Institutions and Economic Behaviour Under Uncertainty

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RESUMO

Este texto se propõe a estabelecer a relação entre algumas contribuições do nosso entendimento das instituições com uma discussão do comportamento econômico sob incerteza, caracterizando a realidade social como sujeita a mudanças estruturais imprevisíveis. Adotando uma definição ampla de instituições, incluindo convenções, ele discute três modos básicos pelos quais as instituições influenciam o comportamento econômico: sua função restritiva, sua função cognitiva e sua influência sobre os fins. O texto rejeita, por conseguinte, uma abordagem reducionista no que diz respeito à relação entre instituições e indivíduos. A fim de entender melhor a influência das instituições sobre o comportamento, e em particular sobre o conhecimento, o texto também faz uma distinção entre diferentes níveis de consciência e, como resultado, diferentes tipos de conhecimento. Finalmente, o texto estabelece uma conexão entre a discussão precedente e a análise dos determinantes do estado de expectativa, considerando a proposta de Hodgson para uma abordagem institucionalista das expectativas.

PALAVRAS-CHAVE

instituições, comportamento econômico, incerteza, conhecimento, níveis de consciência

ABSTRACT

This paper intents do link some contributions to our understanding of institutions with a discussion of economic behaviour under uncertainty, elaborating the characterization of social reality as subject to unpredictable structural changes. Adopting a broad definition of institutions, including conventions, it discusses three basic ways in which institutions influence economic behaviour: their restrictive function, their cognitive function and their influence on ends. The paper then rejects a reductionist approach to the relation between institutions and individuals. In order to better understand the influence of institutions on behaviour, and particularly on knowledge, the paper also distinguishes between different levels of consciousness and, as a result, different types of knowledge. Finally, the paper establishes a connection between the preceding discussion and the analysis of the determinants of the state of expectation, considering Hodgson's proposal for an institutionalist approach to expectations.

KEY WORDS

institutions, economic behaviour, uncertainty, knowledge, levels of consciousness

There has been a revival in the economic profession's interest in institutions. The present paper is part of this development, and intends to link some contributions to our understanding of institutions with a discussion of economic behaviour under uncertainty.

The first section of this paper briefly deals with the concept of uncertainty adopted here and its relation to institutions. Section 2 presents a broad definition of institutions, including conventions. The paper moves on, in section 3, to a discussion of three basic ways in which institutions influence economic behaviour: their restrictive function, their cognitive function and their influence on ends (which could be called their teleological function). The paper then further elaborates on the relation between institutions and individuals, by rejecting, in section 4, a reductionist approach to this relation. In order to better understand the influence of institutions on behaviour, and particularly on knowledge, in section 5 the paper distinguishes between different levels of consciousness and, as a result, different types of knowledge. The paper closes by establishing a connection between the preceding sections on institutions and the analysis, developed in Dequech (1999a), of the determinants of the state of expectation.

1. THE CONCEPT OF UNCERTAINTY AND ITS RELATION TO INSTITUTIONS[1]

Uncertainty is understood here in a fundamental sense (as in a tradition inspired by the work of KNIGHT, 1921, and KEYNES, 1936, 1937). More precisely, uncertainty is conceived of as a lack of knowledge about the future (and therefore as an epistemological problem) that is the counterpart of an ontological characterization of social reality as subject to unpredictable structural changes. This lack of knowledge is represented by the impossibility of a decision-maker having a complete list of possible future states of the world and forming a unique, additive and fully reliable probability distribution regarding future events or outcomes. This impossibility is due to the fact that events that are unimaginable in the present may occur in the future. The future cannot be anticipated by a fully reliable probabilistic estimate because *the future is yet to be created*. Surprises may occur, both as intended and as unintended consequences of human action. The very decisions that would require a fully reliable probabilistic guide may change the socio-economic future in an unpredictable way, and this possibility of change prevents such a fully reliable guide from existing.

1 This section is based on DEQUECH (1999b).

The problem is not merely that we do not have enough information to reliably attach probabilities to a given number of events. An event which we cannot yet imagine may occur in the future. As we cannot imagine it in the present, we cannot attribute to it any probability. This means that some relevant information *cannot be known*, *not even in principle*, at the time of making many important decisions.

The best example of human creativity and of unpredictable structural change in the economic sphere is the introduction of technological or managerial innovations, as in Schumpeter's process of creative destruction. Historical changes can also be of a more typically political or cultural nature. They have a significant impact on preferences, work relations, the workers' bargaining power, government decisions, etc.

All this is still insufficient to characterize the concept of fundamental uncertainty adopted here. The characterization of fundamental uncertainty by the possibility of creativity and structural change is basically an ontological one. This ontological criterion has been adopted by Davidson (1996) to distinguish uncertainty from other situations, based on the difference between what he calls a transmutable and an immutable reality. The ontological side of the discussion about uncertainty inevitably has a counterpart in terms of the type of knowledge that people can or cannot have under fundamental uncertainty. It is necessary to examine in more depth both the ontological conception of economic reality and its counterpart in terms of knowledge.

