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*Economic Activity and  
Institutions: Taking Stock*

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## **Economic Activity and Institutions: Taking Stock <sup>1</sup>**

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### **Abstract**

This paper is an attempt to streamline the multiple meanings of the word “institution”. Related notions discussed include institutional economics, both the “new” and “old” variants, evolutionary economics, institutional change, and institutionalization. Three broad categories of institutions are identified, each comprising a set of “levels”. First there are form-based descriptions primarily concerned with the physical structure and/or appearance of an institution. Second, there are behaviour-based descriptions whose focus is firmly on action or activity. Third, there are context-based descriptions of institutions concerned mainly with the presence/absence of, or interactions among, institutions. Focus in this third group is explicitly on the evolutionary aspects of the institutional context. Using these three broad categories five “types” of institution are defined to provide a loose but necessary structure on which to develop a framework for institutional analysis. The paper concludes with suggestions for cases that could be studied using this framework. Particular attention is paid to the implications of the framework for studying technological “transitions”.

Keywords: Institutions, Institutional Economics, Institutional Analysis, Technological Transitions, Scale

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## 1. Introduction

Institutional thought has captured the imagination of economists, political scientists, and sociologists since the late 19<sup>th</sup> century. In economics the attempts to adopt the scientific method were challenged by economists of the German Historical School led by Gustav Schmoller (1900-4). Drawing on the ideas of Kant and Hegel, the group asserted that simplistic assumptions about the “rational man” and economic equilibria were unfounded, and the quest for a set of universal laws for economics were fruitless. Following the lead of their German contemporaries the American institutionalists were suspicious of abstract universal principles, interested in solving practical problems, and aware of the role of events and historical contingencies (Scott 2001:4). Early institutionalists pointed to pervasive market power and to indeterminacy even under perfect competition; the role of social institutions in shaping individual preferences (and hence the importance of institutions as the subject of economic analysis); the usefulness of pragmatic and psychologically realistic models of economic motivation (as opposed to utilitarianism); and the centrality of time and space in understanding the evolution of the economic system (Scott 2001).

There is broad agreement among institutionalists that the economy is a process “instituted” (Polanyi 1957) over time through social relations in a co-evolving cultural context. For institutionalists key to understanding the processes of growth and change are institutions of the economy, as well as individual preferences. But understanding institutions requires appreciation of complexity, continuity, and evolution in historical time. The task requires carefully organized categories that reveal the levels, scales, and systems<sup>2</sup> around and through which institutions are woven. Both the “old” and “new” strands of institutionalism in economics emphasize the importance of institutions and draw attention to the “evolutionary” aspects of economic activity (Hodgson 1994a). The question for most institutionalists in economics is “not how things stabilize themselves in a ‘static state’, but how they endlessly grow and change” (Hodgson 1988:130). It was perhaps in this spirit that Veblen asserted

the situation of today shapes the institutions of tomorrow through a selective, coercive process, by acting upon [humans’] habitual view of things, and so altering or fortifying a point of view or a mental attitude handed down from the past. ... At the same time, [humans’] present habits of thought tend to persist indefinitely, except as circumstances enforce a change. These institutions [constitute] the factor of social inertia, psychological inertia, conservatism (Veblen 1899:190-1, cited in Hodgson 1988).

Institutionalism was the dominant school of economic thought in the interwar years, particularly in the U.S. In the years after the First World War there was widespread recognition of the need for “improved economic data and policy analysis”. There was

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<sup>2</sup> “Levels” are based on Jessop’s (1997) “levels of embeddedness”. These are: interpersonal relations (social embeddedness), inter-organizational relations (institutional embeddedness), and relations among functionally differentiated institutional orders (societal embeddedness). “Scale” is based on Brenner (1998). “System” refers to the social, economic, political, and ecological systems. Levels, scales, and systems are further elaborated upon in the text.

also recognition of the potential role of government in the reconstruction of the economy (Rutherford 2001:178). Institutionalists did much to improve the statistical work of government agencies and develop monetary and financial data, including work on money flows which later became the “flow-of-funds” accounts (Rutherford 2001:179).

This paper is an attempt to streamline the multiple meanings of the word “institution”. Related notions discussed include institutional economics, both the “new” and “old” variants, evolutionary economics, institutional change, and institutionalization. Three broad categories of institutions are identified, each comprising a set of “levels”. First there are form-based descriptions primarily concerned with the physical structure and/or appearance of an institution. Second, there are behaviour-based descriptions whose focus is firmly on action or activity. Third, there are context-based descriptions of institutions concerned mainly with the presence/absence of, or interactions among, institutions. Focus in this third group is explicitly on the evolutionary aspects of the institutional context. Using these three broad categories five “types” of institution are defined to provide a loose but necessary structure on which to develop a framework for institutional analysis. The paper concludes with suggestions for cases that could be studied using this framework. Particular attention is paid to the implications of the framework in understanding technological “transitions”.<sup>3</sup>

## **2. Meanings and Roles of “Institutions”**

Institutions “are not merely constraints, bearing upon a pre-existing and ‘non-institutional’ economy or market. Economies and markets are themselves constituted as collections of institutions and [as such] are not merely constrained by them” (Hodgson 1999b:145). In relative terms the institution is more “permanent” or “invariable” as a unit of analysis (Hodgson 1988, 1999b) than neoclassical economics’ “individual”. “The institution” is therefore more akin to spatial and temporal inquiry than “the individual” with a fixed set of preferences (Williamson 1994). The focus by institutionalist economists on “the institution” represents “a major departure from the standard rational choice theory of neoclassical economics in that the actor’s operative goals and values, and indeed the actor’s view of the choice context, is seen as culturally determined to a considerable degree, at least regarding actions that involve coordination with or will induce responses from others” (Nelson 1994:130)

Institutions have been defined as “the set of conventions and rules of action prevailing in the economy, which are embedded in the local social structure and show a marked regional differentiation” (Krätke 1999:683). “Institutions are ‘proceduralist’ rather than ‘consequentialist,’ influencing the type of behaviour that occurs in a particular situation independently of an individual’s goal orientation” (Elster 1989, cited in Setterfield 1993:756). Institutions are “settled habits of thought common to the generality of men” (Veblen 1919:239, cited in Hodgson 1988:10). The evidence for an institution is “the regularities of people’s actions and their responses to questions

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<sup>3</sup> “Transitions” are innovation-based structural changes in the political economy accompanied by an evolution of political and social institutions (Kemp 2002, Rotmans et al. 2002).

about what they are doing” (Neale 1994:404). Commons (1924) defined an institution as collective action exercised by different types of organization – such as the family, the corporation, the trade union, and the state – in control of individual action. Mitchell (1950:373) described an institution as “a convenient term for the more important among the widely prevalent, highly standardized social habits”. Young (1994, 2002) underlines a physical difference between institutions and organizations. Institutions are “sets of rules of the game or codes of conduct defining social practices” (Young 1994:3-4) whereas organizations are material entities possessing offices, personnel, budgets, equipment, and, more often than not, legal personality (Young 1994, 2002). In a more inclusive interpretation Coriat and Dosi (1998:6) view institutions as being represented by formal organizations, patterns of behaviour, and negative norms and constraints.

According to Neale (1987:1184) an institution is “a mental construct” while institutions are “both the internalized injunctions that people follow and the actions that others will take to enforce the injunctions or to protect people in the liberties and opportunities that institutions provide” (Neale 1994:404). To North (1991:97) institutions are “the humanly devised constraints that structure political, economic, and social interactions [consisting of] informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights)”. Elsewhere, North (1990:3) has stated that institutions are “the rules of the game in a society ... [that] ... structure incentives in human exchange, ... [and] ... affect the performance of economies over time”, while to Bush (1986:39) an institution is “a set of socially prescribed patterns of correlated behaviour”. In sociology and political theory, institutions are usually treated as various rule systems which occur in sets, e.g. constitutional rule systems for society, collective choice rules governing different kinds of organizations, and operational rules of organizations. Rules may be formal or informal, actively used, or remain buried in statute books or long forgotten customs. Institutions affect the behaviour of individuals and organizations by defining “appropriate” social practices and codes of conduct.

It is clear from the preceding paragraphs that there is a wide range of definitions and descriptions for “institution” and “institutions”. Before attempting to define and categorize institutions and suggest a structure for institutional analysis two tasks require attention. First, the presumed role of institutions needs to be put in context. Second, the context needs to be described through oft-used institutionalist vocabulary including “old institutionalism”, “new institutionalism”, “institutional economics”, “evolutionary economics”, “institutional change”, and “institutionalization”. Also, since this paper is to serve as the conceptual foundation for a project on transitions, particular attention is paid to the relationships between evolutionary economics and technological transitions as well as institutional analysis and technological transitions.

There is reasonable unanimity among institutionalists as to the role of institutions. Institutions “play a functional role in providing a basis for decision-making, expectation, and belief” (Hodgson 1988:205). More broadly, institutions “structure” inter-relations: “they enable us to understand what other people are doing and what they are likely to do; they enable us to know what we may do and what we may not do” (Neale 1994:403). Acting as the substance, rather than merely the boundaries, of

social life (Hodgson 1988:134), institutions “reduce uncertainty by providing a structure to everyday life. ...a guide to human interaction, ...[and] the framework within which human interaction takes place” (North 1990:3-4). Conversely, institutions are “social relations that frame the activities of production, consumption, and exchange, [acting] as a structure within which individual action in the economy takes place” (Setterfield 1993:756). Based on an extensive review of the institutionalist literature, Scott (2001:48) describes institutions and their role as:

- social structures that have attained a high degree of resilience;
- composed of cultured-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life;
- transmitted by various types of carriers, including symbolic systems, relational systems, routines, and artifacts;
- operating at multiple levels of jurisdiction, from the world system to localized interpersonal relationships; and
- connoting stability but being subject to change processes, both incremental and discontinuous.

We may deduce from Scott’s summary that institutions collectively act as an integrated web running through different systems (e.g., social, economic), scales of governance and levels of inter-relations. In addition, institutions are at once persistent, resistant to change while capable of changing in evolutionary time, and are transmitted through various means to consecutive generations thus providing a certain degree of continuity, stability, and security. More explicitly, some have suggested “long-term institutional changes are path dependent, deriving from the specific adjustment path the economy takes toward them” (Setterfield 1993:761). The path of institutional evolution “is shaped by (1) the lock-in that comes from the symbiotic relationship between institutions and the organizations that have evolved as a consequence of the incentive structure provided by those institutions and (2) the feedback process by which human beings perceive and react to changes in the opportunity set” (North 1990:7). Some of the approaches making the link between institutions and the economic system are reviewed below.

