INTEGRATING DEDUCTIVE AND INDUCTIVE APPROACHES IN A STUDY OF NEW VENTURES AND CUSTOMER PERCEIVED RISK

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ABSTRACT

Researchers in the fields of marketing or management may find themselves in situations where they would like to make use of existing theory to guide their investigations. However, they may also see the research developing rather than testing theory, in which case the data may need to be gathered on an inductive/qualitative basis. The use of theory with qualitative method may appear to be a dichotomy. Indeed, existing texts in research methods seem to suggest that it is not possible to use existing theories, or elements of them, to drive an investigation when the aim is to develop theory.

Drawing upon a study of the ways in which entrepreneurs use trust to mediate customer-perceived risk at the start of a venture, this paper argues that researchers can combine elements of both approaches, in an epistemologically consistent way. Specifically, researchers seeking to use an inductivist/qualitative approach *can* start with an a priori specification of constructs, perhaps in the form of a model. One of the ways in which this can help researchers is to identify where they should look in order to find the phenomena of interest to them. We argue that the difference between inductivist and deductivist research is *how* they draw upon existing research: in inductivist research theory can be used where it is composed of constructs while theory represented in the form of variables is more appropriate in hypothetico-deductive research.

Similarly we argue that although existing theory can be used to formulate the questions which the inductivist/qualitative researcher asks of the respondent, what is important is that such questions are atheoretical, and this should also be a characteristic of the tabulation of the data.

We acknowledge that using existing theory to drive a qualitative/ inductivist investigation can compromise the researcher ability to pay attention to the respondent's point of view. It can also limit the extent to which the investigation is truly inductive. However we feel that these losses can be minimised and can be more than compensated by gains in other areas. The implication for inductivist/qualitative researchers is that they need not feel guilty about using existing research - what matters is *how* they use it.

INTRODUCTION

Opinions are divided amongst researchers as to what constitutes legitimate inquiry and warrantable knowledge in specific situations. Indeed there appear to be two diametrically opposing views. On the one hand there is the "experimentalist", "hypothetico-deductive" or "positivist" and on the other the "naturalistic", "contextual" or "interpretative" (Henwood & Pidgeon 1993:15). One starts from the need to test theory and the other to develop theory. This creates a dilemma for the researcher faced with a research question where theory exists but may not be appropriate in their particular circumstances. This is the problem we faced. We were interested in exploring how entrepreneurs used trust to mitigate customer-perceived risk in start-up situations. Whilst there is an extensive literature on the development of trust which allowed the formulation of a deductive research design, it had not been applied in this situation and our experience in the field suggested that it may not be entirely appropriate. We needed to incorporate an inductive approach into the design.

THE HYPOTHETICO-DEDUCTIVE APPROACH

The purist hypothetico-deductive perspective "...emphasises universal laws of cause and effect on an explanatory framework which assumes a realist ontology; that is that reality consists of a world of objectively defined facts" (Henwood & Pidgeon 1993:15). In the deductivist tradition the researcher starts "....with an abstract, logical relationship among concepts then move(s) towards concrete empirical evidence", (Neuman 1997:46). Thus in deductivist research there is a well-established role for existing theory since it informs the development of hypotheses, the choice of variables, and the resultant measures which researchers intend to use. Within this paradigm the scientist formulates a particular theoretical framework and then sets about testing it. In an example of this approach which was relevant to our research, Moorman, Deshpande and Zaltman (1993) study the factors that determine users' trust in their researchers. Their theoretical framework shows that various antecedents influence 'user trust' in the researcher and, in turn, this influences the utilisation of market research information. For example "perceived researcher interpersonal characteristics" are an antecedent to trust; one of the components of these is the 'perceived expertise'

of researchers. Their theory hypothesises a relationship between user trust in the researcher and researcher expertise. The basis for the hypothesis lies in previous work by Crosby Evans and Cowles (1990). Since the researchers have specific measures for expertise they are able to test whether the hypothesised relationship actually exists. Quantitative or 'logical positivist/quantitative' methods (Deshpande, 1983) for data gathering and analysis are commonly associated with such approaches.

