



# Imagination and leadership – The neglected dimension of an evolutionary theory of the firm

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## Abstract

Bounded rationality prevents humans from tracing all action plans that could, in principle, be imagined. In the present paper, individuals' partly socially-shaped cognitive frames explain which action plans do gain attention. This provides the basis for a new entrepreneurial theory of the firm where 'business conceptions,' which underlie any entrepreneurial venture, play a key role. Coordination and motivation of the firm members can be achieved – and opportunism be held down – if through 'cognitive leadership' the entrepreneur succeeds in implementing and defending his own business conception as a tacit cognitive frame collectively shared within the firm. © 1998 Elsevier Science B.V.

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## 1. Introduction

Building on the transaction cost economics explanation of the 'nature of the firm' by Coase (1937), economic theorizing about the firm over the past decades has been increasingly attracted to one theme: how is opportunism kept under control so that it cannot eat up the gains on transaction costs that can be achieved by setting up a firm as a special way of coordinating individual economic activities (Williamson, 1985)? How can the fear of opportunism be prevented in order not to discourage asset-specific investments by the firm members where these create potentially sizable quasi-rents (Alchian and Woodward, 1987)? As is well known, the answers given revolve around measures of 'monitoring'

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(Alchian and Demsetz, 1972), ‘governance’ (Williamson, 1979), and the discussion of abstract incentive structures designed to solve ‘agency problems’ more generally (Grossman and Hart, 1983). However, important as transaction costs and the related opportunism problem may be, they are far from being the only factors relevant for explaining the nature of the firm in general, and the empirically observable differential success of firms in particular.

The recently emerging evolutionary approach to the theory of the firm focuses on other factors. In a neo-Schumpeterian spirit, this approach tries to account for long-term processes of specialization and internal division of labor and, therefore, considers the organizational form of the firm as a means of acquiring, combining, utilizing and maintaining technological and commercial knowledge and skills. Typically, these are skills and knowledge not available to any one single agent, and firms may be using knowledge and skills in a way that does not depend on individual firm members who may come and go. The evolutionary approach thus suggests firm-specific competencies (Pelikan, 1989, Langlois, 1992, Nooteboom, 1992, Foss, 1993, Teece et al., 1994, Montgomery, 1995) as a reason for the existence of firms – the firm as ‘a repository of productive knowledge’ (Winter, 1988). Emphasis is therefore shifted from the efficiency argument implicit in the transaction cost approach to the significance of the firm organization for acquiring and using productive knowledge profitably. However, the principal interest in the ‘nature’ of the firm, that is, in a functionalist approach (see Khalil, 1996 for a lucid discussion) is not challenged.

Evolutionary thought is not, of course, directed at providing functional explanations in the first place, but rather at explaining the way things emerge and change over time (Sober, 1993, Chap. 5, Witt, 1992). However, there is still no consistent theory of how, and why, firm organizations evolve over time in the neo-Schumpeterian approach, though some attempts in this direction have been made (e.g. in Penrose, 1959, Nelson and Winter, 1982, Marengo, 1992, Lundvall, 1992, Fransman, 1995, Foss, 1997). The reason may be a certain bias in many contributions to evolutionary economics. In dealing with the role of cognition, they tend to reflect on its ‘procedural’ rather than ‘substantive’ aspects or, to put it differently, on the role of ‘routines’ rather than that of ‘conceptions.’ This ignores the fact that conceptions are necessary for organizing otherwise meaningless or ambiguous information into significant agendas and action plans. The use of growing knowledge and experience, technological change, and commercial reorganization, all require imagining what to achieve and how to do it (Loasby, 1976, Loasby, 1991, Chap. 4) – in short, a business conception which is a primary entrepreneurial input. In the neo-Schumpeterian approach this entrepreneurial element is neglected,<sup>1</sup> as is the ‘substantive’ cognitive level on which it rests and the impact both have on the evolution of firm organizations.

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<sup>1</sup> The approach goes back to Nelson and Winter (1982), (see Andersen, 1994 for a recent review) and their synthesis of (i) seminal work by Schumpeter (1911/34), Schumpeter (1942)), (ii) the behavioral theory of the firm as developed by the Carnegie school (March and Simon, 1958, Cyert and March, 1963), and (iii) the idea of evolutionary pressures shaping the firm, an idea derived by loose analogy to natural selection (see Winter, 1975). There is no role for an entrepreneurial element in any of these contributions except in the early work of Schumpeter (1911/34) who portrayed the figure of an entrepreneur endowed with extraordinary initiative, authority, imaginative foresight, and leadership capacity. However, for reasons explained elsewhere (Witt, 1995), the late Schumpeter abandoned this view and argued instead that departments of large corporate organizations, which specialize in innovative activities, have taken over the role of the entrepreneur (Schumpeter, 1942, pp. 132–133).

Once the significance of these neglected aspects is acknowledged two key questions arise. First, if the organizational form of the firm is chosen in order to realize what is imagined, it may be asked whose imagined ventures are to be followed by the firm members? Second, how can firm members be induced to follow essentially the one imagined business conception (and for how long)? It will be claimed in this paper that an answer to these two questions requires a reappraisal of the role of the entrepreneur in the framework of an evolutionary theory of the firm. In order to substantiate the claim the paper proceeds as follows. Section 2 reconstructs an implication of bounded rationality which has been neglected in the neo-Schumpeterian approach: the fact that individual learning is socially conditioned so that tacit cognitive commonalities emerge within intensely communicating groups. Relating this insight to the second question, Section 3 points out how cognitive commonalities among firm members can be shaped by the entrepreneur. A notion of – cognitive – leadership is introduced and related to the ability to make firm members adopt, at least temporarily, a common business conception. Section 4 turns to the first question above and elaborates on the elements of a competitive sorting process which determines whose business conception is going to be pursued in firm organizations. The outcome of that contest is not necessarily stable so that the stability conditions need some reflection. Section 5 returns to the transaction cost approach and argues that, in the framework of social learning outlined, the opportunism problem appears in a different light. Section 6 offers some conclusions.