### **3. Institutional Economics**

The term “institutional economics” was first coined by Hamilton in 1919 in an American Economic Association conference paper (Rutherford 2001:173). The “old” institutionalist tradition in economics has been associated with the works of Veblen (1899, 1909, 1919), Commons (1924), Mitchell (1910,1923,1937), and Ayres (1944) who emphasized the importance of change and were critical of their colleagues for not making its examination central to their mission (Scott 2001:3, also Rutherford 2001 and Hodgson 1988, 1993). Veblen (1919) drew attention to the importance of technological change in the evolution of the economy while Commons (1924) “stressed the centrality of change, viewing the economy as ‘a moving, changing process’” (Scott 2001:4). The institutionalist tradition was continued in economics by Schumpeter, Polanyi, Galbraith, and Myrdal who underlined the importance of time, place, and historical circumstance.

The differences in philosophical foundation and approach between the old and the new strands of institutionalism make the job of defining institutional economics difficult. According to some, institutional economics is “the study of ...of how people go about provisioning themselves, whether as individuals or as members groups with common purposes” (Neale 1987:1180). Institutional economics “acknowledges the existence of a multitude of rules, agreements, customs, and norms ...[and] studies their appearance, their effect on the elementary economic agents and their defects” (Aglietta 2000:400). Institutional economics is, according to Peterson (1998:165), “the study of the process of social provisioning” based on the following axioms:

- Inequality and poverty are issues of status and power – they reflect the failure of social and economic institutions;
- Efficiency and equity are interrelated goals – the emphasis should be placed on provisioning and economic security;
- All economics is shaped by values and ideology – economics should focus on problem solving;
- The government and the economy define each other – laissez faire is a myth; and
- The government plays a critical role in the provisioning process.

The ideology, defined as “the integration and systematization of congruent beliefs” (Hayden 1994), most associated with institutionalism is “communitarianism”. The communitarian approach is based on recognition that people’s lives and continuing welfare needs such as education, income, credit, housing, and health care are organized through a social process. Excessive emphasis on individualism leads to the fragmentation of the community and “alienation, frustration and insufficiency of provision of the members’ needs” (Hayden 1994:393). Individualism expressed through the institution of the market also seems to nurture “invidious” (Veblen 1899) tendencies, a market-related trait identified long ago by Adam Smith.

The government and the economy are inseparable and define each other. Through regulating the market place, the government defines and redefines the boundaries of economic activity by legitimizing certain power relationships and sanctioning others, thus shaping and steering the course of economic development. Non-interference in the economy is a tacit indication of government support for the status quo distribution of income and power (Samuels 1989, Brown 1988, cited in Peterson 1998). Institutional economists should evaluate distributional policies “in terms of their contribution to the social provisioning process”, not their “intrusiveness into an otherwise free market” (Peterson 1998:168). Hodgson (1994b) defines institutional economics in terms of the rejection of individualistic assumptions of hedonism and exogenous preferences in favour of a more organicist conception of individual agency; the rejection of an exclusive emphasis on equilibrium in favour of the idea of cumulative causation, and the adoption of institutions as the main units of analysis, rather than atomistic individuals” (Hodgson 1994b:377). Institutional economics assumes no universal method or logic. It focuses on “the rules and opportunities for action and the limits to action, simply assuming that each individual is always moved by one or another purpose” (Neale 1987:1181)

That individuals organize themselves for their provisioning is a given in the institutionalist approach. The question for most institutionalists is “how this organization occurs, and whose purpose it serves”, pointing directly to the governance and political implications of organizing and provisioning. This view of society is the antithesis of the neoclassical view of society as the sum of indistinguishable individuals, all with fixed preferences functioning rationally, and armed with the same information. “Orthodox economics ... sees ‘organizing’ as both unnecessary and undesirable. Markets... obviate the need for organizing – one simply goes out and maximizes” (Bromley 1994:389). Institutional economics studies the “mediatory” functions of institutions as “the products of behavioural interactions among micro-economic agents”. It “emphasizes a variety of relationships [that] create more or less extensive coordination systems among micro-economic players, favour certain behaviour patterns, conclude agreements and combine individual objectives into collective aims” (Aglietta 2000:400).

Williamson (2000) distinguishes between institutional micro and macroeconomics. The macro scale “deals with the institutional environment or rules of the game” while the micro scale “deals with the institutions of governance”. Markets, quasi-market, and hierarchical modes of contracting (more generally, of managing transactions and seeing economic activity through to completion) constitute the institutions of governance (Williamson 2000:93). According to North (1994:366), the institutional environment is “the humanly devised constraints that structure political, economic and social interactions”. There are both formal and informal constraints. Formal constraints include constitutions, laws, and property rights while informal constraints may be sanctions, taboos, customs, traditions, and codes of conduct. North’s (1990) description of institutions as determining “how” the game is played while organizations represent “who” is playing the game, seems to capture the macro and micro scales, respectively, as described by Williamson (2000). North (1990) further views institutions as “the constraints that human beings impose on themselves”. To “internalize” the institutional considerations, North suggests “building a theory of institutions on the foundation of individual choice” as a step toward reconciling differences between economics and the other social sciences: “The choice theoretic approach is essential because a logically consistent, potentially testable set of hypotheses must be built on a theory of human behaviour. .. our theory must begin with the individual” (North 1990:5).

North’s individual-centred approach is in sharp contrast to Veblen’s communitarian perspective and his focus on how institutions determine the manner in which a community provisions for its members in terms of food, shelter, and welfare. Institutionalism in the Veblenian tradition downplays the importance of “the individual” as a unit of analysis in favour of “the institution”. This is because institutions fill a key conceptual gap by connecting “the microeconomic world of individual action, of habit and choice, with the macroeconomic sphere of seemingly detached and impersonal structures”. Actor-structure connections signifying mutual interaction and interdependence may thus be established (Hodgson 1999a:144). According to Ayres (1964:61) the Veblenian tradition is consistent with “what Keynes prevailed upon us to do, pointing out that in such an affluent society as ours people go hungry not because of any inexorable laws but only because we choose to do as we do in respects that are quite amenable to alteration” (cited in Klein 1998:49).

The institutional approach sheds light on “the collective factors that condition the behaviour of individual economic players and, by extension, on the environmental changes produced by the interaction of players trying to loosen constraints” (Aglietta 2000:401).

Despite claims from some quarters to the contrary there are significant differences between the “new” and “old” variants of institutional economics.<sup>4</sup> The main premise for new institutional economics is classical liberalism (Hodgson 1993b). In contrast, old institutional economists such as Veblen were clearly looking for a political and methodological break from the reins of classical liberalism and oversimplifications of a complex world. This desire to break free is reflected in Veblen’s much quoted advocacy of “non-invidious” behavior and “workmanship” in places of invidious behaviour and “salesmanship”, respectively, and the emphasis he placed on institutions as defining the past, explaining the present, and determining the future. In a sense new institutional economics suffers from the same limitations as environmental economics. The latter is an attempt to account for, as much as possible, the ecological impact of economic activity as “environmental externalities” in the mechanistic postulations of neo-classical economics. Whereas environmental economists rely heavily on the price mechanism to make the necessary adjustments, new institutional economists seem primarily concerned with how the efficiency or inefficiency of “institutions” might affect the cost of economic transaction. Some of the other differences between the old and new institutional economics are discussed in the following two sections on the “old” and “new” institutional economics.

### **3.1 “Old” Institutional Economics**

The old school of institutionalism is most closely associated with Commons (1961), Veblen (1899), and Ayres (1944) who explain “institutions by means of historical analysis...by tracing institutions from one period to the next, [accounting] their existence...on the basis of the principle that earlier states account for later ones” (Setterfield 1993). Veblen’s approach stressed the “cumulative and path-dependent nature of institutional change, the role of new technology in bringing about institutional change (by changing the underlying, habitual ways of living and thinking), and the predominantly ‘pecuniary’ character of the existing set of American institutions...” (Rutherford 2001:174). Veblen was doubtful that the “invisible hand” was applicable to large-scale production, corporate finance, and salesmanship arguing for “social control” of the market so as to “make production for profit turn out a larger supply of useful goods under conditions more conducive to welfare” (Rutherford 2001:175).

The old institutionalist methodology is “holistic, postulating that the economy cannot be understood as a set of separable parts...that individual phenomena cannot be explained without reference to the whole of which they form a part – that the characteristics and functioning of the part depend on its relations with other parts, and hence its place in the whole” (Setterfield 1993:757). The behaviour of the individual

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<sup>4</sup> Hodgson (1993) cites March and Olsen (1984) as having argued that the “new” institutionalism is a continuation of the “old”.

must thus be seen as “function of existing institutions, which form an environment to which individuals become socialized over time”(page 757). Structures are emphasized over action (i.e., the choices and activities of individuals) in the determination of economic outcomes. The institutional approach is “process-oriented and evolutionary, rather than static and equilibrating” (Hodgson 1988:243).

Because of their interest in processes and whole systems, the old institutionalists were able to contribute to debates on psychology and economics, business cycles, the pricing behaviour of firms, ownership and control of corporations, monopoly and competition, unions and labour markets, various types of market problems and failures, public utilities and regulation, and law and economics. The interwar institutionalists made important contributions to policy by developing “unemployment insurance, workmen’s compensation, Social Security, labor legislation, public utility regulation, agricultural price support programs and [promoting] government ‘planning’ to create high and stable levels of output” (Rutherford 2001:180-1). The Wisconsin School, for example, was able to use the State of Wisconsin as a “laboratory for many innovations that would then be implemented at the national level – apprenticeship, vocational education, workers’ compensation, collective bargaining, civil service and the administration of labour law” (Bromely 1994:390). The early institutionalists also exhibited a bias in favour of promoting normative principles rather than formulating “testable propositions” (Scott 2001:6).

