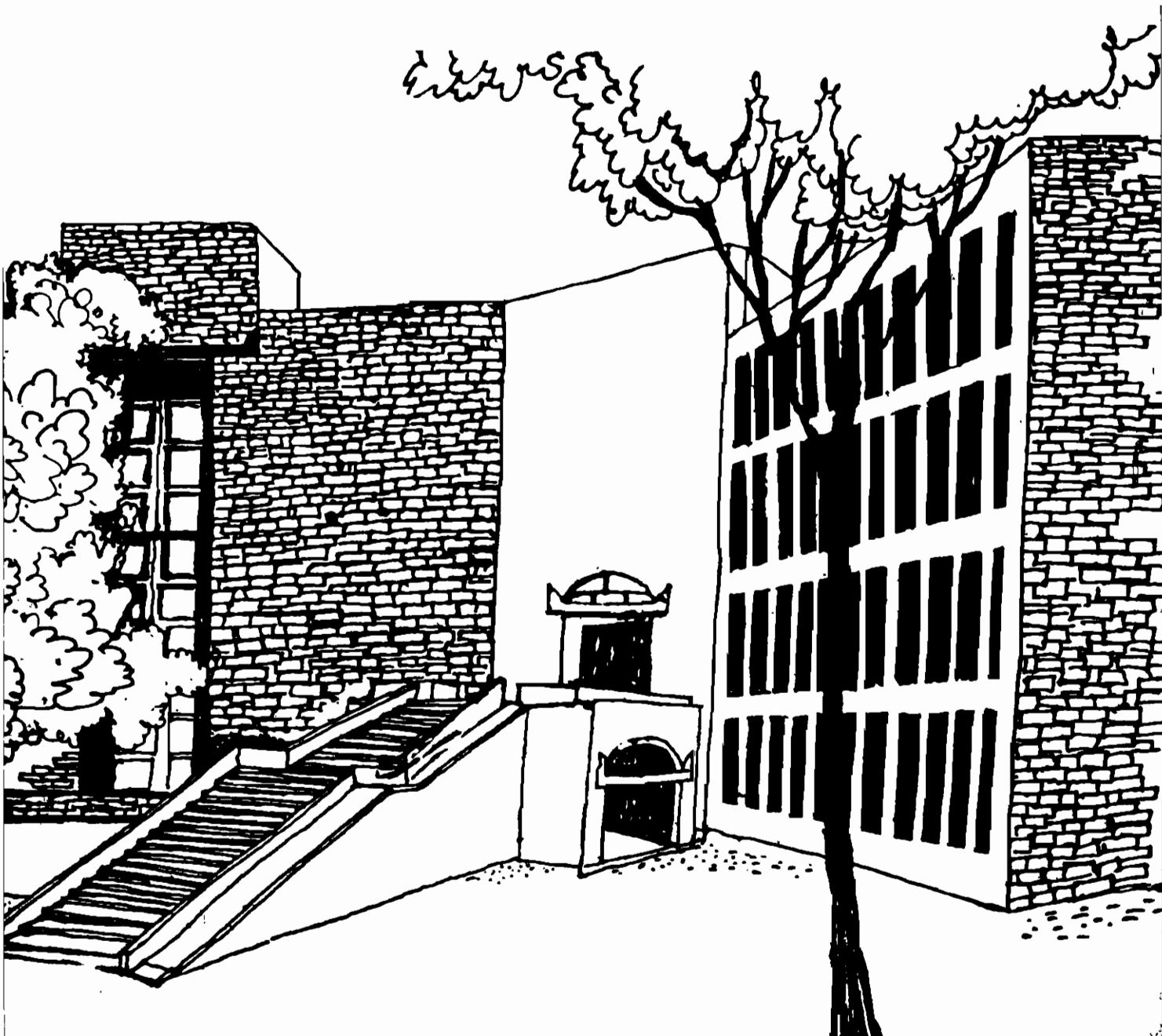




વિદ્યાવિનિ યોગદાકામઃ
J J JMC
AHMEDABAD

Working Paper



**RESOURCEFULNESS : A PROXIMAL CONCEPTUALISATION
OF ENTREPRENEURIAL BEHAVIOUR**

By

**Sasi Misra
E. Sendil Kumar**

**W.P.No.2000-06-10
June 2000 1610**

WP1610

**2000-06-10
(1610)**

The main objective of the working paper series of the IIMA is to help faculty members to test out their research findings at the pre-publication stage.

**INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAD-380 015
INDIA**

11-06-10

RECEIVED
OFFICE
GENERAL MANAGER
R. I. M. AHMEDABAD.
NO. 250156
VIJAYABHAI NARAYAN
R. I. M. AHMEDABAD.

**RESOURCEFULNESS: A PROXIMAL CONCEPTUALISATION OF
ENTREPRENEURIAL BEHAVIOUR**

**Sasi Misra
Indian Institute of Management Ahmedabad
Ahmedabad, India 380 015
Telephone: 91-79-6307241
Fax: 91-79-6306896
E-Mail: smisra@iimahd.ernet.in**

**E. Sendil Kumar
The Wharton School
University of Pennsylvania
Philadelphia, PA 19104.6370, USA
E-mail: sendil@management.wharton.upenn.edu**

RESOURCEFULNESS: A PROXIMAL CONCEPTUALISATION OF ENTREPRENEURIAL BEHAVIOUR

Sasi Misra
E. Sendil Kumar

ABSTRACT

This paper highlights the confusions surrounding prevailing conceptualizations of entrepreneur/ entrepreneurship that have limited our understanding and predictability of the phenomenon. An alternative conceptualisation viewed as Entrepreneurial Resourcefulness that integrates cognitive as well as motivational aspects and focuses on entrepreneurial behaviour is proposed. The model is deemed proximal rather than distal in nature.

A surfeit of different models and theories of entrepreneurship exist, each seeking to identify and explain the effects of a variety of attributes and personality traits upon new ventures. Common to these theories and models however, is a deficit of their rigorous empirical testing. In many studies, conclusions have been drawn on exploratory case analyses or cross-cultural census taking studies¹.

