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Entrepreneurial Alertness and Discovery

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Abstract. The purpose of this paper is to elaborate Kirzner's concepts of entrepreneurial alertness and discovery in the subjectivist perspective. Specifically, it argues that the entrepreneurial discovery process is associated with the actor's interpretation framework, or the stock of knowledge, which is derived from everyday life experiences. Discovery in this context means that the actor interprets incoming information in a way different from perceptions of the general public. Two kinds of entrepreneurial discovery, namely ordinary and extraordinary, are discussed. In terms of mental constructs, ordinary discovery is a 'backward' interpretation in a sense that the entrepreneur endeavours to exploit profit opportunities by doing some things better. This type of discovery largely promotes change *within* an existing situation. Extraordinary discovery is a 'forward' interpretation that involves a new dimension of interpreting events. In this case, the entrepreneur explores profit opportunities by doing some things drastically different from the traditional. This type of discovery enhances revolutionary change to the economy. Inertia is explained, in the subjectivist perspective, as a result of actors taking knowledge for granted and being locked inside the old interpretation frameworks. The argument developed is applied to explain (1) why firms vertically integrate and, (2) why the socialist system impedes entrepreneurial alertness and discovery.

Key Words: alertness, entrepreneurial discovery, subjectivist interpretation, knowledge

JEL classification: M13, M21, O31.

Introduction

Apart from Joseph Schumpeter, the most significant economist contributing to the theory of entrepreneurship in economics during this century is Israel M. Kirzner (Gunning 1997). His theory of entrepreneurial alertness and discovery has improved our understanding of the phenomenon of economic development. Yu (1997, 1998) is able to use his concepts to explain economic development of latecomer economies. Important as Kirzner's insights may be, research into the nature of entrepreneurial alertness and discovery is still very limited,[1] despite several studies from the cognitive perspective (for example, see Gilad et al. 1988:481–501, Klein 1999:47–76). The purpose of this paper is to elaborate Kirzner's concepts of entrepreneurial alertness and discovery in the subjectivist perspective. Specifically, it argues that the entrepreneurial discovery process is associated with the actor's interpretation framework, or the stock of knowledge, which is derived from everyday life experiences. Discovery in this context means that the actor interprets incoming information in a way different from perceptions of the general public. Two kinds of entrepreneurial discovery, namely ordinary and extraordinary, are discussed. In terms of mental constructs, ordinary discovery is a 'backward' interpretation in a sense that the entrepreneur

endeavours to exploit profit opportunities by doing some things better. This type of discovery largely promotes change within an existing situation. Extraordinary discovery is a 'forward' interpretation involving a new dimension of interpreting events. In this case, the entrepreneur explores profit opportunities by doing some things drastically different from the traditional. The discovery enhances revolutionary change to the economy. In the subjectivist perspective, inertia is explained as the result of actors taking the knowledge for granted and being locked inside their old interpretation framework. The argument developed is then applied to explain (1) why firms vertically integrate and (2) why the socialist system is an 'opportunity-negative' structure.

In what follows, Kirzner's arguments will be reviewed in an attempt to resolve his much controversial notion of entrepreneurship. It is followed by a subjectivist exposition of opportunities and entrepreneurial alertness. The core of this paper attempts to explain the relationship between the actor's interpretation framework and entrepreneurial discovery. In the last section, some implications on the theory of the firm and socialism are drawn.

Kirzner's Theory of Entrepreneurship Revisited

As a follower of Mises, Kirzner (1973) has built his concept of entrepreneurship upon the foundation of Mises' human action theory. The basic concept in Kirzner's theory of entrepreneurship is alertness. Alertness leads individuals to make discoveries that are valuable in the satisfaction of human wants. The role of entrepreneurs lies in their alertness to hitherto unnoticed opportunities. Through their alertness, entrepreneurs can discover and exploit situations in which they are able to sell for high prices that which they can buy for low prices.

For Kirzner, alertness to profit opportunity implied arbitrage activities. Kirzner did not distinguish arbitrageurship from entrepreneurship (White 1976:4). Regarding the arbitrage theory of profit, Kirzner (1973) argues that the existence of disequilibrium situations in the market implies profit opportunities. Entrepreneurs endeavour to exploit these opportunities, thus eliminating errors, so that the economy moves towards equilibrium.

Such an argument has raised a number of criticisms. Specifically, White (1976) comments that Kirzner failed to recognise the highly important part played by entrepreneurial imagination. In defense of his position, Kirzner (1982) subsequently differentiated two kinds of markets, namely single-period and multi-period markets. For the multi-period market, with the passage of time and uncertainty, Kirzner accepted the elements of creativeness and imagination into his model. Hence, the "incentive for the market entrepreneurship along the inter-temporal dimension is provided not by arbitrage profits generated by imperfectly co-ordinated present markets but more generally, by the speculative profits generated by the as yet imperfectly coordinated market situations in the sequence of time" (Kirzner 1982:154). In the multi-period situation, the entrepreneur "must introduce ... his own creative actions, in fact construct the future as he wishes it to be" (Kirzner 1982:63). After the revision, it appears that Kirzner's position comes closer to Schumpeter's argument. Yet the tension between Kirzner's and Schumpeter's concepts of entrepreneurship persists.[2] In his recent paper, Kirzner (1998:19) insists on seeing even "Schumpeterian entrepreneurial activities as

coordinative and equilibrative" in the sense that entrepreneurs identify profit opportunities arising out of the inefficient old system.

