Towards an Interdisciplinary Theory of Entrepreneurship

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ABSTRACT. Entrepreneurship is one of the least understood topics in economics. The rising significance of small companies and especially of start-ups for the creation of new jobs has been an intensively discussed subject for nearly one decade. But there is still no theory of entrepreneurship.

First this paper reviews the role of the entrepreneur in the history of economic thought and concludes that there is no agreed upon definition of what an entrepreneur does or is. The unsolved problem is the non-rational human behavior. Schumpeter and Kirzner have developed economic models of the role of the non-maximizing entrepreneur in the price-mechanism. But they did not develop a theory of entrepreneurship.

In the second part of the paper entrepreneurship is understood as the pursuit of opportunites without regard to resources currently controlled (Stevenson, Roberts, and Grousbeck). Based on that definition the contributions of economic decision theory, sociological system theory, psychoanalytical research and behavioral studies are reviewed and an interdisciplinary approach to the development of an entrepreneurship theory is proposed.

1. The importance of entrepreneurship

The consequences of liberalized world trade for industrialized countries are twofold. On the one hand are the new export markets which might strengthen the national economies, and on the other hand there is the shifting of jobs and whole industries to locations with lower costs. In the long run dynamic Asian nations such as Thailand might gain more importance in the world market. Germany, one of the export champions of the past, might loose her leading position (Faltin and Zimmer, 1995, p. 229).

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One reason for this development might be the lack of innovation within the economy. As innovation is seen as an important factor for international competetiveness (e.g., Audretsch, 1995) politicians in Germany have been trying to encourage entrepreneurship as a tool for innovation. Innovation, especially in high-tech, seemed to be the target, entrepreneurship only was a tool. Now, as the problem of unemployment is rising the relation of entrepreneurship and job generation becomes the center of interest. This time entrepreneurship not only is the tool, it becomes the target.

At the beginning of the 90s some tendencies had already been obvious. And if there would not have been the reunification of Germany, the number of unemployed people in its western part would be higher now. As in the U.S. during the 80s, German multinationals are now laying off big numbers of employees. Birch, who analysed the creation of new jobs in the U.S. in the late 70s and early 80s, found that between 1981 and 1985 88.1% of the net job gain was created by companies with less than 19 employees (Birch, 1987, p. 16). The trend continued, and in 1993 small enterprises created more than 1.7 million jobs, while multinationals with more than 25,000 employees reduced their number of jobs by 300,000 (Byrne, 1993; see also Loveman and Sengenberger, 1990).

But these data have also been criticised for their statistical measures. Some economists even doubt the trend, or at least come to a different conclusion. For Davis et al. (1996) statistics give another possibility of interpretation. Although small companies hire at twice the rate, relative to their total employment, of midsized companies and big ones, most new U.S. jobs (66%) between 1992 and March 1994 were created by companies with at least 10 employees (Nasar, 1994). Davis adds that

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small enterprises do not only add jobs faster than their big brothers but they also eliminate them faster: for example in 1992 building contractors and theaters and other fine art businesses lost 33,900 and 28,800 jobs, respectively (The White House, 1993, p. 60).

To explain the different findings it might be helpful to consider the time dimension. Both studies (Birch, 1987; Davis et al., 1996) do not analyze the job generation rate of a company in relation to its growth stage. Companies which were considered small in the Birch study and showed a high rate of job generation might have grown bigger by now. Nevertheless Birch has shown a right trend – at that time. And despite of the critique data in Germany seem to proof the trend Birch discovered. In 1994 aprox. 4% of the jobs in multinational companies in Germany will be eliminated. In the same period, enterprises with less than 4 employees will establish an additional 10% of jobs (Bundesanstalt für Arbeit, 1994). And when the German recession ended at the end of 1994, has there been a change towards more employment as well? Statistics say no. Even if the economy would increase its production by 1.5% another 400,000 jobs might be lost (Piper, 1994). The trend in these figures has been confirmed by the German Statistisches Bundesamt in April 1995.

That entrepreneurship, in the form of a start-up of a new company, can also be an alternative to the search of a job has been shown in different articles (e.g., Schumacher, 1994) but is still the exception of the rule. Perhaps a broader perspective to examine the possibilities of an entrepreneurial movement for job creation should be developed. First there is individualism as one mega-trend of the early 90s in the industrialized countries. And secondly there is an aspect which has been fairly necleted in academic discussions: the role entrepreneurship plays for the poor people in countries like Peru or the Philippines. Since Hernando de Soto published *The Other Path* in 1989, followed by *The Silent Revolution* by Chickering and Salahdine (1991) it became obvious that entrepreneurial behavior is not restricted to developed countries or only high-tech industry. For most people the fundamental change is still hardly visible because the revolutionary power of the entrepreneurial movement is blocked by administrative hurdles of the richer and middle class. It seems as if entrepreneurship will become the main subject in the next years in both developed and developing countries.

