

The Genesis and Progress of the Socially Embedded Firm

Henrik Sornn-Friese

RESPECT

Department of Industrial Economics and Strategy

Copenhagen Business School

Nansensgade 19, 6

DK-1366 Copenhagen K

Phone: + 45 38 15 29 32

Fax: +45 38 15 25 40

hsf.ivs@cbs.dk

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Abstract

In his seminal article *Economic Action and Social Structure: The Problem of Embeddedness* Granovetter argued that economic action is embedded in social relations and structures that affect its functioning, and that economic action should be analyzed as such. In theories of the business firm the idea that firms are socially embedded is widely acknowledged, but social context is typically understood as an exogenous force. When embeddedness is actually accounted for in theories of the business firm it is mostly as independent variable highlighting the structural aspects of embeddedness at the expense of more relational aspects. This short paper traces the origin and branching of embeddedness in business studies. It asserts that the concept of embeddedness is recurrently used as a concept symbol to reclassify aspects of social context, but not in a way that gives credit to the endogeneity of social context to the actions of the business firm. Finally, it is suggested that the notions of evolution and mutualism are fruitful for understanding how and why firms are embedded in different ways and to different degrees.

Key words

Embeddedness; economic activities; a theory of action; social structure; evolutionary economics; business studies; economic relationships; information; learning;

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1. Introduction

This paper is concerned with the complex and dynamic relations between social context and the economic actions of business firms. The basic argument, taken from Granovetter (1985; 1992; 1993), is that all economic action is embedded and enmeshed in relationships and social institutions that affect its functioning. This is an ontological statement as well as an epistemological one. It is ontological in that it states that economic relationships and social structures might in fact be real and have causal liabilities of its own, and it is epistemological in drawing attention to the diversity of meaning, action, and subjectivity in economic relationships. Thus, embeddedness is a relational concept that links and integrates analytical levels such as action and structure, the economic and the social, individualism and collectivism, subjectivity and objectivity. This has the implication that social institutions should be analyzed as endogenous to the economic activities of the business firm.

Most institutionalist research, as pointed out by Hirsch and Lounsbury (1997), as well as studies of strategy and the business firm, as noted by Miller (1996), in their attempt to explain economic action adopt a structuralist approach with economic relationships and social institutions as independent variables. This leaves out the epistemology of agency and results in an inability to explain firm heterogeneity and variations in economic relationships. The embeddedness approach requires researchers to focus attention on more complex and complete explanations that link micro to macro and account for the ways in which the various levels of explanation interpenetrate. This paper suggests that an explanation to these issues requires building an evolutionary theory of economic relationships that combines notions of action and mutuality and highlights the importance of information and processes of knowledge-creation.

The paper proceeds as follows. In section 2, I will examine the business firms and decision-making as typically depicted in contemporary economic theory and in economic approaches to strategic management. These theories take preferences as givens and see social context as exogenous forces to which the business firm unerringly adapts. Hence, they cannot account for the sources of firm heterogeneity and variations in social context. In section 3, the concept of embeddedness is introduced and elaborated on. It is argued that embeddedness is a relational concept that links the actions of economic actors to economic relationships and social structures. In methodological terms

this is an attempt to integrate individualism and collectivism in the explanation of socioeconomic dynamics and change. Section 4 considers the way the embeddedness concept has been used in studies of strategy and the economic organization of the firm. Typically, social context is treated as independent variable and most studies give a structural explanation to firm heterogeneity and do not explain institutional variation at all. It is argued that in order to account for different degrees and types of embedded economic behavior and institutional change it is necessary to develop a more complete and complex evolutionary explanation that links micro behavior and action to macro processes and outcomes. In section 5 key elements of such an evolutionary theory of economic relations are considered.

2. The Self-Governing Business Firm

Economists tend to see business firms as players in a multi player game. The interest of economists is in the game and its outcomes and not in the business firms and their social relations *per se* (Nelson, 1991). Firm heterogeneity and variations in the social context of the business firm may be acknowledged, but firm heterogeneity is mainly explained by the existence of imperfect markets and the social context is broadly conceived as external forces that perfectly determine the actions and decisions of the firm.