Hitherto, most scholars take the position of two contrasting modes of entrepreneur, namely Kirznerian and Schumpeterian.[3] The former is seen as imitative and equilibrative while the latter is innovative and destructive (or disequilibrative). The two concepts of entrepreneurship are regarded as opposite, though complementary, in the market process. There are two serious shortcomings of this formulation. Firstly, it overlooks the important point that Kirzner's concept of alertness and opportunity discovery can be applied to Schumpeterian innovation. Secondly, 'Kirznerian entrepreneurship,' when put into the two contrasting modes argument, is reduced to nothing more than just an imitator or a market follower. In fact, the controversy can be more resolved if we abandon the notion of equilibrium (though Kirzner refuses to do so) for it is the equilibrium concept that leads scholars to classify the two contrasting types of entrepreneurship. My solution is to broaden Kirzner's theory of entrepreneurial alertness to encompass Schumpeter's vision (Yu 1998). Using the approach of Dosi et al. (1997:11), entrepreneurial discoveries can be classified into two kinds, ordinary and extraordinary. They are respectively associated with exploitation and exploration of opportunities (March 1997). Ordinary discovery largely leaves the system unchanged. This entrepreneurial activity exploits market opportunities that are so far unnoticed. It can be routine (Leibenstein 1966) or imitative entrepreneurship (Baumol 1968). Extraordinary discovery is performed by Schumpeterian entrepreneurs who explore profit opportunities in the market and results in a change of a system. The main thrust of my argument is that Kirzner's concepts of entrepreneurial alertness can be applied to either imitative/adaptive or innovative/pioneering entrepreneurship.[4] In other words, entrepreneurial alertness is not limited to exploitation of opportunities. It also encompasses exploration of opportunities, or Schumpeterian innovation.[5] Hence, my argument is consistent with Kirzner's recent view (1998), that the entrepreneurial role is to arbitrage profit opportunities either in single-period or multi-period markets.[6]

Opportunities: A Subjectivist Perspective

It is reported in the business history that for a small sum of US$100,000, Alexander Graham Bell offered to sell all his telephone patents to the giant Western Union Telegraph Company because Graham's backers had run out of funds. Without any hesitation, William Orton, the president of Western Union turned down the offer. Today, Bell Telephone makes as much profit as General Motors. Likewise, in 1975, the Swiss watch industry lost 22 per cent of its sales because the industry was too slow to move into quartz and electronic technologies (deBono 1980:7).[7] In contrast, entrepreneurs in Hong Kong were able to seize the opportunity by exporting inexpensive electronic watches (Yu 1997). With hindsight, we know that Swiss watch manufacturers at that time could not see the opportunity.

To mainstream neoclassical economists, the argument that "everyone is surrounded by opportunities but they only exist once they have been seen" (deBono 1980:9) is a paradox. By rejecting subjectivism, these economists are unable to explain this paradox. In contrast to mainstream economics, the Austrian School of economics interprets human behaviour and social phenomena from the actor's point of view (O'Driscoll and Rizzo 1985). Its approach

highlights the role of the mental construct in the process of opportunity identification. A subjectivist theory of knowledge argues that things simply do not exist if a person does not know about them (Kirzner 1979:137–153). Subjectivists stress not knowledge itself, but rather what people know about knowledge. This approach focuses on the kind of knowledge about which people know nothing at all. It follows that "things about which men are completely ignorant are things that simply do not exist" (Kirzner 1979:138).

Hence in the subjectivist paradigm, the statement that "an opportunity only exists when you can see it" posts no paradox. This statement does not suggest that an opportunity does not *objectively* exist if you do not see it. It simply says that it requires the acting agent to identify the opportunity, whether the opportunity objectively exists or not does not really matter. Without entrepreneurial alertness, opportunities remain unnoticed.

Moreover, if we admit the fact that there are always alternative ways of doing things, then opportunities have long 'existed', though they need to be identified. Kirzner goes further, that "ex post we have to recognise that when an innovator has discovered something new, that something was metaphorically waiting to be discovered (*Austrian Economics Newsletter* 1997 Spring, p. 4). It is often the case that when a new idea is invented, we all appreciate the idea and query why we have never thought of it. Thus, deBono (1980:23) is right in claiming that an opportunity is often something you do not yet know that you want to do and can do. New things are just "waiting to be discovered". In fact, in his recent article, Kirzner (1998) further extends his concept of alertness and discovery to cover Schumpeterian innovation. He argues that a profit opportunity emerges because inefficiency in the old system intensifies (in his example, time-consuming horse-drawn carriage versus lower-cost rapid motor vehicle). Nevertheless, the issue of whether opportunities have already existed or not is irrelevant in the subjectivist framework. What is important is that an opportunity needs to be identified by the entrepreneur. In this study, the terms 'ordinary' and 'extraordinary' discovery largely denotes the degree of technological breakthrough or magnitude of creativity. Both of them require entrepreneurial alertness. As will be elaborated elsewhere, they differ from each other in that extraordinary discovery enhances a revolutionary or systemic change to the economy while ordinary discovery brings an incremental change to the economy.