Considering the importance of new businesses for job generation one also has to examine measures of outputs. Acs and Audretsch (1992, p. 125) have shown that in US manufacturing companies with fewer than one hundred employees increased their share of sales from 15.6% (1976) to 22.5% (1986). Similar research will have to prove this trend and whether it is also valid for other countries.

As a consequence of these trends any central organized institution looses more and more its ability to satisfy individual needs because of severe information problems. The philosopher and economist Friedrich August von Hayek saw the entrepreneur as the central figure for the distribution of economicaly relevant information. No individual, no central institution, is capable of coordinating the existing knowledge in a way the market can (von Hayek, 1945). The purpose is to examine the role of entrepreneurship in the economics literature and to propose a new integrative interdisziplinary theory of entrepreneurship.

2. The role of the entrepreneur in the history of economic theory

For most of the twentieth century the entrepreneur disappeared from economics literature. But since approx. 10 years a renaissance of the entrepreneur can be observed. For Kirchhoff the main reason for the disappearance was the seperation of macro- and microeconomics and the domination of equilibrium models that led to the “death” of the entrepreneur (Kirchhoff, 1991, p. 93). In modern microeconomics the neoclassical tradition and its equilibrium system, in which there seemed to be no place left for an entrepreneur, was playing the most important role. The question which should be answered now is how this theory could gain its importance.

Before neoclassical theory started to dominate microeconomics the figure of the entrepreneur was a central element in economic thought: “In fact the entrepreneur was more than merely present: he played several fundamental roles in a wide variety of settings. The entrepreneur has been risk-bearer, innovator, industrial leader – the list is almost endless" (Baretto, 1989, p. 4). The origins of the word entrepreneur can be found in the work of R. Cantillon and J. B. Say. Cantillon described what we today would maybe call entrepreneurship as a special economic function: "The Farmer is an undertaker who promises to pay to the Landowner, for his Farm or Land, a fixed sum of money (. . .) without assurance of the profit he will derive from this enterprise" (Cantillon, 1775, p. 47). In this description it seems to be central that the undertaker is not the resource owner, and that his profit is uncertain and of residual nature because costs are fixed and the income is not. Some decades later J. B. Say (1803) described the entrepreneur as the person who shifts economic resources out of an area of lower and into an area of higher productivity and greater yield (see also Drucker, 1993, p. 21). Through this description Say did not only stress the importance of change and innovation within an economic system, but he also described the entrepreneur as the agent of change.

The marginal utility revolution at the end of the 19th century is mostly seen as the beginning of neoclassical theory. But even for the protagonists of the marginal revolution the entrepreneur was an important player in the economic game. Walras (1877), for example, described the entrepreneur as a coordinator and arbitrageur. The entrepreneur was one of the four players in the economy, apart from the land-owner, the capitalist and the worker. Without the entrepreneur there is no activity, no change. Although Walras elaborated the role of the entrepreneur he did not integrate him into his equilibrium model. For another important scholar, the Austrian Carl Menger, marginal utility was only the basis of a new tradition in economic thought: the Austrian tradition, which has subjectivism and methodological individualism as further characteristics. A hundred years later, Israel M. Kirzner (1973, German translation 1978), a representative of the Austrian tradition, elaborated the role of the entrepreneur within his theoretical framework and made an important contribution to the revival of the entrepreneur in economics.

Although other approaches to entrepreneurship were made, the diszipline of economics was not able to present a sophisticated model of the role of the entrepreneur in the economic process. That might be why the interest of researchers changed towards the more "objective" *Theory of The Firm*, in which human behavior is poorly represented. The main ideas of the *Theory of The Firm* were the production function, the equilibrium model, and the assumption of complete information and rational decision making. There was no place in mainstream economics for an additonal role, the entrepreneur as an agent of change became obsolete.

For Baretto the elimination of the entrepreneur was a logical consequence of the assumptions. The new neoclassical microeconomic theory offered a consistent framework and therefore dominated the development: "[T]he modern theory of the firm excatly meets consistency requirements: several pieces (isoquant, output and factor market sides) join to form bigger pieces (the production side) which join with still other pieces (the distribution side) to form the modern theory of the firm. Furthermore, in conjunction with consumer theory, the orthodox theory of value is formed. The whole system, internally and externally, is a perfect set of interlocking relationships" (Baretto, 1989, p. 141). The problem is that the entrepreneur does not behave rationally. To integrate him means to change the assumptions and for consistency reasons this is not possible.