The value of such an approach is that researchers are able to make use of previous researchers work. However, its limitation is that it is only possible to test whether or not, or to what extent, the hypothesised relationships exist. This approach does not help the researcher to identify what other unanticipated factors may exist such as, for example, contingent variables or new constructs. Moreover the researcher can lose the richness of data which respondents can provide as a conversation develops in a more unstructured setting. These are some of the advantages of the qualitative approach.

THE QUALITATIVE APPROACH

Van Maanen (1979) says that the term "qualitative" has no precise meaning, that it is an umbrella term which covers a variety of techniques, ".....which seek to describe, decode, translate and otherwise come to terms with the *meaning*, not the frequency of certain more or less naturally occurring phenomena in the social world" (Van Maanen 1979:520) (our italics). In order to gain that meaning qualitative methods emphasise, "...the representation of reality through the eyes of participants (Henwood & Pidgeon 1993:16). The focus is on the respondent and it is their reflections and opinions that should guide the research, so that "...a qualitative researcher begins with a research question and little else" but "begin(s) with detailed observations of the world and move(s) towards more abstract generalisations and ideas" (Neuman 1997:334). This distinction between qualitative and inductivist research on the one hand and quantitative and deductivist research on the other is also made by Deshpande (1983).He draws on Reichardt & Cook (1979) to conclude that an area of differentiation between the qualitative and quantitative paradigms is that in the qualitative paradigm research is "grounded, discovery oriented, exploratory, expansionist, descriptive, inductive" whilst the quantitative paradigm research is

"ungrounded, verification-oriented, confirmatory, reductionist, inferential, hypothetico-deductive" (Deshpande 1983).

We would argue that this is not a helpful dichotomy and that using theory to drive qualitative research, thus introducing a degree of deductivism to the data gathering process, does not rule out our ability to describe and explore *per se* although it may reduce the extent to which we can explore.

IT IS THE HOW THEORY IS USED THAT MATTERS

Whereas the hypothetico-deductive approach starts with theory expressed in the form of hypotheses, which are then tested, qualitative research avoids this, in order to avoid prematurely closing off possible areas of enquiry (Bryman 1988). If theory does play a role, it is later in the research process: "....the belief (with which qualitative research is more commonly associated) that theoretical reflection ought to be delayed until a later stage in the research process" (Bryman 1988:91).

If it were widely recognised that the above recommendation could be followed productively, then there would be no need for the discussion in this paper. However, it has been recognised that moving away from such a "purist" approach can have benefits Indeed, Eisenhardt notes that researchers can benefit from an: "...*a priori* specification of constructs" which "...can help shape the initial design of theory building research" (1989:536). In fact starting with a completely clean slate has been argued to be very rare. As Bryman (1988) notes "Ethnographers rarely adopt a stance of being "sponges" whereby they simply absorb the subjects interpretations" (Bryman 1988:73). This implicit recognition that pure inductivism may be difficult to practice has been made explicitly "although the qualitative and quantitative approaches are polar opposites: it should be kept in mind that individual researchers in all areas, including marketing, fall somewhere along the continuum between the two extremes" (Deshpande 1983:104). There is, however, some reticence about going much further. Eisenhardt (1989:536) cautions researchers that they should avoid: "thinking about specific relationships between variables and theories". Nevertheless, it is possible for the inductivist researcher to acknowledge both their interest in specific **constructs**, and also their understanding of the relationships between them. What Eisenhardt cautions against is specifying relationships between **variables**.

Clearly, this distinction between constructs and variables is important. Bacharach (1989) citing Kaplan (1964:55) says, "constructs may be defined as terms which though not observable either directly or indirectly may be applied or defined as the basis of the observables." Bacharach (1989) also cites Schwab (1980) for the definition of a variable as "an observable entity which is capable of assuming two or more values. So, for example, "performance" is a construct for which "sales" or "return on investment" is the variable.

DEVELOPING MODELS USING CONSTRUCTS

Up to now researchers have distinguished between inductivist and hypothetico-deductive research on the basis of the presence or absence of theory. We would argue that there can be a middle ground - one where existing theory is used but is presented in the form of constructs rather than variables. This would be synergistic with the qualitative approach to research, since the whole tenor of a data gathering exercise which is premised on constructs rather than variables can be more fluid and adaptive to the needs of the respondent. This enables the researcher to "discover" issues or effects which they may not have had in mind when the investigation began. So, for example, asking a respondent about the performance of their firm leaves it open for a discussion of any one of a number of variables (e.g. sales, market share, profitability). Indeed, taking this approach assumes that the respondent would identify and focus on the variables most important to them. In contrast, if the researcher specifically asks about profits, this would close off some potential areas of enquiry. Consequently, we would argue that the qualitative researcher **can** use models to guide their investigations but that they should be composed of constructs rather than variables.