Ignorance of Opportunities and the Limit of Deliberate Search

Opportunity discovery, like all human actions, involves knowledge and ignorance problems. Kirzner (1979) argues that ignorance of opportunities is associated with two types of knowledge: deliberated acquisition and non-deliberated acquisition. The former can be gained and learnt by deliberated search. This covers technological knowledge, know-how, where to buy and where to sell, etc. The latter can only be spontaneously absorbed from everyday life experience. Information and knowledge gained from the deliberate search has been already emphasised in economic analysis in last decades.[8] The deliberate acquisition of knowledge is described as cost consciousness. In other words, the individual will compare cost and benefit of each additional search. However, it is not unusual that opportunities cannot be seen even when the firm deliberately searches for them. This explains why a lot of companies set up R&D departments to search for profitable opportunities, but fail. For example, Du Pont spent US$100 million trying to launch the artificial leather 'Corfam' before

dropping the project (deBono 1980:8-9). Similarly, RCA and Xerox Corporation thought that they had seen an opportunity in the rapidly expanding computer field and therefore bought their way in. However, the opportunity turned out not to be an opportunity and they had retreated with heavy losses.

Notwithstanding the value of the deliberate search, it must be remarked that a deliberated search for knowledge presupposes that the agents already know enough of the territory that they know what kind of information they want and where to acquire such information. In other words, they must already possess a "framework" (Schutz 1970) or a "paradigm" (Choi 1993) to guide them. It is impossible for individuals to search for something that they do not know about, let alone to estimate the costs and benefits associated with the search. Earlier, Penrose (1959/1995:34) puts forth a similar view as follows:

> The assumption that firms are 'in search' of profits already implies some degree of enterprise, for it is only in the special case where the profitability of expansion in a given direction is obvious and the decision to expand almost automatic that no particular quality of enterprise is required.

Similarly, Rogers (1983:185) argues that a lot of learning and searching is often motivated by a dissatisfaction with the information they have already obtained. It is this dissatisfaction that inspires us to search for more and better knowledge. Such prior knowledge is not the result of a deliberate search, but accumulated from everyday life experiences. As Kirzner (1979:142.) argues, individual's expectation, belief and awareness are largely "the result of learning experiences that occurred entirely without having been planned nor are they deliberately searched for". In Kirzner's view, ignorance of this sort of knowledge (i.e. profit opportunities) cannot be explained in terms of anything other than itself. They are simply there. Their existence is the evidence of a sheer failure to notice what is there to be seen. In Kirzner's term, the person simply lacks entrepreneurial alertness.

The Nature of Entrepreneurial Alertness

In the subjectivist perspective, an opportunity exists only if it is perceived by the entrepreneur. Even the most obvious opportunity can be ignored by a person who is not motivated to see it. In other words, individuals will not discover any profit opportunity if they 'switch off' their alertness systems. Given the significance of entrepreneurial alertness, an inquiry into its nature is desirable. Kirzner (1997:72) refers to entrepreneurial alertness as "an attitude of receptiveness to available, but hitherto overlooked, opportunities". The entrepreneur has an extraordinary sense of 'smelling' opportunities. Alertness is like an "antenna that permits recognition of gaps in the market that give little outward sign" and entrepreneurs always position themselves on the high ground where signals of market opportunities can more easily strike them (Gilad et al. 1988:483). Here the word "always" is emphasized for the reason that entrepreneurial alertness does not emanate merely as a response to the external world.[9] Entrepreneurship is at all times on the lookout for hitherto unnoticed features of the environment (present or future), which might inspire new activity

on his part (Kirzner 1997:72). Thus, the essence of entrepreneurship is to keep alert to opportunities even when the enterprise is in a profitable situation and it is this feature that qualifies an actor to be an entrepreneur.

We know relatively little about what constitutes alertness. One view contends that actors raise alertness and hence innovate when they encounter difficulties. This is the problem solving argument.[10] In other words, most people will awaken when they encounter a sudden crisis or a rapidly changing external condition. In Yu (1997), I argued that both Hong Kong and the United States can be regarded as an entrepreneurial economy. However in Hong Kong, entrepreneurs are constantly on the alert to opportunities because, in the tiny island economy, they have long experienced volatile political and economic conditions. This unique environment forces Hong Kong's entrepreneurs to be alert in order to survive. In the United States, without any adverse conditions, people are at all times alert to opportunities. In this sense, the United States is more entrepreneurial than Hong Kong. Admittedly, an adverse external environment can make people become more alert. However, human agentsdo not only "react" but also "enact" to their environment (Weick 1969:27, 1995:30). Put differently, human action is not seen merely as a given response to some external stimuli, but arises out of the meaning when people construct sensible events (Weick 1995:4, Yu 1999).

Another view is that human agents tend to notice that which it is their interest to notice (Kirzner 1980). In other words, it is the self-interest motive that enhances the entrepreneur to be alert. In the cognitive perspective, this is called selective entrepreneurial attention (Gifford 1992).[11] It follows that, for Kirzner, in order to switch on the alertness of potential discoverers, gain must be offered to potential discoverers themselves. Accordingly, the free market system is conducive to entrepreneurial alertness for it permits agents to reap gains from their discoveries (Kirzner 1979:148–151).

Notwithstanding all the above arguments, self-competition seems to be the most important factor in enhancing entrepreneurial alertness. Self-competition is defined by Khalil (1997) as "inter-temporal competition between future and past selves stemming from the desire of the present self to test self-ability". For entrepreneurs, businesses are their passions. They have a desire to fulfill a vision, to see things become true. This passion often supersedes the desire to make a profit, though money is important at the early stage of entrepreneurial career (Gilad et al. 1988:491–492). Owing to this self-challenging character, entrepreneurs often create uncertainty to themselves and to the market.[12] If viewing from the equilibrium paradigm, entrepreneurial activities can be diseqillibrative too.