In the North American context, research into the question, what causes an entrepreneur, reflect both a strong bias for distal motivational concepts (e.g., needs, personality, interests, motives, etc.) and frequent disenchantment with this line of research.^{2,3} Despite the growing interest in entrepreneurship phenomenon in the past decade, understanding of the construct remains limited and ambiguous. Many researchers do not explicitly distinguish between an entrepreneur and entrepreneurship *per se* and often offer tautological definitions. For example, Stevenson *et al*⁴ defined *entrepreneurship* as the pursuit of an opportunity irrespective of existing resources. Bygrave and Hofer⁵ defined an *entrepreneur* as one who perceives an opportunity and creates an organisation to pursue it. The definitional confusion is readily apparent. Furthermore, Covin and Slevin⁶ have introduced an additional confusion by viewing entrepreneurship as a firm behaviour by arguing: "organisations, *per se*, can behave in entrepreneurial manners. Entrepreneurial organisations.... are those in which particular behavioural patterns are recurring. These patterns pervade the organisation at all levels...." (p.7). Thus, the conceptual and theoretical confusions have resulted in inadequate understanding of the notion of entrepreneurship and the processes underlying the concept.

The aims of this paper are two-fold: to clarify the definitional issues and propose a framework for researching into entrepreneurial behaviour. This framework purports to integrate both cognitive and motivational aspects of behaviour through recognition of both choice and volition. In advocating this position we subscribe to the view that an individual's psychological profile does not necessarily make him an entrepreneur, but his behaviour and actions do. Central to this framework is the notion of *resourcefulness* advanced by Kanungo and Misra⁷. The concept of resourcefulness identifies and explicates a set of fundamental generic cognitive characteristics called *competencies* in the managerial context. We argue here that adoption of the resourcefulness model has relevance for a fresh conceptualisation of entrepreneurial behaviour as well. It is hoped, that it would contribute both to the advancement of entrepreneurship theory and hypothesis-generating research in the field.

The Construct of Entrepreneurship

Tables 1 and 2 provide representative lists of definitions of entrepreneur and entrepreneurship, respectively. A perusal of the two tables indicates that the fundamental difference underlying the use of the two terms lies in that the former refers to the content of the phenomenon, while the latter to the process.

Table 1. Definitions of Entrepreneur

Author(s)	Definition
Schumpeter (1934) ⁸	An entrepreneur is a person who carries out new combinations, causing discontinuity. The carrying out of new combinations can include: a new good or quality of a good; a new method of production; opening of a new market; conquest of a new source of raw materials; or the reorganisation of any industry.
Hoselitz ⁹	The entrepreneur is one who buys at a price that is certain and sells at a price that is uncertain.
Leibenstein ¹⁰	An entrepreneur is one who marshals all resources necessary to produce and market a product that answers a market deficiency.
Kirzner ¹¹	An entrepreneur is one who perceived profit opportunities and initiated action to fill currently unsatisfied needs.
Bygrave & Hofer ¹²	An entrepreneur is one who perceives an opportunity and creates an organisation to pursue it.

While we do not dissent with the scholars who focus on the content of the entrepreneurial phenomenon, the results of this line of inquiry remain descriptive rather than explanative. We therefore, invite greater attention of researchers to the entrepreneurial process.

An examination of Table 2 suggests that there is a great deal of diversity among the definitions of entrepreneurship. First, they seem to be closely linked to notions such as innovation, opportunity recognition, profit, economic growth, venture creation, and change. Second, entrepreneurship has been variously conceptualised such as a characteristic, a behaviour, an activity, and a social role, each reflecting the content-domain of a specific discipline. For example, while the characteristics of entrepreneurs were the subject of interest to psychologists, their behaviour preoccupied economists.

Finally, there is some confusion regarding whether entrepreneurship involves single or multiple

Table 2. Definitions of Entrepreneurship

Author(s)	Definition
Cole ¹³	Entrepreneurship is purposeful activity to initiate, maintain, and develop a profit oriented business.
Drucker ¹⁴	Entrepreneurship is an act of innovation that involves endowing existing resources with new wealth producing capacity.
Gartner ¹⁵	Entrepreneurship is the creation of new organisations.
Hisrich & Peters ¹⁶	Entrepreneurship is the process of creating something different with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction..
Stevenson, Roberts, & Grousbeck ¹⁷	Entrepreneurship is the pursuit of an opportunity irrespective of existing resources.
Kaish & Gilad ¹⁸	Entrepreneurship is the process of first, discovering, and second, acting on a disequilibrium opportunity
Herron & Robinson ¹⁹	Entrepreneurship is the set of behaviours that initiates and manages the reallocation of economic resources and whose purpose is value creation through those means.

actors, or it is an organisational-level phenomenon. As mentioned earlier, the level of analysis has become even more contentious with Covin and Slevins²⁰ view of entrepreneurship as firm behaviour. Thus, it is apparent that the quest for a unified definition of entrepreneurship which is inclusive of the multitude of disciplinary viewpoints is akin to the hunt for the holy grail. We concur with Gartner, Bird, & Starr²¹: “The garden of entrepreneurial theories is ready for a variety of seeds from many different disciplines and perspectives. As our field emerges, it might begin to look more like a weed patch, rather than a neatly cultivated garden. At this stage in our development, ‘weediness’ should be encouraged.” (p.27).

However, while we recognise that entrepreneurship is too complex a phenomenon to be explained by any single set of factors²², the greatest benefit is to be obtained by focusing on entrepreneurial behaviour. Concentrating on actions rather than on characteristics or dispositions, shall be more fruitful. It will help push the frontiers of entrepreneurship theory by selecting those aspects of entrepreneurial behaviour which are most significant and determine the generality with which they are found^{23, 24}.