The statement that the entrepreneur disappeared from the mainstream economics literature implies that the entrepreneur is part of other theoretical approaches which do not belong to the mainstream literature. The most famous economic model dealing with the entrepreneur is *The Theory of Economic Development* by Joseph Schumpeter, first published in German in 1911. But there have been numerous other approaches as well. Hébert and Link (1988) give an impressive overview over the different roles the entrepreneur was given during the last 200 years. They identified 12 main roles:

The first important differentiation Hébert and Link make is between static and dynamic approaches. 2, 6, 8, and 9 are static and therefore not suitable for a better understanding of the entrepreneur. Within the dynamic group they identify three schools of thougt, they call the Austrian (11/12), the German (1/3/5/7), and the Chicago (1/4/12) school. Innovation is the central element of the Schumpeterian approach, the name

TABLE I
Roles of the entrepreneur in the history of economic theory according to Hébert and Link (1988, p. 152)

1. The entrepreneur is the person who assumes the risk associated with uncertainty *(e.g., Cantillon, Thünen, Mill, Hawley, Knight, Mises, Cole, Shakle)*.	2. The entrepreneur is the person who supplies financial capital *(e.g., Smith, Turgot, Böhm-Bawerk, Pigou, Mises)*.
3. The entrepreneur is an innovator *(e.g., Baudeau, Bentham, Thünen, Schmoller, Sombart, Weber, Schumpeter)*.	4. The entrepreneur is a decision maker *(e.g., Cantillon, Menger, Marschall, Wieser, Amasa Walker, Francis Walker, Keynes, Mises, Shakle, Cole, Schultz)*.
5. The entrepreneur is an industrial leader *(e.g., Say, Sain-Simon, Amasa Walker, Francis Walker, Marshall, Wieser, Sombart, Weber, Schumpeter)*.	6. The entrepreneur is a manager or super-intendent *(e.g., Say, Mill, Marshall, Menger)*.
7. The entrepreneur is an organizer and coordinator of economic ressources *(e.g., Say, Walras, Wieser, Schmoller, Sombart, Weber, Clark, Davenport, Schumpeter, Coase)*.	8. The entrepreneur is the owner of an enterprise *(e.g., Quesnay, Wieser, Pigou, Hawley)*.
9. The entrepreneur is an employer of factors of production *(e.g., Amasa Walker, Francis Walker, Wiesr, Keynes)*.	10. The entrepreneur is a contractor *(e.g., Bentham)*.
11. The entrepreneur is an arbitrageur *(e.g., Cantillon, Walras, Kirzner)*.	12. The entrepreneur is an allocator of ressources among alternative uses *(e.g., Cantillon, Kirzner, Schultz)*.

"German school" is seldom used, a more frequent term is the Schumpeterian tradition. Uncertainty and the entrepreneur as risk-bearer is the focus of Knight, and the Chicago school, while Kirzner and the Austrians see the entrepreneur mainly as a discoverer of new opportunities. A more recent approach to entrepreneurship is developed by Casson (1982). He stresses a fourth role: the entrepreneur as a coordinator and tries to integrate entrepreneurial decision making into the "Theory of the Firm", e.g., mainstream economics.

2.1. *The entrepreneur as uncertainty-bearer*

Without any doubt risk is one of the main elements in the discussion about entrepreneurial behavior. Risk is the consequence of uncontrolled or uncontrollable change. For Knight change is not initiated by the entrepreneurial process but the entrepreneur is using change for his purpose. Knight saw the profit of the entrepreneur as a compensation for bearing uncertainty. The entrepreneur is defined as a special economic functionary similar to the idea of Cantillion (Knight, 1921, p. 268). The difference between risk and uncertainty is, that the latter can not be measured with percentages. Risk, as Knight put it, is calculable, uncertainty is not.

The "primary function" of the entrepreneur in Knight's concept is deciding what to do and how to do it without being certain about possible future states (Ricketts, 1987, p. 48). There are two important characteristics of social organizations (e.g., the firm) brought about by the fact of uncertainty: "In the first place, goods are produced for a market, on the basis of an entirely impersonal prediction of wants, not for the satisfaction of the wants of the producers themselves. The producer takes the responsibility of forecasting the consumers' wants. In the second place, the work of forecasting and at the same time large part of the technological direction and control of production are still further concentrated upon a very narrow class of the producers, and we meet with a new economic functionary, the entrepreneur" (Knight, 1921, p. 268). In this approach the entrepreneur, the confident and venturesome, "assumes the risk" and "insures" the doubtful and timid by guaranteeing the latter a specified income. As a reward he receives the entrepreneurial profit.

Knight did not offer a reason how the entrepreneurial process should start. He only explained the entrepreneurial profit as a consequence of the social specialization process which leads to two kinds of income: contractual income (such as wages and rent) of the employees and residual income (profit) of the entrepreneur (Knight, 1921, p. 271).