Having said that the entrepreneurs possess a desire to fulfil a vision does not mean that entrepreneurs realise their hunch. In other words, intuition or hunch is never an ingredient involved in the deliberations that control action (Kirzner 1979:169). Entrepreneurs never know that they possess 'a resource of alertness' in the sense that they are not conscious of their alertness. Nor do they know that this resource is at their disposal.

In the following section, I shall discuss entrepreneurial alertness and discovery in association with actor's subjective interpretation framework. It will be argued that the interpretation framework or the actor's stock of knowledge is built upon the actor's everyday life experiences.

Experience, Stock of Knowledge and the Formation of Interpretation Framework

Cognitive studies have provided us with some profound models explaining how human agents handle problems under uncertainty. For example, in cognitive economics literature, Earl (1983:140) argues that under genuine uncertainty, human agents attempt to cope with the external world by constructing, in their minds, templets of features of the world and then seeing whether or not these templets actually fit. Similarly, Choi (1993, 1995) argues that under uncertain environments, human agents endeavour to derive a set of usable paradigms, through a mental experimentation of their own, based on their past experiences. Likewise, Lane et al. (1996:53) argues that, when confronted with a new situation requiring action, our mental system "categorises the situation according to patterns motivated by previously experienced situations. The categories are associated with particular actions: the association depends upon the valuations of the effects of the actions taken in past situations that were characterised similarly to the present situation. The categorisation-action system then generates an action on the basis of this association ". While the cognitive studies focus on agents' reaction to the external environment, my argument in this paper is more deeply rooted in the Schutzian theory of human agency and emphasises the point that the human agents' stock of knowledge has its particular history. It has been constituted in and by previous experience activities of our consciousness (Schutz 1970:74; Berger and Berger 1976). Though this stock of knowledge, accumulated from experiences, can be modified over time, it cannot be "sought" or "searched" for as a paradigm, as argued by Choi (1993).[13]

Starting from the contributions of Max Weber and Alfred Schutz, it has been argued that action has meaning attached to it as human agents make sense of their everyday life (Weick 1969; 1995). Making sense of the external world means interpretation.[14] Coordination involves understanding of actions and interpretation of the meaning of other actors. Everyday life builds on the category of the "other" (Weigert 1981:55). Individuals find themselves related to the surrounding world in order to create a meaningful life and share it with others. Therefore, action is essentially inter-subjective, since all human agents find their experiences necessarily reaching out the existence of other persons. People are taken to be "other I's" just as I am experienced as an "another you". Only in this way, can "we" make sense. As Weigert (1981:74) puts it, "interpretation is a process of perceiving the other and his or her interaction within symbolic frameworks so that we can make some sense out of what the other is doing.... If we cannot make any sense out of the other's interaction, it may be that there is no sense in it, or worse, it may be that there is no sense in me".

Experiences from everyday life are accumulated into a stock of knowledge that can be used to interpret incoming events. Human agents find, at any given point of time, a stock of knowledge at hand that serves them as a scheme of interpretation of their past and present experiences, and determines their anticipation of things to come (Schutz 1970:74). When we experience, our knowledge grows.[15] Experiences enter the individual's consciousness via everyday life learning, such as daily contact with our parents, face-to-face interaction with friends and neighbourhood, watching television and movies etc. This means that the framework is largely biographically determined (Berger and Berger 1976). These lived

experiences are then typified and crystallised into routines or rules of thumb which can be used as a skill or problem solving technique in everyday life. As soon as we spot something, we can follow the established interpretative channel and have access to all knowledge (meaning) about that thing (deBono 1980:14). It is like driving a car. As soon as we are heading on a familiar road, we no longer need to use a map, ask a passer-by or read road signs for directions. Similarly, our interpretation frameworks continue to search for familiar roads that render thinking unnecessary. Furthermore, the stock of knowledge actors possess is by no means homogeneous (Schutz 1970:74). Because of diverse experiences, human agents will respond differently to the same objectively defined stimulus[16] (O'Driscoll and Rizzo 1985:38–39, Yu 1999). In Lachmann's words (1970:36), "different men in identical situations may act differently because of their different expectations of the future." In conclusion, the interpretation framework developed in our mind allows us to make sense of the world and to live. Without such a system, life would be impossible.

Interpreting the External World and Opportunity Discoveries

The interpretation framework, originating from the actor's lived experiences, is a device for receiving external information and organises itself into patterns. Once the patterns are formed, the framework will be used as a broad catchment area for interpreting incoming events which involves a sorting of new experiences into existing categories, sometimes adding to or modifying the structure as a result. The framework helps an individual to identify and solve problems, and discover opportunities. However, the patterns are not symmetric. The lack of symmetry gives rise to new ideas and creativity (deBono 1992:15).

The opportunity discovery process can be analysed in terms of real time. In every moment, actors experience new events. As actors receive external information, their interpretation framework will make the best use of what has become available. The interpretation process is described as follows. Assume at moment 1, John experiences an event A.[17] The next moment, he experiences an event T, then his interpreting system organises the two events into an idea called 'AT' with a social meaning (the product of social construction) attached to it. Next, he experiences an event R, and then his system interprets all three events together as "RAT" with the meaning of an animal. If he continues to experience incoming events, say, R and G, then ideas 'RATE' and 'GRATE' will form. So far, John has no difficulty in interpreting the incoming events. Suppose a new event T is experienced, this event does not fit onto either end of the idea 'GRATE'. What will happen? A person lacking alertness and discovery capability will have difficulty interpreting this extra event.