## **2. Bounded rationality and its social–cognitive implications**

The difference between procedural and substantial interpretations of bounded rationality can be pinpointed as follows. If man's capacity for processing and memorizing information is limited and if, therefore, human capacity for considering alternatives is severely constrained as well, the question then is, how do individuals arrive at the alternatives they perceive. Is the bundle of alternatives just there, readily provided from outside? Does the environment offer them, ready to be grasped, in more or less unambiguous messages – which would amount to an inductivist view. Or does the individual mind create those alternatives in an imaginative act by combining individual experience, subjective understanding, and current information in a most complex associative act – which would imply a deductive interpretation? The behavioral and organizational theories usually ignore the problem or implicitly lean towards the former position (see Marengo, 1995 for a recent contribution). By contrast, once the latter position is taken, subjective imagination immediately becomes a key element in business behavior.<sup>2</sup> Conceiving a business venture is a necessary prerequisite for undertaking it – and thus a crucial part of entrepreneurship (Day, 1987). However, except in one-man businesses, conceiving is not

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<sup>2</sup> Shackle (1972); on the relationships between subjective knowledge and vision see also Fransman (1994). In a similar way, judgement can be distinguished from imagination and the forming of conceptions. Taken literally, judgement refers to given alternatives, even though they may be highly uncertain and difficult to assess. Imagination is the very act of mentally creating those alternatives. For this reason, the Knightian explanation for the existence of firms, which identifies the entrepreneurial element with the provision of judgement on 'uncertain' business prospects (see Langlois and Cosgel, 1993), differs in its basic assumptions from the view on the firm suggested here. The same holds with respect to the interpretation by Casson (1982, Chap. 17) who equates entrepreneurial services with the provision of judgmental decision.

all. Within firm organizations effective communication and collective pursuit of business conceptions may be crucial for their success. The latter condition points to some complications relating to the fact that, within intensely communicating groups like the employees of a firm, action knowledge may be socially shared and is often tacit. This is an implication of bounded rationality at a substantive level which is particularly important for assessing the entrepreneurial role within the firm organization.

To understand the mechanisms operating here a brief reconstruction of the underlying cognitive processes is useful. As is well known, the constraints on human working memory require a selective processing of the vast amount of sensory information offered to the nervous system at every moment of time. Selection is carried out through discriminative attention processes which, in turn, rely on cognitive cues.<sup>3</sup> Sets of incoming information are screened by means of the latter on an associative basis to see whether they fit patterns that already exist in the memory. If familiar configurations cannot be easily identified in the incoming information, or if existing patterns cannot be easily extended to encompass it, the information is ignored. The cognitive cues that help memorize patterns and discriminate among the incoming information are themselves organized into larger and more complex systems called ‘cognitive frames’ (cf. Anderson, 1990, Chap. 5). Cognitive frames support classificatory activities and thus allow knowledge to be represented in a meaningful way. Needless to say, cognitive frames are subjective.<sup>4</sup> Starting from a limited number of probably genetically coded cues, longer and longer associative chains with increasingly more complex sets of frames are formed by, and stored in, long-term memory. The formation starts in individual socialization, in the learning of language, and in the identification of meaning, and extends far beyond these early phases into a lifelong process. Against this background, the human mind always selectively utilizes information and frames it – even at the level of deliberate reasoning – within existing interpretation patterns which often take the form of fairly rigid, mental conceptions.

The crucial point, often ignored in the discussion of bounded rationality, now is that the individual’s cognitive development just outlined does not take place in an entirely autonomous or isolated way. Rather, it is molded in interactive processes with man’s social environment (Bandura, 1986, Chap. 2). Communication, particularly of the non-formal, and often one-sided, kind that occurs in socializing with others, enables people to observe, and make comparisons with, the behavior of other agents and their rewarding or non-rewarding experiences. The more frequent and intense the latter observations are, the more likely that there are some similarities in the subjective representation of knowledge. The exchange with, and selective imitation of models of behavior provided by, the social environment tends to induce tacit cognitive commonalities – the more so the more intense

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<sup>3</sup> See Anderson (1990, Chap. 3) for a detailed discussion of the element of cognition theory reported here. Note that the notion of an attention process focuses on a more basic level and, with its background in cognition theory, is much richer in theoretical content than the idea of attention as a scarce and valuable management resource. The latter idea, which has been around for quite some time (see Gifford, 1992 for a good survey), suggests an optimization framework, while the hypotheses about attention processes discussed here are independent of such a framework.

<sup>4</sup> Therefore, the same information input may mean different things to different people or, as Fransman (1994) has put it, there is an ‘interpretative ambiguity’ in transforming information into subjective action knowledge.

communication is. Socially shared interpretation patterns and frames emerge, as does common tacit knowledge of facts, hypotheses, practices, and skills. This also usually includes socially shared knowledge of rewarding or aversive experiences and corresponding preferences. Furthermore, intense communication is usually subject to a spontaneous agenda-setting effect (see Schnabl, 1991). The effect modifies, in a self-reinforcing way which is similar for all the participants in the social interaction, the intensity with which some particular information, rather than other available information, is exchanged and attracts attention.

Notwithstanding the subjective nature of individual knowledge and the corresponding diversity that results from each individual's unique cognitive history, tacit cognitive commonalities are thus a common concomitant of intense communication within social groups. These commonalities extend to both the content of action-related knowledge and the way in which it is framed. This means that intense communication tends to induce similarities in the alternatives of action which individuals within an intensely communicating group selectively perceive as being feasible and those that they disregard.<sup>5</sup> One kind of knowledge subject to the social learning processes outlined, and particularly relevant in the context of the firm, is knowledge of how to behave in social interactions. Certain patterns of behavior which are regularly shown by some person(s), and which can be observed in social interaction, may gain the status of commonly shared models of behavior (Bandura, 1986, Chap. 2). The significance of such models lies in their vicarious nature, that is, the fact that their rewarding or non-rewarding consequences can be grasped by observation rather than experimentation. Within intensely communicating groups, learning by observation means, of course, that the group members tend to focus on much the same models. Consequently, their individual learning processes produce correlated results which, via the prevailing social models, can intuitively be grasped by newcomers. Often such models develop from spontaneously established, multilaterally respected, rules telling how to behave into normative rules telling what conduct should be.