2.2. *The entrepreneur as innovator*

A different approach to entrepreneurship was emphasized by Schumpeter. He critized Knight for not distinguishing between the entrepreneur and the resource owner (Schumpeter, 1954, p. 556). Receiving a profit for bearing the risk of losing, as Knight has postulated it, assumes the posession of resources. This is in clear contradiction to the seperation of the role of the entrepreneur from that of the resource-owner (e.g., the capitalist). For Schumpeter, risk was not essential in the concept of entrepreneurship unless the entrepreneur is identical with the ressource-owner. The entrepreneur was not the risk bearer, but the driving force in economic development. The main idea was that change is not only coming from outside the economy but from within, too. The change initiating force from within the economy is the entrepreneur.

Schumpeter (1934, p. 66) concentrated on how the entrepreneur acts and listed five categories of action that are covered by the concept of innovation:

1. The introduction of a new good or quality of a good;
2. The introduction of a new method of production – something as yet untried in industry;
3. The opening of a new market;
4. The utilization of some new source of supply for raw materials or intermediate goods;
5. The carrying out of some new organizational form of the industry.

Thus for Schumpeter entrepreneurship is defined as the carrying out of new combinations.

If ownership of resources is not a prerequisite for being an entrepreneur then the innovation process in the above mentioned sense can also be carried out by an employed manager (Schumpeter, 1934, p. 75). The entrepreneur is defined by his what he does and not by what he owns. Following this idea employees can be entrepreneurs too, but Casson (1982, p. 375) points out to the fact that in the Schumpeterian system the typical entrepreneur is the founder of a new firm rather than the manager of an established one. For Schumpeter the entrepreneur does not invent or find the opportunities but it is his role to make them living, and to realize them (Schumpeter, 1934, p. 89).

Being an entrepreneur is not a profession and is to be distinguished from being just a normal, administration oriented manager with the help of the concept of leadership which summarizes the personal traits of the dynamic entrepreneur in three arguments. These traits are needed to overcome the obstacles an innovator faces when he presents his ideas in public. Leadership in the Schumpeterian sense means that the entrepreneur:

– has the “view”, the intuition, to do the right things without analyzing the situation;
– has the power to create something new; and
– the power to overcome scepticism and hostility from his surrounding (Schumpeter, 1993, p. 124ff).

Schumpeter believed that entrepreneurial traits are not teachable and only a small percentage of individuals within a population has these abilities (Schumpeter, 1934, p. 119, footnote 20). But most important is the fact that the entrepreneur is motivated intrinsicly, and not by profits or luxury. The behavior of the entrepreneur can not be measured with ratio. It is irrational and sometimes pathological. Marginal analysis is foreign to the entrepreneur (p. 136). Schumpeter compared the market to a sports game or even a boxing fight in which the entrepreneur has a strong will to succeed. His motivation comes from the dream and the will to found an own kingdom, the will to prove oneself superior to other and the joy of creating. These personality traits were confirmed more than 50 years later by Goebel (1990).

2.3. *The entrepreneur as alert discoverer*

This Austrian concept of imperfect distribution of information was first presented by von Hayek (1949). For von Hayek and Kirzner the neoclassical focus on equilibrium prices was misleading because complete information was an impossible assumption. What is of real importance are the prices realized by entrepreneurs – prices within the market *process*. These prices reflect an imbalance resulting from an asymetric distribution of information. The adjustment of prices towards the equilibrium is the main economic role of the entrepreneur and as Ricketts (1988, p. 51) put it, the question of information becomes the pivotal economic problem in Austrian economics. Kirzner's approach is therefore referred to as the market process theory which accepts imperfect knowledge and describes the market as a process of discovery and learning.

Being alert to economic opportunities the entrepreneur in the market process theory uses information advantages for his own profit and by this he starts the market process. Learning is a central part of this process (Kirzner, 1978, p. 11) and Casson underlines the importance of markets as a communication tool for the transmission of new knowledge: "Markets help people to communicate their discoveries to others and to learn of discoveries that other people have made" (Casson, 1982, p. 369). The entrepreneur might realize that he paid too much or – the other way round – that he did not charge what he could have charged another person. He will use his new knowledge for his next transaction and this is why experience is of such importance to the entrepreneur. So the individual cognitive learning ability of the human being is the main part of the process which is bringing market prices from an imbalance into the direction of and coser to an equilibrium.

The entrepreneur is forced to use the new knowledge because of his competitors in the market. They will use the information as soon as it is available to strengthen their position. That's why Kirzner calls the entrepreneurial process always competitive (Kirzner, 1978, p. 21). For him, ". . . recognizing the propensity of the entrepreneur alertly to discover failures in existing patterns of co-ordination among market decisions, permits us to see how systemic ('equilibrating') market tendencies can be traced back to creative, originative, entrepreneurial alertness" (Kirzner, 1992, p. 7).