The counterpart, in terms of knowledge, of the ontological conception of economic reality as subject to unpredictable structural changes is fundamental uncertainty. But does this uncertainty imply complete absence of knowledge, that is, complete ignorance (or unknowledge, to use Shackle's expression)? First of all, people are or at least may be aware of uncertainty itself. In Hicks's (1977, vii) aphorism, people [may] know they don't know. Can people know more than that? As the type of knowledge of reality that is possible for us to have depends on the characteristics of reality, the question then becomes: is there an ontological basis for some knowledge in a transmutable reality? That depends on whether there is more to be said of the ontology of such a changeable reality.

It is here that the relation between the concept of uncertainty and institutions becomes of crucial importance. There is indeed more to be said of ontology, particularly regarding the existence of social practices that lend stability to economic reality. These social practices are institutions (to be properly defined below). Perhaps the least controversial of these practices are those related to

the existence of some legal institutions. For example, legal contracts regulate the future values of nominal variables. Ontologically, the existence of legal contracts has to be associated with the existence of another institution, the State, which is supposed to enforce contracts. The existence of contracts and the State rules out at least some events or outcomes which would be possible or more likely otherwise. Another type of legal institution that provides stability to a transmutable reality is a market-maker. In a market for a durable asset, the market-maker is responsible for providing orderliness, significantly reducing the magnitude of possible changes in the asset spot price. Prices are more stable, even if not rigid, than they would be in the absence of a market-maker. In addition to legal institutions, there are also more informal institutions which lend stability to economic reality. This should become clearer after institutions are properly conceptualized and their influence on economic behaviour discussed.

The inclusion of institutions allows an elaboration of the ontological characterization of economic reality which in turn results in a more detailed epistemological counterpart. Institutions provide an ontological basis for the existence of some kind of knowledge even in a reality subject to unpredictable structural changes.

Therefore, fundamental uncertainty does not imply complete ignorance. It is a matter of degrees, depending on institutions that reduce or increase it. Not all depends on factors such as animal spirits or creativity. By saying more of social reality than arguing that it is subject to unpredictable structural changes, one can then more easily maintain that the consideration of uncertainty in a fundamental sense does not lead to theoretical nihilism - and therefore refute the accusations of Coddington (1982) and others.[2]

If fundamental uncertainty implied complete ignorance and were not a matter of degrees, institutions would not matter as part of the ontological characterization of reality, at least not in terms of their consequences for what people can know. In particular, the influence of institutions on economic behaviour under uncertainty could not include what is discussed below as their cognitive function.

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2 An important difference between the approach to uncertainty defended here and that of Davidson and others is that the former explicitly links an elaboration of the ontological characterization of reality via institutions with the possibility of some kind of knowledge under uncertainty. Although Davidson occasionally relates institutions to the formation of what he calls sensible expectations, he has tended to deny that uncertainty is a matter of degrees and to overemphasize factors such as animal spirits.

2. *THE CONCEPTS OF INSTITUTIONS, CONVENTIONS AND HABITS*

According to Maki (1993, p. 13), a completely satisfactory definition of an institution does not yet exist. I shall not try to provide one here. Neale (1987, p. 228-29) states that for institutionalists, institutions are similar to culture in the understanding of social scientists.[3] Hodgson (1994, p. 47) argues that '*for institutional economists, an institution refers to any kind of habituated behaviour that is rooted in a group, community or society. It covers formal institutions or organizations such as corporations, associations, armies and states, but it is more general and is not confined to them*' (see also HODGSON, 1988, p. 10; GORDON AND ADAMS, 1989, p. 17-18). Neale's and other writers' definition includes not only patterns of behaviour but also of thought. Thus, a broad definition encompasses different meanings given to the term, according to which institution applies to: (a) social habits or socially diffused routines and ways of thought; (b) social norms; (c) organizations or collective agents.

Some authors propose that organizations be taken from under this umbrella and thus do not consider it an adequate definition - see Kapp (1968, p. 92), Bromley (1989, p. 22-23), North (1990, p. 4) and Khalil (1995). When adopting the broader concept, as I do here, one has to acknowledge the existence of different types of institutions.

Routines are by definition recurrent in time, but they are not necessarily institutions, because they can be strictly individual. The same is true of habits. A routine is a particular act performed regularly, and so is a habit. Perhaps a good way of distinguishing routines from habits is by saying that the latter are not performed consciously, while routines may be. A habit, then, is a particular type of routine. When they are socially spread, habits and routines are institutions.

Social norms are socially shared and/or prescribed standards of behaviour with a normative content enforced upon the individual by external pressure. Legal norms are social norms enforced by the legal system. Other types of social norms are informally enforced by the approval or disapproval of other people in the

3 GRUCHY (1987, p. 3, 15) uses the labels 'homo culturalis' and 'homo institutionalis' as substitutes for the neoclassical 'homo economicus'. Similarly, JENSEN (1987, p. 118-19) explains that institutionalists constructed the alternative concept of a '*multidimensional human being who, for want of a better term, may be labeled the "socio-cultural person".*' The institutionalist notion of culture is non-individualistic (see MAYHEW, 1987; HODGSON, 1993a, p. 156).

group or community (contrast this with ELSTER, 1989, p. 100, who excludes legal norms from his definition of social norms).