Individual behavior can, of course, deviate from established social models. This may be a result of ambiguities or misconceptions in the individual's attempt to associate meaning with incoming information or of deliberate reflection and inventive thinking, that is, the discovery of action possibilities not perceived earlier. If an individual thus experiments with novel actions, such experimentation is likely to arouse more attention among group members, the more existing knowledge about behavioral contingencies and consequences is challenged. The observed vicarious success or failure provides the other agents with information that enables them to assess their current behavior in the light of the new opportunities. The innovator's vicarious reward or loss thus tends to induce or inhibit corresponding behavior adjustments by imitation (Bandura, 1986, Chap. 7).

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<sup>5</sup> The fact that, due to their selective information processing, potential choices go unnoticed is normally not recognized by the agents, because the cognitive system that processes some information cannot at the same time reflect on how that information is processed. Note that socially shared constraints in the selective representation of reality do not imply that people are prevented from choosing the most preferred alternative among those they do recognize. People may however, deviate from what the rationality postulate would prescribe if information processing were perfect, that is, non-selective and therefore unbiased. Unless the particular cognitive constraints of the communicating population are specified, the concept of rationality is therefore insufficient to actually determine what behavior should be expected.

Accordingly, social learning strengthens or weakens the tacit constraints on what is individually perceived as the choice set. If successful, a new way of behaving is likely to jeopardize the tacit cognitive commonalities. The corresponding re-framing of action knowledge may cause a switch in social interactions from one social models of behavior to another one. Indeed, in an evolutionary perspective, this possibility is a crucial part of the story and, as will be shown later, poses a persistent challenge to firms.

### **3. Leadership as provision and enforcement of cognitive frames**

Cognitive commonalities, that is, socially shared tacit knowledge including knowledge about social models of behavior, may emerge spontaneously from intense communication as an unintended collective outcome and may, as such, be difficult to influence. Sometimes, however, the institutional set-up of the interactions assigns certain individuals a position in which they get a chance to shape the communication processes and thus to exert an influence on the collective outcome. The firm organization is a case in point. Indeed, the social–cognitive implications of bounded rationality are the key, it is submitted here, to understanding why firms, as organizations, are able to achieve internal consistency and the co-ordination of individual efforts. To show this, it is useful to interpret the nature of business conceptions and the role they play in a firm’s internal communication process in the light of the previous section.

To take the intuitively most easily accessible situation, consider a firm which has just been founded by someone, called for the sake of simplicity the entrepreneur, who hires personnel and other resources.<sup>6</sup> As mentioned above, any such venture is based on some initial imaginings of what can be undertaken, for what purpose, and how. With growing experience, these entrepreneurial visions usually develop into a business conception which, although it may inspire more or less detailed plans and strategies, is not in itself a plan. Rather it represents the interpretative framework which furnishes the decision maker with a general orientation and a general associative basis for deriving and assessing action information. The fact that a business conception is general, and rather unspecific, in nature is crucial, because the cognitive limitations mentioned earlier prevent the entrepreneur from anticipating all possible business moves that unfold into the future.<sup>7</sup> The general, unspecific nature of the business conception leaves room to cover up-coming information on non-anticipated events and consequences of one’s own actions which would otherwise be difficult to classify and assess with respect to their implications for the business. Thus a business conception has the features of a cognitive

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<sup>6</sup> Note that, despite the fact that, with regard to the incentives, it makes a difference whether an entrepreneur is employed or self-employed, this question will be neglected here. The implications, which have been exhaustively discussed by Casson (1982, Chaps. 9–16), are not of central importance for the present focus on the cognitive features of entrepreneurship.

<sup>7</sup> Even though learning and deliberate reflection improve on what is selectively being conceived of, they still elaborate on what basically remains partial knowledge. Accordingly, it is always such partial and fallible knowledge that informs businesses. This assessment has inspired the idea of considering entrepreneurial activity as a form of truth-seeking behavior in some sense comparable to science (Loasby, 1996).

frame. It helps to interpret the current events in the perspective of the firm's overall orientation and associates appropriate actions with the conceived state of affairs.

The social dimension of the business conception can be demonstrated as follows. A multi-person firm is an organization with an internal division of labor which serves the purpose of accomplishing jointly the conception which the entrepreneur is unable to realize by her/himself. This purpose is attained if all firm members decide, within their respective area of discretion, in a co-ordinated way, and if their decisions are consistent with the entrepreneur's business conception. To achieve this, the entrepreneur's conception must be transmitted to, and adopted by, the firm members.<sup>8</sup> It is at this point that the possibility of shaping the communication processes within the firm becomes a crucial condition for entrepreneurial success. As explained above, frequent communication, particularly informal communication which people cultivate when socializing with one another, tends to induce tacit, socially shared, interpretation patterns and models of behavior. Of course, this is something different from organizing a formal communication process and issuing instructions within that process. It would therefore be erroneous to assume that firm members, whether just hired or already employed, can be made to adopt the entrepreneur's business conceptions on the basis of a mere instruction process or by devising organizational and administrative routines. It is socialization in informal communication processes within the firm that is crucial for inducing people to adopt those conceptions.