The “behaviouralist” turn during the 1930s diverted attention away from institutional structures to political behaviour, constituted by “informal distribution of power, attitudes, and political behaviour” (Thelen and Steinmo 1992:4, cited in Scott 2001:7) as manifest in the actions of individuals. This move from institutions to individuals was “accompanied by a more utilitarian orientation, viewing action as ‘the product of calculated self-interest’ and taking an instrumentalist view of politics, regarding the ‘allocation of resources as the central concern of political life’ (March and Olsen 1984:735) [and viewing politics as the study of] ‘Who Gets What, When, and How?’ ...” (Scott 2001:7). The reductionism of behaviouralism was reinforced and deepened by the “rational revolution” in the 1970s and 1980s (Scott 2001:8). The rational choice approach is characterized by “an emphasis on rigorous and deductive theory and methodology; a bias against normative, prescriptive approaches; methodological individualism, or the assumptions that individuals are the only actors and that they are motivated by individual utility maximization; and ‘input-ism,’ a focus on societal inputs to the political system – for example, votes, interest group pressures, money – to the exclusion of attention to internal workings of the system, or the institutional political structures, as they may affect outcomes” (Scott 2001:9).

Drawing on post-Darwinian sciences, institutionalists apply the concept of “cumulative causation” to more fully explain the occurrence of socioeconomic phenomena. The institutionalists also borrowed the core concept of “culture” from anthropologists to distinguish “the continuities in social life from other ranges of causal relations describing human life and behaviour at the physical, biological, or psychological levels” (Lower 1987:1147-8). There is a two-way relationship between human action and institutions: “people’s actions are shaped by and reflect culturally inherited but evolving social rules and relationships” (Neale 1987:1202). This

description is consistent Veblen's (1899) view of how tomorrow's institutions are shaped by today's institutions through a "selective, coercive process".

The demise of the "old" institutional economics has been partly attributed to a failure to pay sufficient attention to theoretical development: "After establishing the importance of institutions, routines and habits, [institutional economists] underlined the value of largely descriptive work on the nature and function of politico-economic institutions" (Hodgson 1988:21-2) at the expense of the further development of the theoretical foundations. "The revival of institutional economics should not neglect the theoretical task, nor fall once again into the empiricist trap" (page 23). Institutional works in economics could be attacked as "ad hoc, or as lacking proper foundations in a theory of individual behavior..." and for failing to "develop ... theories of social norms, technological change, legislative and judicial decision-making, transactions, and forms of business enterprise (apart from issues of ownership and control) much beyond the stage reached by Veblen and Commons" (Rutherford 2001:183).

### **3.2 "New" Institutional Economics**

In recent years, the "new" institutional economics has been closely associated with the works of Coase (1937,1960), Williamson (1985,1994,2000), North (1990), Schumpeter (1926) on innovation, Nelson and Winter (1982) on evolutionary theory, combined with insights drawn from the Austrian approaches to institutions, e.g., Menger (1963,1981) and Hayek (1948,1967). To date new institutionalists seem focused on transaction cost analysis of property rights, contracts, and organizations. The new institutionalism has been identified as "an attempt to extend the range of neoclassical theory by explaining the institutional factors traditionally taken as givens, such as property rights and governance structures, and, unlike the old institutionalism, not as an attempt to replace the standard theory" (Rutherford 2001:187).

The "new institutional economics" is not a re-emergence of traditional institutionalism. The old institutionalism draws inspiration from biology while the new institutionalism draws heavily upon physics (Mirowski 1989, cited in Hodgson 1994d:401). The new institutional economics is a product of "developments in the heart of modern orthodox [economic] theory itself... the 'new' institutionalism rests upon some long-established assumptions concerning the human agent" (Hodgson 1994d:397). "Institutions and institutional change have generally been analyzed [by new institutionalists] as ways of reducing transactions costs, reducing uncertainty, internalizing externalities, and producing collective benefits from coordinated or cooperative behaviour. ...[with] a strong tendency to argue that institutions tend toward providing 'efficient' solutions to economic problems..." (Rutherford 2001:187). The new institutionalism in economics shares the classical liberalist concept of "rational economic man", based on the doctrine of "methodological individualism".

For the new institutionalists, institutions are important only insofar as they relate, as an externality, to "a model of individual behaviour". For most new institutionalists "causality is unidirectional, with institutions arising solely in response to the current

maximizing behaviour of rational individuals”. Individuals possess psychologically given preference structures and are evaluative utility maximizers ( Hodgson 1994d, Setterfield 1993). This line of reasoning overlooks “the reverse line of causality... through which individual behaviour is influenced and constrained by institutions” (Setterfield 1993:759-60). The influence of institutions is not seen as shaping individuals and therefore their actions. This view is in direct contrast to the old institutionalist / evolutionary view that individuals are products of a “complete and cumulative process” of change in culture and institutional environments over time. This failure is in part attributable to a tendency among the new institutionalists not to replace the orthodox economic theory but to develop an “economic theory of institutions” (Langlois 1986).

New institutional economics “is dominated currently by scholars who cling to the neoclassical core of the discipline while struggling to broaden its boundaries” (Scott 2001:33). The reliance on the “self-organizing” properties of the market and the “invisible hand” mechanisms to “produce social patterns of behaviour without any one individual directing the results”(Setterfield 1993:758) has led the new institutionalist to conclude that institutions are products of the spontaneous workings in market activity. Many structures and outcomes that constitute the institutional landscape are the consequence of unanticipated effects and constrained choice in an environment that is simultaneously “indeterminate and context-dependent”. The thrust of an institutional theory, according to Scott (2001), should be to “account for continuity and constraint in social structure ... [and] not preclude attention to the ways in which individual actors take action to create, maintain, and transform institutions” (Scott 2001:75).

The sharp contrast between the old and new variants of institutionalism has been attributed of the politics of the time and of the individuals commenting on institutions. For example, in contrast to the rational individual and the efficacy of the market, Hayden boldly states:

Institutionalism is an ideology. Institutionalists have beliefs: a broad base of beliefs about knowledge, philosophy, ceremony, technology, government, and political theory – beliefs that are organized in a systematic and congruent manner. An ideology is the integration and systemization of congruent beliefs (Hayden 1993:304).

Hayden (1993) describes institutionalism in terms of an “approach” to science, evaluation and policymaking – an approach that arrives at beliefs through scientific inquiry. “The institutionalist’s approach to economic policy is (1) values driven, (2) process-oriented, (3) instrumental, (4) evolutionary, (5) activist, (6) fact-based, (7) technologically focused, (8) holistic, (9) non-dogmatic, and (10) democratic” (Petr 1984, cited in Hayden 1993:304).

Adopting a sociological and political perspective, Olsen (2000:1) maintains that the new institutionalism focuses on “political institutions and democratic governance [and] how and when international political orders are created, maintained, changed,

and abandoned”. This view is echoed by March and Olsen (1998:26), according to whom the new institutionalism “represents an attempt to supplement ideas of consequential action, exogenous preferences, ... and efficient histories with ideas of rule and identity-based action, institutional robustness, and inefficient histories”. The central question for the new institutionalists with a socio-political focus is “where structures [or forms] originate and how they are maintained and transformed, including the relative importance of deliberate reform and design” (Olsen 2000:1). History is viewed as “inefficient”, following “a meandering path affected by multiple equilibria and endogenous transformations of interests and resources (March and Olsen 1998:1). Actors are perceived as behaving “in accordance with their interpretation of rules and practices that are socially constructed, publicly known, anticipated, and accepted” (Olsen 2000:1). Actors may be driven by “habit, emotion, coercion, and interpretation of internalized shared rules and principles, as well as calculated expected utility driven by incentive structures” (Weber 1978, cited in Olsen 2000:3).

### **3.3 Summing Up**

Major weaknesses have been associated with the institutional approach in economics. For example, it does not deal with “the ways in which the institutions are linked, dovetailed, hierarchically organized, and so forth, to form subsystems”. Despite its emphasis on the relevance of mainly intangible, contextual variables that condition economic agents, institutional economics falters in explaining the “the existence, coherence or incoherence of macro-economic patterns” (Aglietta 2000:401). Some of the definitional vagueness and analytical inadequacies of institutional economics may be due mostly to unwavering insistence as to the importance of “complexity”, “interconnectedness”, and “interdependence” as starting points in economic analysis. Simplifications need to be made of complex phenomena and assumptions need to be made about the relative importance of some connections or relations among some variables over others so as to make meaningful institutional analysis feasible.

It could be argued that making simplifications and assumptions has been thus far resisted because it could lead to mimicking the much-criticized reductionist neo-classical approach. Nevertheless, one alleged result of this resistance has been a tendency in the old institutionalist tradition to degenerate into naïve empiricism and historicism, producing “largely descriptive work on the nature and function of politico-economic institutions” (Hodgson 1999a:211) which according to Coase (1983:230) was “waiting for a theory, or a fire”. Institutionalists, particularly the old variants, seem to adopt a “structuralist” approach, wherein the role of goal-oriented individuals in determining economic outcomes and in shaping the institutional environment is de-emphasized (Brunner 1987, cited in Setterfield 1993:757). A second criticism of the old institutionalist approach is the emphasis placed on the history of current institutions, “as if this, in and of itself, explains [the institutions’] origins and persistence” (Setterfield 1993:757), hence understating the dynamics and the causes of institutional evolution (page 758).

The “old” institutionalist school in economics has been characterized as expressing “a world view where power, conflict, market failures, and the possibilities of a

governmental policy are more pronounced than in mainstream economics” (Lind 1993:13). Based on an overview of writings in the old institutionalist tradition, Lind (1993) concludes that institutional economists “do not use mathematical models and ‘advanced’ statistical techniques ... [or] any special methods of their own”, recommending that institutionalists should “apply a more pluralist methodology, where interviews, surveys, and participatory observation are put to a systematic and sophisticated use together with the methods of mainstream economics” (Lind 1993:13-14). Underlining the methodological shortcomings of the institutionalist approach does not imply that mainstream (neoclassical) economics is methodologically more rigorous (Lind 1996). Rather, the implications of these shortcomings should be that institutionalists need to employ “all types of methods from participatory observation to mathematical model building, from experiments to statistical analyses of history” (Lind 1996:283) to make their arguments more convincing and to a wider audience.