The classical and neoclassical conception of the business firm in economics is that of a profit maximizing self-governing unit, typically depicted as a production function (black box), that efficiently transforms input into output. It is a decentralized anonymous unit that is specialized in the sense that it produces for outsiders and is dependent on others in the sense that it has to buy or rent the resources for production and to sell goods exclusively to households. It is assumed that the firm has perfect knowledge of alternative courses of action, and that it always picks the alternative that maximizes short-term profit.¹ The only social responsibility of the neoclassical firm is to the owners of the firm. Regulation as well as demands from varying interest groups (other than the owners of the firm) are, from the owner-managers point of view, perceived as rent lowering mechanisms to be

¹ The reason for this perspective of the business firm is the synthesis of optimization and the equilibrium concept; concepts that are at the core of neoclassical economics.

dealt with at minimum cost.

This conception of the business firm cannot account for economic behavior that is long-term, weakly rational, and responsible to interest groups other than the owners. Moreover, it cannot explain such economic activities as entrepreneurship; goal setting; and cooperation just as it cannot account for economic, technological, and institutional processes and change; changing preferences; managerial discretion; and the like.

Decision-making (managed coordination) is a central concern to contemporary economic theories of the organization of the business firm.² Over the last 15-20 years the strategic management field has successively adopted, and clearly profited from, the language and logic of economics. Within this framework competitive advantage is seen as sustained by mobility and entry barriers, market preemption, asset specificity, learning, causal ambiguity, tacit knowledge, resources and capabilities, etc. A weighty cause for this tendency has been the emergence of a series of new research traditions within the field of economics turning the single firm into the basic unit of analysis, allowing for the existence of firm heterogeneity at group or industry level, and thereby changing the nature of economics. According to Rumelt et al. (1991, p. 13)

‘at least five substantial monkey wrenches have been thrown into what was a smoothly running machine [the neo-classical theory of the firm]. They are called *uncertainty, information asymmetry, bounded rationality, opportunism, and asset specificity*’.

In this process there has been two theoretically conflicting trends; one known as the entry deterrence approach (with emphasis on strategizing and monopoly rents), and the other as the resource or competence based view of the firm (with emphasis on economizing and Ricardian rents).³

² As Demsetz (1997) convincingly argues an explanation for the existence of the business firm may have little to do with an explanation of the organization of the business firm, and that mixing these two issues is only a source of confusion. The wish to explain the existence of the firm is an abstract concern as how to fit the firm as a theoretical construct into the, likewise highly theoretical, construct of the price system. The inner organization of the business firm is an epistemologically different question.

³ The terms ‘strategizing’ and ‘economizing’ are taken from Williamson (1991). Williamson sees the fundamental strategic challenge to firms as organizing and governing economic activities so as to eliminate waste; that is - economizing. In the economics and strategy literature ‘rents’ are defined as the excess return to the owners of the resources of the firm. Ricardian rents are extraordinary profits earned from resources that are in fixed or limited

Most contemporary theories of the business firm open up the black box of mainstream economics but still conceive of the firm as an atomized economic actor. This is epitomized in traditional strategy literature, in the industrial organization literature, in the modern economics of organization, and in contemporary theories in Strategic Management. The resource-based theory of the firm (e.g., Barney, 1986; 1991, Dierickx and Cool, 1989; Wernerfelt, 1984), for example, focuses narrowly on the internal organization of the business firm.⁴ The problem is how to decide on the optimal allocation of scarce resources and capabilities, that is, the focus is on economic efficiency.⁵

The premises of decision-making are typically taken as given in these theories.⁶ To illustrate, preferences are treated as socially autonomous and antecedent to decision-making (March and Simon, 1993, p. 310). The processes by and the social context within which those preferences are formed is treated as exogenous to the decisions. Firm heterogeneity and sustainable competitive advantages are attributed solely to market inefficiencies, including, for example, asset specificity (Williamson, 1975; 1985), factor market imperfections (Barney, 1986; 1991), and unique resource endowments (Dierickx and Cool, 1989). The theories do not, however, inquire neither as to the sources of these unique endowments nor as to the actions of other business firms. This requires a relational conception of economic activities as in economic sociology (Granovetter, 1985; 1993, Swedberg, 1990).

Granovetter (1993) has forcefully shown that economic activities are conducted in certain ways that are specific to and dependent on social relations and structures, and that the degree of embeddedness actually does make a difference to the study of economic activities.

An embeddedness perspective would depict the business firm as an entity engaged in multiple

supply (that is, due to scarcity they are insufficient to satisfy demand for their services). Monopoly rents are profits earned from collusion or government protection.