However, whereas the institutional set-up of a firm provides the entrepreneur with the power to define the structure and the agenda of formal communications, there is much less institutional support for being able to influence the informal communication processes within the firm. While the agenda of formal communication can be determined as a matter of mandate and subordination, the agenda of informal communication is difficult to control and is therefore open to rival cognitive frames and social models. For the entrepreneur to succeed in influencing informal communications in a way that is advantageous to the propagation of her/his business conception, particular skills seem necessary. An individual is capable of dominating the informal process of communication within a group, if her/his assessments and interpretation patterns are more often adopted by the members of the group than those of other individuals, or if the social model (s)he implicitly propagates is more frequently imitated than others are. An individual with such an influence is said to take the lead socially, but what is actually at stake is taking the lead in shaping cognitive commonalities within the group. Leadership interpreted in this particular sense is obviously advantageous for the propagation of entrepreneurial

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<sup>8</sup> Indeed, the general, that is, rather unspecific, nature of that cognitive framework is no less essential for the employee's situational problem solving than it is for the entrepreneur's. The generality supports the coordinating function of a common cognitive frame in using special knowledge dispersed among, and singular information distributed over, the firm members – a function which would, of course, be lost if there were rivaling business conceptions within the firm. Note that a socially shared cognitive frame by which individual knowledge is represented is a much weaker requirement for enhancing coordination among firm members than the commonality of that knowledge itself. Accordingly, the trade-off, as diagnosed by Marengo (1993), between commonality and diversity of knowledge (the former deemed essential for coordination, the latter for creative problem solving), is not necessarily relevant here.

conceptions within a firm and this, in turn, is an important condition for the success of entrepreneurial ventures.<sup>9</sup>

Leadership of this kind can be attributed more precisely to traits that help to win through in informal communication, such as eloquence, persuasiveness, patience and persistence, the capacity for gaining sympathy and confidence etc. Obviously people differ with respect to these capacities. On the other hand, features intrinsic to a business conception are also important. A conception's soundness and appeal help to exercise leadership convincingly. A sound business conception may induce the employees to believe in the success of the entire venture in which they are participating. It may also promise to be personally rewarding in terms of qualification enhancement, working conditions, career options, and remuneration. Similarly, the social models of behavior which emerge within the firm organization may be supportive of, or detrimental to, exercising leadership and realizing the entrepreneurial conception. As is well known from the perspective of social psychology, social models which emphasize task commitment, cooperative problem-solving, fairness, and frankness help keep intra-group frictions and individual frustrations down. They thus make a substantial contribution to achieving a group's goals (Weiss, 1978, Mullen and Goethals, 1987, Paulus, 1989). Due to the individual's selective attention processes which tend to discriminate against interpretation patterns and social models other than the leading ones, cognitive leadership and leading social models are self-reinforcing phenomena.

This holds, of course, with respect to whatever gains dominance in the informal communication processes within the firm. Hence, failure to prevent rival cognitive contents and social models from tacitly taking the lead in the firm's informal communication – which is tantamount to a lack of leadership on the part of the entrepreneur – is likely to end up in poor performance of the firm organization. Once the business conception underlying a firm loses its coordinating and motivating function, the way the firm organization works changes significantly. Differential success and survival of firms may critically hinge on how long leadership skills within the firm suffice to prevent this. Often, deficiencies may crop up when a firm grows excessively – and may then go unnoticed because of scale effects which may compensate coordinating and motivational shortcomings temporarily. When poor performance prevails, however, other modes of enforcing coordination and controlling motivation are often tried as a substitute, like bureaucratic 'governance,' that is, formalization of responsibilities, and tight 'monitoring' procedures. Ironically, this rather ineffective state of affairs seems to be the situation that the transaction cost economics approach to the firm starts from.

#### **4. Competitive vision giving, vision taking and the firm as an organizational form**

The discussion so far leaves several questions open of which two seem of particular significance, traditionally, for the theory of the firm and will therefore be shortly

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<sup>9</sup> In the management science and related fields, contributions revolving around the role of business conceptions, cognitive frameworks, and leadership often describe processes internal to the firm very similarly without, however, recognizing the common roots of these phenomena in the bounded rationality of the agents and the corresponding social implications (cf. e.g. Schein, 1985, Nonaka, 1991, Resnick, 1991 and Blackler, 1993).

addressed in turn: (i) why is it necessary to organize a (multi-person) firm to realize an entrepreneurial vision instead of doing so through market transactions? (ii) which particular business conception survives to the stage where it inspires the formation of an enterprise, that is, which of the vast number of ventures that can indeed be imagined leads to personnel and other resources being directed to its realization? While the evolutionary character of the second question is obvious, the first question can easily be identified as the ‘functional’ one Coase (1937) posed. Although, as mentioned in Section 1, an evolutionary approach is not in the first place directed at providing functional explanations, it may be interesting to highlight the respective implications of the theory presented above, that is, to derive an answer to Coase’s question from the ‘substantive’ evolutionary point of view developed so far. Indeed, without denying that there may be several reasons for the existence of firms, it can be argued that the role of entrepreneurial conceptions is itself a sufficient one.

To support this claim note, first, that even one-person enterprises – which rely entirely on the market as the way of coordinating interactions – are informed by some entrepreneurial conception. (Recall that such a conception has been argued to be fairly general and rather unspecific in nature so that up-coming, non-anticipated information can be ‘framed’ for situational problem-solving.) When production processes become more involved, the number of transactions necessary for buying and selling all services and materials on the market at the right time quickly increase. To conceive of all those transactions, to fix, and to supervise them becomes impossible for a single entrepreneur because of the limited individual information processing capacity. If there were no (multi-person) firm, some of the entrepreneurial activities would therefore have to be contracted in the market. But, since these activities owe their coherence to a fairly unspecified business conception, how would it be possible to contract the yet unknown services suitable for the business conception as the venture unfolds into the future? Obviously, a contract of rather unspecified content would be necessary here, a contractual form that is indeed provided in the market: namely, employment contracts in the labor market. Moreover, the precondition of a contract as unspecified as this one – the transmission and adoption of the business conception as a cognitive frame – could hardly be realized by ordinary market exchange relations where people on the other side of the market, by necessity, pursue their own entrepreneurial conception. The representation of conflict in terms of a purely transaction-cost dominated ‘make-or-buy’ alternative misses this crucial cognitive framing difference. Non-rival cognitive frames are required for, and cognitive leadership is confined to, a firm’s own employees, hence their intimate relationship with the organizational form of the firm.<sup>10</sup>

The second question raised above – which particular business conceptions reach the stage of a realization being attempted – has to be seen against the background that large numbers of business conceptions and entrepreneurial imaginings can be developed by many people, certainly far more than those pursued in actual enterprises. Obviously, there is a kind of sorting process that separates imaginings, which are indeed turned into

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<sup>10</sup> This does not exclude the fact that promising business conceptions may be imitated by others. Business conceptions may themselves even be made the object of market transactions in the consulting industry or, combined with other services, in franchising contracts. Yet, in each of these cases, a business corresponding to one’s own firm is created.