The task to address the shortcomings of institutional economics should begin with the clarification of the terminology in use. Definitional clarity should then be used to develop a foundation for ideas on how best to conduct institutionalist economic analysis. In the remainder of this paper, a survey of the definitions for various institutionalist terms will be followed by a structured summary and the introduction of a framework to conduct institutional analysis. The paper concludes with examples of how this framework may be applied.

#### **4. Evolutionary Economics**

Significant contributions to address the shortcomings of neo-classical economics have come from the practitioners of “evolutionary economics” who draw attention to far from equilibrium conditions not as “imperfections” but as dialectical outcomes of an inherently contradictory, dynamic, and evolving system. Because of the pre-occupation with equilibria, neo-classical economics fails to recognize change and instability as the norm, failing further, as a consequence, to explain the appearance of stability of “things” or systems (Harvey 1996). The goal of the neo-classical theory has thus become one of expressing the essence of its object by stripping it of everything contingent: institutions, social interactions, and conflicts. These are treated as “so much dross to be purged to rediscover economic behaviour in its pure state [attained] in the concept of price, as sufficient and exclusive bond between all rational subjects under the uniform constraint of scarcity” (Aglietta 2000:14). For a number of years now, indeed decades, there has been general dissatisfaction with the mainstream in economics, associated closely with the neo-classical school. Dissatisfaction concerns the failure to analyze the economic process in a historical context and to give voice to the (evolutionary) social content of economic relations.

The crises in contemporary western societies compounded by significant socio-economic and political changes during 1990s must propel researchers to pose quite different theoretical questions than orthodox economic can muster. The object of economic theory can then become “the study of the social laws governing the production and distribution of the means of existence of human beings organized in social groups” (Aglietta 2000:16). The focus must be on the transformation of social

relations through the creation of new forms, e.g. rules, habits, norms, that are “both economic and non-economic, that are organized in structures and themselves reproduce a determinant structure, the mode of production” (Aglietta 2000:16). History thus becomes an indispensable component of the study, exploring the tension between abstract and concrete.

Evolutionary economics was in part a reaction against the shortcomings / short-sightedness of the neoclassical school by some historically grounded and socially oriented economists who perhaps sought substance for the “science” part of “economic science”. Evolutionary economics developed as an extension of the new institutionalism in economics by Nelson and Winter (1982) who drew on the works of Veblen on the evolution of the institutions of the economy, Schumpeter’s ([1926], 1961) ideas on innovation, and Alchian’s (1950) view of firms as economic agents subject to adaptation and selection processes. Nelson and Winter’s “evolutionary theory” draws also on biology and the works of Malthus and Darwin to articulate the idea of “economic natural selection” and “organizational genetics” according to which “traits of organizations, including those traits underlying the ability to produce output and make profits, are transmitted through time” (Nelson and Winter 1982:9). Nelson and Winter make the explicit and practical disclaimer: “We are pleased to exploit any idea from biology that seems helpful in understanding of economic problems, but we are equally prepared to pass over anything that seems awkward, or to modify accepted biological theories radically in the interest of getting better *economic* theory (witness our espousal of Lamarchianism)”(Nelson and Winter 1982:11).

To understand a given state of the economy, the evolutionary view holds that one needs to look back on the processes and the events that preceded that state. The notion of evolution also implies that events are irreversible. It was based on this premise that Thorstein Veblen resolved to transform economics into “an evolutionary science” and Schumpeter insisted that the “essential point to grasp is that in dealing with capitalism we are dealing with an evolutionary process ... a fact...long ago emphasized by Karl Marx” (Hodgson 1994c:218). The term “evolutionary” in evolutionary economics does not necessarily mean an espousal of gradualism in opposition to “revolutionary” change, a point made clear by Nelson and Winter (1982). Evolution in economics is similar to evolution as used by modern evolutionary biologists and involves “discontinuities and revolutionary ‘leaps’ giving rise to ‘punctuated equilibria’” (Hodgson 1994c:219, also Nelson and Winter 1982:10). At the micro, behavioural level, instincts, habits, and institutions are viewed as analogous to biological genes while “the economic life history of the individual is a cumulative process of adaptation of means to ends that cumulatively change as the process goes on, both the agent and his environment being at any point the outcome of the last process” (Veblen 1919:74-75, cited in Hodgson 1994c:222).

## **5. Institutional Change**

According to Scott (2001:183-187) evolutionary institutional change occurs at three levels. At a subsystem (micro) level, established institutional arrangements governing behaviour of key organizational actors has been observed to be disrupted due to the

introduction of new technology, for example (Barley 1986). Second, at the organizational form (meso) level, changes in practice patterns have been linked to (ideological) changes in core values and beliefs at the societal level (Greenwood and Hinings 1993). Third, at the macro, societal level changes in institutional logics (e.g., focus on effectiveness versus efficiency or vice versa) as well as associated changes in governance systems, have been found to affect the types and relative numbers of certain types of organization (Scott et al. 2000). Change at all levels occurs over time as one institutional pattern gives way to a different pattern. Ideas (scripts, schemas, and logics) and ordered activities (organizational routines, systems, forms) interact to produce structures that over time are reproduced but are always subject to change: “Institutional structures are medium and outcome: They shape and are themselves shaped by subsequent interpretations and activities” (Scott 2001:187).

Change can be associated with features of particular institutional components or with tensions between components, with the movements of key individuals from one institutional setting to another, or it may be a product of “coalitions of participants with varying interests” (Scott 2001:190-1, see also Sabatier and Jenkins-Smith 1999). Institutional change is not a complete transformation. It is rather a continuum and a rearrangement exiting patterns or recombination of existing factors. Changes in practice co-evolve with changes in legitimating logics. Changes in linguistic framing are instrumental in transforming marginal, deviant practices into legitimate practice. For example, the conglomerate firm, based on “the notion of organizations as primordial social units”, was supported from the 1960s through to the 1980s by actions of state, organizational intimidation, the advice of business consultants, and the efficiency rationales of organization theorists. This notion was discarded in the 1980s in favour of “a radical individualist view in which corporations were simply ‘financial tinker toys’ which could be arranged at whim, without regard for organizational boundaries” (Davis, Kiekmann, and Tinsley 1994:549, cited in Scott 2001:191). The emphasis since the early 1990s has shifted to organizational models that emphasize “core competence” and network forms (see for example, Piore and Sabel 1984, Saxenian 1994, Storper 1997, and Cooke and Morgan 1998 among numerous others).

TABLE 1 about here.

Institutional change occurs as a result of accidents, learning, and natural selection resulting in the *institutionalization* of new forms, norms, and habits. Table 1 depicts some of the causes of institutional change. These causes can contribute to change at all levels, scales, and systems. Institutions are created through demand- and supply-side processes and come into being because actors devise or borrow new and different rules and models to deal with perceived problems requiring new approaches. Institutions are also created because certain types of actors “occupy institutionalized roles that enable and encourage them to devise and promote new schemas, rules, models, routines, and artefacts” (Scott 2001:109). The evolution of human societies (including their economies, institutions, and organizations) cannot be characterized as stable and much less as static. Social systems tend to be of an “accumulative nature [whereby] stable ‘cybernetic’ cycles are contained within long term secular trends leading to crises, breakdowns and reorganization”. In their most stable states, “social

systems oscillate between the same values or limits” (Friedman, 1979:269). This view of social systems is based on Prigogine's (1977) concept of dissipative structures. Dissipative structures may exhibit a degree of local stability only so long as they do not infringe the limits imposed by an environment that is itself composed of similarly dissipative structures. It may be deduced that the stability, or instability, in the economic system is a product of the interplay between the local and supra-local formal and informal institutions.

## **6. Institutionalization**

According to Parsons (1937, 1951), a system of action is said to be institutionalized to the extent that actors in an ongoing relation orient their actions to a common set of normative standards and value patterns (Scott 2001:15). Berger and Luckmann (1967) define institutionalization as a process where systems of symbols (e.g., language) and cognition, mediated by social processes, are “crucial to the ways in which actions are produced, repeated, and come to evoke stable, similar meanings in self and other” (Scott 2001:17). There are three stages in institutionalization: Externalization, Objectification, and Internalization. Externalization is “the production, in social interaction, of symbolic structures whose meaning comes to be shared by the participants”. Objectification is the process through which this production becomes something “‘out there’, as a reality experienced in common with others”. Internalization is “the process by which the objectivated world is ‘retrojected into consciousness in the course of socialization’” (Berger and Luckmann 1967, cited in Scott 2001:40).

In studies of institutionalization as a process, the focus should be on the growth (or decline) over time of associative, behavioural, cognitive, constitutive, and regulative elements capable of defining the form and stability to social behaviour (table 3). An in-depth appreciation of these elements can also inform policy-making and implementation of policy objectives by highlighting, in “real world terms”, what could be expected given the “instituted processes”. The intent to change the instituted processes and activities needs to be based on the understanding that the new process(es) inevitably evolve from existing processes. This systemic view of the institutionalization process, or institutional change, is consistent with notions of “cumulative causation”, “path-dependency”, “lock-in”, and Neale’s (1987) “mutual reinforcement of institutions”. Cumulative causation is closely associated with the better-known economic concept, the “multiplier effect”. Cumulative causation is thus defined as the unfolding of events connected with a change in the economy (Myrdal 1957) due to the appearance of a new enterprise which may be private, e.g., a factory, or public, e.g., a government institution or a public-private partnership. Path dependency may be described as “dependence on initial conditions” (after Arthur 1990), or a recurring emergence of initial conditions, resulting in relative permanency (Hodgson 1988; 1993, 1999a) of particular habits / customs and institutional forms. Lock-in and its relationship with path dependency and cumulative causation is best demonstrated in an example from Liebowitz and Margolis (1995):

The archetypal case of path dependence has been, of course, the configuration of the typewriter keyboard. ...the standard "QWERTY" keyboard arrangement

is dramatically inferior to an arrangement offered by August Dvorak, but we are locked into the inferior arrangement by a coordination failure: No one trains on the Dvorak keyboard because Dvorak machines are hard to find, and Dvorak machines are hard to find because no one trains on Dvorak keyboards. The process is said to be path dependent in that the timing of the adoption of QWERTY, and not its efficiency, explains its survival (Liebowitz and Margolis 1995:210).