Conventions are socially shared and/or prescribed patterns of behaviour and thought. Thus, conventions are institutions.[4] Some authors tend to conceive of conventions as social rules that a group of people ought to follow. I prefer a less restrictive definition, because many types of behaviour referred to as conventions in the economic literature do not have this normative character. This less restrictive definition is particularly useful to deal with unconventional economic behaviour or, more precisely, with behaviour that is, at least in part, unconventional. Conventions (institutions) with a normative content are, then, social norms.

The concern with unconventional aspects of economic behaviour underlies the difference between the definition of convention adopted here and the one proposed by Lewis (1969). The latter, according to which a convention is also a collective standard of behaviour, is more restrictive than the former, for it requires everyone to conform to the convention when there is an expectation that others will do the same (although Lewis is not always so restrictive - see BROMLEY, 1989, p. 79n and FAVEREAU, 1988a, p. 156).

Following Lewis and others, game theory has defined a convention (or an institution, as it is sometimes called) as a solution to a coordination or a prisoner's dilemma game with multiple equilibria (for recent surveys, see YOUNG, 1996 and especially LECQ, 1996). Developing Lewis's analysis also in a game-theoretic context, Schotter (1981, p. 11) distinguishes between conventions and institutions by saying that the former are self-enforcing while the latter need not be so, and thus may require an external sanction. In either case, it is not in the individual's interest to abandon a convention or institution.[5] Note that a convention may become established by some external authority and, once established, be self-enforcing (as in YOUNG, 1996, p. 106).

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4 While I agree with LEIBENSTEIN (1984, p. 77) that conventions are regularities of behaviour with a high degree of adherence, I do not follow his definition of institutions as nonlocal conventions, that is, conventions with a broad range of operation (for example, a city rather than a single company).

5 With Schotter's distinction between conventions and institutions, an anonymous referee's suggestion that it is easier for one to abandon a convention than an institution may be valid, since there would be no external sanctions in the former case. However, one would not want to do so, as long as one expects others to keep following the convention.

However, game theory, as much as it is concerned with the interdependence of individual decisions, is not of interest in the present context, for it traditionally abstracts from fundamental uncertainty - see Shackle (1972, p. 422-26), for an early critique, and, regarding the Bayesian foundations of game theory, Binmore (1987; 1993); other, related criticisms of this literature on conventions/ institutions in game theory are made by Mirowski (1986).[6]

The distinction between conventions and institutions in terms of self-enforceability could be used in contexts other than game theory. As Lecq (1996, p. 417) also notes, old and new institutional economists adopt a broader notion of institutions, which includes conventions. I follow this institutionalist tradition in treating conventions as institutions. In my view, a convention is followed by most people in the environment it applies to (otherwise it ceases to be a convention), but a few individuals may intentionally flout the convention without necessarily behaving against their self-interest, so that not everyone considers the convention self-enforceable. In the economic sphere, the Schumpeterian entrepreneur or firm provides an important example of partly unconventional behaviour that is not necessarily irrational. This example is of particular importance for those concerned with relating institutions and conventions to fundamental uncertainty, as the possibility of innovation is a major source of this type of uncertainty. (DEQUECH, 1997)

Thus, defining conventions as institutions makes the present paper compatible with the terminology adopted in a large part of the old and new institutionalist literature. Additionally, this definition allows the consideration of unconventional behaviour that is not necessarily against an individual's self-interest (and, therefore, is not necessarily irrational). Furthermore, considering conventions as a type of institution opens the way for connecting the literature on institutions with the Post Keynesian discussions of conventions under uncertainty, which facilitates a combination of the institutionalist detailed treatment of institutions with the Post Keynesian detailed treatment of uncertainty. Keynes did not explicitly define convention and can be summarized as referring, rather loosely, to (a) the assumption that the current situation will continue to exist in the future, unless specific indicators in the contrary direction appear, and (b) the resort to the average or majority opinion. (KEYNES, 1936, p. 152-53; 1937, p.

6 It should be noted, however, that game theory has begun to incorporate recent developments in decision theory which go beyond the standard, weak notion of uncertainty prevalent in mainstream economics (e.g., DOW AND WERLANG, 1994 and LO, 1996). As discussed elsewhere, these developments have failed to adequately deal with the fundamental uncertainty associated, for instance, with the possibility of innovation.