⁴ One rare exception is Foss (1996) who -- from a resource-based perspective -- argues for the ability of groups or populations of firms to learn interactively and thus create 'higher-order capabilities.'

⁵ For economic references to the business firm in general see, e.g., Barney and Ouchi, 1986; Demsetz, 1997; Putterman, 1986; Rumelt et al., 1991; 1994.

⁶ Some exceptions are the dynamic capabilities perspective (for an introduction see Teece and Pisano, 1998) and evolutionary theorizing about the firm (see, for example, Dosi and Marengo, 1994; Marengo, 1995; Nelson and Winter, 1982). These assert that the business firm is a unitary, historical organization of cooperating individuals (Langlois and Foss, 1997, p. 13).

activities; having multiple goals and different resource and competence endowments; making boundedly or procedurally rational decisions (typically based on personal knowledge); embedded in ongoing economic relationships and social structures that affects and are affected by the decisions of the firm; and responsible to interest groups other than the owners. In this embeddedness perspective, the boundaries of the business firm are becoming increasingly difficult to draw -- strategies like downsizing; reengineering; outsourcing; networking; and so forth only adds to the complexity of the business firm. Thus, it is not feasible to make a sharp distinction between the firm and the market as otherwise maintained by, for example, Coase (1937).

3. The Social Embeddedness of Economic Behavior

Taking economic theory literally, Karl Polanyi was the first to systematically provide anti-free market arguments.⁷ In the book *The Great Transformation: The Political and Economic Origins of our Time* (1944) Polanyi introduced the concept of embeddedness in analyses of the market economy. In this book Polanyi analyzed the emergence of the self-regulating market in nineteenth-century Europe, and especially England. He made a general argument about the social evolution of economic institutions and behavior claiming that the evolution from the premarket society over the rise of the system of self-regulating or price-making markets for land, labor, and capital to the regulated modern market society was an instituted process along which man was axiomatically established as a 'bartering savage' (p. 44). In Polanyi's view this was a process with destructive societal effects.

According to Polanyi (1944, p. 43), previously to our time no economy has ever existed that, even in principle, was controlled by markets (at least not markets in terms of profit and gains). The self-regulating market system of our time was historically instituted through a process involving social disembedding, systemic transformation, and reembedding in economic institutions. In premarket societies economic behavior was heavily embedded in social relations and though the institution of the market was fairly common in these societies, its role in economic life was no more than incidental

⁷ A Hungarian refugee economic historian Polanyi was the founder of the substantivist school of economic anthropology who claimed that the nature of economics cannot be properly understood without analyzing the institutional structure of society as a whole. Polanyi did not mention an alternative to the market like did, for example, the Marxists. It was a whole new kind of anti-free market arguments at the time.

(p. 43). With modernization, however, economic behavior became increasingly autonomous and less defined by social or kinship (noneconomic) obligations.

In Polanyi's conception of the modern market society social relations have become an epiphenomenon of the market (Granovetter, 1985, p. 482). When the market became important the whole society became like the market. Social relations became embedded in the market or the economic system, not the other way around as in premarket societies.

3.1 Redefining Embeddedness

In the article *Economic action and social structure: The problem of embeddedness* Granovetter (1985) redefines Polanyi's embeddedness concept into a 'network' concept.⁸ Here, he asserts that all economic action and behavior is embedded in social relations, but not in the fashion that Polanyi believed. Unlike Polanyi, Granovetter does not see a sharp break between earlier and modern societies with regards to the underlying mechanisms governing human activities and relationships.

Granovetter (1985, p. 482) argues that the level of embeddedness of economic behavior was lower in premarket societies and has changed less with modernization than maintained by Polanyi, but that this level has always been and continues to be much more substantial than held by economists. Secondly, Granovetter focuses on mainly one aspect of Polanyi's use of embeddedness, namely 'economic behavior' and in doing so likely locates the embeddedness concept on the level of individual actors. In Granovetter (1993) economic action is more explicitly linked to the institutional arrangement of exchange and thus embeddedness is more distinctly a relational concept.⁹

It seems to me that one of the main cores of Granovetter's embeddedness approach is not so much a rejection of 'rational actor' models and an interest in social institutions as independent variable

⁸ The structural embeddedness approach in Granovetter's 1985 article is concerned primarily with individuals. Richard Swedberg's book *Economics and Sociology: On Redefining Their Boundaries. Conversations with Economists and Sociologists* (1990) contains an interview with Mark Granovetter in which, among other things, he extends his embeddedness approach to account for the emergence of firms and industries.