Hayden (1982a: 403-7) draws attention to upper and lower “flow deviation” bands, to denote the upper and lower boundaries beyond which the projected change in existing process(es) is at best difficult to effect. Fundamental, structural change such that the mode of production or materials flow in the economy is reconstituted requires persistent external pressures to mould the new “instituted process”, likely to be a product of old and new institutions. In part this is because political actors “are constituted both by their interests, by which they evaluate their expected consequences, and by the rules embedded in their identities and political institutions” (Olsen 2000:2). The society is a configuration of institutions, norms, forms, rules, and practices and “a community of rule followers with distinctive sociocultural ties, cultural connections, intersubjective understandings based on shared codes of meaning and ways of reasoning, and senses of belonging” (Olsen 2000:1-3). Social order is brought about through “legitimate institutions, principles, procedures, methods, rights, and obligations [which] restrict the possibilities of a one-sided pursuit of self-interest or drives” (Weber 1978, cited in Olsen 2000:1). Institutional analysis cannot view institutions “solely as incentives and opportunity structures that regulate behaviour by affecting calculations and transaction cost” (Olsen 2000:3). Institutions must be viewed as constituting political actors within and around different levels, scales, and system.

Given this key “variable” status of institutions in economic analysis it is crucial that the properties of the variable, and the role(s) expected of it, are defined and articulated. This of course is no easy task. What is presented in the next few sections is in no way meant to be the final word on institutions and institutional analysis. It is rather an attempt to bring structure to a very loose but very fundamental aspect of socio-economic enquiry.

## **7. Categories of Institution**

The many definitions and descriptions of the institution may be grouped into three broad categories. First there are form-based descriptions primarily concerned with the physical structure and/or appearance of an institution. Second, there are behaviour-based descriptions whose focus is firmly on action or activity. Third, there are context-based descriptions of institutions concerned mainly with the presence/absence of, or interactions among, institutions. Focus in this third group is explicitly on the evolutionary aspects of the institutional context. Each of these categories is discussed in further detail below.

## 7.1 “Form-based” Descriptions

Cooley (1956:314) cites language, government, the church, laws, and customs of property and of the family as institutions. Neale’s (1987, 1994) expanded list includes economic markets, marriage systems, churches and temples with their religious codes and informal rules and beliefs, law courts with their formal and informal procedural rules as well as their legal codes, the American middle class family, and courtesies of the dinner table. “Love and reproduction” and “‘economic’ profit or Ricardian rent” are positively not institutions according to Neale (1987). To Thelen and Steinmo (1992:2) institutions are “both formal structures and informal rules and procedures that structure conduct” (cited in Scott 2001:33). North (1990) seems to emphasize the “intangibility” of institutions: rules and regulations are given as examples of formal institutions while conventions and codes of behaviour are informal institutions. Political bodies (political parties, the Senate, a city council, a regulatory agency), economic bodies (firms, trade unions, family farms, cooperatives), social bodies (churches, clubs athletic associations), and educational bodies (schools, universities, vocational training centres) are all “organizations” (North 1990:5).

Institutions can be created and they can evolve. They change incrementally rather than in discontinuous fashion (North 1990). Institutions “appear to be independent and external to behaviour, they are developed and preserved through interactions among individuals and exist ‘as a habit of mind and of action, largely unconscious because largely common to all the groups... The individual is always cause as well as effect of the institutions’” (Cooley 1956:313-14, cited in Scott 2001:10). The causality in Cooley’s (1956) description is circular and flows from exogenous (societal) to endogenous (to individuals and organizations) and back again to exogenous. In the intermediate stage of this circular causation process, institutions as informal constraints embodied in customs, traditions, and codes of conduct, once “instituted” in individuals and organizations, become “much more impervious to deliberate policies” (North 1990:6) focused on societal change. Institutionalized behaviour, though often a “given” in the realm of politics and policy-making, is of crucial importance in understanding socio-economic and political change. The process of institutionalization can help explain how the past, present, and future connect to determine the path of historical change.

Formal institutions such as governments can and do successfully employ coercive and/or regulative power in introducing innovations and reforms into the workings of the market (Jepperson and Meyer 1991). This is particularly the case with corporatist governments as compared to pluralist or individualist systems of government. Stepan (1978:xii) takes this argument one step further: “the state must be considered as more than the ‘government’. It is the continuous administrative, legal, bureaucratic and coercive systems that attempt not only to structure relationships between civil society and public authority in a polity but also to structure many crucial relationships within civil society as well” (cited in Hodgson 1988:153). In the short run, these coercive systems appear as “exogenous constraints... , but in the long run, they are endogenous to the workings of the economy... , [giving rise to] an institutional environment that frames current economic activity” by individuals, groups, or organizations (Setterfield

1993:761). “Constraints” may be manifested as inertia or goal-oriented steering of the economy by governments.<sup>5</sup>

## 7.2 “Behaviour-based” Descriptions

Institutions are “the constraints that human beings impose on themselves...” (North 1990:5). Institutions may be viewed as shaping behaviour at the individual, organizational, or societal levels: “Institutions provide guidance and resources for acting as well as prohibitions and constraints on action. ... Institutions operate at multi *levels*, from world system to interpersonal interaction” (Scott 2001:50, emphasis added). Similarly, “institutions are prescribed or proscribed patterns of correlated behaviour and attitudes that coordinate life in community. They specify – as codes, rules, laws, customs – what can and cannot be done” (Tool 1993:122). At the individual level, institutions “imply ‘you may’ as well as ‘thou shalt not,’ thus creating as well as limiting choices” (Neale 1987:1179). Institutions are a system of norms that “regulate the relations of individuals to each other ... [and define] what the relations of individuals ought to be” (Parsons 1990:327, cited in Scott 2001:15). These systems of norms may be societal or confined to organizations, e.g., firms.

At the organization level, institutions “construct actors and define their available modes of action; they constrain behaviour, but they also empower it...” (Scott 2001:34). At this level, institutions are “collective action in restraint, liberation, and expansion of individual action” in the context of “going concerns”, e.g., a firm and its workers, a labour union, a nation state. “The working rules of going concerns represent the manifestation of collective action in restraint and liberation of individual action” (Bromley 1994:388). An institution is “a regularity of behaviour or a rule that is generally accepted by members of a social group, that specifies behaviour in specific situations, and that is either self-policed or policed by external authority” (Rutherford 1994:182). According to North (1990:4), institutions are perfectly analogous to the rules of the game in a competitive team sport. There are written rules and unwritten codes of conduct that supplement formal rules and violators are punished through sanction.

At the societal level, “institutions are patterns of correlated behaviour” (Bush 1987:1076), represented by regular, planned behaviour of people for the ideas and values associated with these regularities (Neale 1994). Institutions may become manifested as “habituation; collective action in control of individual action; widely prevalent, highly standardized social habits; a way of thought or action embedded in the habits of a group or the customs of a people; [and,] prescribed patterns of correlated behaviour” (Neale 1994:402). In political terms, an institution is “a structure in which powerful people are committed to some value or interest”. The same institutions are continuously regenerated by succeeding generations of power-

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<sup>5</sup> This is demonstrated in a study by Cole (1989) who finds the higher the level of intervention by governments, the more important is the role played by government agencies, trade associations, and union organizations in legitimating, informing, and supporting adoption and retention of innovations: “Japan more than Sweden, and Sweden more than the United States, possessed such supportive structures, with the result that the innovation spread more widely and were more stable in the former than the latter societies” (cited in Scott 2001:116).

holders through “selection, socialization, controlling conditions of incumbency, and hero worship...” (Stinchcombe 1968:107-111, cited in Scott 2001:25). It is also possible for powerful actors to “*impose* their will on others, based on the use or threat of sanctions, ...provide *inducements* to secure compliance, ...[or use] ... *authority*, in which coercive power is legitimated by a normative framework that both supports and constrains the exercise of power” (Scott 2001:53).

According to Hamilton (1932:84, cited in Neale 1987:1178), institutions “connote a way of thought or action of some prevalence or permanence, which is embedded in the habits of a group or the customs of a people”. The emphasis on permanence is echoed by Hughes (1939), Hodgson (1988), Jepperson (1991), and Setterfield (1993). Hughes held that an institution is “an establishment of relative permanence of a distinctly social sort” (Hughes 1939:297, cited in Scott 2001:10). Hodgson (1988:10) refers to a “social institution” as “a social organization which, through the operation of tradition, custom or legal constraint, tends to create durable and routinized patterns of behaviour”. Similarly, Jepperson (1991) and Setterfield (1993) see institutions as multi-faceted, durable social structures with symbolic elements, social activities, and material resources.

Hamilton (1932:84) also asserted that institutions “fix the confines of and impose form upon the activities of human beings” and spoke of the world as “a tangled and unbroken web of institutions”. For Hughes (1939) this web represented “consistency”, through establishing “a set of mores or formal rules”, and “concert or organization”, through enabling people to act collectively. The web-like interconnectedness, continuity, and consistency implied by Hughes (1939) are also alluded to by Neale (1987), who sees institutions as giving “meaning and continuity to actions and [assuring] that each action fits with some of the actions of other people to maintain ongoing processes” (Neale 1987:1180). The set of mores and formal rules referred to by Hughes (1939) as institutions also resonates with Parsons’ (1940) description of institutions as “normative patterns which define what are felt to be, in the given society, proper, legitimate, or expected modes of action or of social relationship” (Parsons 1940:190, cited in Hodgson 1988:123-4). Similarly, institutions are “enduring features of social life” (Giddens 1984:24) and tend to be maintained and reproduced across generations (Zucker 1977, cited in Scott 2001:49). According to Dopfer (1991:536) economic institutions constitute “any correlated behaviour of agents... that reoccurs under the same or similar conditions” (cited in Setterfield 1993:756). This latter description of institutions alludes to formalized, or codified, behavioural norms that shape inter-relations in similar circumstances at different levels.