But Kirzner is an economist and mainly interested in price mechanisms and the entrepreurial role in the economy and not so much in the research of entrepreneurship as a special form of human behavior. Nevertheless he compares the role of the entrepreneur within the market to the entrepreneurial element in human behavior (Kirzner, 1978, p. 25). Kirzner's view of human nature is deeply influenced by the ideas of von Mises. Based on the concept of the *homo agens* of Ludwig von Mises the Kirznerian entrepreneur is not only trying to maximize outcome out of a given set of resources but he is also able and has the will and the alertness to find out new targets and resources (Kirzner, 1978, p. 27). This explanation is central to the aspects of change. Economic maximization does not explain change, nor can it integrate a learning process. Only if the creative, non-rational entrepreneurial element is regarded as essential within the economy a theoretical approach can explain change from within.

As for Schumpeter the possession of resources is of lower importance for the Kirznerian entrepreneur. If he has discovered an opportunity he is trying to persuade the capital owner that the expected interest is worth the risk to invest or give a loan. Nevertheless the possession of resources such as money reduces transaction costs for the entrepreneur (Ricketts, 1988, p. 54) and helps him to realize the venture – but the *pure* entrepreneur has nothing but his alertness (Kirzner, 1978, p. 32).

2.4. *The entrepreneur as coordinator*

Although there has been much criticism of neoclassical theory, no other approach has been able to replace it, yet. But neither neoclassical theory nor its critics have developed a theory of entrepreneurship. According to Casson this may be due to two reasons: "The first lies in the very extreme assumptions about access to information which are implicit in orthodox economics (. . .). This assumption reduces decision-making to the mechanical application of mathematical rules for optimization. It trivializes decision-making, and makes it impossible to analyse the role of entrepreneurs in taking decisions of a particular kind" (Casson, 1982, p. 9). In his second argument Casson critizes the Austrians for their extreme subjectivism, which makes any attempt of a predictive theory futile.

Casson modifies neoclassical assumptions in a way that he accepts assymetric information and the existence of transaction costs. In his concept transaction costs represent opportunity costs of the entrepreneur's activity, which Cassons calls "market making service" (Casson, 1982, p. 13). The market maker, the entrepreneur, is the coordinator of market activities. He is defined as someone, ". . . who specializes in taking judgemental decisions about the coordination of scarce resources" (p. 23) and integrates elements of Schumpeter (dynamism), Knight (bearing economic uncertainty) and Kirzner (alertness). An interpretation of Casson's concept can be found in Ricketts (1987): "Casson's entrepreneur requires Kirznerian perception perhaps to spot the information most pertinent to the judgemental decision at hand; [and] he requires Shackle's imaginative faculty to ponder future possibilities; but these features are not greatly emphasised. The reason is straightforward and fundamental. Casson wants to discuss more than the *rationale* of the entrepreneur. He realises the importance of the entrepreneur to the process of resource coordination and wishes to consider further questions upon which an economic theory might cast some light" (Ricketts, 1987, p. 67).

It is not only the individual decion making Casson is interested in but also to find an explanation for a connection between entrepreneurial activity and economic growth and development. He describes the efficiency of successfully developed countries in information usage which seperates these countries from non-growth nations. This idea is close to the position Hayek has taken in his 1945 paper "The Use of Knowledge in Society". In summary Casson's presentation of an economic theory of entrepreneurship seems to be a promissing approach as he integrates the entrepreneur into the equilibrium world of neoclassical economics. But exactly this might be the obstacle for further elaboration, because neoclassical theory and its assumption of rational human behavior have been proven to be the big obstacle for an integration of the sometimes non-rational entrepreneur. Whether Casson's model is a theoretical advance, will have to be judged by future research. Nevertheless it seems to help to understand the role of the entrepreneur in the market.

2.5. *The entrepreneur in economic thought – a summary*

Entrepreneurship is a very complex and extremely difficult subject in the economic literature because there is still no persuading approach to integrate human behavior into economic theory. Kirzner has made an important contribution to the discussion of price theory by describing the entrepreneur as the central element in the market process. Market prices are not equilibrium prices, and it is not only supply and demand which determin the price but the entrepreneur who discovers information asymetries and by taking the initiative he leads the market towards an equilibrium (which it will never reach). But Kirzner gives the reader no idea why the entrepreneur who has discovered a new profit opportunity in fact uses it.

Knight's approach also does not explain how and why the entrepreneurial process starts, it just gives an explanation for the entrepreneurial profit which is the income the entrepreneur receives for bearing uncertainty. Casson's ideas have the persuading framework of the neoclassical analysis and the idividual aspects of the person of the entrepreneur. But it seems to be more than doubtful that the entrepreneur can be described as rational and with economic factors alone.