⁹ Granovetter (1985) oscillates between the notion of 'economic behavior' and the notion of 'economic transactions' using them as synonymous thereby causing some confusion as to the question of the level of analysis. The two concepts refer to different doings that involve different levels. Transactions are necessarily relational while economic behavior generally refers to the actions of single actors (individuals and firms).

(though this seems to be how embeddedness is mostly applied in empirical research) as it is, more profoundly, a rejection of both methodological individualism and collectivism.¹⁰

Granovetter asserts that a fruitful analysis of economic behavior must avoid the atomization of economic actors implicit in the alleged under- and oversocialized theories of human action -- especially economic and sociological theories in the utilitarian tradition.¹¹ Actors do not take action or make decisions as atoms outside a social context, but neither do they mechanically and automatically adhere to the social context (although some generalized morality must be granted). Actors' attempts at purposive action are instead embedded in concrete, ongoing systems of social relations (Granovetter, 1985, p. 487).

The point is that social relations and social structures, cultures, practices, routines, etcetera in some sense exist prior to any individual act and partly guide it by providing limiting and focusing conditions. Instead of taking actors preferences for given the major concern of the embeddedness approach is on explaining how individual interests are created, sustained, and transmitted through time and space.

Granovetter clings to a middle-ground between the under- and oversocialized positions and thus avoids a priori functionalist or consequential interpretations (Friedland and Alford, 1991, p. 256) as well as voluntaristic idealism with respect to the understanding of social structure and a mechanistic determinism with respect to the understanding of people (Bhaskar, 1989, p. 76). Social structures, in his view, put limits to human action but they do not determine it. Social structures are conceptualized not just as obstacles to action but as essentially implicated in its making. The

¹⁰ The problem with methodological individualism is about how to give a non-social explanation of individual behavior (for a thorough discussion of methodological individualism, see Hodgson (1989, pp. 53-72)). Even though methodological individualism provides a sharp analytical cutting edge, it also reduces everything to individual preferences and purposes, and denies to study the social and institutional forces which influenced and shaped these individual preferences and purposes. This turns the doctrine into a reductionist one, since it locates the individual outside the social sphere. By the same token, the problem of methodological collectivism is that social structure is taken to have an independent existence as a 'social fact', external to and forcing upon the individual (what Bhaskar (1989) terms 'the error of reification'). Social activities tend to be regarded as merely collective phenomena from which stable social relationships can be reconstructed. As a result, in such methodological collectivist approaches economic behavior is explained by converging to exogenous variables.

¹¹ Granovetter's article, therefore, was an appeal to both economists and sociologists to take seriously this concept laid out by the 'substantivist' school in economic anthropology presented most strongly by Polanyi (1944) and Polanyi, Arensberg and Pearson (1957).

embeddedness approach is an explicit attempt to combine abstract dimensions and (enabling and constraining) contextual forces with process properties stressing action and individual perception. The social is not just a stimulus environment but an embedded composition of social relations, social structures, and individual actions. In this sense, Granovetter's embeddedness approach also prompts a resolution to the perennial dispute within sociology of defenders of action against defenders of structure.

DiMaggio (1990) criticizes Granovetter's narrow use of embeddedness to include only social relations and structures. In DiMaggio's view economic action and organization is also embedded in culture and in the sharing of norms and values. In Zukin and DiMaggio (1990, pp. 14-22) embeddedness is categorized as cognitive, cultural, political, and structural (equivalent to Granovetter's conception). Eisenhardt and Brown (1996, p. 188) suggest that embeddedness can also be technological and institutional.

In order to operationalize the concept to studies of the business firms Miller (1996, p. 283) defines strategic embeddedness as 'the extent to which a company's strategy reflects or is influenced by its social and institutional connections' and maintains the premise of distinguishing among different kinds of institutional influences. Analytically distinguishing among different kinds of embeddedness, however, turns the concept into a vague, catch-all category that includes everything not attributable to technical or economic rationality. In my own view, it is not necessary to distinguish between different kinds of institutional influences. Embeddedness should be a tight concept. It should be narrowly defined to include only the nature and dynamics of social relations and social structures. The basic insight is that economic transactions do not take place between atomized strangers in an impersonal way, but are embedded in ongoing personal or social relations. Such a conception of embeddedness implicitly contains cognitive, cultural, and political elements.