ventures, from the vast number of those that have no consequences. This fact is significant not only where a new business is founded, but also for existing firms, particularly large corporations, when they try to innovate or diversify into new businesses. The differences between the sorting processes in the two cases provides a key to understanding the many problems growing firms are faced with. Consider the firm-founding case first.<sup>11</sup> In principle, everyone who has thought up a business conception could make an attempt to hire employees and other resources in order to pursue her/his conception within a firm. However, hiring is competitive and, moreover, it is mediated through markets which act as allocation devices. Therefore, prospective entrepreneurs have to develop some idea of the wages their business would allow them to offer to potential employees. Since the wage offers must be competitive, the question arises as to how much income the entrepreneur would be able to retain for her-/himself after paying out the wages offered. On the other hand, people contemplating their prospects as entrepreneurs can themselves obtain a competitive offer to work as an employee in a non-entrepreneurial position for someone else's venture. The income to be earned by joining someone else's venture can be measured against the imagined income from trying to set up one's own venture, and so too can the non-pecuniary features of the alternatives of either assuming the entrepreneurial role or the employee's.

Hence, something like a market contest between entrepreneurial projects occurs where there is actually no market for evaluating such projects. Everyone who participates in it by considering her/his own business idea obtains some information about how promising their own imaginings are compared to those of others. The contest discriminates between the vast number of entrepreneurial visions and, by the same token, sorts people into entrepreneurs and employees. Leaving the non-pecuniary aspects aside, the agents who take on the entrepreneurial role are those who believe being able to pay more than the other agents would expect to earn after paying them. The sorting thus is a result of multilateral subjective opportunity cost assessments. All these subjective assessments, and thus all the individual comparisons made in the implicit contest, may, of course, turn out to be wrong. For this reason, the results of the sorting process are not necessarily stable. The subjective assessments are confirmed if the imagined entrepreneurial income and the wages and non-pecuniary benefits offered to those who decide to become employees can indeed be earned. Otherwise a venture may not succeed and the firm will go out of business. To avoid such a fate, market conditions must prove to be sufficiently profitable and the new entrepreneur must prove to be in command of sufficient leadership skills (with some room for a trade-off between the two requirements).

Even if these conditions are met, however, some results of the sorting process may not be stable. The subjective opportunity costs of being hired by someone else are expressed by the imagined entrepreneurial income that could be earned by pursuing one's own venture. They can rise because of discoveries or innovations in the business conception relevant to an own venture. If this happens, an agent who has become an employee in a non-entrepreneurial position in a first sorting may want to leave the firm and set up something of her/his own. If the firm wishes to prevent this, it would have to transfer the agent to a position in which (s)he can profitably be employed, and a wage increase

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<sup>11</sup> The following argument draws on Witt (1987).

sufficient to keep up with the changed opportunity costs to be paid. In this case the competitive sorting process of entrepreneurial capacity continues within the firm and produces income differentials corresponding to the job assignments. A substantial increase in the earnings of an employee may often only be possible if the agent can be given a position in which her/his entrepreneurial capacity can be utilized. The agent could, for instance, be entrusted to pursue her-/his own business conception as an entrepreneur employed within the existing firm.

However, such a move is not without risk. The more the entrepreneurial tasks assigned to an agent in a firm organization, the better prepared the agent may become for breaking away and starting her/his own business. An employee in a non-entrepreneurial position, by contrast, has to devote her/his mental activities, and thus attention and effort, to carrying out other mental tasks. Hence, less of her/his attention is available for inquiring more deeply into own entrepreneurial ideas. The desire to cope with the risk of breaking away, which, for this reason, is higher for senior staff than for other employees, may be the simple rationale for firms often paying disproportionately higher incomes to their top executives.<sup>12</sup> Indeed, there is a more serious threat lurking here. If the innovative ideas of a firm member who leaves allows him to offer non-pecuniary rewards and wages which attract other members of the old firm to the new enterprise, a ‘fissioning’ phenomenon can result. This has in fact been observed in some highly innovative industries (see Ziegler, 1985).

Let us now turn to the case of existing firms. As an entrepreneurial venture grows and the firm develops into a larger corporation there comes a point when the original business conception reaches its limits. This may happen because the extent of the market constrains further growth on the basis of the existing business conception or as a consequence of increasing competitive pressure by imitators as Schumpeter (1911/34) had it. An attempt to respond and achieve further growth quite naturally focuses on innovation or diversification into a new business. Again, the number of ventures imaginable, through which this could be endeavored, can be assumed to be vast so that a sorting process must take place. However, it is a notably different one. The process is not necessarily significantly less competitive than in the former case as there may be many ways of encouraging the launching of proposals on the firm level. Nor is the evaluation, or the selection outcome, produced by this process necessarily inferior just because it is mediated not by the factor markets, but by resource allocation devices internal to the firm. These devices may be designed so that they quite effectively mimic a market contest. The crucial difference is that, due to the organizational division of tasks within a corporation, the entrepreneurial role is no longer necessarily associated with those who have developed, and successfully pushed, the entrepreneurial conception in the contest within the firm. (The case just mentioned, where people are entrusted with pursuing their ‘own’ business conceptions as employed entrepreneurs within an existing firm seems to be the exception, rather than the rule, where innovation and diversification have become routine business.)

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<sup>12</sup> If this conjecture holds, a conservative social environment, as for example in Japan, which disapproves of fissioning, should be associated with an average earning ratio between top executives and the lowest paid employees significantly lower than that associated with a comparatively permissive social environment as, for example, in the US.

If the personal identity between entrepreneurial conception and entrepreneurial role is lost, that is, if the selection of conceptions and the sorting of people can follow different paths, then a source of potential mismatch emerges. There is a danger of tasks being assigned to employees in entrepreneurial positions who, even though they may be believed to have the necessary leadership skills, have little personal affinity with the business conception concerned and may therefore find it difficult to indeed gain cognitive leadership within the firm's informal communication process. If so, the success of innovations and diversification efforts may be considerably hampered, with detrimental effects for the growth of the corporation. Some of the notable differences in corporate performance may thus be attributed not only to differences in the quality of entrepreneurial conceptions and the leadership skill of those holding entrepreneurial positions, but also to differences in coherence between visions and tasks where firms grow into multi-division organizations.