There are two additional advantages in using models composed of constructs. First, since the qualitative researcher is often advised to deal only with general themes rather than specific questions, this means that different respondents may well discuss different variables. In such a situation the *a priori* specification of constructs provides a useful means of making sense of the disparate information provided by various respondents. Moreover since in the subsequent analysis the researcher is challenged to identify the links between variables and constructs, this approach allows the

respondents to help to explain what the relationships are in their particular circumstances. Furthermore they can help to distinguish between different constructs.

Second, constructs provide a focus for research but unlike variables they are inherently more general and as such leave open the scope for generating unintended findings. After all, in reality there is a clear pressure on researchers to generate findings about a specific topic – to focus their research. Identifying specific constructs with which to work is an aid to this. This does not, however, preclude the opportunity to find new constructs which are relevant to the research question. Indeed, this flexibility is a real strength of the approach we espouse.

Figure 1 shows the differences between the purist inductive and deductive approaches and our view as to a combination of the two.

At this point it is important to acknowledge the criticism that Blaikie (1991) has made of triangulation, specifically we need to consider whether his criticisms apply here. Firstly, the approach proposed here is not triangulation in the commonly used sense, we are not arguing for the combination of qualitative and quantitative methods of data gathering in a single piece of research in order to gain different insights into the same phenomenon and in this respect we believe that Blaikie's criticisms do not apply.

One of the reasons why triangulation is used is to improve validity of findings and reduce their bias, Blaikie (1991) argues that given the different ontological and epistemological assumptions of quantitative and qualitative approaches it may often not be possible to do this. However these two supposed benefits did not motivate the proposal of our approach, instead our motivation was to improve the focus of otherwise interpretive research. For these reasons we do not consider Blaikie's criticisms to be applicable here.

HOW EXISTING THEORY CAN BE USED IN QUALITATIVE RESEARCH: A CASE STUDY

Having argued that qualitative researchers can use models composed of constructs the question is how in practical research they can be used. The following discussion addresses some practical issues as to how theory can be used in qualitative research. We consider in turn the help theory can provide in choosing a context for the research, the choice of questions to be asked of respondents and finally the tabulation of

interview data. To illustrate our argument, we demonstrate the approach used in our exploration of the use of trust in mitigating customer -perceived risk in new ventures.

Developing the model:

In designing their study, researchers may start with an interest in a particular construct or phenomenon. In our case, we began with a curiosity as to how entrepreneurs used "trust" to generate sales opportunities in the creation of a new venture. Whilst there was an extensive exploration, and discussion, of this construct in the literature, to our knowledge, it had rarely been explored to the entrepreneurial context. Nevertheless, the literature distinguished between the different bases that may lead to one individual trusting another. It may be because of:

〈 Their particular personal characteristics (characteristic based trust). For example, they may be mature and carry gravitas.

〈 Their previous interactions (process based trust). For example, they may have worked together as customer and supplier in a previous employment.

〈 The rule of law (institutional based trust). For example, the individual is a qualified doctor or works within a recognised and respectable organisation.

This existing knowledge was important. It allowed us to develop the model shown in Figure 2 and helped us to identify the impersonal and personal bases of trust, the mechanisms individuals use to find out whether someone else is trustworthy, and the specific reasons why customers may think an entrepreneur is trustworthy. As well as helping us to 'recognise' the relevant evidence when we came across it, the model was also useful insofar as it helped us to contextualise our findings in terms of existing research. Since the model is composed of constructs it is holistic, in the sense that although it is based on trust between individuals, it can also be used to categorise the use of elements of the marketing mix. For example, usage of warranties can be categorised as using institutional based trust. On the other hand, the usage of high prices as an extrinsic cue for quality would be categorised in the same group as reputation, since both are methods customers use to determine whether a marketer is trustworthy.