### **7.3 “Context-based” Descriptions**

According to Veblen (1899), institutions serve one of two divergent categories of purpose in economic life. In the following the first category is contrasted with the second: acquisition or production, pecuniary activity or industrial activity, invidious (ceremonial) or non-invidious (technological) economic interest, salesmanship or workmanship, vested interest or “the common man”, sabotage or community serviceability, and conscientious withdrawal of efficiency or inordinately productive

enterprise (Tool 1986:36-37, 1993). Institutions are “a product of human interaction” (Scott 2001:13). They are “social facts: phenomena perceived by the individual to be both external (to the person) and coercive (backed by sanctions)”. For Durkheim ([1901] 1950), these systems of knowledge, belief, and moral authority were social institutions (Scott 2001:13). Social institutions are thus intertwined with culture in that they are “the structure and meaning of human life” (Neale 1994:404). A culture is “a collective legacy of patterns of action”. Like institutions, “culture defines the permissible and the forbidden, defines right and wrong, the admirable and its opposite, gives context to these definitions with rules for behaviour, and so provides opportunities as well as limits” (Neale 1987:1179). There are clear linkages between Neale’s description of institutions and Veblen’s (1899) “technological – ceremonial” dichotomy (table 2), as summarized by Tool (1977:827).

TABLE 2 about here

Social ceremonies are “the habitual patterns of behaviour based on emotions and social mores; they are therefore past-bound” while technology is “the dynamic force which is constantly recombining and providing for new opportunities, thereby constantly disrupting institutional arrangements and ceremonial beliefs” (Hayden 1982b:638).<sup>6</sup> Social ceremonies arguably constitute the “culture” closely associated with capitalism while technology could be interpreted as representing change toward “communitarian” social mores based on the belief that “people’s lives are organized and their welfare determined by a community’s organic social process” (Hayden 1993:304). Hayden’s (1982b) interpretation of the ceremonial-technological dichotomy is also analogous to Tool’s (1993) interpretation of Veblen’s notions of “invidious” and “non-invidious” discrimination in pursuit of change and economic interest. To Veblen invidious meant: “judgements of worth or merit rooted in race, creed, gender, ancestry, ethnicity, wealth, ownership, power, tradition, and the like ... [which] generate class, status, rank, income, discretion, and participatory distinctions within communities”. Those against whom invidious discrimination is directed “are denied options, entitlements, and the full development of their capabilities” (Tool 1993:122).

Political systems “are not neutral arenas within which external interests compete but rather complex forms that generate independent interests and advantages and whose rules and procedures exert important effects on whatever business is being transacted” (Scott 2001:34). One such effect is the imposition of “transaction costs” (by state institutions, primarily) on economic exchange in the form of legal fees, insurance, gathering of information by the exchanging parties, and so forth (North 1990). Transaction cost arises from ensuring that institutions, i.e., the formal rules and the informal codes of conduct, are not violated. Transaction costs are directly related to

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<sup>6</sup> Elsewhere, Hayden emphasizes the importance of definitional clarity if “technology” is to be used in the same manner as Veblen: “Technology, which is one of the most important ingredients of human welfare, has become a foul word in the minds of many people because it is so regularly associated with hazardous spills, unemployment, cancer, community disruption, consumer victimization, ozone depletion, and so forth. If technology is to advance in the sense of enhancing progress for human and ecosystem welfare, the people’s legislative bodies must explicitly and directly take back control of the research functions of their public universities” (Hayden 1993:293).

ascertaining violations and the severity of punishment (North 1990:4). Institutions play a key role in determining the costs of production and hence affect the performance of an economy (North 1990:28,61,69). In addition to institutions as constraints or transaction costs there are other types of institution with constraining *and* facilitating properties. Institutions can and do operate through different arenas and forms to determine the “mode of regulation” with direct implications for the “regime of accumulation”.<sup>7</sup> In the following section a typology of institutions is developed to underline the arenas and forms through which institutions affect economic activity.

## **8. A Typology of Institutions**

Focusing on the context of economic activity, Scott (2001:51-8) identifies three “pillars” of institutions. These are the regulative, normative, and cultural-cognitive pillars. The *regulative* aspects of institutions are manifest in rule-setting, monitoring, and sanctioning activities: “...regulatory processes involve the capacity to establish rules, inspect others’ conformity to them, and, as necessary, manipulate sanctions – rewards and punishments – in an attempt to influence future behaviour” (page 52). The state in this case is “rule maker, referee, and enforcer” and there is a potential for the state to forgo neutrality by developing its own interests and operate somewhat autonomously from other societal actors (page 54). The *Normative* aspects of institutions impose constraints on social behaviour as well as empower and enable social action. Normative aspects are most pronounced in “kinship groups, social classes, religious belief systems, and voluntary associations where common beliefs and values are more likely to exist” (page 55). The *Cultural-Cognitive* aspects of institutions are “the shared conceptions that constitute the nature of social reality and the frames through which meaning is made”. The hyphen in cultural-cognitive “recognizes that internal interpretive processes are shaped by external cultural frameworks” (page 57). A cultural-cognitive conception of institutions “stresses the central role played by the socially mediated construction of a common framework of meaning” (page 58).

From an economics perspective, “transaction” between two or more wills consists of “giving, taking, persuading, coercing, defrauding, commanding, obeying, competing, governing, in a world of scarcity, mechanism and rules of conduct [social institutions]” (Commons 1950:7, cited in Scott 2001:3). Transactions among economic agents are shaped by “institutions”, best viewed as multifaceted, durable social structures, made up of symbolic elements, social activities, and material resources (Scott 2001). Institutions are relatively resistant to change (Hamilton 1932, Hodgson 1988, Jepperson 1991). They span generations, are maintained, and are reproduced (Zucker 1977, Harvey 1996). Put differently, institutions are “the more enduring features of social life... giving solidity [to social systems] across time and

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<sup>7</sup> The “mode of regulation” provides the “rules of the game” (Boyer 1979:75; Dunford 1990:306). The “regime of accumulation” is the “over-arching constellation of regularities ensuring the continued existence of the mode of production, by describing the relationship between production relations, consumption, and income distribution necessary to ensure (temporarily) stability” (Treuren 1998:360). The regime of accumulation and the mode of regulation are “dialectically interwoven” instituting a stable mode of development only when in a complementary state, the absence of which results in crisis (Jäger and Raza 2001:2).

space” (Giddens 1984:24, cited in Scott 2001:49). Institutions are manifestations of interactions among humans based on rules, norms, and values. As such, institutions are produced, modified, and/or reproduced by human behaviour (Scott 2001). The “permanency” or durability of institutions is only relative as institutions continuously undergo change due to societal dynamics and entropy, or a tendency toward disorder or disorganization (Zucker 1988b:26).

TABLE 3 about here

Table 3 expands on Scott’s (2001) “pillars” of institutions to introduce five “types” of institution. This table provides descriptions and examples of these institutions types and denotes the main direction(s) of regulation.<sup>8</sup> Scott’s (2001:48) overview of the role of institutions provides the descriptions for four of the five institution types identified in table 3. First, institutions may be “constitutive” in that they are social structures that have attained a high degree of resilience and operate at multiple levels of jurisdiction.<sup>9</sup> Second, institutions may be “cognitive” in that they are based on values and embedded in culture.<sup>10</sup> Third, institutions may be “regulative” in that they provide stability and give meaning to social life.<sup>11</sup> Fourth, institutions may be “behavioural” in that they are transmitted by various carriers, including symbolic and relational systems, routines, and artefacts.<sup>12</sup> There may also be a degree of selectivity associated with the societal role of institutions. The fifth institution type is “associative”, referring to socio-political structures characterized by exclusion, socialization, controlling conditions of incumbency, and hero worship to express certain values or interests. Associative institutions are reproduced by succeeding generations of power holders.<sup>13</sup>

There are in addition numerous “hybrid” descriptions of institutions consisting of two or more of the types identified in table 3. For example, Setterfield (1993:761) defines institutions as “exogenous constraints” (regulative) which in time become endogenous to the working of the economy and the actions of individuals (behavioural). Scott (2001:52) also refers to institutions as “regulatory processes” to establish rules, inspect others’ conformity to them, and as necessary, manipulate sanctions. The internalization of various institutions by individuals and groups of individuals can be cause for inertia or resistance to change. Hughes (1939) viewed institutions as behavioural and regulative in that they determine individual or group action according

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<sup>8</sup> Positive and negative feedback loops through inter-relations exist between all elements in the third column of this table. From an evolutionary perspective these feedback loops are best described by the “Cause-Effect-Cause” notion. The direction of the arrows in the third column headed “Direction of Régulation” indicates the more likely origin of the flow, or who/what affects whom first. Bi-directional arrows indicate equal likelihood for both sides of the arrow to initiate régulation. The direction of each arrow also indicates the sequence in the Cause-Effect-Cause continuum.

<sup>9</sup> See also Commons (1934), Cooley (1956), Giddens (1984:13), Hodgson (1988:134,153), Neale (1987:1180, 1994:404), North (1990:3-4,28,61,69), Scott (2001:75,95).

<sup>10</sup> See also Douglas (1982:12), Neale (1987:1184), and Scott (2001:57-58).

<sup>11</sup> See also Bush (1986), Elster (1989), Hayden (1993:309), Hodgson (1988:205), Hughes (1939:297), North (1990:4), Parsons (1990:327), Rutherford (1994:182), Scott (2001:34,50-54), Setterfield (1993:756,761), Thelen and Steinmo (1992:2), and Tool (1993:132).

<sup>12</sup> See also Durkheim (1950), Mitchell (1950:373), Neale (1994:404), and Veblen (1919:239).

<sup>13</sup> Based on Stinchcombe (1968:107-111). See also Parsons (1940:190) and Scott (2001:55).

to a set of mores and/or formal rules. Similar views are expressed by Neale (1987) and Hayden (1993). According to Rutherford (1994:182) institutions are at once regulative and constitutive in that they denote regularity in behaviour by individuals at large and by individuals within an organization. An organization is in turn subjected to external (social) regularities which are constituted at higher scales.

Neale (1987, 1994) identifies three characteristics of institutions as patterns of activities (behavioural), rules giving activities repetition, stability, and order by establishing the boundaries of action (regulative), and folkviews explaining or justifying the activities and the rules (cognitive). Bush refers to institutions as patterns of correlated behaviour (1987:1076) while Hodgson (1988:10) and Tool (1993:122) seem to emphasize the constitutive / regulative / behavioural role of institutions as social organizations that create durable and routinized patterns of behaviour through constituting traditions, customs or legal constraints. Cooley (1956:313) underlines a dialectical relationship between the constitutive and behavioural functions of institutions. To Cooley, institutions are manifested as habits of mind and action, largely unconscious because largely common to all groups, rendering the individual simultaneously as cause and effect of institutions.

