle information. Indeed, we would go so far as to suggest that the ability of our cohort of green consumers to think through "transportation considerations" in the absence of complete information was impressive, with information like the country-of-origin of a specific product being drawn upon to assess transportation issues. It was here that the more environmentally conscious consumers managed to extend their set of information tools and materials so that their reasoning was more inventive and less bounded than those in the lower clusters. This might not live up to the rigor of scientific thinking presupposed in the cognitive psychology literature, but we would suggest it does present a more realistic and intuitively appealing picture of green consumer choice behavior, which by virtue of its complex nature, is often pragmatic in outlook, with green consumers basing their shopping decisions on information that is perceived to be easily available in a certain choice context. Given these findings, the reasoning and behavior shown by green consumers of the top clusters appears to share the characteristics of skilful practical thinking and successful bricolage as indicated by the fact that these consumers had shown the greatest practical skills in their decision-making. Perhaps less surprising, the actual practice of being a green consumer and the concomitant behavioral learning that this entailed, played an important role in green consumer cognitive development with increases in "green" familiarity (in terms of the number of green products regularly purchased) contributing to an increase in the quality of practical thinking and consumer behavior. Familiarity thus supported the build-up of practical consumer intelligence and which, in turn, was translated into actual consumer behavior.

Regarding life-cycle considerations other than transportation issues, interviewees showed less interest. Information was apparently not easily available to them in the context of shopping and could not, therefore, be put in to practice through practical thinking and bricolage. Information held on life-cycle consideration such as "production process" or "disposal" was largely of specific and unsophisticated nature and was frequently demonstrated in the interviews through the co-participants communicating rather abstract shopping maxims that functioned as rules of thumb when assessing potential purchases, for example, "no plastics". Similar cognitive shortcuts were common for more complex life-cycle considerations such as "sourcing". There appeared to be no easy way to extract this kind of information from a product for these consumers, with the result that context did not support problem framing and problem solving so much so, that for these consumers, such products were so far removed from their original source that they could not discern whether purchasing these goods was either good for the environment or potentially harmful.

The tragic scientist: "un-practical" thinking

In the top three clusters, the co-participants commanded a considerable, nearly quasi-scientific knowledge about life-cycle analysis, but somewhat surprisingly, their

actual green shopping behavior was comparatively unaffected by their in-depth knowledge. They showed little ability in relation to practical thinking and bricolage and, despite their comprehensive, technical knowledge of life-cycle analysis, failed to translate this into actual behavior in their everyday shopping and consumption behaviors. Indeed a consistent trend across our interviews with those consumers in the highest clusters was that despite their inclination to search out relevant knowledge and their high general knowledge relating to green consumer issues, this knowledge served to stifle actual behavior rather than enabling it, because it made even everyday decision-making that much more complex – thinking was "un-practical" rather than practical. "Scientifically" minded green consumers tended to retain a large store of information on rather elaborate green issues (e.g. production and energy issues) that was not easily obtainable in the choice contexts in which these green shopping behaviors were enacted, thereby making it that much more difficult to put their knowledge into practice. Of particular note here was the level of depth of knowledge that these consumers had in relation to the where it was possible to source the types of information that they required to discern the environmental impact of their consumption choices in relation to, for instance, the benefits associated with "natural" household goods such as beeswax, which was subsequently juxtaposed using counter-argumentative knowledge in relation to the tradeoffs associated with non-green products such as highly processed manufactured cleaners. Despite this apparent specificity of knowledge content, and having developed a degree of cognitive understanding of one product class, this information was readily translated across products classes and supplemented with additional information where required; i.e. in relation to being a practicing green consumer, their attention was widely dispersed across a range of issues with information about the requisite behaviors drawn primarily from more specialist sources including (but not limited to) the publications and meetings of pressure groups than from other communication media such as television, radio or newspapers. Having said this, this in-depth and highly specific knowledge did not necessarily translate into effective shopping behavior. Indeed, it was the lowest among those we interviewed.

In contrast to the paralysis induced by in-depth knowledge, the successful pragmatic green consumers focused more readily on transportation issues since they were relatively easy to estimate in a certain shopping context and enabled this group to put their green consumer beliefs into practice. It would seem that too much knowledge could stultify the ability of green consumers to translate their abstract knowledge into social praxis with green consumer behavior dependent, to some degree, on a veil of ignorance. Consumers who had tried to approach green shopping with scientific precision suffered under cognitive frustrations regarding the complexities of the issues involved, with related behavioral strictures imposed by apathy and cynicism resulting, in turn, in less green shopping behavior being undertaken. Here, then, is the tragedy of the green consumer. Where a theoretical science of abstract assessments and exact measurements had failed "scientific" green consumers, a concrete science of contextual cognition and contextual behavior had enabled pragmatic green consumers to become more active in their green shopping behavior. The real "expert" green consumer here was a pragmatist who had learnt to extract certain information for environmental assessments from the choice context. Even complex problems such as life-cycle assessments were contextually re-framed and negotiated. Overall consistency, numerical accuracy and "scientific" correctness did not play a significant role in such choice behavior.