4. The Business Firm in Context

Granovetter's embeddedness concept has generated a substantial body of empirical research and abstract thinking, but rather than being a unified body of work residing evenly within the borders of a

single discipline (e.g., economic sociology), studies of embeddedness are various, casual, and sometimes contradictory. The concept is interdisciplinary in nature and has brought scholars together from such different fields as economics, political science, management and business administration, geography, and sociology (Grabher, 1993). Recently it has even emerged as a central construct in the field of industrial dynamics which considers economic sectors as complex, nested systems of organizations in mutual interaction.¹² Prominent examples are Lam (1997) and Teubal (1997; 1998).

In management studies there have not been many attempts at approaching the embeddedness of strategy and the organization of the business firm. Embeddedness has mainly been peripheral or it has been used as a ‘concept symbol,’ that is, as a shorthand notation of complex ideas about the relationship between economy and society -- a relationship whose substance is merely transmitted in the form of an honorific citation (Rao, 1996, p. 409).

The same is true of contemporary theories of the business firm. These are mainly institutional and focus on the links between alternative, yet related and interdependent, structural arrangements for governing economic activities, for example, markets, networks, and hierarchies. They do acknowledge the existence of social and institutional environments and management theories do take features of the environment into account, but these features are treated as givens to which a focal business firm must adapt in order to survive in volatile markets.

Recently, some attempts at adopting Granovetter’s embeddedness approach to connect (or rather reconnect) business strategy to its social surround have been made. Gimeno and Woo (1996) thus adopt a firm-specific embeddedness approach to business strategy focusing on the kind of structural embeddedness that occurs when a business firm is linked through multiple relations of economic interdependence simultaneously -- what they term economic multiplexity. Murtha, Spencer and Lenway (1996) examine how the success of business firms’ in emerging industries is a country-level phenomenon that depends on the interaction among political institutions, non-political institutions, and firms. They especially stress the impact of a nation’s industrial policy on home-country firms’

¹² Industrial dynamics is an advancing scientific field emerging from industrial economics (Carlsson, 1989). Four main themes constitute the industrial dynamics framework: 1) The nature of economic activity within the firm and its connection to economic growth, 2) the boundaries of the firm and the degree of interdependence among firms, 3) the role of technological change and the institutional environment in economic growth, and 4) industrial policy.

probabilities of profiting from technological innovation and the emergence of new industries. Oliver (1996) develops a theoretical framework to explain market inefficiency and business firm heterogeneity as a function of institutional embeddedness. She identifies transaction costs, social capital, and cognitive sunk costs as key sources of sustainable competitive advantage that are affected by what she calls institutional impediments to market efficiency. Porac and Rosa (1996) develop what they believe to be a social constructionist approach to imperfect competitive markets. They suggest that comparable firms are defined in relation to collective industry models that summarizes typical organization forms within a specific field.

The studies listed above are far from exclusive, but they are typical for the way Granovetter's concept has been used. The articles vary in scope and level of analysis and emphasize different types of embeddedness, but they all focus on the implications of embeddedness on the strategic management of business firms. They argue that an embeddedness approach to the understanding of business strategy and the business firm in general implicates a need for a contextualized concept of strategy, the adoption of multiple levels of analysis, and the modeling of context as an endogenous force.¹³ Many of the articles, however, emphasize strategic embeddedness as an independent variable and thus overlook the importance of degree of embeddedness. As Miller (1996, pp. 288) puts it, an important question is 'to what degree a particular company's strategy will become embedded. In other words, if we treat the degree of embeddedness as a dependent variable, what are some factors inhering in an organization, its environment, or the relationship between the two, that help to explain the level of embeddedness.'

For the same reason, the articles moreover become focused on structure and come short of perspectives on action. The articles do develop a contextualized concept of strategy and of the business firm, they do acknowledge the multi-level quality of economic behavior, and they do question the idea that social context is an exogenous force. They do so, however, with a preference for ontology, that is, in highlighting the constitutive role of embeddedness they generally treat the social context of strategy as a 'social fact' that is not changed as the result of the business firm's

¹³ A contextualized concept of strategy focuses attention on the cognitive and social embeddedness of decision-makers and other members of the firm; the embeddedness of business strategies within cognitive communities, industries and organizational fields; the structural embeddedness of strategies in interpersonal, interorganizational, and status networks; and the network properties of business strategies (Baum and Dutton, 1996, p. 5).

activities.