In a similar vein, Hamilton (1932:84) pointed to a “tangled and unbroken web of institutions” that represents a way of thought (cognitive) or “action of some prevalence or permanence... embedded in the habits of a group or the customs of a people” (behavioural). Durkheim (1950) emphasized a cognitive, constitutive, and behavioural role for institutions as “social facts” relayed to the individual through systems of knowledge, belief, and moral authority. As a system of norms, institutions “regulate” relations among individuals (Parsons 1934) while as formal and informal rules and procedures they structure (constitute) conduct (North 1990:3, Thelen and Steinmo 1992). Institutions are diffused through coercive (regulative), normative (associative), and mimetic (behavioural) mechanisms (DiMaggio and Powell 1983). Institutions construct actors and constrain as well as empower behaviour (Scott 2001:34).

When we speak of something as being “instituted” and “institutionalized” we at once allude to something that has been adopted by individuals, singly or in groups; something by which individuals or groups of individuals may be characterized; and perhaps most importantly, something that reveals a degree of relative permanency as manifested in habits, customs, and so forth. Viewed as such, institutions exist at different scales and are discernible at different levels of inter-relations. Scale and level of inter-relations are explored further in the next section.

## **9. Scale of Analysis and Level of Inter-relations**

The form-, behaviour-, and context-based descriptions of institution together with the associative, behavioural, cognitive, constitutive, and regulative types of institution identified in table 3 are intended to provide a framework for institutional analysis sensitive to “scale” and the level of inter-relation under study. Depending on the purpose of the analysis some scales and levels need to be more, or less, emphasized

than others since not everything is equally important in all situations and all the time. Institutions are context-specific and geographically locatable. Institutions function and affect phenomena in the social, economic, and political domains. Scale may be geographical for empirical and historical research; organizational for socio-economic and political research; strategic for socio-political transformation; discursive in ideological struggles for hegemonic control; and constructed through struggles of actors, movements, and institutions to influence locational structure, territorial extension, and qualitative organization of these scales. Thus, geographical scales are “produced, contested, and transformed through an immense range of socio-political and discursive processes, strategies, and struggles that cannot be derived from any single encompassing dynamic” (Brenner 1998:460).

The inherent complexities implied in Brenner’s articulation of scale are perhaps better understood through Jessop’s (1997) levels of embeddedness or inter-relations and Mann’s (1996) socio-spatial levels of social interaction. According to Jessop (1997:102) there are three levels of inter-relations. These are: “the social embeddedness of interpersonal relations”, “the institutional embeddedness of inter-organizational relations”, and “societal embeddedness of functionally differentiated institutional orders ... in a complex, de-centred societal formation” (table 4). For Mann (1996) there are five socio-spatial levels<sup>14</sup> of social interaction: local (subnational), national, international (relations between nationally constituted networks), transnational (networks passing through national boundaries), and global (networks covering the globe as a whole).

TABLE 4 about here

These scales of analysis and levels of inter-relation have important implications for “governance” of socio-economic spaces which takes place through interrelationships involving institutions and organizations at different spatial scales (Jessop 1997). Governance is the coordination of interdependent social relations ranging from simple dyadic interactions to complex social divisions of labour (Jessop 1999:349). In power relation terms, governance may be defined as the exercise of authority and control by governments, private sector interests, and other non-government organizations (Francis 1994) to stabilize or destabilize the regime of accumulation to better serve own interests. Regardless of which definition one adopts for governance, for institutional analysis one needs to be able to identify the institutions through which governance is exercised.

## **10. Institutional Analysis and Technological Transitions**

An evolutionary approach in economics recognizes “irreversible and continuing processes in time, as evolution involves irreversible transformations in structure and acquisitions of knowledge”, “long-run development rather than short-run marginal adjustments, as evolution beholds the grand course of development and not the innumerable micro-foundations”, “variation and diversity, as these are the fuel of all

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<sup>14</sup> In Brenner’s (1998) vocabulary these “levels” are described as “scales”.

evolutionary processes of selection”, “non-equilibrium as well as equilibrium situations, as evolution applies to open systems which are often far from equilibrium”, and “the possibility of error-making and non-optimizing behaviour, as these are part and parcel of both human learning and evolution itself” (Hodgson 1994c:223). Elsewhere, Hodgson (1993a:258,1994:66) echoes Nelson and Winter (1982) by pointing out that radical change may be a product of gradual change when the cumulative strain of gradual change leads to outbreaks of conflict or crisis in a stable system, resulting in a radical change in actions and attitudes. On recognition that “reality is hierarchically ordered” and interconnected, Hodgson (1993a:266) promotes an “ad hoc” methodology for studying each level of the total system.

Adopting an ad hoc methodology does away with the concept of social optimum and allows for generating insights into what the economic system “ought” to be doing (Nelson and Winter 1982). Experimentation within the economic system – currently mostly conducted in a top-down, technocratic fashion and driven by ideology – needs to assume an expanded, societal role to generate the information and feedback necessary to steer the development of the economic system toward a communitarian ideal. Adopting an evolutionary approach in economics is contingent on doing away with “hidden-hand theorems” in favour of arguments for diversity, pluralism, and “appreciation not only of why our current economic system is so mixed in institutional form, but why it is appropriate that this is so” (Nelson and Winter 1982:402). Recognition of interconnectedness within the total system minimizes the possibility of making reductionist, arbitrary assumptions. This is because the findings based on analysis at one level, when viewed from other perspectives, have to be meaningful and relevant to phenomena at “lower, higher, or equivalent” levels. Being meaningful does not imply, however, that context specificity is irrelevant. On the contrary, context specificity moulds capitalism while evolving capital relations mould the specifics of the context at different scales.

Hodgson’s (1993a) “ad hoc” methodology and Nelson and Winter’s (1982) evolutionary approach represent two necessary ingredients for studying “transitions” (Rotmans, Kemp, and van Asselt 2001) in the socio-economy. A transition to a new socio-economic state takes place through “a set of connected changes, which reinforce each other but take place in several different areas, such as technology, the economy, institutions, behaviour, culture, ecology and belief systems” (Rotmans et al. 2001:16). Policy work in “real-world situations” to effect transition to a preferred socio-economic state thus needs to be based on appreciation of place-specific peculiarities and dangers of importing “ideas that have worked well in one place and time into another place and time” (Sandiford and Rossmiller 1996). The institutionalist strand in economics attaches considerable weight to “historical contingency” that underlies the institutional functionality within a particular historical, social, political and cultural context (Murrell 1994). Nelson and Winter’s (1982) vision of “diversity and pluralism” or the communitarian ideal of some institutionalists may only be realized through fundamental, radical changes through innovation in the economic system, and by implication its institutions. An important part of the innovation process is alternative technology and alternative ways of instituting technology.

Technology, defined as “the combination of tools, skills, and knowledge ... organized as the industrial arts of a society...[whose] change stimulates creation of new social relationships and thus a new society”, is the most emphasized aspect of policy making in the institutionalist literature (Hayden 1993:291). Polanyi (1957) placed great emphasis on the links between policy and technology and how policy, not process, determines alternative technology and alternative ways of instituting technology. Research is a powerful weapon “in the determination of the kind and structure of technology that will be instituted and of the enhancing or deteriorating uses to which it will be put” (Hayden 1993:292). A significant part of the task is to determine the desirability of the technology in question, the institutionalization process required to adopt the technology, and whether or not expectations of adoption and the subsequent changes are realistic – given the institutional context.

Collectively, Foster (1981) and Swaney (1987) have developed a set of criteria for technological assessment. For new technology Foster offers “technological determinism, recognized interdependence, and minimal dislocation”. To these criteria Swaney adds “the criterion of coevolutionary sustainability which means that development paths or applications of knowledge that pose serious threats to continued compatibility of sociosystem and ecosystem evolution should be avoided” (Hayden 1993:294). Knowledge is not “out there” to be discovered – it is created. Findings by researchers and scientists are determined by the frame chosen by the investigator. As socially embedded individuals, researchers always carry with them considerable moral / ideological baggage which affects much of their scientific work. It follows that the frame of reference for economists is not a given, but created by them (Hayden 1993:294). If in economic analysis the assumption is one of supremacy of the market and market models are the frames of reference, then the findings are likely to relate to the inner workings of the market and concerns about “efficiency” rather than sufficiency and how effectively the market serves socio-political and ecological needs.

A technological transition is said to occur when a new (significantly different) dynamic equilibrium is reached (Rotmans, Kemp, and van Asselt 2001). The concept of transition is firmly rooted in the development of complex systems (Nicolis and Prigogine 1989) according to which under certain conditions, open systems with a gradient across their boundaries will move away from equilibrium and will establish new stable structures (Kay 1991). The development of complex systems is characterized by phases of rapid organization leading to steady states, which after a period of relative calm move toward rapid reorganization to constitute a new steady state. The (re)organization of a given subsystem, e.g., the pulp and paper industry in Europe, may be continuous or catastrophic but is in both cases evolutionary in that at no time all total system components are “stationary”. Transitions are often triggered by external events, such as macroeconomic crises, or shifts in consumer preferences. This is especially the case in the diffusion of ecologically sustainable technologies. During this process of transition firms, customers, policy makers and other parties claiming a stake learn, adapt, negotiate, and compromise with regard to the technology to be adopted. We might conclude that the output characteristics of technologies are merely socially constructed. We might further conclude that this process is embedded, cumulative, path-dependent, based on changes in existing cognitive and institutional textures, and dependent on windows of opportunity to

“lock-in”. Each new state has elements or remnants of past states and thus there are no entirely “new” states.