### **5. Governance vs. leadership – When does what count?**

Once a competitive sorting process has *uno actu* determined which business conception to pursue, and who are taking over the entrepreneurial and non-entrepreneurial positions in the firm, the business conception that has been selected must be transmitted to the employees. Interestingly enough, such transmission is usually not considered a problem in the theory of the firm. As discussed in Section 3, business conceptions are similar to cognitive frames, and their transmission between the entrepreneur and the employees is therefore a matter of social learning rather than formal instruction. The success condition, as has been explained, is that the employees adopt the entrepreneur's business conception, that is, that they can be induced to comply with it, so that it guides their behavior within the firm organization. If this cannot, or no longer, be achieved, the major theme of the transaction cost economics approach to the firm may become relevant – the threat of an opportunistic, hidden pursuit of private interests by the employees at the expense of the firm. Concern with keeping an omnipresent opportunism in check has motivated hypotheses about the necessity of 'monitoring' (Alchian and Demsetz, 1972) or 'governance' (Williamson, 1979), and has found its general expression in the principal–agent models (e.g. Grossman and Hart, 1983) with asymmetric information, that is, the possibility for the agent to hide her/his true interests from the principal.

As is well known, the degree of asymmetry depends on how difficult it is for the entrepreneur (principal) to assess the performance of the employee (agent). If the firm's goal, and the activity and effort of the employee through which it could be achieved, were accurately specified, this would appear less of a problem, even if there are some non-observable influences overlapping with the employee's effort. However, as has been argued above, in an entrepreneurial venture conditions are worse than this. New firms, and firms that are forced to relentlessly create new businesses, cannot be operated with detailed plans based on the fiction that all possible contingencies can be anticipated. Since the entrepreneurial business conceptions of such firms have to leave room for initiative and creative situational problem-solving in the employee's decision making,

they must be fairly global, less detailed, and less specific devices. The room that must be left to the individual firm member makes assessments of performance significantly more difficult. By the same token, it potentially makes it easier for employees to pursue their private interests at the expense of the firm. Hence, if opportunism were indeed the only mode of behavior, and tight governance and monitoring efforts the only response, there could never be something like a creative organization.<sup>13</sup>

However, the problem does not pose itself as generally as it appears to in the governance approach. That view fails to consider the particularities of the social–cognitive processes internal to the firm. Accordingly, a governance approach has no understanding of the contingencies of compliance vs. non-compliance (i.e. opportunism) with the entrepreneur’s business conception which reside in the transmission process. Consider the social implications of bounded rationality once again. The conditions for successful implementation of a business conception as described by the notion of cognitive leadership in Section 3 point to what may induce employees to comply with the conception. Since attention is highly selective and influenced by the current interpretation patterns, a persuasive business conception adopted by an employee may detract her/his attention in a self-reinforcing manner from non-compliance alternatives that actually exist. Hence, if an entrepreneur is able to dominate the informal communication process within the firm, so that elements of her/his conception become tacit cognitive commonalities among the firm members, this may enable the entrepreneur to get the employees cognitively involved into her/his endeavor. If the firm members are successfully induced to pursue the entrepreneurial vision as their own, they may be less likely to engage in figuring out opportunities for opportunistic choices. The simple reason is that their attention tends to be diverted away from such a line of thought. This seems to explain why firms with successfully implemented business conceptions – which leave room for initiative and the creative activities which innovativeness requires – are much less faced with opportunism than the governance approach would have it.

Commonalities which emerge from social learning also include tacit social models of behavior. Therefore, leadership in the informal communication process also means being able to launch a social model of ‘commitment to the business conception.’ If this model of conduct spreads in the firm through imitation and becomes the reference model, opportunism is kept down. Following an opportunistic pattern of behavior would mean to deviate from the predominant model. The rationale here is not necessarily to refer to any normative power that an accepted social model may exert. (If it did, this would have to be dealt within a framework of interdependent preferences.) Rather the argument builds on a cognitive effect: if non-compliance with the suggested model of behavior, and the potential individually rewarding consequences of this, cannot be observed by the firm members, they may not be given any ‘wrong’ ideas. The notion of ‘corporate culture’

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<sup>13</sup> Encouragement and cultivation of innovativeness within the firm requires leaving the employee alone – within certain bounds – because (as has long been known, see Steiner, 1965) tight control tends to paralyze her/his creative impulses and the motivation to pursue unknown consequences. Emphasis on governance and monitoring generate a conservative atmosphere within organizations and makes employees reluctant to deviate from established routine behavior. In the principal–agent literature, where monitoring is usually assumed impossible, a way out of the dilemma has been suggested through institutional precautions. Opportunism is deemed pervasive but controllable, if ‘incentive-compatible’ arrangements can be designed, that is, regulations that preclude (hidden) conflicts of interest between the entrepreneur and the employee.

recently developed in the management literature may be interpreted as addressing a phenomenon very similar to that discussed in the present paper – the devising and propagation of tacit social models specific to a corporation.<sup>14</sup> Unlike in the literature on corporate culture, the crucial point here is that the phenomenon has been derived as a social-cognitive implication of bounded rationality, that is, on an individualistic basis. In such a view, the vulnerability of what cognitive entrepreneurial leadership can achieve – the implementation of a corporate culture (as a set of tacitly shared social models) and the commitment on the part of the firm members to the entrepreneurial business conception – is quite evident.

Once entrepreneurial effort and leadership fade, rival conceptions may gain a foothold and the attitudes of the employees may change. As explained in Section 2, successful individual deviations by the employees challenge the authoritative effect of tacit cognitive commonalities and shared social models. While the self-reinforcing features of the informal communication process tend to protect any established cognitive frame from such challenges within certain bounds, it may become impossible to stop the employees from re-framing their interpretation patterns once these bounds are exceeded. This is typically the case where the domination of the communication process by the entrepreneurial business conception slackens beyond a critical point. Then individual behavior may well turn away from the previously shared social model and towards opportunism. When opportunistic behavior is recognized as a true alternative, it is likely to be tried out and, if successful, to be imitated by other firm members. An opportunistic attitude that disseminates among a firm's personnel in this way is likely to result in a major efficiency loss.