114, 124) This has inspired several interpretations or developments of a Keynesian concept of convention. (DEQUECH, 1999c)

3. *INSTITUTIONS AND THEIR INFLUENCE ON ECONOMIC BEHAVIOUR*

It is possible, based on the work of several institutionalists, to identify at least three basic types of influence that institutions have on economic behaviour. The first, which may be called their restrictive function, consists in their role as constraints on economic behaviour. The second refers to their influence on people's perception of reality. The second case has to do with what Hodgson (1989a, p. 110) calls the cognitive function of institutions. These two functions of institutions are not totally independent of one another, since restrictions themselves can under certain circumstances be seen as information providers. In particular, if they restrict the behaviour of several people, they help each person to imagine the possible decisions of the others. Although the distinction between these functions is not absolute, it is useful, among other reasons, for contrasting the institutionalist and the neoclassical treatment of institutions, since the latter has tended to emphasize the role of institutions as constraints.[7] Institutions perform a third function through their influence on the ends that people pursue.

Neale (1987, p. 228-29) describes the restrictive function of institutions, although he does not use this expression. He writes that '*a culture* [institutions, for him] *defines the permissible and the forbidden, defines right and wrong, the admirable and its opposite, gives content to these definitions with rules for behaviour, and so provides opportunities as well as limits. ... Institutions imply "you may" as well as "thou shall not".*' Post Keynesians such as Carvalho (1983-84, p. 279) and McKenna and Zannoni (1993, p. 402) share this view. Social norms, as defined above, are the specific type of institution which works as a constraint.

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7 According to FUSFELD (1989, p. 361), some more sophisticated neoclassical analyses consider that '*choices may also be constrained by the institutionalists' "socio-cultural environment". But in conventional theory the key concept is individual choices with constraints.*' Fusfeld does not refer to New Institutional Economics (NIE). Its neoclassical faction, in which the majority of NIE belongs (RUTHERFORD, 1994, p. 3), has been attempting to broaden the mainstream treatment of institutions. However, KHALIL (1995, p. 452) argues that NIE still focuses on institutions as constraints. This is true for most NIE. See also FAVEREAU (1989) on extensions of neoclassical theory (including part of NIE) which endogeneize institutional constraints by transforming them into rules accepted by mutual consent.

Fusfeld (1989) and Hodgson (1988, p. 134) criticize the negative view that neoclassical theory has of institutional constraints. These constraints can be treated as elements that bring order to economic life. (CARVALHO, 1983-84)

Furthermore, an overemphasis of the restrictive function of institutions prevents one from adequately seeing their cognitive function, which has also been highlighted by institutionalists. This cognitive function refers, firstly, to the information that institutions provide to the individual, including the indication of the likely action of other people.[8] I call this the informational-cognitive function of institutions. Secondly, the cognitive function of institutions includes also their influence on the very perception that people have of reality, that is, on the way people select, organize and interpret information. I call this their deeper cognitive function. This point, while commonly emphasized by the Veblen-Commons variety of institutionalism, is also made by a few scholars closer to NIE (STREIT, MUMMERT AND KIWIT, 1997; KNIGHT, 1997). Among these scholars, Denzau and North (1994) highlight a specific aspect of the deeper cognitive function of culturally shared mental models[9] by pointing out their importance to the process of learning: a culturally shared mental model expedites the process by which people learn directly from experience; it also facilitates communication between people, which is crucial for them to learn from each other's experiences; in addition, the cultural heritage helps to transfer perceptions to other generations.

For Khalil (1995, p. 452), '*the main thrust of old institutional economics is the modelling of institutions as determinants of the agent's cognitive ability*' (as paradigms, in Khalil's words). In general, old institutionalists attribute to institutions a broader and deeper cognitive function than members of other schools of thought that also emphasize the role of institutions. Nevertheless, Lawson (1985, p. 917-20) and McKenna & Zannoni (1993, p. 402-3), for example, when discussing Keynes, treat the influence of the social context on

8 See HODGSON (1988, chapter 6). For a new institutionalist perspective, see LANGLOIS (1986, p. 18) and KNIGHT (1997, p. 694-95). An earlier discussion appears in NEWMAN (1976). For NEALE (1987, p. 229), '*institutions are the "habits of use and wont" (the phrase is Veblen's) that allow people to act with a high degree of confidence in their expectations of how other people will respond to their actions, and that allow other people to interpret actions and to respond intelligently. Institutions give meaning and continuity to actions and assure that each action fits with some of the actions of other people to maintain ongoing processes.*' This can be seen as a developed form of expressing the idea that institutions help give order to economic life. An important issue is, in Neale's terms, the *degree* of confidence and sureness associated with the information provided by institutions.

9 Denzau and North call these models ideologies, used to interpret reality, and conceive of institutions just as rules of the game (constraints), used to structure and order the external environment.

knowledge in a manner that resembles the institutionalist approach, even if with a different wording (see also ROTHEIM, 1989-90, p. 323; PETERSON, 1984, p. 433).

Finally, institutionalists stress that ends are influenced by the social environment (see, for example, GRUCHY, 1972, p. 290-92; HODGSON, 1988, p. 10, 124; FUSFELD, 1989, p. 362-64). Neoclassical economists may accept this social influence on ends, but they too often do not pay sufficient attention to it. They usually assume that people pursue their self-interest, but, like other ends, self-interest is culturally conditioned. Some forms of social arrangement may stimulate self-interested behaviour more than others, or may make self-interest assume a more individualist or selfish character than others.