Given that the interpretation framework is disrupted, some people will reject this new event as a deviance or obstacle. Others, seeing that the incoming event does not make sense, may simply ignore it. However, entrepreneurs see things differently and are able to move out of the routine track and create. Modifying the categories of their framework (Lane 1996), or in some cases even add a new category, entrepreneurs are able to give others a different sense of the meaning through recreating. Simply put, they are "sense-givers" (Thayer 1988:250, 254). Creative activity thus involves the sifting together of different sets of reference frames that would usually be ordered differently and be seen as incompatible—until something clicks into place as a new way of looking at how things fit together. Such discovery means

that the actor escapes from the existing patterns of interpretation and reorganises ideas into new sequences (deBono 1992:15). The entrepreneur always "embodies the possibilities of escape from what might otherwise appear to us to be incomprehensible, or from what might otherwise appear to us to be a chaotic, indifferent, or incorrigible world" (Thayer 1988:250, 254). In our example, being alert to alternatives, entrepreneurs re-shuffle the events, which they had experienced in the order of A, T, R, G, and T, into a new idea called 'TARGET'. Such re-arrangement of information is a discovery or creativity. Most people are unaware of the possible alternatives—say, re-arranging the ideas—but entrepreneurs are always able to do so (deBono 1992:16).

How do we know the opportunity is valuable? The answer is that every valuable insight must always be logical in hindsight (deBono 1992:15). Suppose we were to abandon the routine track in order to create a new idea. We have no way of fitting that idea into our existing interpretation system. We have no way of telling whether the idea was truly crazy or simply unrecognisable in our present state of knowledge. So, we can only recognise ideas that do have a logical link-back. In other words, we formulate our arguments and conclusions in logical terms after we have constructed them in an alternative way (Minsky 1986:186, see also Klein 1999:47–76). It therefore follows that all valuable creative ideas must be logical in hindsight.

Bergson (1910) argues that a discovery involves solving a problem or seeing a solution in a single leap. After such insight is gained, the solution is reconstructed in a series of steps that others are capable of following. In this view, creative activity is the condensation of the past preliminary stages into the present final stages, i.e. the problem solution. O'Driscoll and Rizzo (1985:67) elaborate that this is precisely the concept of entrepreneurial innovation. In their own words, "entrepreneurial success depends on the capacity of seeing things in a way which afterwards proves to be true, even though it cannot be established at the moment'. A creative leap cannot, by definition, be conclusively established because it literally leaps over the requisite logical steps".

Accordingly, a true opportunity is not a high-risk area and should be obvious in its benefits (deBono 1980:53). What is risked is the thinking time taken to consider an opportunity and to bring it to the stage where it is obviously worth pursuing further. In the subjectivist paradigm, Kirzner (1998:14–15) goes further, stating that "a true opportunity does not need boldness and leadership to shoulder the risks. If it does, then the entrepreneur has in fact not yet really discovered an available, attractive opportunity for innovation. If the entrepreneur has not seen that opportunity in so shining a light that it drives him to its implementation in spite of the jeering scepticism of others, and in spite of the possibility of its ultimate failure—then the entrepreneur has not really 'seen' that opportunity".[18]

From Ordinary to Extraordinary Discoveries

deBono (1971:168) classifies two types of insightful or innovative opportunities. The first type involves what might be called short-circuiting. A long and tedious way of carrying out some tasks suddenly gives way to a quick and neat way of doing it. Once this has come about it is so obvious that everyone exclaims, 'Of course, why didn't we think of that before?' It is like finding a short cut to a route. The second type is a eureka situation. A problem

has been impossible to solve. Then suddenly in a flash of insight, and without any further information, the solution becomes clear (deBono 1971:169). This is not a coincidence. Rather, entrepreneurs have serious thinking on the subject all the ways. They are 'well-prepared'. When an agent of change comes along, the opportunity will be identified. Thus Archimedes splashing around in his bath had the hunch prompted by the water. The apple dropping onto Isaac Newton's head is another example.

The first type of insightful innovation resembles our concept of ordinary discovery in which entrepreneurs are concerned with 'doing things better'. This activity does not involve a brand new development, but rather, a restructuring of the old system. This process could be called a backward interpretation: this is a matter of looking something that is there and working it over (deBono 1977:93). This type of discovery largely promotes "change *within* an existing situation" (Cheah 1992:466). It "stems mainly from the discovery of existing profitable discrepancies, gaps, mismatches of knowledge and information which others have not yet perceived and exploited, and the entrepreneur acts to capitalise upon the opportunity for gain or advantage which that discovery presents". In this case, entrepreneurs respond to changing data (Loasby 1989:178).

The second type is associated with our concept of extraordinary discovery. It is forward looking and involves something that is new rather than analysing something old. Contrary to the first type of innovation where the entrepreneur tries to do things better, with the second type, the entrepreneur is concerned with doing things drastically differently (Kirton 1984:137). Schumpeterian innovation belongs to this category. Extraordinary discovery requires the actor to radically re-interpret incoming events into new ideas. Klein (1999:47–76) refers to this discovery as 'epiphany' which brings an interpretative shift that is not so obvious from the raw facts. In Weick's sensemaking paradigm (1995:14), it is an invention which involves "an act of constructing, filtering, framing, creating facticity and rendering the subjective into something more tangible". The entrepreneur makes sense out of an uncertain situation that initially makes no sense. As a result of this extraordinary discovery, other members in the society may have difficulty understanding the entrepreneurial action that later proves to be logical. In Loasby's terms (1989:178), entrepreneurs cause the data to change.[19] Their activities promote "change *of* an existing situation" and bring uncertainty to the market (Cheah 1992:466).