So what about Schumpeter? Could his theory of economic development be a theory of entrepreneurship as well? In fact Schumpeters contribution to economics is twofold: on the one hand he developed a dynamic and evolutionary perspective of economic development, and on the other hand he tried to identify and describe the entrepreneur. The methodological problem in this approach is that he tried to combine economic theory and the role of the entrepreneur in it with the psychological and sociological aspects of the real person. Both levels of entrepreneurship analysis (economic theory and psychological observations) are equally important but it seems as if they have to be regarded as two areas clearly seperated from each other. Nevertheless Schumpeter's detailed observation of individual characteristics of the entrepreneur has deeply influenced entrepreneurship research.

3. Towards an interdisciplinary theory of entrepreneurship

The main conclusion of the second section of this paper is that the integration of the role of the entrepreneur into economic (price-) theory has to be separated from any attempt of describing the real life entrepreneur. In modern management science entrepreneurship is understood as a behavioral phenomenon which can be described as the pursuit of business opportunities without regard to the resources currently controlled (Stevenson et al., 1994, p. 5). Entrepreneurial behavior can not be explained by economic theory alone because psychological, cultural, and sociological factors are important, too (e.g., Campbell, 1992, p. 22).

For Baumol (1993, p. 203) the development of an economic explanation of entrepreneurship is of high importance, because policy-makers need instruments that can effectively influence the allocation of entrepreneurial resources. Unfortunately economic calculation alone are hardly enough to explain entrepreneurship.

3.1. *An economic decision model*

As section 2 discussed the role of the entrepreneur in the economy, section 3 discusses alternative approaches to a theory of entrepreneurship which should be able to explain why people start an entrepreneurial venture. First the economic position shall be presented very briefly. Casson had chosen an aggregative prespective, and for him the number of entrepreneurs (of people who decided to behave entrepreneurial) depends on the number of profit opportunities (judgemental decisions to be made), and the relation of the entrepreneurial reward to the current wage level (Casson, 1982, pp. 330–346). While this perspective is able to describe the number of entrepreneurs within an economy, it can not give an answer to the question why a certain individual becomes an entrepreneur.

Building on the Cassonian link between the wage and the entrepreneurial profit, Campbell (1992) developed an economic decision model. For him any potential entrepreneur evaluates whether there are positive expected net present benefits of a business venture relative to the expected gains from wage labor (opportunity costs): “The expected net gains from entrepreneurship depend both on the average income from successful entrepreneurship weighted by the probability of success and the average income from wage labor weighted by the probability of employment” (for the mathematical model, see Campbell, 1992, pp. 24, 25).

Based on this simple model Campbell shows that new entrepreneurship could be stimulated by higher profits for existing ventures, that high profits attract immitative entrepreneurs and that members of minority groups often only have low-wage alternatives to entrepreneurship what might explain a higher percentage of minority entrepreneurs compared to the average citizen (Campbell, 1992, p. 25).

3.2. *Another part of the puzzle: The systemic perspective*

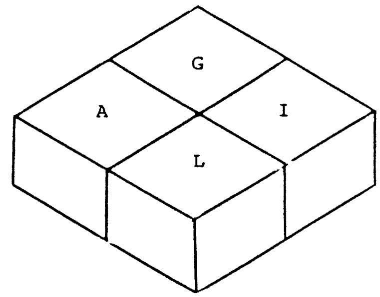
If entrepreneurship is considered to be a behavioral concept then sociology should be able to contribute to a better understanding of the entrepreneurial process. For an overview of sociological research on the level of the individual see Reynolds (1991). This part of the paper deals with another level: the nature of a social system as a whole and the role of the entrepreneur in it. Two views of the relation of social systems and economics have been discussed in the past: societal equilibrium models and models of class conflict (Reynolds, 1991). As the conflict model (starting with Karl Marx) offers no support for entrepreneurship is it not discussed any further. (The interested reader may have a look into the article of Reynolds for more details.) In this paragraph a specific societal equilibrium model is presented, reflecting efforts to consider the interactions within a smoothly functioning or low-conflict society: Robert Cauthorn’s *Systemic Approach to Entrepreneurship* was developed in 1963 and published in 1989.

According to Cauthorn (1989, p. 127) Schumpeter had a vision of a theory of entrepreneurship but he did not give a causal explanation for it. Instead of trying to build his own economic theory of entrepreneurship Cauthorn favors a systemic approach based on the findings of the sociologist Talcott Parsons. In this approach the entrepreneurial function is integrated into a broader theory of social systems and entrepreneurship emerges as a subsystem “. . . of action specializing in the integration or coordination of other functions necessary to the larger system which it is a part of . . .” (Cauthorn, 1989, p. 45). Figure 1 gives an overview on the Parsonian concept:

The three main elements of this systemic approach to entrepreneurship are:

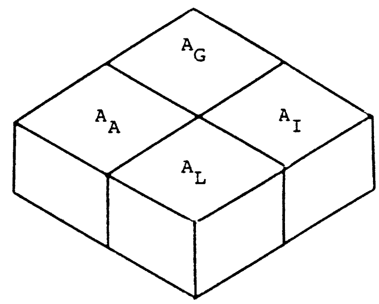
Level of Social System

A --- adaptive function: instrumental object manipulation
G --- goal attainment function: instrumental-expressive; consummatory performance and gratification
I --- integrative function: integrative expressive and sign manipulation
L --- latent pattern maintenance and tension-management function: receptive meaning integration and energy regulation; tension build-up and drain-off



Level of Economic System

A_A -- capitalization and investment subsystem: provisions for liquidity and market direction of capital goods creation
A_G -- production subsystem (including distribution and sales): provisions for output of consumer goods in appropriate volume and composition
A_I -- integrative subsystem: entrepreneurship; offsets to diminishing returns
A_L -- economic commitments subsystem: physical and cultural resources and motivational commitments



Level of Entrepreneurship System

A_{I_a} - financing of innovation: instrumental means by which innovative opportunities are brought to fruition
A_{I_g} - new combinations of factors of production offered to economy
A_{I_i} - opportunities for innovation
A_{I_l} - institutionalized mobility, flexibility and substitutability of factors of production: flow of resources

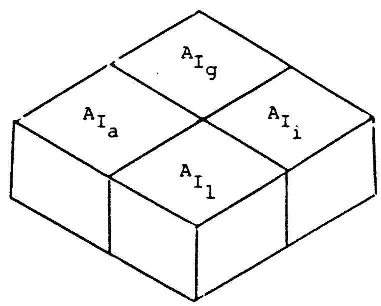


Fig. 1. Entrepreneurship as a function of the social system. Source: Cauthorn (1989, p. 30).

1. The concept of systems: Entrepreneurship is a subsystem of a broader societal system. Each subsystem directs its action along the four system-problems: goal attainment, adaption, integration, and lattent pattern maintanance/ tension management.
2. The concept of homeostasis: All systems are self-regulating and are capable of change within certain limits and have a tolerance for disequilibration within limits.
3. The concept of thresholds: Between the systems thresholds avoid that too many interactions block the function of the whole construction. Besides that the thresholds give each subsystem the ability to concentrated on one system-problem at a time (Cauthorn, 1989, p. 129f).

For Cauthorn (p. 136) the consequence of such an approach to entrepreneurship is that entrepreneurial behavior has to be differentiated into three levels: time, type of opportunity, and type of entrepreneur: *Time*: That means that the intensity of entrepreneurial behavior with a system may vary. *Type of opportunity*: The idea is that one entrepreneur might not be able to spot or grasp every type of profit opportunity. *Type of entrepreneur*: This reflects the fact that different people might react in different manner to the same opportunity.

Cauthorn's approach is an interesting concept which helps to see economic behavior as a complex function of more than one influencing variable. It becomes more and more obvious that entrepreneurship cannot be explained by using economic models or sociological models alone. Not even together these models would be able to explain entrepreneurial behavior. An interdisciplinary approach including psychology and behavioral studies might be necessary to get a better understanding of the entrepreneurial process.

3.3. *The psychological contribution: The trait approach*

Economic decison theory has given one possible explanation to the questions of why and when entrepreneurship takes place, but it can not explain all types of entrepreneurial behavior. Systemic analysis gave a another perspective on the importance of the situation and the environment. Other scholars in entreprneurship try to understand the entrepreneur by describing his personal characteristics (traits).

Several characteristics have repetitively been metioned when authors were trying to identify what distinguishes entrepreneurs from non-entrepreneurs: a high need for achievment, self-confidence/locus of control, risk-taking, personal values, age, sometimes even the marital status (for a list of studies and a general critique on the trait approach see Gartner, 1989). The problem of the trait analysis is that it seems to assume the entrepreneur to be a particular person, a fixed state of existence: "Once an entrepreneur, always an entrepreneur". But the missing dynamic is only one problem. Another is: within the trait research community there is no agreed upon definition whether only the founder of a company is an entrepreneur or whether the employed manager can be an entrepreneur, too.

In Germany the "Gründungsforschung" (literaly translated with "research on company foundation") has concentrated on the characteristics of the founder, as 51% of the studies on entrepreneurs are on traits, and only 23% deals with the surrounding (Müller-Böling and Klandt, 1993). These studies showed that for example entrepreneurs in Germany . . .

- . . . are approx. 70% male (decreasing),
- . . . are in their mid 30s (decreasing),
- . . . have a higher need for achievement than non-entrepreneurs,
- . . . and that their need for independency is the prime mover to become an entrepreneur.