Jensen (1987, p. 118-19) states that for institutionalists the 'socio-cultural person' (as opposed to *homo economicus*), influenced by a changing society, 'pursues a multiplicity of goals and objectives' (also SCREPANTI, 1995). In my view, this social influence makes it more clearly possible that people simultaneously pursue different ends which may not be easily reconciled (see also ISAAC, 1997, p. 565).

Moreover, the possibility of social change (an important source of uncertainty) leads to the possibility of a change in ends. Therefore, ends must be understood socially and historically, instead of being seen as natural and/or eternal, i.e., as existing in all forms of society and/or at all times, past, present and future.

4. *REJECTING REDUCTIONISM*

Acknowledging the important influence of institutions immediately implies rejecting any voluntarist or subjectivist view of individual behaviour.[10] At the same time, it is essential to avoid 'institutional determinism', which, as Adams (1994, p. 336) puts it, '*results from imbuing culture, rules, customs, and laws with*

10 By this I mean that, if institutions strongly influence individual behaviour in the ways discussed above, then this behaviour is not totally specific of a particular individual, but rather has several aspects which are intersubjectively shared with other individuals operating in a similar context. The same argument is true of the type of institutions represented by conventions, which, contrary to the suggestion of an anonymous referee, are not conceived of here as being more 'subjective' than institutions. Even if we were to think of conventions as informal institutions, conventions would still be intersubjective. Conventions are a crucial factor in the socialization of any individual. I am thankful to that referee for forcing me to clarify this point.

an excessive capacity to prefigure individual actions.' In sum, it is necessary to reject reducing individuals to society and vice versa. This implies going beyond the dichotomy between agency and structure, free will and determinism, methodological individualism and methodological collectivism, etc.

As the discussion in the preceding section about the influence of institutions on individual behaviour owes much to the (old) institutionalist tradition, it is useful to note that economists working in this tradition have often been accused of the second type of reductionism. However, several of them adopt an anti-reductionist stance - for example, Miller (1978), Mayhew (1987), Hodgson (1988, 1993a), Rutherford (1989a, 1989b, 1994), Samuels (1990a, 1990b) and Adams (1994).

To be sure, many institutionalists are self-proclaimed holists. Holism is viewed by some critics as implying reductionism. For Rutherford (1994, p. 38), different institutionalists display various degrees of holism and only some are extremists. However, as Hodgson (1989b, p. 251) and Rutherford (1989b, p. 301; 1994) note, terms such as determinism and holism have not been given very precise meanings (also LANGLOIS, 1989, p. 285-86). In part due to its complexity, the discussion has been marked by an enormous semantic confusion.[11] More important than the label used is whether the analysis is reductionist or not.

For at least some of those institutionalists who maintain that the influence of institutions on individual perception and action does not imply that individuals are mere passive reactors, an essential argument is based on the emphasis given by institutionalists to the process of institutional change. According to Mayhew (1989, p. 325, 327), the Veblen/Ayres strand of institutional economics has developed the idea that purposive behaviour causes socioeconomic change by creating '*new tools for manipulation of the physical world*.' Similarly, Hodgson (1988, p. 140) points out the potential for cumulative instability in Veblen's theory and refers to '*the clashing new conceptions and traditions thrown up with each innovation in management and technique*.'

11 For example, HODGSON (1993b, p. 110-11) argues that holism is a troublesome term: '*There is a danger that holism itself becomes one-sided and perhaps even reductionist: in social analysis a mirror image of methodological individualism*.' Hodgson suggests that institutionalists substitute organicism for 'the much abused notion of holism'. Unfortunately, as DOW (1991, p. 148-49) shows in her account of Keynes's epistemology, the term organicism also creates confusion. The expression 'methodological individualism' is not free of semantic controversy either. For LANGLOIS (1989, p. 285), methodological individualism is not necessarily opposed to seeing social wholes as more than the sum of the parts or to arguing that society influences individual aims and purposes (also RUTHERFORD, 1989a, p. 169n; 1994, p. 36; BOETTKE, 1995, p. 28).

However, Rutherford (1989b, p. 313-14) accuses some of his fellow institutionalists of tending '*to see institutional change as an outcome of a process involving virtually autonomous social forces (institutions versus technology) that impinge on individuals*'; ... "*this [extreme] holistic view implies that change only occurs as the result of the overwhelming impact of some outside, supraindividual, 'power'.*"[12] Thus, concern with structural change does not *per se* indicate a rejection of reductionism.