Using our previous example, we can illustrate the two types of discoveries. When the actor re-shuffles the incoming events in such a way that the new idea 'TARGET' is interpreted, we refer to it as ordinary discovery in the sense that the interpretation operates within the same linear format. For an extraordinary discovery, it requires more than just 'linear' thinking. Some brilliant entrepreneurs are able to recognise that the events can be organised into, say, two dimensional spaces: horizontal and vertical. The new result is as follows:

GRATE
T

It has a brand new enriched meaning, "AT GRATE". The actor's interpretative framework moves from one dimensional space to two dimensional spaces. This move demands a higher level of absorptive capacity (Cohen and Levinthal 1990).

A Subjectivist Diagnosis of Inertia

Human agent's interpretation framework or stock of knowledge has a certain time sequence that allows thinking to follow a routine perception track. In other words, we see things in a certain way and expect things to be worked out in a certain way. Once the incoming information is organised into a pattern, then the interpretation framework no longer has to analyse or sort incoming information. All that is required is enough information to trigger the pattern. The mind then follows along the pattern automatically in the same way as a driver follows a familiar road. Over time, non-entrepreneurial habit develops because the actor simply uses his or her interpretation system routinely. Lack of entrepreneurship means that actor's thinking is locked up in old interpretation structures, old concepts and old institutions (deBono 1992:17). Two points need to be emphasised here. Firstly, once we take the stock of knowledge for granted, then perception becomes even more important, because the way we look at a situation will determine what we can do about it. Secondly, unless there is another competing pattern developed in our interpretation framework, anything similar to the established pattern will be treated just as if it were that pattern. It is just like the watershed to a valley. Unless there is a competing valley, water will gather into the centre of the single valley.

It may be argued that each time actors interpret incoming events, they should not take their experience or knowledge for granted. Unfortunately, it is often the case that individuals are unwilling to disrupt all existing concepts, perceptions or institutions in order to put the previous and recent experiences together into new ideas. After a while, the pattern has survived for too long, become non-separable and resisted disruption. In other words, over time each piece of knowledge works together, forming an integrated part of the thinking pattern and develops into human institutions. By that time, changing patterns becomes extremely difficult (deBono 1992:17). Hence, inertia, the opposite of alertness, develops because individuals take experiences for granted and interpret incoming information routinely.[20] In this regard, a failure of being alert to an opportunity cannot be considered as an "error",[21] as Kirzner (1979:120-136) argued. Instead, it often reflects the operation of an ideological filter (Weick 1995:113). Entrepreneurial discovery or creativity means that the actors do not take the knowledge for granted. Rather, they are able to escape from the present routine. The entrepreneur, in Choi's (1997:36; 1999:20) words, is thus a deviant. With a different perspective, he or she "may see something of significance where conventionalists see none, or recognise the possibility of new combinations that the majority with their conventional blinders neglect". Accordingly, to escape from inertia, actors need to consciously challenge their way of interpreting things. For this, they require entrepreneurial vision. This point reiterates the argument that self-competition is an important source of entrepreneurial alertness. The quality of alertness, essentially associated with actor's interpretation framework, cannot be obtained from deliberate search but is 'contaminated' from everyday-life activities, via socialization at school, family, workplace and other social activities. Hence, it is not surprising to discover that new ideas are formed and profitable opportunities are taken only by those who can free themselves from the way of thinking held by associates and friends, who may be more intelligent, better educated and more disciplined, but who have not mastered the art of taking a fresh, clean look at old knowledge.

Inertia, or lack of entrepreneurial alertness is often alleged on the basis that actors are involved in too many urgent things. When business people encounter urgent problems, they have to solve them immediately. For them, urgent problems override important problems. For the important problem, such as opportunity discovery, the most challenging thing to the actor is to keep alert to opportunities even if there is no problem at all and hence no urgency. When there is no problem, there is nothing to react to or to focus our attention. However, missing opportunities is important because they are the source of pure entrepreneurial profits. Admittedly, in some cases, solving problems will open up opportunity. However, it should not be construed to mean that we need problems to enhance alertness. To the contrary, the most striking quality of entrepreneurship, as this study has argued, is that a true entrepreneur does not need problems to enhance alertness. Entrepreneurs by definition possess the alertness quality. deBono (1980:25) rightly argues that, on many occasions, opportunities could have been opened up long before the problem arose if entrepreneurs had not needed problems to enhance their alertness.

Applications

1. Extraordinary Discovery and Vertical Integration

The arguments developed in this paper provide an explanation of vertical integration (Yu 1999). In a stable environment, agents can use their stock of knowledge to interpret familiar events and solve economic problems they encounter. However, if another person deliberately violates our expectations, such as in the case of Schumpeterian innovation, then a sense of reality at the centre of the human self is also violated (Weigert 1981:75). In other words, such a violation threatens people's sense of what is real. In Schutz's argument (1970), the stock of knowledge that market participants possess is no longer able to tackle the new problems. Knowledge hitherto taken for granted becomes problematic. Routine expectations are disrupted by radical technological breakthrough.