In the case of the European pulp and paper industry high levels of chlorine in wastewater discharge from pulp and paper mills acted as the main catalyst for the technological transition that ensued. Two types of technology constituted the policy alternatives within the subsystem of pulp and paper. These were Elemental Chlorine Free (ECF), which removed only elemental chlorine and was the cheaper and less effective of the two technologies, and Totally Chlorine Free (TCF) which completely removed chlorine from the process of bleaching. During the 1990s the European pulp and paper industry largely opted for the TCF technology while the north American counterparts widely adopted the ECF. The European subsystem’s environmentally superior technological transition may be attributed to the institutional dynamics that underpin the pulp and paper subsystem in Europe. An important characteristic of these dynamics is the central role played by environmental non-government organizations in influencing consumer behaviour. Another characteristic is the role of consumer preference in “forcing” the adoption of certain types of technology. One could at once see the manifestation of these changes in the associative, behavioural, cognitive, constitutive, and regulative institutions.<sup>15</sup>

## **11. Conclusion**

The main task for this paper has been to identify the elements of a framework for conducting institutional analysis of economic change and to demonstrate how such analysis could be carried out. Part of this task was to bring definitional clarity to such terms as institution, institutionalization, institutional change, old and new institutional economics, and evolutionary economics. There is reasonable clarity as to the meaning of the other terms. It appears, however, that what constitutes an “institution” is not generalizable and depends largely on the researcher, the subject of research, and the research question. Because of definitional looseness surrounding institutions, inevitable difficulties (and many opportunities) are associated with conducting institutional analysis.

Despite the difficulties in finding a universal definition for the institution, it is possible to categorize the definitions and descriptions as form-based, behaviour-based, and context-base. It is in addition possible to fit a typology that encompasses the categorized institutions. The typology could be used to analyze institutional change and institutionalization of new norms, forms, and rules at different levels, scales, and systems. There are of course other ways of organizing the many categories and types of institution. For example, institutions maybe categorized as informal, e.g. customs or conventions, or formal, e.g., courts. Similarly, institutions maybe intangible (e.g., habits and beliefs) or tangible (e.g., government, churches, the family). All these examples appear to share a tendency to persist over time, however. Institutions are relatively “permanent” and usually accepted or tolerated by the vast majority of people. The church, state, family, language, and so on, though evolving,

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<sup>15</sup> For detailed analysis see Parto and Reinstaller (2003), *forthcoming*. For a similar analysis of the evolution of the Dutch waste management sector see Parto and Loorbach (2003), *forthcoming*.

seem to persist unchallenged from generation to generation with relative ease and little change of the main characteristics. In this respect, institutions are analogous to culture. Significant evolutionary change in institutions usually occurs outside two or more consecutive generations. Institutions have a correlating and patterning effect, bringing order (or consistency) and collective purpose into society through establishing a system of norms and beliefs. Institutions are also political – they are embedded in habits and are therefore continuously present in, or have bearings on, human actions.

While recognizing some of the difficulties in structuring what we know about institutions, this paper underlines several points for inclusion in the discourse on the place of institutions in economic analysis. First, this paper has argued that there are different levels of institutions. These are individual, organizational, and societal. Institutions are identifiable in the society at large as rules determining behaviour of individuals. These include laws, beliefs, or widely accepted norms. Organizational norms and rules are expected to be followed by the organization's members. These norms constitute the organization's culture, or memory according to Nelson and Winter (1982), often expressed through statements like, 'that's the way we do things around here', or 'that's the way we've always done it'. Third, there are rules and conventions to be respected by all organizations (including firms) interacting with one another. These constitute the "rules of the game" (and "how the game is played"), to be broken only at the risk of being subjected to coercive action or sanctions. Regularities or patterns which occur due to force of habit, instinct, or coercion are in effect the rules governing the actions of a group of people. In-depth study and analysis of these patterns should reveal the "why, who, what, when, and how" (Neale 1994:402).

Second, institutions are inseparable from the geopolitical context of economic activity. To most people, the term "institution" also implies "specificities of time and place and contrasts with universals (or general characterizations)" (Neale 1987:1181). These rules are largely responsible for maintaining localized socio-political cohesion and stability. Institutions evolve and can be created. Generally, institutions "challenge, borrow from, and, to varying degrees displace prior institutions" (Scott 2001:94). There is no question that institutions can and do change under certain conditions and over the long-term. Institutional change occurs when "an existing set of beliefs, norms, and practices comes under attack, undergoes deligitimation, or falls into disuse, to be replaced by new rules, forms, and scripts" (Scott 2001:95)

Third, although not possible to identify as wholes, components of institutions, manifested as activities of people in situations and in contexts, can be observed and characterized (Neale 1987). For example, Munkirs (1985, cited in Neale 1987) conducted a quantitative analysis of the frequency, circumstances of direct and indirect contacts among officers of major corporations, and analyzed formal and informal planning instruments such as stocks, debts, directorships, trusteeships, and transfers and registrars to establish that a new economic institution had emerged in the United States. The "centralized private planning" (Munkirs 1985) coordinates the actions of different companies through the flow of information among the corporate officers who are members of the informal network (Neale 1987:1190). Identifying

institutions in the manner suggested by Neale (1987, 1994) provides a high degree of flexibility in the use of the term “institution”. What is called an institution by an investigator depends on the investigator’s focus of interest, the types of institutional inter-relations under investigation, and the scope and level of the hierarchy that emerges from such investigation. An institution, say the church, plays different roles in different contexts. Similarly, the behaviour of same economic agents is time and place specific. One may expect however that the same economic agents in the same context are likely to abide by the same rules and conform to shared norms, revealing a specific structure.

Fourth, institutional analysis may be conducted by breaking down social structures into components representing reasonably distinct types of institution as shown in table 3 or by putting together a number of “situations” that make up larger institutions as indicated by Neale (1987) and suggested by Hayden (1982a, 1982b, 1982c) through mapping. In either case the intent, as far as policy- and change-making are concerned, is to be in a better position to predict actions, identify the limits of actions, and investigate future scenarios and their outcomes. Mapping and putting together situations to identify institutions can highlight how institutions at different scales, levels, and systems are inter-related in a (seemingly) seamless quilt, which only upon close examination reveals the carefully placed stitches [or the “writ of rules” to borrow from Neale (1987:1195)] that hold the numerous and colourful pieces of fabric together.

It is at best difficult to conduct institutional analysis without having a firm grip on what constitutes an “institution”. An institution is not a “thing” that once recognized or defined can be then conveniently accounted for as a single variable (or a fixed constraint) in analyses of economic change. There are many varieties of institution. To conduct meaningful institutional analysis institutions need to be identified or discovered, documented, and classified so as to allow the attribution of appropriate weights to the institutions relevant to the subject of study. Mapping can assist in the identification and discovery of institutions in a given context. Despite the “primeval soup” that emerges out of most mapping exercises, mapping is crucial for discovering informal institutions. Grouping institutions based on the typology in table 3 allows closer examination of specific sets of relationships among specific variables so as to understand “why”, as well as how, economic change occurs and at what scale and level. The scale of an institution and the level(s) of inter-relations at which it is manifested help differentiate between endogenous and exogenous factors that give rise to, or change, the institution and whether or not these factors can be meaningfully accounted for in analyses of societal or economic change.

**Table 1. Causes of Institutional Change**

<p>Institutional change may be the product of external or internal processes and factors. External factors that initiate institutional change include:</p> <ul style="list-style-type: none"> <li>• Introduction of new “competence-destroying” (versus “competence-enhancing”) technologies;</li> <li>• Management innovations;</li> <li>• Major changes in political policies, including industrial regulation and employment rules;</li> <li>• Major political upheavals, such as wars and revolutions;</li> <li>• Social reform movements, such as civil rights or women’s liberation;</li> <li>• Economic crisis or dislocations; and</li> <li>• Shifts in cultural beliefs and practices, such as changing conceptions of the natural environment.</li> </ul> <p>Internal factors include:</p> <ul style="list-style-type: none"> <li>• Adjustments;</li> <li>• Refinements;</li> <li>• Amendments;</li> <li>• Shortcuts;</li> <li>• Modifications; and</li> <li>• Departures</li> </ul>
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Source: Scott (2001:187).

**Table. 2 Veblen’s Dichotomy**

<b>Social Ceremonies</b>	<b>Technology</b>
Salesmanship	Workmanship
Business	Industry
Ceremonial	Technological
Ownership	Production
Free Income	Tangible Performance
Vested Interests	Common Man
Sabotage	Community Serviceability
Pecuniary Employment	Industrial Employment
Invidious Emulation	Technological Efficiency
Conscientious Withdrawal of Efficiency	Valuable Information and Guidance
Competitive Advertising	Inordinately Productive Enterprise
Business Prosperity	Industrial Efficiency

Source: Hayden (1982b)

**Table 3. Types of Institution**

Institutions Type	Examples	Direction of Régulation
<b>Associative:</b> Institutions as mechanisms facilitating privileged interaction	Business Networks; Kinship Groups; Social Classes; Associations; Interest Groups	Member ↔ Member
<b>Behavioural:</b> Institutions as standardized (recognizable) social habits	Habits; Routines; Ways of Doing Things; Shared Beliefs; Theories in Use	Individual → Society
<b>Cognitive:</b> Institutions as mental models and constructs or definitions	Cultural and Social Values; Superstitions; “Wisdom”	Individual ← Society
<b>Constitutive:</b> Institutions setting the bounds of social relations	Collective Actions initiated by the State Agencies, Firms, Unions, or Citizens Groups; Language; Property Rights Structures; Agreements; Arrangements; Marriage; Family	Individuals ↔ Individuals and Groups ↔ Groups
<b>Regulative:</b> Institutions as prescriptions and proscriptions	Written and Unwritten “Rules of the Game”; State as Rule Maker, Referee, and Enforcer	Society and State ↓ Individuals and Groups

Source: Adapted from Scott (2001)

**Table 4. Levels of Inter-relations or Embeddedness**

<p><b>Social embeddedness:</b> Interpersonal interdependence is associated with an acute problem of trust owing to the many-sided ‘double contingencies’ of social interaction (grounded in the fact that ego’s behaviour depends on expectations about alter’s conduct and vice versa) where many actors are involved.</p> <p><b>Institutional embeddedness:</b> The problem of trust is reinforced on an inter-organizational level by the difficulties in securing the internal cohesion and adaptability of individual organizations; and in making compatible their respective operational unities and independence with their <i>de facto</i> material and social interdependence on other organizations</p> <p><b>Societal embeddedness:</b> Inter-systemic heterarchy poses the problem of the material and social interdependence of operationally autonomous (or closed) functional systems, each with its own autopoietic codes, programmes, institutional logics and interests in self-reproduction. Autopoiesis is “a condition of radical autonomy secured through self-organization when a system defines its own boundaries relative to its environment, develops its own operational code, implements its own programmes, reproduces its own elements in a closed circuit and obeys its own laws of motion”.</p>
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Source: Jessop (1997)

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