We do not wish to add to the definitional diversity by adding our own definitions of an entrepreneur and entrepreneurship. However, in order to delineate the boundaries of the resourcefulness model, we propose a working definition of entrepreneurship as “a process of opportunity identification and the creation of an organisation to exploit the opportunity”. It may be noted that the definition recognises the construct to be manifest at multiple levels of analysis and proposes no normative restrictions on the definition (such as, success of the venture). Thus, entrepreneurial behaviour is defined as the constellation of functions, activities, and actions involved in the perception of opportunities and the creation of organisations. Having examined the limitations of our

understanding of the entrepreneurial phenomenon owing to pesky definitional problems and fuzziness of the construct, we attempt to reason and present an alternative model of entrepreneurship which focuses on acts rather than dispositions.

Model of Entrepreneurial Behaviour

Fig. 1 presents a heuristic model of entrepreneurial behaviour through integration and augmentation of the existing literature. The model contains five main factors: background factors (demographic and psychological characteristics); attitude; situation; intention; entrepreneurial environment; entrepreneurial resourcefulness; and entrepreneurial behaviour. Explanations and brief reviews of each of these factors follow:

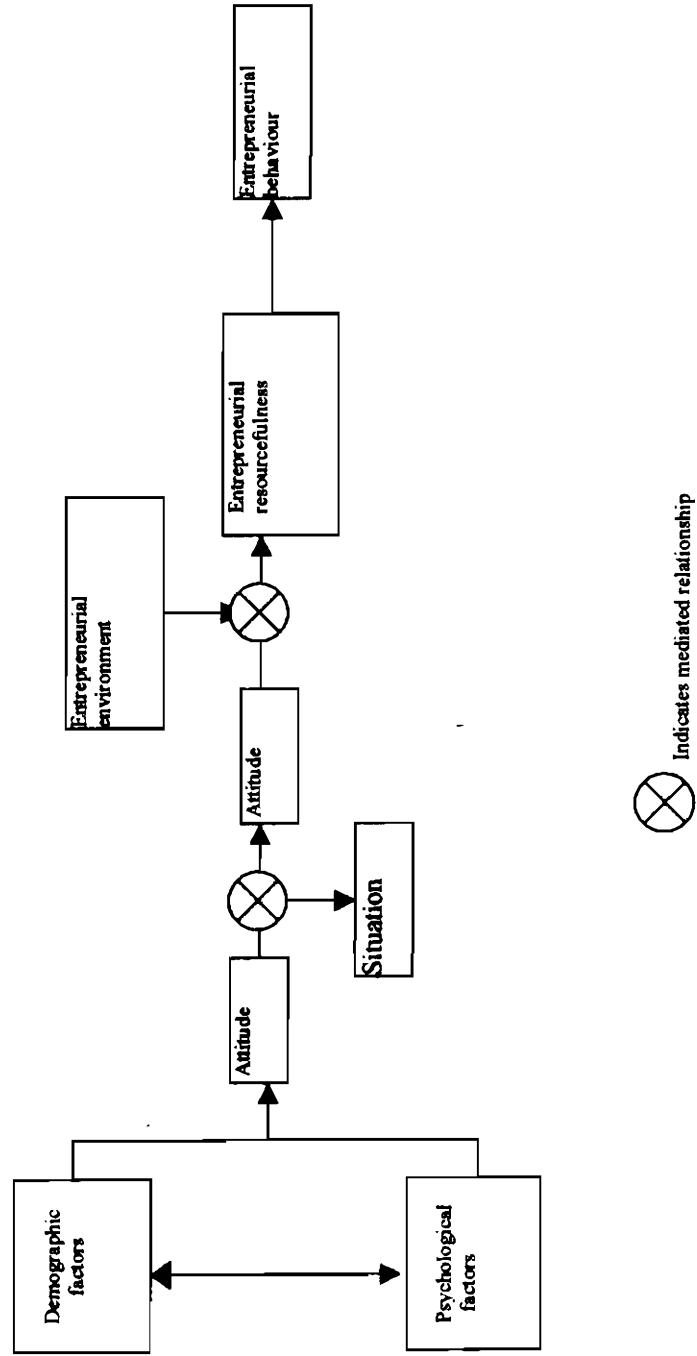
Background factors

The background factors which could have an impact on entrepreneurial behaviour may be divided into two broad categories: demographic characteristics; and psychological characteristics. The background factors that have been included are believed to be temporally as well as situationally invariant. This is at variance with more recent paradigms such as contingency perspective and population ecology, which posit entrepreneurial behaviour to be contextually grounded. However, since these approaches have provided substantial background to entrepreneurship, they have been integrated in the model.

Demographic characteristics. This line of research has employed demographic information to develop a typical profile of an entrepreneur. The variables examined under this agenda have been family background, birth order, age, education level of parents, sex, marital status, previous work experience etc.^{25,26,27,28,29}, Robinson et al³⁰, after a thorough review of the literature concluded that this body of research suffers from three main deficiencies: (1) the assumption that certain demographic characteristics lead to similar experiences in life has been proved otherwise; (2) many researchers use demographic characteristics as surrogates for personality characteristics, which again is an extension of the assumption made above; and (3) this line of research has been woefully inadequate in predicting who will or will not be an entrepreneur, which ultimately is the acid test of the theory. Despite the overwhelming criticism against this line of research we thought it pertinent to include this dimension in our model under the assumption that these variables may influence the more proximal constructs such as attitude and intention.

Psychological characteristics. This line of research sought to identify the psychological characteristics unique to entrepreneurs. The approach spans the gamut of measurement of personality traits to uncovering motivational tendencies of entrepreneurs. This line of inquiry began with the work of McClelland³¹ who explored the need for achievement, power and affiliation of entrepreneurs. This was the approach of many American researchers^{32,33,34,35,36,37,38} who attempted to set apart entrepreneurs from the general populace on dimensions such as achievement motive, locus of control, risk taking, values, and so on.

Figure 1: Model of Entrepreneurial Behaviour



This line of research, once again, did not bear fruit. It was found that managers and entrepreneurs did not differ in substantial ways on the psychological characteristics measured^{39,40,41}. In fact, there was significant diversity in the psychological profiles of entrepreneurs themselves⁴². However, this category of variables are once again being included in this model due to the insights it has offered toward an understanding of the entrepreneur.