Given that the success of an innovation requires the adaptation of complementary activities, the problem for the innovator is to call forth these complementary activities. In the economy, where people interpret external events in a routine manner, it is very difficult for the innovator to make the suppliers understand the novel and idiosyncratic idea. Accordingly, it is very costly to inform and persuade the contracting parties to invest in specialised assets that involve irreversible investment. In many cases, suppliers may refuse to comply with the innovator's vision.[22] Consequently, coordination fails. Owing to this difficulty, it may be better for the entrepreneur to integrate the co-specialised activities and to employ those parties with the relevant skills, than to contract them out (Silver 1984; see also Langlois and Robertson 1995:38; Yu 1999). Within the integrated firm, the entrepreneur provides a set of rules, which generally lay down clear lines of authority, and communication with the intention of ensuring that the entrepreneurial goal may be attained (Silverman 1970:14). By asking the members to subordinate their in-order-to motives to the officially defined goals, the firm "attempts de facto to substitute an objective context of meaning for the subjective configuration in which the individual actor discovers the meaning of his or her action" (Jehenson 1973:227). The world taken for granted inside the firm is

thus composed of actors following typical courses of action prompted by a set of invariant, typical motives. In other words, employees are given expectations about appropriate acts for themselves and others when in various status positions. Consequently, they are then able to apprehend the meanings associated with the economic actions of other people and to form a view of self, based on the responses of others. Members will meet the expectations of others because these expectations are part of the definitions of themselves (i.e. they have been internalised). Such a system would remain unhindered in its function if the members could retain their reciprocal anonymity and interact only at the level of 'they' relationship (Jehenson 1973:229). In essence, they conform to a set of shared values, which is central to the existence of a firm (Silverman 1970:131).

2. The Socialist System as an 'Opportunity-Negative' Structure

The argument that the socialist system is averse to entrepreneurship is not new (for example, see Kirzner 1979). However, most of the studies, including Kirzner, focus on the incentive problems of collective ownership and conclude that the socialist system cannot facilitate entrepreneurship. In this study, I offer an explanation using the concept of interpretation framework developed in this paper. As mentioned above, firms integrate out of the necessity of coordination. As firms expand, there are drawbacks too. A growing organisation discourages entrepreneurial alertness and discovery because members of the organisation are required to subordinate their in-order-to motives to the officially defined goals (Jehensen 1973:227; Yu 1999:25–41). Thus, inside the firm, members have to follow typical courses of action prompted by a set of invariant, typical motives. In other words, employees are given expectations about appropriate acts for themselves and others when in various status positions. Such requirements discourage alertness and discoveries. Consequently, opportunities remain untapped as people conform to current corporate conventions rather than adopting new practices (Choi 1997:37). The socialist regime can be viewed as a superfirm, allocating resources under the central command. In this regime, Marx-Lenin ideology monopolises social thinking. Profit seeking is equivalent to the exploitation of labour. People do not have the freedom to 'switch on' the alertness button for opportunities. In de Soto's words (1995:238), it is a "system of institutionalized aggression against the free practice of entrepreneurship". More importantly, people are educated to be loyal exclusively to socialism and not to consider alternatives. As a result of the long-term communist teaching, people have developed a habit of interpreting external events in a very routine and narrow framework. The stability of the super-firm, namely the communist regime in which entrepreneurial deviants are suppressed, implies social inertia (Choi 1997:36). Consequently, discovery of opportunities is rare. Moreover, being familiar with the government way of doing things and given their narrow way of thinking, people in the gigantic bureaucratic system focus on rent-seeking opportunities. This explains why unproductive activities are prevalent in the socialist economy.

Having argued that the socialist system is an 'opportunity-negative' structure does not mean that the system will never change at all. The opportunities neglected by most people who conformed to the (old) socialist system will become more and more obvious over time as people learn from their daily experiences. In other words, the gap between

the actual and the neglected opportunities tend to grow over time. As the gap becomes larger, opportunities are easier to identify (Choi 1993:108; 1997:18; 1999:22). Therefore, entrepreneurship will eventually appear as people encounter severe economic difficulties, although such entrepreneurial actions are responsive to external environments. As an illustration, since food and energy are in acute shortage after a long period of implementation of collective ownership, starving people will attempt to solve hunger problems as a matter of urgency. In this way, they are 'forced' to look for alternative solutions. Such a phenomenon is consistent with the Chinese saying that "poverty will enhance people to change; changes will work things out". Some political entrepreneurs such as Mikhail Gorbachev or Deng Xiaoping discovered that socialism was not feasible and called for experimenting with some alternatives. Similarly, millions of anonymous market entrepreneurs seek to improve their living conditions by trying new ideas. The interactions of entrepreneurial actions give rise to institutional change,[23] a change triggered by severe economic stagnation. As a result, socialist regimes in Russia, China and the Eastern European bloc collapsed. If, in a severe stagnation situation, people still do not want to consider other alternatives due to their old ways of thinking, then the country will head toward a dead-end. This is the case with North Korea. Recently, there has been a tendency for the Russian people to consider returning to the communist regime. This is not surprising. A lot of Russians with their old interpretation framework, may find that it is easier to cope with the everyday life in the communist system than in the transitional stage.[24] Thus, a successful economic reform requires a change in mentality. On this, open door policy allowing actors to assimilate new ideas and phase out old ones, is desirable.