In traditions of economic thought other than institutionalism, some authors also share the sort of anti-reductionism defended here.[13] This is the case, for instance, of Dow (1988, 1990) and Rotheim (1989-90), within Post Keynesianism.[14] Post Keynesians have to be mentioned in this context because of their emphasis on uncertainty.[15] Shackle has a positive influence on Post Keynesians in this and other aspects, but Shackle's work is subject to criticism for neglecting the social context and tending to extreme subjectivism and voluntarism - see Giddens (1979, p. 70), Carvalho (1983-84), Hodgson (1989a) and Davidson (1993).

Surely, individuals can be creative, in the sense of originally producing change and not merely devising new habits, new rules to adapt to some change. Moreover, individuals create the future not simply by innovating or by being

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12 RUTHERFORD (1989b, p. 313-14) exempts Commons and (partially) Veblen from this accusation. HODGSON (1988, p. 57) also distinguishes Commons from Veblen (and Mitchell) in this regard; but he states that they all 'have an explicit notion of purposeful, individual human action'.

13 From a neo-Schumpeterian perspective, DOSI (1988) criticizes a reductionist analysis of institutions, but he means reductionism of a different kind. He is against the reduction of institutional issues to exceptions, anomalies and particular cases of a framework based on General Equilibrium theory.

14 Post Keynesians are also against yet another type of reductionism, namely that of the microfoundations project, i.e., the attempt to reduce macroeconomics to microeconomics. Here is another example of how the term 'holism' has been used. DOW (1985, p. 16) associates holism with 'a general perception of how the system works'. One aspect of Dow's definition of holism is the concern with the fallacy of composition (p. 83). This goes against the microfoundations project, as is clear, for example, in Keynes's analysis of the paradox of thrift or of the effects of money-wage cuts on employment, where it is shown that a form of reasoning that might seem at first plausible for an individual or a firm does not necessarily apply to the economy as a whole. The concern with fallacies of composition at least in part underlies Dow's characterization of Keynes's methodological framework as 'holistic, rather than piecemeal' (p. 59).

15 Institutionalists may not give as much emphasis to problems of knowledge and uncertainty as others, but they do relate their approach to the open nature of the economic process: '*The view that they hold ... is that there is no final or inevitable end to processual development.*' (GRUCHY, 1987, p. 22)

bolder than the majority, which only some do, but also by imagining the future and deciding what to do based on this imagination, which applies to all individuals. Individuals and their interaction can structurally change the economic situation, including through the unintended consequences of individual actions. If one recognizes this, one must also consider that people have to creatively imagine the future in their minds and act accordingly. At the same time, one should avoid '*extreme forms of subjectivism whereby beliefs are treated merely as creative acts of the imagination*.' (LAWSON, 1987, p. 963; also ROTHEIM, 1995, p. 174)

A strong case against reductionism can be made without a commitment to any particular theory or school of thought, as in Lawson's (1997, p. 166-70) recent economic methodological discussion.[16]

5. *LEVELS OF CONSCIOUSNESS AND DIFFERENT TYPES OF KNOWLEDGE*

The reference made above to habits automatically indicates that behaviour is not always fully conscious and does not take place at only one level of consciousness. We can identify at least three such levels: (1) consciousness; (2) subconsciousness; and (3) unconsciousness. A more detailed distinction could be made (see HODGSON, 1988, p. 109-111), but for the purposes of this paper it is sufficient to identify the presence of habits and of what Michael Polanyi called tacit knowledge at the intermediate, subconscious level.

In connection with tacit knowledge, subconsciousness is sometimes referred to as 'practical consciousness', as distinct from 'discursive consciousness' (e.g., LAWSON, 1997). These latter terms are borrowed from Giddens, who states (1979, p. 57) that practical consciousness is '*tacit knowledge that is skilfully applied in the enactment of courses of conduct but which the actor is not able to formulate discursively*.' I like to say that in these cases something is easier done than said, contrary to the usual expression. Several skills can be acquired through practice without being discursively dealt with.

16 It should also be noted that the issue of agency and structure has long been a focus of attention in social theory, with important contributions to overcoming the dichotomy between them - e.g., BOURDIEU (1981) and GIDDENS (1984); for a discussion with special reference to economics, see GRANOVETTER (1985).

Habits can thus embody tacit knowledge.[17] However, some habits may result from the repetition of acts initially performed at a discursively conscious level. Similarly, some of the knowledge embodied in acts performed subconsciously may be expressed verbally, if necessary. If the expression 'tacit knowledge', as usually employed, is not suitable for these cases, perhaps 'practical knowledge' would be a good expression to designate, more generally, the knowledge embodied in acts performed subconsciously, be such knowledge tacit or not.[18]

These habits or practices may be individual or they may be shared by a group (such as a family or a work team) or by society as a whole. Indeed, a very important way of learning these habits or practices is by imitating other people, something that we do since early childhood. As social habits or practices are institutions (according to the broad definition proposed at the beginning of this paper), institutions too can embody tacit or practical knowledge. We employ this knowledge in our everyday social life.[19]

Furthermore, the conceptual framework we use to interpret reality is very much a result of social interaction (as HODGSON, 1988, p. 119-120 argues, based on cognitive theory). The deeper cognitive function of institutions may also be performed at a subconscious level.