What we hope to have demonstrated here is that a subjective, comparative approach to product choice based on selective information search for proxy information is likely to be highly useful and successful for the green consumer in their everyday life. Findings from experimental consumer research which indicate that consumers make "wrong" or "irregular" choices when they process information on a contextual, comparative basis do not contradict the findings made here (Prelec *et al.*, 1997, pp. 118-19). Rather, they seem to indicate certain methodological problems regarding the way that context was dealt with in previous experimental research.

Conclusion

This paper has attempted to explore the contextual aspects of problem-solving behavior of green, environmentally concerned consumers. We have demonstrated that cognitive anthropology develops a different, yet complementary, understanding of consumer cognition in comparison to a psychological approach. By drawing theoretical sustenance from cognitive anthropology, particularly from work such as Levi-Strauss's (1966) *The Savage Mind* or Levy-Bruhl's (1926) *How Natives Think*, we highlighted how issues of information search, information processing and problem solving are purposefully and logically negotiated in everyday life. Through the concepts of practical thinking and bricolage, cognition and behavior were conceptualized on a contextual basis, and this approach, however, exploratory it still remains at present, encouraged a reassessment of how consumer research has traditionally conceptualized problem framing, information search, information processing and related concepts such as expertise, familiarity and intelligence. As a movement in this direction we have outlined the theory informing cognitive anthropology that conceptualizes meaningful behavior in a radical, but intuitively appealing fashion, through the ideas of practical thinking and bricolage. A cognitive anthropological approach to consumer cognition does not assume "bounded rationality" or "limited information processing", but instead demands that the researcher actually looks at how green and non-green consumers actually bind – and also unbind – their reasoning through the subjective perception and construction of their behavioral context.

From the interviews, a complex picture of green consumer behavior was developed that would appear to suggest that marketing communications practitioners or others interested in speaking to this market adopt a leveling communications strategy. By this, we mean that environmental communications strategies should aim to overcome the cognitive barriers that impinge on consumer cognition and, in turn, prevent consumers from moving from the intent to purchase to the actual purchase of green products. In response, we suggest that green marketing communications should be factually based and pragmatic in outlook and tailored to the requirements of the different groups of consumers. The communications and message mix should be easily accessible to the target consumer on a step-by-step basis, through the use of a variety of different marketing communication channels (i.e. leaflets, poster campaigns, television advertising and in-house seminars), with a range of different green communications delivered one after another. What is of paramount importance here is that the potential green consumer is not overburdened by information overload, while at the same time, those groups who do desire additional information can retrieve it, as and when they require it. Given the theoretical complexity of green shopping issues these should be introduced on a step-by-step basis with one potentially important

avenue for exploration being a "learning by doing" strategy. One possible educational route that communications managers may want to pursue is some form of "community based social marketing" which entails encouraging experienced green consumers to work with recent converts to the virtues of green consumption and, for whom, they can function as an exemplar of the kinds of behavior easily incorporated and accomplished in everyday life (McKenzie-Mohr and Smith, 1999).

While we have used cognitive psychology as our foil for discussing the value of cognitive anthropology both approaches conceptualize "meaning" in different, but not incommensurable ways, therefore, implying some degree of methodological complement between these paradigms. The challenge for future research in this area is to establish interdisciplinary communication across their respective territories if theories of cognition are to develop. One such avenue could be achieved through multiple paradigm research by using the positivist insights of cognitive psychology in parallel or sequentially with interpretive cognitive anthropology. Indeed, this potential "meeting of minds" is seen as a highly desirable strategy for theory building in marketing. We can only echo the recent call for more multiple paradigm research given its potential to "foster greater comprehensiveness … relevance … and reflexivity" (Tadajewski, 2004, p. 325). So where one reviewer of this paper made reference to the use of both qualitative and quantitative methods, we propose that now marketing researchers are becoming more fluent in interpretive approaches, while retaining their literacy in more positivistic research approaches, that it is becoming feasible to undertake multiple paradigm research projects (Davies and Fitchett, 2005; Tadajewski, 2005, n.d.). The potential conflict that could arise here is less likely to be a function of the much vaunted incommensurability thesis, and more from the sheer intellectual demands that such research would require. This, however, remains the preserve of future researchers but as we have briefly indicated here, it would appear to be an important future direction for consumer research.

Notes

1. We are well aware of the deficiencies of this terminology but given that most marketing and consumer researchers are versed in its use, however inappropriate, it conveys the style of research we are gesturing towards adequately (Szmigin and Foxall, 2000).
2. Findings were replicated for British and German green consumers.
3. The higher value for the German sample was largely due to a bigger share of German interviewees, about 40 percent, falling into the top clusters as compared to about 30 percent for the British sample. These differences in shares was a by-product of non-random, purposive sampling.

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