It has already been mentioned that, in order to counter such a development, an entrepreneur may take resort to a regime of tight controls in order to deter and prevent opportunism. This seems to be a typical problem in many 'aging' corporations. When entrepreneurial leadership loses out to routine administration and governance, the firm's internal co-ordination capacity is not necessarily destroyed so that all benefits of scale economies disappear. But the interactions in the firm change their character. Even if efficiency can be retained sufficiently by the introduction of monitoring and governance devices, the firm is likely to suffer from the fact that such devices discourage individual initiative and innovativeness. Once opportunism spreads, the measures considered to keep it in check may thus render a firm immobile and prevent it from effectively utilizing its 'repository of knowledge' for solving problems. In a competitive and innovative environment this may well affect the firm's viability chances significantly.

## **6. Conclusions**

In the present paper an attempt has been made to outline a theory of the firm as an organization in which the entrepreneurial element has a proper role to play. The basic premise from which the considerations start is the insight that, underlying the creation of

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<sup>14</sup> Cf., for example, Hofstede (1986). Note, that this interpretation contrasts with the attempt at interpreting corporate culture in terms of a transaction cost-oriented approach as in Kreps (1990) and Casson (1991).

a firm, there are always some entrepreneurial imaginings about the business to do and how to do it. By drawing attention to those ideas developed into business conceptions, that is, to cognitive aspects relevant to the firm's behavior, a 'substantive' perspective is suggested. It differs from the prevailing 'procedural' view in the neo-Schumpeterian, evolutionary approach to the firm which focuses on business procedures and routines. It has been argued that, of the many ideas about technological and commercial activities which may be developed by many people, only a tiny fraction is actually turned into a venture in the form of a multi-person firm. Hence, a selection process takes place which sorts people into two groups: agents who inspire others to follow their business conception and agents who become inspired to follow those others. The former assume the entrepreneurial position in the firm, the latter the position of non-entrepreneurial employees. The explanation of necessary or sufficient conditions for success in the competitive sorting process is closely related to another, equally important, problem: how can the firm members be induced to follow the entrepreneurial business conception as a common device in their decision making within the firm? As has been shown, this question requires a thorough reconstruction of the behavioral foundations of a theory of entrepreneurship and the firm. It is provided in the paper by elaborating on the social implications of bounded rationality.

The cognitive constraints of the individual agents necessitate highly selective processing of information and this is influenced by socially shaped attitudes. Against the background of a theory of social learning processes, an extremely important entrepreneurial activity is the attempt to shape the firm members' perceptions of means and ends in such a way that the entrepreneurial business conception becomes a collectively shared interpretation pattern. In the discussion it has been shown how sense can be made, within the suggested theory, of what is commonly labeled 'leadership,' which is considered to be an important entrepreneurial skill. Furthermore, it proved possible to develop a more differentiated view concerning an old organizational dilemma. On the one hand, there is the notion that firm members should be induced to engage in creative problem-solving and be innovative. For an enterprise to prosper and grow, it is indeed important for the entrepreneurial vision to be translated into day-to-day problem-solving by the members of the firm in their own specific domain. As has been noted long ago in the discussion on the innovative organization, a tight monitoring regime is incompatible with such behavior. On the other hand, in the absence of control, it appears uncertain whether employees do indeed comply with the entrepreneurial conception or whether they pursue their separate interest at the expense of the firm. While the transaction cost approach with its emphasis on governance does not consider the dilemma – to say nothing of suggesting a solution – the present approach focuses on some of the conditions under which the dilemma may be overcome.