This is, of course, one reasonable (partial) approach to explaining economic institutions and the actions of the business firm, but it leaves out the epistemology of subjectivity, meaning, and agency. One result is an inability to explain firm heterogeneity and variations in economic relationships. Approaches to the study of social institutions and institutional change should not be arbitrarily limited to some structurally oriented paradigm or restricted to the study of agency. Instead, attention should be on more complex and complete explanations that link micro to macro and account for the ways in which the various levels of explanation interpenetrates. Moreover, institutional analysis must better account for change and the emergence of novel institutional structures and this may require a more complex theory of action (Hirsch and Lounsbury, 1997, p. 415) or, more explicitly, the actions of economic agents (Witt, 1992). An explanation to these issues requires building an evolutionary theory of economic relationships.

5. Elements of an Evolutionary Theory of Economic Relationships

The foregoing discussion is really a preface to the arguments that follow in this section. The basic message is that evolutionary economics would benefit from an explicitly attention to the social embeddedness of economic activities. This import of ideas from a discipline ‘contiguous’ to economics seems to be a general movement (Coase, 1994, p. 37). The main reason for this seems to be a general need to broaden the scope of economics in order to find solutions to the questions that have always been central to economics.

Economic and institutional change as well as the strength and content of economic relationships varies in time and space and these variations have implications for both the individual business firm and the overall institutional structure.¹⁴ For example, access, timing, and referrals are important elements for the individual firm of the flow of business information within social networks (Burt, 1992, p. 62), and variations in the degree and kind of economic relationships within a social system

may give clues as to threshold points where social institutions take hold or break (Hirsch and Lounsbury, 1997, p. 416). Also, individual economic action can at time have dramatic consequences on socioeconomic institutions.¹⁵ How do we account for firm heterogeneity and variations in economic relationships, that is, how do we account for different forms and degrees of embeddedness?

To build a more complex and complete evolutionary theory that links micro to macro and accounts for the ways in which the various levels of explanation are nested requires us to return to the initial formulations of Granovetter's embeddedness approach. Such an evolutionary theory necessitates a focus on social networks and it must have a notion of mutualism that allows for intentional, purposeful, and intelligent actors as well as social institutions as endogenous forces that constrain and enable human action. This implies reconstructing the notion of human action as basically situational *and* relational. In this respect, the dynamic aspects of information sharing, knowledge creation, and information and knowledge diffusion are key explanatory elements.

5.1 The Theoretical Significance of Economic Relations

Granovetter (1985) proposed embeddedness as a relational concept. It was a pragmatic attempt to integrate action and structure; individualism and collectivism; subjectivity and objectivity; the economic and the sociological; epistemology and ontology and thus take concrete economic action and behavior as time and space specific social facts rather than as subject to abstract universal laws. The explanatory specificity of Granovetter's embeddedness concept is its qualification as a 'linkage' concept that transcends the dualism of these abstract dichotomies. Through social relations individual actors are linked to the material and structural elements of the context and via this linkage the processes that occur on both levels are impelled and organized. Granovetter (1992, p. 47) argues that economic institutions are *socially constructed*. They result from the actions of socially situated individuals embedded in networks of personal relations with both economic and noneconomic goals.

¹⁴ Thus, proximity in relationships matters for economic activities. Granovetter (1993, p. 18) stresses that trade relations become less personalized and embedded in ongoing personal relations the greater the social, cultural, and geographic distance between the traders.

¹⁵ Henry Ford's \$5 strategy is a good example. When he on January 4, 1914 announced an extraordinary increase in the regular wage to 5 dollars a day he inadvertently started a chain reaction of wide temporal and spatial extent in

Embeddedness denotes the mechanisms and processes of institutional change and therefore an adequate understanding of economic institutions requires detailed attention to the mechanisms and processes of the social construction of institutions. Moreover, if economic action is embedded in networks of social relations, it is logical to begin the analysis by exploring the nature of those relations (Granovetter, 1993, p. 3). Implicit, then, is a notion of mutualism.