Selecting the sample:

Our study was concerned with the process of creating a venture and an examination of the theory also allowed us to construct a sample which allowed us to capture the likely diversity of process-based trust. In short, it was important that we included some people who had had no previous interaction with their target customers, and where there would be an absence of process based trust. This would give us the opportunity to gather evidence of how entrepreneurs make use of trust where ostensibly none ought to exist.

This deliberate choice of sample would not prejudice the inductive nature of the enquiry, indeed Yin (1984) recommends that cases in qualitative research can be selected either because similar results are predicted (literal replication) or to generate different results for predictable reasons (theoretical replication).

Existing theory was also useful in highlighting the link between risk and trust. This was an important notion because it provided us with an additional means both of finding trust and also recognising it. Thus we could search for the use of trust in situations where the entrepreneurs perceived some form of risk. Clearly, the building of an entirely new customer base fulfilled this criterion since the conceptual relationship had a correlate in the practical notion of "customer perceived risk", which marketers can try and overcome using the "elements of the marketing mix"(EMM). The literature suggests that the effectiveness of strategic choices of the marketing mix may be due to their trust bearing properties. So, for example, Wiener & Mowen (1986) have argued that an important trait determining the success of salespeople is how trustworthy customers perceive them to be. Pricing can be used as a means of influencing customer predictions of product performance. Customers may use high price as an extrinsic cue for inferring product quality (Bearden & Shimp 1982) i.e. they may demonstrate greater trust in a product if it has a relatively high price.

Questions should be atheoretical:

Having used theory to guide our choice of respondents and also the respondent's activities on which we wanted to focus, the final issue was how we should question them. Whilst the literature did provide opportunities to follow a deductive path and construct some form of survey instrument, we rejected this. Quite simply, we were not

convinced that existing theory was sufficiently robust to capture the particular complexities of trust and customer perceived risk in the entrepreneurial situation. Therefore, we continued down the qualitative path.

Our aim was to find out how entrepreneurs manage customer perceived risk. Clearly one means of doing this would have been to ask them directly how this was done. However that would have run counter to the need to collect data in the interviewee's own terms. Naturally it would also have presupposed their interest in the subject and their linking trust with risk. Our task was to develop a means of questioning the respondent in such a way that they would lead us to risk and trust but in such a way that there should be no tautological guarantee of this. In order to maintain objectivity, we had to rely on respondents taking us to trust and risk through their own volition. So although we knew the existence of the theoretical link between risk, trust and entrepreneurs marketing activities, in order to maintain objectivity it was important that the link was not disclosed to them.

The questions we asked were what elements of the marketing mix they used and why they used them. So, for example, we might say "How did you go about getting your first orders?" followed by "Why did you do it that way?" The first question required only a descriptive answer, which had no theoretical implications, but the second question leaves it open to the respondent to say, in their own terms, that it was customer perceived risk which motivated usage of the specific EMM and that it was because of the credibility or trust associated with the EMM that they felt that they would be effective. For example a clothing manufacturer said that they had used a sales agent because of the credibility he would bring when making sales to retailers. Similarly a fitness machine manufacturer used retailers rather then sell direct, partly because customers believe that the former can be relied upon to give independent advice.

The respondent was thus charged with providing us with the linkage between their actions and the reasons for choosing those actions - it is they who could introduce and discuss the links between risk and trust. This approach also had a benefit insofar as it reduced the chances of reification. Therefore while there was a model guiding the research, this did not mean to say that the model guided the questions asked of the respondent.

Tabulation of data should be atheoretical:

As well as the questions being atheoretical it was important that the tabulation of the data should be also. We tabulated responses in the following manner. Text from interviews was coded in one of three columns - material relating to choice of elements of the marketing mix, the reasons for the choice, and any success associated with their decision making. All data was tabulated, regardless of whether it dealt with risk or trust. Clearly entrepreneurs reasons for their decisions could have been associated with risk and trust or any number of other motivations. For example a cosmetics manufacturer chose export markets by literally placing pins on a map. Since respondents were charged with explaining the reasons for their choice of elements of the marketing mix, this meant that the tabulation could be undertaken purely in terms of the respondent's own words.

At the analysis stage, given the volume of data, we had the choice of focusing on respondents' evidence dealing with risk and trust and/or some of the other motivations they had had for choosing specific EMM. In the event, we chose not to deal with the latter since there was insufficient material to present a coherent story. Our analysis of the remaining data was based as far as possible on respondent's own words. We left as little as possible to our own inference of what they were doing, again in order to minimise the possibility of reification and of our creating second order constructs which had no relevance to actual practice. However this could not always be avoided.