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## References

- Alchian, A.A., Demsetz, H., 1972. Production, information costs, and economic organization. *American Economic Review* 62, 777–795.
- Alchian, A.A., Woodward, S., 1987. Reflections on the theory of the firm. *Journal of Institutional and Theoretical Economics* 62, 110–136.
- Andersen, E.S., 1994. *Evolutionary Economics – Post Schumpeterian Contributions*, Pinter, London.
- Anderson, J.R., 1990. *Cognitive Psychology and Its Implications*, 3rd edn., Freeman, New York.
- Bandura, A., 1986. *Social Foundations of Thought and Action – A Social Cognitive Theory*, Prentice-Hall Englewood Cliffs, NJ.
- Blackler, F., 1993. Knowledge and the theory of organizations: Organizations as activity systems and the reframing of management. *Journal of Management Studies* 30, 863–884.
- Coase, R., 1937. The nature of the firm. *Economica* 4, 143–149.
- Casson, M., 1982. *The Entrepreneur – An Economic Theory*, Martin Robertson, Oxford.
- Casson, M., 1991. *Economics of Business Culture: Game Theory, Transaction Costs and Economic Performance*, Clarendon Press, Oxford.
- Cyert, R.M., March, J.G., 1963. *A Behavioral Theory of the Firm*, Prentice-Hall, Englewood Cliffs, NJ.
- Day, R.R., 1987. The general theory of disequilibrium economics and of economic evolution. In: Batten, J., Casti, D., Johansson B. (Eds.), *Economic Evolution and Structural Adjustment*, Springer, Berlin, pp. 46–63.
- Fransman, M., 1994. Information, knowledge, vision and theories of the firm. *Industrial and Corporate Change* 3, 713–757.
- Fransman, M., 1995. *Japan's Computer and Communications Industry – The Evolution of Industrial Giants and Global Competitiveness*, Oxford University Press, Oxford.
- Foss, N.J., 1993. Theories of the firm: Contractual and competence perspectives. *Journal of Evolutionary Economics* 3, 127–144.
- Foss, N.J., 1997. Evolutionary theories of the firm: Reconstruction and relation to contractual theories. In: Dopfer, K. (Ed.), *Evolutionary Principles of Economics*, Kluwer, Boston, forthcoming.
- Gifford, S., 1992. Allocation of entrepreneurial attention. *Journal of Economic Behavior and Organization* 19, 265–284.
- Grossman, S., Hart, O., 1983. An analysis of the principal–agent problem. *Econometrica* 51, 7–45.
- Hofstede, G. (Ed.), 1986. *Organizational Culture*, (Special Issue), *Journal of Management Studies* 23, 3.
- Khalil, E.L., 1996. After the special nature of the firm: Beyond the critics of orthodox neoclassical economics. In: Groenewegen, J. (Ed.), *Transaction Cost Economics and Beyond*, Kluwer, Dordrecht, 289–307.
- Kreps, D.M., 1990. Corporate culture and economic theory. In: Alt, J.E., Shepsle, K.E. (Eds.), *Perspectives on Positive Political Economy*, Cambridge University Press, New York, 90–143.
- Langlois, R.N., 1992. Transaction-cost economics in real time. *Industrial and Corporate Change* 1, 99–127.
- Langlois, R.N., Cosgel, M.M., 1993. Frank Knight on risk, uncertainty, and the firm: A new interpretation. *Economic Inquiry* 31, 456–465.
- Loasby, B., 1976. *Choice, Complexity and Ignorance*, Cambridge University Press, Cambridge.
- Loasby, B., 1991. *Equilibrium and Evolution – An Exploration of Connecting Principles in Economics*, Manchester University Press, Manchester.
- Loasby, B., 1996. The imagined deemed possible. In: Perlman, M., Helmstädter E. (Eds.), *Behavioral Norms, Technological Progress and Economic Dynamics: Studies in Schumpeterian Economics*, Michigan University Press, Ann Arbor, MI, pp. 17–31.
- Lundvall, B.-A. (Ed.), 1992. *National Systems of Innovations: Towards a Theory of Innovation and Interactive Learning*, Pinter, London.
- March, J.G., Simon, H.A., 1958. *Organizations*, Wiley, New York.
- Marengo, L., 1992. Coordination and organizational learning in the firm. *Journal of Evolutionary Economics* 2, 313–326.
- Marengo, L., 1993. Knowledge distribution and coordination in organizations: On some social aspects of the exploitation vs. exploration trade-off. *Revue Internationale de Systémique* 7, 553–571.
- Marengo, L., 1995. Structure competence and learning in an adaptive model of the firm. In: F. Malerba, Dosi, G. (Eds.), *Organization and Strategy in the Evolution of the Enterprise*, Macmillan, London, pp. 124–154.

- Montgomery, C.A. (Ed.), 1995. *Resource-based and Evolutionary Theories of the Firm – Towards a Synthesis*, Kluwer, Boston.
- Mullen, B., Goethals, G. (Eds.) 1987. *Theories of Group Behavior*, Springer, New York.
- Nelson, R.R., Winter, S.G., 1982. *An Evolutionary Theory of Economic Change*, Harvard University Press, Cambridge, MA.
- Nonaka, I., 1991. The knowledge-creating company, *Harvard Business Review*, November–December, 96–104.
- Nooteboom, B., 1992. Towards a dynamic theory of transactions. *Journal of Evolutionary Economics* 2, 281–299.
- Paulus, P. (Ed.) 1989. *Psychology of Group Influence*, 2nd edn., Erlbaum, Hillsdale, NJ.
- Pelikan, P., 1989. Evolution, economic competence, and corporate control. *Journal of Economic Behavior and Organization* 12, 279–303.
- Penrose, E.T., 1959. *The Theory of the Growth of the Firm*, Basil Blackwell, Oxford.
- Resnick, L.B., 1991. Shared cognition: Thinking as social practice. In: Resnick, L.B., Levine, J.M., Teasley, S.D. (Eds.), *Perspectives on Socially Shared Cognition*, American Psychological Association, Washington, DC, pp. 1–20.
- Schein, E.H., 1985. *Organizational Culture and Leadership*, Jossey-Bass, San Francisco.
- Schnabl, H., 1991. Agenda-diffusion and innovation. *Journal of Evolutionary Economics* 1, 65–85.
- Schumpeter, J.A., 1911/34. *The Theory of Economic Development*, Harvard University Press, Cambridge, MA, (first German edition, 1912).
- Schumpeter, J.A., 1942. *Capitalism, Socialism and Democracy*, Harper, New York.
- Shackle, G.L.S., 1972. *Epistemics and Economics*, Cambridge University Press, Cambridge.
- Sober, E., 1993. *The Nature of Selection – Evolutionary Theory in Philosophical Focus*, University of Chicago Press, Chicago.
- Steiner, G.A. (Ed.), 1965. *The Creative Organization*, University of Chicago Press, Chicago.
- Teece, D.J., Rumelt, R., Dosi, G., Winter, S., 1994. Understanding corporate coherence: Theory and evidence. *Journal of Economic Behavior and Organization* 23, 1–30.
- Weiss, H.M., 1978. Social learning of work values in organizations. *Journal of Applied Psychology* 63, 711–718.
- Williamson, O.E., 1979. Transaction-cost economics: The governance of contractual relations. *Journal of Law and Economics* 22, 233–261.
- Williamson, O.E., 1985. *The Economic Institutions of Capitalism*, Free Press, New York.
- Winter, S.G., 1975. Optimization and evolution in the theory of the firm. In: Day, R., Groves, T. (Eds.), *Adaptive Economic Models*, Academic Press, New York, pp. 73–118.
- Winter, S.G., 1988. On Coase, competence, and the corporation. *Journal of Law and Economics and Organization* 4, 163–180.
- Witt, U., 1987. How transaction rights are shaped to channel innovativeness. *Journal of Institutional and Theoretical Economics* 143, 180–195.
- Witt, U., 1992. Evolutionary concepts in economics. *Eastern Economic Journal* 18, 405–419.
- Witt, U., 1995. Schumpeter vs. Hayek: Two approaches to evolutionary economics. In: Meijer, G. (Ed.), *New Perspectives on Austrian Economics*, Routledge, London, pp. 81–101.
- Ziegler, C.A., 1985. Innovation and the imitative entrepreneur. *Journal of Economic Behavior and Organization* 6, 103–121.