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Notes

1. Shmanske (1993:41–70) critically examines the problems of Kirzner's analysis in entrepreneurial alertness and discovery.
2. In a personal correspondence with the author (January 13, 1994), Kirzner remarked that he preferred to consider Kirznerian entrepreneurship as a subset of entrepreneurship, confined to those activities, that take advantage of existing scattered knowledge. It seems that, at that time, he wanted to separate his mode of entrepreneurship from Schumpeter's.
3. For a review of some representative studies, see Kirzner (1998).
4. In my 1998 article, I applied entrepreneurial alertness to both ordinary and extraordinary discoveries. At that time, I confined ordinary discovery to the well-defined market or single-period market. As will be seen in the next section, in the subjectivist theory of knowledge it does not matter whether an opportunity has existed or not, the critical issue is that the actor has to perceive it.
5. I believe that my argument is consistent with Kirzner's (1998) latest defence of his position. However, I shun away from the concept of equilibrium. Furthermore, I argue that human agents, apart from attempting to reduce uncertainty (Mises 1949), also generate uncertainty for themselves because of the self-competition character (see below).
6. In line with Kirzner (1998), Holcombe (1998) concluded that Kirznerian entrepreneurs exploit the opportunities created by previous entrepreneurship.

7. deBono's works are said to be widely read but the least cited.
8. Such an informational economics perspective is best represented by Stigler (1961), Arrow (1974) and, Alchian and Allen (1983).
9. As will be discussed elsewhere, this view contrasts with the cognitive approach which focuses on the examination of how an individual responds to the external world. In fact, entrepreneurs often enact to their environment and create uncertainty for themselves and for others.
10. Most cognitive studies, including Choi (1993, 1997, 1999), hold this view.
11. For an account of how cultural, political and economic factors influence human creativity, see Brockhaus (1982:39–71) and Gilad (1986:189–208).
12. Most Austrian economists focus their analysis on human agents' attempts to reduce uncertainty.
13. The term 'paradigm' as used by Choi, is analogous to my notion of "interpretation framework" developed below. However, there are some differences in the two perspectives. Choi's paradigmatic approach allows him to discuss human action in the broader social context (convention). In this sense, his analysis can be labelled as 'Austrian macroeconomics' or 'Austrian social economics'. On the other hand, my interpretation framework approach builds upon Schutz's theory of human agency and is more radically subjectivistic. Furthermore, Choi's paradigm-seeking argument may lead us to think that human agents, under uncertainty, can choose the best paradigm to solve a problem. While the influence of the social world on human action cannot be denied, human agents, taking experience for granted, have already been pre-occupied with a set of paradigms. Incoming external events will only modify an individual's interpretation framework or paradigm through incremental learning. In other words, the interpretation framework or paradigm has its history and cannot be transplanted into the actor's mind.
14. There are some differences between interpretation and sensemaking (see Weick 1995:13–14).
15. For an exposition concerning entrepreneurial learning and the growth of knowledge in the Popperian perspective, see Harper (1996).
16. Simmel (1918/1980:57–92) identifies two modes of understanding, namely, historical and immanent. On the one hand, an interpretation may represent an answer to a question about the conditions for the production of the interpretandum. In that case, the question is historical and the interpretans produces a historical interpretation. On the other hand, the interpretation may represent an answer to a question about the intrinsic properties of the interpretation itself. A description of these properties is independent of any description of the genesis of the interpretandum. The question is then immanent. The argument that human agents will respond differently to the same objectively-defined stimulus belongs to the former, i.e., the historical question.
17. This example, modified from deBono (1992:16), is for illustrative purposes only.
18. For Kirzner (1998:15), in the world of uncertainty, alertness must express itself with boldness, self-confidence and leadership. Hence, he concluded that what is important for analytical purposes is not these leadership qualities in themselves, but the pure alertness that these qualities express and sustain.
19. The two types of discovery can be explained further in terms of real time. According to O'Driscoll and Rizzo (1985:68), "in creativity activity, the preliminary stages in a problem solution are seen as part of the very recent past or in the limit, as an aspect of the subjective present moment". Hence, the less creative the activity, "the more enlarged these stages become, in another word, the narrower the mnemic link between them. Reduction in the degree of creativity is related with a relegation of the stages to the more remote past". Increasing the degree of creativity "results in quickening the subjective time. In terms of Newtonian time, more things are happening in the creative activity than the less creative one".
20. An ancient tale, which has been used in Chinese society as a warning to those people with a reflexive personality, can illustrate inertia. One day, a farmer saw a rabbit running rapidly across the field. It hit a tree and died. The farmer was happy that he could take the rabbit meat home as a meal. Since then, the farmer waited under the tree everyday, hoping that by luck he could get another rabbit. In our framework, the farmer was locked into this waiting game. His experience (mistakenly) told him that he could easily get the rabbit in this way—an 'easy-catching-rabbit' mentality. For entrepreneurs, instead of sitting under the tree and hoping for pure luck, they would try to find out, say, why the rabbit hit the tree. The clue may help the entrepreneur to discover a new way of hunting rabbits in the future. For a discussion of entrepreneurial alertness and sheer luck, see Kirzner (1979:154–181).
21. For a further discussion of 'error' in association with entrepreneurial alertness, see Klein (1999).
22. The role of persuasion in economic life has received attention in recent years. McCloskey (1994:76–79)

showed that, in the United States, about a quarter of the labour force or national income in 1988 was devoted to persuasion activities.

23. This is an entrepreneurial perspective of institutional change.
24. Hence, a transitional economy, in the subjectivist knowledge perspective, is defined as the situation where its people's current interpretation framework is outdated and is unable to cope with the rapidly changing external world. At the same time, a new framework for interpreting new events or solving new problems has not yet fully developed in these people's minds.

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