Interpreting respondents first order constructs as our second order constructs:

The model and our specification of constructs provided us with an explicit and transparent means for interpreting respondents first order constructs in terms of our own second order constructs. So, for example, when a respondent talked of the importance of salesperson "enthusiasm" in order to make sales, we could compare this to the constructs already present in our model and those with which we were familiar from the broad field of marketing. This was important because respondents may have been using synonyms to identify constructs that had already been observed by previous researchers.

It should be pointed out that the value of this approach as an inductive piece of research lies in the fact that the "enthusiasm" construct was not in the original model at all and was an unintended finding. This would not have been possible had we simply been *validating* the model. Our demonstration as to whether enthusiasm is linked to trust or not is explained in more detail in Ali & Birley (1998).

CONCLUSION

This paper has sought to show how qualitative researchers can make use of existing theory and thereby take advantage of existing knowledge. We have recognised though, that this will limit the extent to which the resulting research will have paid attention to respondent's perspective. Our contribution, we hope, has been to demonstrate how researchers can try and use existing theory and maximise the attention paid to the respondent's perspective.

What matters is *how* existing theory is used. We have argued that it is possible to develop "models", that it is important that the models be constructed out of constructs rather than variables. Indeed we have stressed that an important distinction between qualitative and hypothetico-deductive research is the focus of the former in constructs while the latter places more emphasis on variables. We then showed that the most critical issue is how respondents are asked questions and how their answers are analysed. It is at this stage that we have said that researchers need to be "atheoretical". They need to ensure that respondents can give answers that are as important and meaningful to them as possible. The effort on the part of the researcher is to draw up questions and bases of analyses that although atheoretical can possibly lead to the constructs in which they are interested. This also applies to the choice of sample - it needs to be composed of people who, because of their characteristics, may possibly lead to the constructs the researcher is interested in.

Finally, as previous commentators on methodology have remarked, very few researchers start off with a "clean slate", and very few are able to function as sponges - merely gathering up everything that is told to them. Having taken for granted that most researchers undertake some form of literature review, and also having taken for granted that researchers develop interest in some issues or constructs, we have sought to show why an *a priori* interest shouldn't reduce the quality of research or indeed be "glossed" over in embarrassment.

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Figure 1: The integrated approach compared to purist versions of the deductive and inductive approaches

Stage	Purist Deductive	Purist Inductive	Integrated Approach
1.	Develop theoretical framework	Area of enquiry identified - but no theoretical framework	Develop theoretical framework based on constructs
2.	Variables identified for relevant constructs	Respondents identify constructs and explain the relationship between them	Some variables identified for relevant constructs - others can be identified by respondents
3.	Instrument development	Broad themes for discussion identified	Researcher converts the a priori theoretical framework into **atheoretical** questions
4.	Respondents give answers to specific questions	Respondents discuss general themes of interest	Respondents discuss the seemingly general questions and identify constructs which are meaningful to them and explain the relationships between the constructs
5.	Answers analysed in terms of prior theoretical framework	Researcher develops theory on a purely inductive basis	Respondent data analysed according to existing theory. OR theory is developed on an inductive basis - without regard to the existing theory.
6.	**Outcome** Theory tested according to whether hypotheses are accepted or rejected.	**Outcome** Theory developed	**Outcome** **Either** Existing theory is adapted **Or** Alternative theoretical framework is presented.

Figure 2:

Bases of Trust
personal & impersonal reasons why the
customer should trust the marketer

Institutional
because of the rule of law
e.g. warranties
(can lead to emotional trust

1st Level of distinction:
between the state and the individual

Characteristic-Based
because of who they are
(can lead to emotional trust)

2nd Level of distinction: between the individual's characteristics and their behaviour

Process-Based
because of how they behave
(can lead to cognitive& emotional trust)

Reasons why customers think entrepreneurs are trustworthy

Ability

Integrity

Benevolence

Customers can **find out** whether entrepreneurs are trustworthy through the following:

Reputation

Social learning

Self-disclosure

Behavioural Enactment
customer overcomes perceived risk and enters into exchange - demonstrates trust in marketer

Demonstration of trust builds trust