Attitude

Although there are no perfect correlations between attitude and behaviour (ranging from 0.4 to 0.7), the variance explained is significant enough to include them in the model^{43,44}. Research in this area as applied to entrepreneurship have been relatively scarce. However, more recently Robinson et al.⁴⁵ found that an entrepreneurial attitude orientation scale significantly differentiated between entrepreneurs and non-entrepreneurs. Therefore, it is posited that:

Attitude towards entrepreneurship is a function of the demographic and psychological characteristics and their interaction.

Situation

There is a small body of literature that investigated the actual situation that has caused the decision or intention to start a new venture. Learned⁴⁶ suggests that for some it may be a trigger event (e.g. layoff from work, dissatisfaction with present work etc.) that may stimulate an intention to found a business, while for others it may be the cumulative effects of various situations over time. Shaver et al.⁴⁷ have found that the motivation for attempting to found a business is frequently personal, such as the desire to work for oneself. Brockhaus and Horwitz⁴⁸ suggest that an entrepreneur may compare entrepreneurial activity with the current situation and may choose the former. Hisrich⁴⁹ found that the number of new business listings in the Yellow Pages increased by 12% during a layoff period. Also two work environments which tend to serve as incubators for potential entrepreneurs are research and development, and marketing. Although research along this line may overlap with the research on the demographic characteristics of the entrepreneur, we chose to distinguish the two due to its greater proximity to entrepreneurial behaviour. Therefore, it is posited that:

the current situation faced by the (potential) entrepreneur mediates the relationship between entrepreneurial attitude and intention.

Intention

Bird⁵⁰ defines intentionality to be a state of mind that directs a person's attention toward a specific goal or path in order to achieve something. Entrepreneurial intentions are aimed at the creation of new ventures or creating new values in existing ventures⁵¹. Bird⁵² in a conceptual paper develops a model depicting the context of entrepreneurial intentions. The author argues that the personal history of the entrepreneur, his current personality, and abilities interact with the social, political, and economic factors to create the context for entrepreneurship, which in turn influence (1) the person's rational, analytic, and cause-effect processes, and (2) the intuitive, holistic, and contextual

thinking frames, giving rise to entrepreneurial intentions. The model then concludes with a link toward action. Therefore, it is posited that:

Entrepreneurial intentions are influenced by the attitude towards entrepreneurship, mediated by the situational factors.

Entrepreneurial environment

Entrepreneurial environment refers to the combination of external factors that influence entrepreneurial behaviour⁵³. It subsumes under its gamut the overall cultural, economic, political, and social factors that enhance or undermine an individual's propensity to undertake entrepreneurial activities and also the training, assistance, and non-financial support available to entrepreneurs.

Gnyawali & Fogel⁵⁴ grouped the entrepreneurial environment into five dimensions: government policies and procedures (e.g., import/export restrictions, entry barriers etc.); socio-economic conditions (e.g., public attitude towards entrepreneurship, presence of experienced entrepreneurs etc.); entrepreneurial and business skills (e.g. entrepreneurial training programs, availability of information etc.); financial support to business (e.g., venture capital, low-cost loans etc.); and non-financial support to business (e.g., counselling and support services, entrepreneurial networks etc.). The authors review the existing literature on environments for entrepreneurship and list the empirical evidence for the factors that they posit influence entrepreneurial activity. Therefore, we propose that:

Entrepreneurial environments mediate the relationship between entrepreneurial intentions and entrepreneurial resourcefulness.

The Concept of Resourcefulness

Before delving into entrepreneurial resourcefulness, some background on the concept of resourcefulness and its relevance to the entrepreneur is in order. We have drawn upon the notion of *resourcefulness* from Meichenbaum's⁵⁵ cognitive behaviour therapy research which refers to the ability to *self-regulate* and direct one's behaviour to successfully cope with difficult, stressful, and challenging situations (emphasis added). Three ideas emerge from this definition which is germane to the present paper: (1) The idea of coping strategies which result in successful adaptation to the environmental demands is complementary to one of the theoretical pillars of entrepreneurship research - strategic adaptation perspective; (2) Since, all individuals differ in their learning or socialisation experiences, there would be individual differences between as well as within homogeneous groups (such as managers or entrepreneurs) showing widely varying levels of resourcefulness; and (3) The central idea of self-regulation rubricates the role of volition and its proximity to behaviour, and its applicability to various roles that an individual may take up in life (e.g., manager, entrepreneur, politician, social worker etc.).

In a recent paper, Kanungo and Misra⁵⁶ employed the concept of resourcefulness to explain management skills. They argue that managerial competencies can be viewed as components of resourcefulness that represent the learned abilities of managers to employ self-regulating and self-

controlling procedures on their jobs. The present paper borrows from their conceptualisation of managerial resourcefulness to develop the concept of entrepreneurial resourcefulness. Table 3 presents a preliminary list of dimensions on which entrepreneurs and managers are believed to differ as a basis for an argument highlighting the need for a theory of entrepreneurial resourcefulness. However, it may be noted that the terms “Manager” and “Entrepreneur” are used here in the sense of ideal types. The characteristics of each type may be present in the other to a greater or lesser degree. In fact, we may even tentatively conjecture that a successful entrepreneur is a manager and something more. Therefore, while conceptually the two types of resourcefulness are the same, the operationalizations in the two instances will vary, due to the change in the subject (i.e., manager and entrepreneur) and his/her functions.

Table 3. Key Dimensions Differentiating Managers and Entrepreneurs

Key dimension	Entrepreneur	Manager
Strategic Orientation	Driven by perception of opportunity	Driven by resources currently controlled
Commitment to the opportunity	Revolutionary with short duration	Evolutionary, of long duration
Commitment of resources	Multistaged with minimal exposure at each stage	Single-staged with complete commitment upon decision
Control of resources	Episodic use or rent of required resources	Ownership or employment of required resources
Management structure	Flat with multiple informal networks	Formalized hierarchy
Reward philosophy	Value driven and performance based	Security driven and promotion oriented

Source: Adapted from Stevenson et al.⁵⁷

Entrepreneurial resourcefulness

We define entrepreneurial resourcefulness as the ability to identify opportunities in the environment and regulate and direct behaviour to successfully cope with the task of creating and managing an organisation to pursue the opportunity.