6. *INSTITUTIONS AND THE STATE OF EXPECTATION*

In this section I turn to the relation between institutions and one of the major determinants of conscious decision-making, namely the state of expectation.

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17 For references to habits and customs as repositories of knowledge, see LANGLOIS (1985, p. 315) on SCHUMPETER, LAWSON (1985, p. 917) and MEEKS (1991, p. 148-49) on KEYNES, VANBERG (1993, p. 182) and BUTOS AND KOPPL (1997) on HAYEK. HODGSON (1988, p. 10, 110, 126) develops an institutionalist tradition of emphasis on this point (see also RUTHERFORD, 1994, p. 62), which has some similarity with Hayek and the Austrian wing of New Institutional Economics. On routines as storage of operational knowledge, see NELSON AND WINTER (1982, p. 99).

18 LAWSON (1997, p. 179) gives tacit knowledge this wider sense: '*discursively acquired knowledge can, with time and experience, become tacit knowledge, just as tacit knowledge may, on reflection, be rendered discursive*.'

19 One could perhaps add to the distinction between tacit and other types of knowledge a distinction between tacit and other types of information. As far as I know, the latter distinction is not commonly made. Thinking of those who find it easier to accept the possible tacitness of knowledge than that of information, I refer to an informational-cognitive function of institutions (instead of an informational one), to account for the possibility that institutions provide us not only with information (which some people may not see as tacit) but also with tacit knowledge about the likely behaviour of others.

Before doing that, I should note that an important implication of the previous section is that the discussion of conscious decision-making has to refer, implicitly or explicitly, to a subconscious process of information selection, organization and interpretation, which, as argued above, is part of the cognitive function of institutions. This subconscious process crucially influences knowledge, which, as argued below, is one of the fundamental determinants of the state of expectation. In forming our state of expectation, we employ a cognitive framework that is only in part held consciously. This coexistence of conscious and subconscious elements clearly applies to knowledge, but it may also be true of other determinants of the state of expectation (to be mentioned shortly). Therefore, our conscious behaviour necessarily involves non-conscious aspects, and it is impossible to completely separate the former from the latter. Indeed, the presence of these non-conscious aspects free us to concentrate our conscious attention on fewer things. All this is quite consistent with Lawson's (1995) idea that the wider conception and understanding of which our expectations are part are often tacitly held. For all these reasons, the influence of institutions on the state of expectation is not restricted to a conscious level of behaviour.

The state of expectation consists of expectations proper and the confidence with which these expectations are held, as Keynes (1936, p. 148) suggested. Dequech (1999a) develops this idea, proposing a more detailed scheme of determination of the state of expectation. For the purposes of the present paper, it is not necessary to present that scheme. It is sufficient to note that all the fundamental determinants of the state of expectation considered in that paper, namely, knowledge, animal spirits and creativity, are significantly influenced by the institutional setting in which individuals operate. At the same time, there are factors affecting knowledge, animal spirits and creativity which are particular to a single individual, to his/her experiences and his/her personal reactions to those experiences.

Thus, it is worth commenting on Hodgson's (1989a) proposal for an institutionalist approach to expectations.[20] Hodgson may give the impression that an extensive consideration of the influence of institutions on perception and behaviour would make expectations endogenous to a Keynes-cum-institutionalism model.[21] This is how Arestis (1992, p. 100), for example,

20 Hodgson does not distinguish between expectations, confidence and the state of expectation.

21 FAVEREAU (1988b, p. 198, 203-05) also seems to argue that it is possible - and necessary - to develop Keynes's theory so as to make expectations endogenous, while at same time emphasizing a radical type of uncertainty. Again, this would also be accomplished by dealing with institutions - or, more specifically, conventions.

approvingly interprets him. For Hodgson (1988, p. 230), '*a crucial weakness of the General Theory in comparison with the rational expectations hypothesis is Keynes's treatment of long-term expectations as exogenous to the model*.' Hodgson (1985, p. 20) refers to the rational expectations approach as an '*alternative, endogenous treatment of expectations*', from which he differentiates his own approach because in the latter '*the processes of the formation and evolution of institutions themselves still remain exogenous*.' Furthermore, Hodgson (1985, p. 40) contends that one consequence of adopting an institutionalist approach '*would have to be a recognition of the likelihood of divergent expectations, based on a non-uniformity of institutional structure and routine*', as if institutions, routines and habits were the only or almost exclusive determinants of expectations and considering them were the only way by which one could envisage the possibility of divergent expectations.

Nevertheless, Hodgson is not necessarily defending an approach in which expectations are completely endogenous, even though he undoubtedly criticizes treating them as exogenous. He recognizes largely indeterminate influences on expectations. Hodgson (1988, p. 225) does not '*propose a kind of structural determinism in which the ideas and actions of economic agents are completely determined by the appropriate structures and institutions. Due recognition should be made for insight, will, flair, accident and the like*' (see also p. 63). In short, Hodgson is not explicit about the endogeneity or exogeneity of expectations and is somewhat ambiguous in this respect.