A logically consistent relational approach must allow for an understanding of both social adoption and actors adaptation. This is what Polanyi referred to as mutual adjustment. According to Polanyi (1944, p. 49), mutual adjustment is the fundamental mechanism through which the social embeddedness of the economy operates. It works on the level of 'institutional patterns and principles of behavior.' This idea is shared with post-Aristotelian developments in evolutionary theory with its emphasis on endogenous environments and socioeconomic dynamics as processes of mutual adaptation (or coevolution) between the evolving unit and its social and institutional environment as well as between institutions (March, 1994, p. 43; Nelson, 1998). These mutual adaptations are mechanisms of socioeconomic coordination likely to lead to economic and social institutions that are not uniquely determined by the initial environment.

Any business firm is embedded in communities or ecologies of business firms and other organizations that mutually adapt. The engaging questions are just how the business firm is embedded in social context and how processes of mutual adaptation create variations among business firms within communities. Evolutionary theory -- especially the part of the theory that merges Schumpeterian dynamics and the behavioral theory of the firm as represented by Nelson and Winter (1982) -- and social psychology (Weick, 1969; 1979) suggest that the socioeconomic dynamics of the economy to some extent are subject to the mechanisms and processes of variation (the creation of new technological and institutional forms), selection (that occurs through competition among alternative new forms), and retention (which involves the forces that retain individual forms selected in the past).¹⁶

which a whole new way of industrial life emerged. This was later described as mass-production industrialism (Storper, 1998).

¹⁶ In Karl Weick's social psychology of organizations variation includes ecological changes and actors enactment and, thus, action is much more explicit in this framework.

5.2 Action, Mutuality, and the Nature and Significance of Information and Knowledge

Mutualism highlights the importance of human intelligibility, information processing, and action.¹⁷ Actions depend on firm specific routines that are largely the outcomes of knowledge-creation through the processing of complex information.¹⁸ Social and institutional variation comes from the various actions taken by the business firms'; actions that are often motivated by the new opportunities for profitable business that constantly arise throughout the economy and that often are connected to the information benefits of social networks (Burt, 1992, p. 62). This motivation is related to two fundamental aspects of embedded human action and behavior: its situational and relational character (Storper, 1998, p. 12). Actions are situational in the sense that they are inherently associated with objects, circumstances and events, and individual persons, whose mixed natures create complex and particular synergies. Economic actions are relational in the sense that most actions are effective so as to allow economic coordination only if they are met by certain kinds of mutually compatible actions by other interdependent actors.

By the same token, when effective economic coordination is achieved mutual expectations have been aligned. Because of the situational and relational nature of action, action is associated with a fundamental kind of uncertainty that can only be limited or overcome by the individual actor, if the actor is able to identify the aspects of a situation that are in congruence with other interdependent actors' identification and beliefs of what can and what should be done and how it can be done. Such mutual adaptation depends on a common or shared social context that allows individual actors to reduce fundamental uncertainty. In this respect, the transfer of routines and the sharing and diffusion of information and knowledge within economic relationships are essential elements in our understanding of economic action and socioeconomic evolution.

¹⁷ Weick (1969, 1979) asserted that social actors are chained to the environment through various kinds of feedback-loops, that is, organizations are defined in terms of processes of organizing and therefore they are based on interlocked behaviors embedded in these socioeconomic mechanisms and processes. Such substantially related behaviors consist of repetitive, reciprocal, contingent behaviors that develop and are sustained in social relationships.

¹⁸ Routines and knowledge are not purely the outcome of processed information. Beliefs are also important parts of routines and knowledge (Fransman, 1998).

6.0 Conclusion

In this paper, I have argued that evolutionary economics needs to explicitly incorporate into its framework and theorize about the social embeddedness of economic activities in a way that links micro-incentives and macro-outcomes and accounts for the ways in which different levels of analysis interpenetrates. The natural starting point for such theorizing is the nature and dynamics of ongoing, concrete economic relationships. Granovetter's work on embeddedness provides a useful basis for this task. Such evolutionary theorizing must bring together a notion of mutualism that allows for intentional, purposeful, and intelligent actors and the idea of social institutions as endogenous forces that constrain and enable economic activities. This implies reconstructing the notion of human action as basically situational *and* relational. In this respect, the dynamic aspects of information sharing, knowledge creation, and the transfer of information and knowledge are key explanatory elements. In this paper, I have only outlined the shape of such an evolutionary theory of economic relationships.

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