Unfortunately the results of the traits approach do not lead to a causal understanding of entrepreneurship. This might be the reason why for many authors (e.g., Low and MacMillan, 1988; Gartner, 1989) this kind of research does not promise new insights. As Low and MacMillan (1988, p. 148) point out, entrepreneurs ". . . being innovators and idiosyncratic, . . . tend to defy aggregation. They tend to reside at the tails of population distributions, and though they may be expected to differ from the mean, the nature of these differences, are not predictable. It seems that any attempt to profile the typical entrepreneur is inherently futile".

Some deficits of the trait approach might be overcome by a psychoanalytical perspective. For Goebel (1990, p. 11) entrepreneurial behavior is the consequence of the individual development and of the experience of a person. But pschoanalytical entrepreneurship research is still at its beginning and apart from trait research or psychoanalytical analysis a new approach has been presented: the behavioral approach.

3.4. *The behavioral approach*

The idea of the behavioral approach is quite simple: If one accepts the term that entrepreneurship is the creation of new organizations and that entrepreneurship is a behavioral concept, ". . . than these behaviors cease once organization creation is over" (Gartner, 1989, p. 62). The main idea is to distinguish between the dynamic entrepreneur and the more static small business manager. The individual who creates the organization is the entrepreneur and then later becomes a small business manager. This concept is derived from Schumpeter's theory. He wrote: "Everyone is an entrepreneur when he actually 'carries out new combinations', and loses that character as soon as he has built up his business, when he settles down to running it as other people run their businesses" (Schumpeter, 1934, p. 78). Entrepreneurship then is a functional rather than a static concept.

Gartner (1989, p. 63) proposes a behavioral analysis as Mintzberg (1973) has done it in management science. Entrepreneurship research should try to address the following questions:

"What kinds of activities does the entrepreneur perfom?"
"With whom he must work?"
"What basic roles can be inferred from the study of the entrepreneur's activities?"

In addition to that it seems to be interesting to investigate the origin of the new venture concept: "Where does the entrepreneur start?"; "Where do his ideas come from?"; "Where and how does he try them?"

The main obstacle for the behavioral approach is a methodological problem because it seems very difficult to observe an entrepreneur in all steps of the creating process. If this can be solved it promisses new insights into the phenomena of entrepreneurship.

4. Conclusion

After having presented the different roles of the entrepreneur in economic theory and some results of system analysis and psychological research, the question is whether there will ever be a theory of entrepreneurship. Bull and Willard (1993) come to the conclusion that a theory of entrepreneurship will be very difficult to develop, the unsolved problems are still enormous. They pronounce the importance of the interrelation of teaching and research and compare the situation with the beginning of financial market theories after the capital asset pricing modell had been presented.

In summary the whole field of entrepreneurship research in economics is still at its beginning. For a very long time it has concentrated on the definition problem and instead of looking for causal explanations authors reinvented the wheel a hundred times by presenting own definitions. Empirical data on entrepreneurial traits give interesting insights on the person of the entrepreneur but for the time being they do not lead towards a new theory. Two aspects will influence future entrepreneurship research: First it seems as if Schumpeter's understanding of the entrepreneur is widely accepted and that it may very well serve as starting point for a future theory of entrepreneurship. Such a theory might be as follows (Bull and Willard, 1993, p. 188).

> A new combination, causing discontinuity, will be created, e.g., entrepreneurship will occur, under conditions of:
> 1. Task-related motivation (some vison or sense of social value embedded in the basic task itself that motivates the initiator to act), and
> 2. Expertise (present know-how plus confidence to be able to obtain know-how needed in the future), and
> 3. Expectation of gain for self (economic and/or psychic benefits), and
> 4. A supportiv environment (conditions that either provide comfort and supprot to the new endeavor, or that reduce discomfort from a previous endeavor).

And secondly the behavioral process, the entrepreneurial pursuit of business opportunities, becomes the center of empirical research.

At last another poorly analysed part of the discussion about entrepreneurial success is the quality of the idea or the concept. Most often this "soft-fact" is fairly neglected. Some authors argue that there are enough good ideas, but it is the infrastructure which decides about success or failure (see Wiesen, 1994). Other new studies include the opportunity recognition in the discussion of a new venture creation (see Timmons, 1994; or Hisrich and Peters, 1992), and Kirschbaum (1990) found out that the poorly developed entrepreneurial idea is the main obstacle for success. A new proposal is to analyse the creative process of an artist and to describe the similarities the process has with the creation of a new economic venture. Faltin (1991, p. 273) mentiones that the personal traits of artists and entrepreneurs seem to be very similar and even more important is the idea that entrepreneurial creativity and not capital is the secret of success (Faltin and Zimmer, 1995, p. 108).

The intention of this paper was to show that Schumpeter's notion of the entrepreneur can only serve as a starting point for the development of a theory of entrepreneurship. The situation, the behavioral analysis, and the entrepreneurial idea have to receive more attention in empirical research. The task is to develop an interdisciplinary theory of entrepreneurship including economic, socicological, psychoanalytical and systemic aspects.

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