Consistent with the conceptualisation of Kanungo and Misra⁵⁸ we visualise the structure of entrepreneurial resourcefulness to comprise three generic competencies: cognitive, affective, and action-oriented. Here competencies refer to the mental capabilities that aid in the successful coping/adaptation in the face of difficulties posed by the external environment. The present paper is skipping an extensive discussion of the distinction between skills and competencies for two reasons. First, it has been more than adequately carried out by Kanungo and Misra⁵⁹, and second, there is no record of controversy over the distinction in the entrepreneurship research literature. Table 3. presents a summary of the components of entrepreneurial resourcefulness. A brief description of each of the components of entrepreneurial resourcefulness follows:

Cognitive competence. This refers to the effective management of thought processes, beliefs, and expectations. Six components of cognitive competence are identified which contribute to

entrepreneurial resourcefulness. The first is the ability to analyze and make sense of large volumes of information. Before, starting a new venture, the entrepreneur needs to analyze the competitive environment, the suppliers, the customers and the markets, and the potential for his/her product to make a dent in the market and create a niche for itself. While this information is available to all, not all are able to analyze and make sense of it, or the economy would be witnessing many more entrepreneurial attempts than seen today.

The second competency is the ability to take risks. There have been a number of studies supporting the idea that the ability to bear risk is a prime factor in entrepreneurial behaviour⁶⁰. Colton and Udell⁶¹ found that with respect to likelihood of starting a business, the risk scale is a better indicator than nAch and internal locus of control. More recently, Brockhaus⁶² found no significant difference in the general risk performance patterns of entrepreneurs and a group of managers. However, the fact that entrepreneurs are no different from managers on risk taking, does not imply that entrepreneurs are not risk takers.

Table 4. Components of Entrepreneurial Resourcefulness

<p><u>Cognitive competence</u></p> <ol style="list-style-type: none"> 1. Ability to analyze and make sense of large volumes of information. 2. Ability to take risks. 3. Innovativeness. 4. Ability to perceive and make sense of equivocal realities. 5. Tolerance for equivocality and uncertainty. 6. High effort-outcome expectancy.
<p><u>Affective competence</u></p> <ol style="list-style-type: none"> 1. Ability to control feelings of withdrawal and depression. 2. Competitive desire to excel. 3. Ability to persevere. 4. High central-life interest. 5. Dissatisfaction with status quo.
<p><u>Action-oriented competence</u></p> <ol style="list-style-type: none"> 1. Ability to take charge and lead employees. 2. Ability to influence external agencies. 3. Ability to find, marshal, and control resources. 4. Ability to establish strong networks.

The third component is innovativeness. Schumpeter⁶³ argued that innovation was the central characteristic of entrepreneurial behaviour. According to him all entrepreneurial processes begin with an idea, and the creation of something new. While, there is no evidence in the literature which says that non-entrepreneurs or managers are not innovative, there is support for the perceptions that entrepreneurs are innovative.

The fourth component is the ability to perceive and make sense of equivocal realities. Most of us feel that too many entrepreneurial opportunities do not exist because we feel that if they did, someone would already have seen it. Moreover, even if we did see an opportunity, we may

conclude that if it was worthwhile to pursue, someone might already have done it. And if no one has done it then it represents no opportunity at all. However, this is not the way entrepreneurs reason. The unique perspectives and the resources of the entrepreneur make it possible for him/her to see the opportunity. However, all opportunities are not created equal, and some may be worth pursuing while others may be passed. This requires a deep understanding of the complex and dynamic processes underlying the business environment, which we believe, is an integral element of the cognitive competence of the entrepreneur.

The fifth component is supplementary to the earlier one - tolerance for equivocality and uncertainty. Drawing on portfolio theory, as the risks increase the potential returns also increase. However, greater returns are associated with higher uncertainties. It is believed that associated with each individual is a certain level of risk preference which is found to widely vary in a population. This can be represented at one extreme by the risk averse person who invests all his money in a bank for interest, and at the other extreme is the gambler who spends all his money on lotteries. The entrepreneur needs to take the right level of risks to ensure success. Therefore, a higher tolerance for equivocality and uncertainty in the entrepreneur assumes importance.

The last competency we call as a high effort-outcome expectancy. Expectancy theory was formulated by Victor Vroom to explain work motivation. According to this theory, expectancy is the perceived probability (ranging from 0 to 1) that a certain action or effort will lead to a certain outcome. Therefore, high expectancies will lead to greater effort while low expectancy implies the converse.

Affective competence. This refers to the management of emotional arousal. Five kinds of affective competence are identified for entrepreneurs. The first is the ability to control feelings of withdrawal and depression. Simon^{64,65} suggested that under stress, our primitive urges take control of behaviour and these urges need to be regulated. The entrepreneur therefore, needs to develop the ability to overcome the sense of despair and helplessness resulting from effort-outcome non-contingency.

A complementary competency is the competitive desire to excel. Begley and Boyd⁶⁶ found Type A behaviour pattern to be a promising indicator for differentiating entrepreneurs from non-entrepreneurs. The Type A construct is intended, among others, to measure a person's competitiveness. This provides tentative grounds for us to believe that the entrepreneur needs to be driven by the competitive desire to excel and succeed.

The third competency is the ability to persevere. Entrepreneurs, often have to face hostile environments and overcome entry barriers to start with. Subsequently, there is a gestation period before the results are actually visible. In this period it is critical for the entrepreneur to be able to persevere at his/her goal. If s/he gives up hope then the survival or even birth of the venture may be severely compromised.

A fourth competency is work as one of the central-life interests of the entrepreneur. An individual moves from one portion of life space to another during the day, as for example, from family to work organisation to community⁶⁷. In the social experiences of the individual, one or more social settings in which behaviour occurs may be central. This has been the basis for defining central life

interest of individuals as their expressed preference for carrying out their activities in given institutional settings⁶⁸. Dubin, Champoux, and Porter⁶⁹ found that persons with a central life interest in work have a high level of commitment to their work organisation. As an extension to this we propose that a high central life interest in working for oneself may be an important component of affective competence.