Fusfeld (1989, p. 361) may be right in claiming that '*the reconstruction of the economic theory of individual behaviour requires an analysis that moves the socio-cultural environment out of the category of "parameter" and into the centre of analysis*.' The mistake would be not to accept that, as much as the social environment influences people's perception, expectations will always be to some degree exogenous in a theory dealing with uncertainty. In an effort towards a semantic agreement, expectations could be characterized as *partially* endogenous, *partially* exogenous.[22]

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22 HODGSON may agree with this choice of words, as he (1988, p. 12) adopts the idea of partial indeterminacy. DAVIDSON may also agree, as he (1990, p. 74) writes that "*choice can be, at least in part, due to an 'uncause'*" (emphasis added). An 'uncause' may be conceived in relation to the causes admitted within the model. This avoids unnecessary controversy. It should be noted that a model is understood here in a broader sense than the one according to which a model is a system of equations. In other words, a model is not necessarily a formal one. An exogenous element of a model (which does not need to be called a variable, if the model is not formal) is defined here as one which is not explained within the model. If the model is not a formal one, one can speak of an element of it being partly endogenous, partly exogenous, in the sense that the model only explains part of that element. For DOW AND DOW (1985), there is here a methodological, more than semantic, problem. They condemn a dualist methodology that implies a dichotomy, among other things, between endogeneity and exogeneity of expectations (see also DOW, 1990).

Keeping in mind these warnings against an overemphasis on institutions, especially in a context of uncertainty, a connection between institutional economics and a treatment of the state of expectation inspired by Keynes can perhaps be more easily identified in the case of the perception of uncertainty, which is conceived of by Dequech (1999a) as one of the determinants of the confidence with which expectations are held, than in the case of expectations proper. The knowledge involved in the perception of uncertainty is the knowledge of institutions that help to reduce or increase the (ordinal) degree of uncertainty. Among these institutions, one can, following the Post Keynesians, highlight contracts, market-makers and conventions.[23] The connection between this point and institutionalist theory becomes more visible once one realizes that what is involved here is the cognitive function of institutions. Contracts and market-makers are clearly intended to provide information on the future nominal value of important economic variables by providing information on the likely future behaviour of other people and of collective entities such as the state, responsible for enforcing contracts, and the market-makers, responsible for reducing the volatility of prices in organized markets. Conventions may also provide information on other people's behaviour, and even their deeper cognitive function helps to reduce the range of actions that are likely to be pursued by individuals sharing some social environment.

Moreover, the fact that knowledge is affected by the institutional context in which it is produced also has to be considered here, together with the fact that uncertainty perception depends on the theory of economic reality implicitly or explicitly adopted by the decision-makers. The dominant approach in economics, which is institutionally strengthened by the prestige of the universities in which it is taught, the journals in which it is published, etc., neglects fundamental uncertainty. This may negatively influence the perception of uncertainty by practical decision-makers.

This sort of institutional analysis can be extended to other factors affecting the state of expectation. This will have to wait, however, for further research.

7. CONCLUDING REMARKS

The first relation to be established between institutions and economic behaviour under uncertainty has to do with the concept of uncertainty itself. Institutions

23 To accept that institutions help to reduce or increase the (ordinal) degree of uncertainty one obviously has to accept that uncertainty is a matter of degrees. As seen above, there is no consensus on this issue.

are seen here as an important part of the ontological characterization of a social reality that is subject to unpredictable historical changes. Their existence is also seen as having an epistemological counterpart in terms of making some knowledge possible even in such a reality.

Institutions influence economic behaviour under uncertainty in several ways. One of them is through their cognitive function, which is possible because even the fundamental type of uncertainty emphasized here does not imply complete ignorance. Institutions also constrain behaviour and influence the ends that people pursue. The identification of these different types of institutional influence on behaviour is combined here with a rejection of reductionism: individuals cannot be reduced to institutions, nor vice versa.

These different ways in which institutions affect behaviour do not take place at only the highest level of consciousness. In particular, the cognitive function of institutions may be performed at a subconscious level. Institutions embody knowledge and influence people's very perception of reality.

The discussion of the role of institutions improves our understanding of the state of expectation and, by extension, of conscious decision-making. That discussion helps us to acknowledge that the line separating the conscious from the non-conscious aspects of behaviour is not easy to draw. Moreover, knowledge, animal spirits and creativity (the ultimate determinants of the state of expectation) are conditioned by institutions, but, from the non-reductionist perspective adopted here, are not seen as determined by the latter.

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This paper is based on chapter III of Dequech (1998). The author wishes to thank his PhD supervisors, Geoff Harcourt and Paul Davidson, as well as Sheila Dow, Jochen Runde and two anonymous referees, for useful comments on earlier versions. The usual caveats apply. Financial support from FAPESP (São Paulo, Brazil) is gratefully acknowledged.

(Recebido em abril de 1999. Aceito para publicação em setembro de 1999)