The final competency is dissatisfaction or frustration with the status quo. Brockhaus⁷⁰ studied previous job dissatisfaction on the part of the entrepreneur. He used the Job Description Index (JDI) to measure the employees' satisfaction with the work itself, their perception of supervision, pay, opportunity for promotion, and their attitude toward co-workers. When compared with the normative population used by the authors of the scale, entrepreneurs were found to be significantly less satisfied on all subscales except pay. The greatest dissatisfaction was with the work itself. This suggests that dissatisfaction or frustration with the current situation may be an important precursor to successful entrepreneurial behaviour.

Action-oriented competence. It is the management of intentions and action orientations. Four main components are identified. The first is the ability to take charge and lead employees. In addition to being the driving force behind the creation and establishment of the enterprise, the entrepreneur is a personal leader as well. He is the model for behaviour in the organisation. He is the person to whom employees look for information about what is right and wrong for the organisation. It is important therefore, for the entrepreneur to establish and communicate a vision for the enterprise, inspire commitment, and instil pride in working for it. The entrepreneur here serves as the rallying point for the organisation.

The second competency is the ability to influence external agencies. The role of the entrepreneur demands that s/he interact with numerous external agencies: the government, suppliers, resellers, venture capitalists and so on. For example, the entrepreneur needs to influence financiers to obtain much needed capital. Financiers on the other hand, are interested not only in the returns but also in the risk of the investment, the timing of the returns, and the controls to protect their money. It is the task of the entrepreneur to convince the financier that the investment is worthwhile.

The third competency is the ability to find, marshal, and control resources. Once the entrepreneur perceives and decides to act on the opportunity, the next question is how to get needed resources. The goal of the entrepreneur will be to obtain as many resources as possible subject to the constraint that it can be obtained at different stages with minimal exposure at each state⁷¹. This is where the manager clearly differs from the entrepreneur. The formal systems in organisations and the pressures of personal risk reduction force managers to obtain all resources and then proceed further. On the other hand, entrepreneurs need to work with only the resources critical at that juncture. Also, the entrepreneurs need to control only the strategic resources and leave control of all non-strategic ones. However, the manager will have a tendency to try to control all the resources needed by the organisation to reduce uncertainty and dependence on the environment.

The fourth competency is the ability to establish strong networks. The theoretical and empirical literature suggests that previous relationships, connections, and kinship and community ties lay the ground for new ventures. Entrepreneurs first turn to prior business contacts, family, and friends for information on physical and capital resources, sales, and social support^{72,73}. Networking abilities of

the entrepreneur will help in finding and acquiring the critical resources necessary for venture survival.

Entrepreneurial Behaviour

As defined earlier, entrepreneurial behaviour is the constellation of functions, activities, and actions involved in the perception of opportunities and the creation of organisations. In the present model, entrepreneurial behaviour is the outcome variable. It includes all conscious behaviour executed in the process of opportunity search, opportunity recognition, sensemaking, organisation creation, product/service launch, exchange, and growth. Therefore, we posit that:

Entrepreneurial behaviour is a function of entrepreneurial resourcefulness.

Having examined all the components of the model, the following features of the model become apparent:

1. The model is consistent with the view that behaviour is a function of person-situation interaction. The focus on the person as the unit of analysis should not be confused to be equivalent to a study of personality. The studies focusing on psychological aspects make an assumption that the psychological variables produce the same behaviours regardless of the situation. Our model starts off by relaxing this assumption.
2. As one moves from left to right of the model, borrowing from the terminology of Kanfer⁷⁴, there is a transition from more distal constructs to proximal ones in explaining entrepreneurial behaviour. The impact of the distal constructs on entrepreneurial behaviour is often indirect. For example, the background and psychological factors may exert an influence on behaviour through their impact on the attitude and intention of the individual. At the other end we have constructs such as entrepreneurial environment and entrepreneurial resourcefulness which are more directly purported to influence behaviour.
3. As one moves from left to right there is also a transition of the processes from choice to volition of self-regulation. The distal constructs influence the cognitive choice processes that determine intentions, which form the basis for behaviour. However, when the behaviours to be predicted are highly complex (as in entrepreneurial behaviour), self-regulation and volition mediate the relationship between the distal constructs and entrepreneurial behaviour.
4. Low and MacMillan⁷⁵ suggest two main theoretical pillars to guide researchers in the entrepreneurship paradigm: the strategic adaptation perspective, and the population ecology perspective. The present model also is contextually grounded reflecting the strategic adaptation view. The dominant assumption of this view is that success of the entrepreneurial venture depends upon the entrepreneur's ability to develop and execute effective strategies⁷⁶. Consistent with this view our model suggests that entrepreneurial resourcefulness, a key construct in the model, is the variable that is likely to explain the greatest variance in entrepreneurial behaviour.

In sum, the conceptual model presented here can be seen as a lens through which to view the varying patterns of entrepreneurial behaviour. Past attempts to study entrepreneurship have focused on three key questions: what causes an entrepreneur; how do entrepreneurs behave; and what is the result of entrepreneurship⁷⁷. While the present model attempts to provide a better

answer to the first question, it must be recognised that it also represents a significant departure from existing models. All previous models have attempted to differentiate the entrepreneur from non-entrepreneurs, the assumption being that all entrepreneurs are alike (at least in some respects). The present model makes no such assumptions. By treating behaviour as the outcome variable, the model acknowledges the fact that there could be significant variation in the behaviour of entrepreneurs.

Secondly, by positing that entrepreneurial resourcefulness, a more proximal construct, influences entrepreneurial behaviour, the model has attempted to enhance its predictive power. In fact, all the variables antecedent to the entrepreneurial resourcefulness construct have been modelled to indicate the place of the construct in the entrepreneurship research paradigm.

Finally, care has been taken to define the concept precisely in order to make it measurable with the intention of provoking research to provide empirical validity for the model. It is hoped that the conceptual model and the research agenda presented here will make a clear contribution to answering the question of what causes entrepreneurial behaviour.

Notes

1. Low, M.B., and MacMillan, I.C., 'Entrepreneurship: Past Research and Future Challenges,' *Journal of Management*, XIV (1988).
2. Bull, I., and Willard, G.E., 'Towards a Theory of Entrepreneurship,' *Journal of Business Venturing*, VIII (1993).
3. Bygrave, W.D., and Hofer, C.F., 'Theorizing About Entrepreneurship,' *Entrepreneurship Theory and Practice*, XVI (1991).
4. Stevenson, H.H., Roberts, M.J., and Grousbeck, H.I., *New Business Ventures and the Entrepreneur*, Homewood, IL: Irwin., 1989.
5. Bygrave and Hofer, 'Theorizing About Entrepreneurship' (no. 3 above).
6. Covin, J.G., and Slevin, D.P., 'A Conceptual Model of Entrepreneurship as Firm Behaviour', *Entrepreneurship Theory and Practice*, VI(I), 1991.
7. Kanungo, R.N., and Misra, S., 'Managerial Resourcefulness: A Reconceptualisation of Management Skills,' *Human Relations*, XXXV (1992).
8. Schumpeter, J.A., *The Theory of Economic Development*, Cambridge, MA: Harvard University Press, 1934.
9. Hoselitz, B., 'The Early History of entrepreneurial Theory'. In J. Spengler and W. Allen [Ed.], *Essays in Economic Thought: Aristotle to Marshall*. Chicago: Rand-McNally, 1960.

10. Leibenstein, H., 'Entrepreneurship and Development,' *American Economic Review*, LVIII (1968).
11. Kirzner, I.M., *Discovery and Capitalist Process*, Chicago: University of Chicago Press, 1985.
12. Bygrave and Hofer, 'Theorizing About Entrepreneurship' (no. 3 above).
13. Cole, A.H., 'The Entrepreneur: Introductory Remarks,' *American Review of Economics*, (May 1968).
14. Drucker, P., *Innovation and Entrepreneurship: Practice and Principles*, New York: Harper & Row, 1985.
15. Gartner, W.B., 'A Conceptual Framework for Describing the Phenomenon of New Venture Creation,' *Academy of Management Review*, X (1985).
16. Hisrich, R.D., and Peters, M.P., *Entrepreneurship, Starting, Developing, and Managing a New Enterprise*, Homewood, XI: BPI/Irwin., 1989.
17. Stevenson, Roberts, and Grousbeck, *New Business Ventures and the Entrepreneur*, (no. 4 above).
18. Kaish, S., and Giland, B., 'Characteristics of Opportunities Search of Entrepreneurs Versus Executives: Sources, Interests, General Alertness,' *Journal of Business Venturing*, VI (1991).
19. Herron, L., and Robinson, R.B.Jr., 'A Structural Model of the Effects of Entrepreneurial Characteristics on Venture Performance,' *Journal of Business Venturing*, VIII (1993).
20. Covin, and Slevin, 'A Conceptual Model of Entrepreneurship as Firm Behaviour' (no. 6 above).
21. Gartner, W.B., Bird, J., and Starr, J.A., 'Acting As If: Differentiating Entrepreneurial from Organizational Behaviour,' *Entrepreneurship Theory and Practice*, XVI(III), 1992.
22. Tripathi, D., 'An Integrated View of Entrepreneurship,' *Economic and Political Weekly*, XX (1985).
23. Bird, B.J., *Entrepreneurial Behaviour*, Glenwood, XI.: Scott, Foresman & Co. , 1989.
24. Hoselitz, 'The Early History of entrepreneurial Theory' (no. 9 above).
25. Brockhaus, R.H., 'The Psychology of the Entrepreneur'. In C.A. Kent and D.L. Sexton K.H. [Ed.], *Encyclopaedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice-Hall, 1982.
26. Cohen, N., 'The Five Stages of the Entrepreneur,' *Venture*, (July 1980).

27. Gasse, Y., 'A Strategy for the Promotion and Identification of Potential Entrepreneurs at the Secondary School Level'. In J.A. Hornaday, B. Shils, J.A. Timmons and K.H. Vesper [Ed.], *Frontiers of Entrepreneurship Research* Wellesley, MA: Babson College, 1985.
28. Hisrich, R.D. [Ed.], *Entrepreneurship. Intrapreneurship. and Venture Capital*. Lexington, MA: Lexington Books, 1986.
29. Sexton, D.L., and Aauken, P.V., 'Characteristics of Successful and Unsuccessful Entrepreneurs,' *Texas Business Review*, (Sep, 1982).
30. Robinson, P.B., Stimpson, D.V., Huefner, J.C., and Hunt, H.K., 'An Attitude Approach to the Prediction of Entrepreneurship,' *Entrepreneurship Theory and Practice*, XV (IV), 1991.
31. McClelland, D., *The Achieving Society*, Princeton, NJ: Van Nostrand., 1961.
32. Brockhaus, R.H., 'I-E Locus of Control Scores as Predictors of Entrepreneurial Intentions,' *Academy of Management Proceedings*, (1975).
33. Brockhaus, R.H. Sr and Horwitz, M., 'The Psychology of the Entrepreneur'. In D.A. Sexton and R.W. Smilor [Ed.], *The Art and Science of Entrepreneurship*, Cambridge, MA: Bollinger, 1986.
34. Collins, O.F., and Moore, D.G., *The Organization Makers*, New York: Appleton-Century-Crofts, 1970.
35. Hornaday, J., and Aboud, J., 'Characteristics of Successful Entrepreneurs,' *Personnel Psychology*, XXIV (1971).
36. Palmer, M., 'The Application of Psychological Testing to Entrepreneurial Potential', *California Management Review*, XIII (1971).
37. Shapero, A., 'The Displaced, Uncomfortable Entrepreneur,' *Psychology Today*, IX (1975).
38. Swayne, C.B., and Tucker, W.R., *The Effective Entrepreneur*, Morristown, NJ: Genl. Learning Press, 1973.
39. Brockhaus, 'The Psychology of the Entrepreneur' (no. 25 above).
40. Sexton, D.L., and Bowman, N., 'The entrepreneur: A capable executive and more,' *Journal of Business Venturing*, I(I), 1985.
41. Gasse, Y., 'Elaborations on the Psychology of the Entrepreneur'. In C.A. Kent, D.L. Sexton and K.H. Vespers [Ed.], *Encyclopaedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice-Hall, 1982.
42. Gartner, 'A Conceptual Framework for Describing the Phenomenon of New Venture Creation,' (no. 15 above)

43. Ajzen, I., 'On Behaving in Accordance with One's Attitudes'. In M.P. Zanna, E.T. Higgins and C.P. Herman [Ed.], *Consistency in Social Behaviour: The Ontario Symposium*, Hillsdale, NJ: Erlbaum, 1982.
44. Ajzen, I., and Madden, T.J., 'Prediction of Goal-Directed Behaviour: Attitudes, Intentions, and Perceived Behavioural Control,' *Journal of Experimental Social Psychology*, XXII(1986).
45. Robinson, Stimpson, Huefner, and Hunt, 'An Attitude Approach to the Prediction of Entrepreneurship,' (no. 30 above).
46. Learned, K.E., 'What Happened Before the Organization? A Model of Organization Formation,' *Entrepreneurship Theory and Practice*, XVII(II), 1992.
47. Shaver, K.G., Gatewood, E.J., and Gartner, W.B., 'Attributions for New Venture Creation: An Experimental Comparison,' *Paper Presented to Entrepreneurship Research Conference*, Pittsburgh, PA., 1991.
48. Brockhaus and Horwitz, 'The Psychology of the Entrepreneur'(no. 33 above).
49. Hisrich, R.D., *Entrepreneurship and Economic Climate: A Preliminary Investigation*, Boston: Boston College Press, 1984.
50. Bird, B.J., 'Implementing Entrepreneurial Ideas: The Case for Intention,' *Academy of Management Review*, XIII (1988).
51. Bird, 'Implementing Entrepreneurial Ideas: The Case for Intention' (no.50 above).
52. Bird, 'Implementing Entrepreneurial Ideas: The Case for Intention' (no. 50 above)
53. Gnyawali, D.R., and Fogel, D.S., 'Environments for Entrepreneurship Development: Key Dimensions and Research Implications,' *Entrepreneurship Theory and Practice*, XVIII (1994).
54. Gnyawali and Fogel, 'Environments for Entrepreneurship Development: Key Dimensions and Research Implications,' (no. 53 above).
55. Meichenbaum, D., *Cognitive Behaviour Modification: An Integrative Approach*, New York: Plenum Press, 1977.
56. Kanungo and Misra, 'Managerial Resourcefulness: A Reconceptualisation of Management Skills,' (no. 7 above).
57. Stevenson, Roberts, and Grousbeck, *New Business Ventures and the Entrepreneur*, Homewood, IL: Irwin., 1989.
58. Kanungo and Misra, 'Managerial Resourcefulness: A Reconceptualisation of Management Skills,' (no. 7 above).

59. Kanungo and Misra, 'Managerial Resourcefulness: A Reconceptualisation of Management Skills' (no. 7 above).
60. Welsh, J.A. and White, J.F., 'Converging on Characteristics of Entrepreneurs. In K.H. Vesper [Ed.], *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College, 1981.
61. Colton, R., and Udell, G.G., 'The National Science Foundation's innovation centre: An Experiment in Training Potential Entrepreneurs and Innovators,' *Journal of Small Business Management*, (1976).
62. Brockhaus, 'The Psychology of the Entrepreneur' (no. 25 above).
63. Schumpeter, 'The Theory of Economic Development' (no. 8 above).
64. Simon, H.A., 'Motivational and Emotional Controls of Cognition,' *Psychological Review*, LXXIV (1967).
65. Simon, H.A., 'Making Management Decisions: The Role of Intuition and Emotion,' *Executive*, I (1987).
66. Beglay, T.M., and Boyd, D.P., 'The Relationship of the Jenkins Activity Survey to Type A Behaviour and Business Executives,' *Journal of Vocational Behaviour*, XXVII (1985).
67. Dubin, R. 'Industrial Workers' Worlds: A Study of the Central Life Interests of Industrial Workers,' *Social Problems*, III (1956).
68. Dubin, 'Industrial Workers' Worlds: A Study of the Central Life Interests of Industrial Workers' (no. 67 above).
69. Dubin, R. Champoux, J.E., and Porter, L.W., 'Central Life Interests and Organizational Commitment of Blue-Collar and Clerical Works,' *Administrative Science Quarterly*, XX(1975).
70. Brockhaus, 'The Psychology of the Entrepreneur' (no. 25 above).
71. Dollinger, M.J., *Entrepreneurship: Strategies and Resources*, Boston, MA: Irwin, 1995.
72. Birley, S., 'The Role of Networks in the Entrepreneurial Process,' *Journal of Business Venturing*, I (1985).
73. Starr, J., and MacMillan, I., 'Resource Cooptation via Social Contracting: Resource Acquisition Strategies for New Ventures,' *Strategic Management Journal*, XI (1990).
74. Kanfer, R., 'Work Motivation: New Directions in Theory and Research,' *International Review of Industrial and Organizational Psychology*, VII (1992).
75. Low and MacMillan, 'Entrepreneurship: Past Research and Future Challenges' (no. 1 above).

76. Low and MacMillan, 'Entrepreneurship: Past Research and Future Challenges' (no. 1 above).
77. Stevenson, H.H., and Jarillo, J.C., 'A Paradigm of Entrepreneurship: Entrepreneurial Management,' *Strategic Management Journal*, XI (1990).
- Birley, S., 'The Small Firm-Set at the Start'. In R. Ronstadt, J. Hornaday, R. Peterson and K. Vesper [Ed.], *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College, 1986.
78. Fishbein, M., and Ajzen, I., Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research, Reading, MA: Addison-Wesley, 1975.

