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## **Cognitive and Cultural Embeddedness: Combining Institutional Economics and Economic Sociology**

*David Dequech*

A minority of economists and a relatively larger contingent of scholars in other social sciences have attempted to show that the neoclassical theory of economic behavior has serious limitations and to develop alternative approaches. In this effort, both non-neoclassical economists and non-economists have enriched their work with research done outside their original disciplines, but there is room for much more interdisciplinary cooperation.

This paper is part of a broader interdisciplinary discussion of institutions, cognition, and economic behavior begun in Dequech 2003a. The present paper examines what has been called, in recent economic sociology, the *cognitive and cultural embeddedness of economic behavior*, relating this to discussions of institutions in economics. It considers not only the so-called *new economic sociology* but also part of the new institutionalism in sociology, an approach marked by its emphasis on cultural-cognitive issues, according to W. Richard Scott (2001, 57). Additionally, the paper is intended to facilitate communication among institutional economists and economic sociologists, which requires discussing some key concepts and how they might be translated into a different language and related to each other. Given this journal's readership, a more specific aim is to make institutional economists more aware of interesting lines of work in economic sociology.

The paper is organized as follows. The first section discusses the notion of embeddedness, which is a core concept for many contemporary economic sociologists. Different varieties of embeddedness are identified. The second section examines the notion of culture and the influence of culture on economic behavior and then relates

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this to the economists' treatment of institutions. The third section shows the strong intertwining of cognitive and cultural embeddedness. Finally, the fourth section highlights one among other points concerning the relation between cognition, culture, and economic behavior: the different ways in which culture and cognition are constitutive of economic agents.

### ***Kinds of Embeddedness of Economic Action***

The notion of embeddedness may be traced back to Karl Polanyi and Clifford Geertz. It was revitalized by Mark Granovetter (1985) and has since then become a central concept in the new economic sociology. Granovetter's influential article focuses on the embeddedness of economic action "in networks of interpersonal relations" (504). Granovetter (486) used the expression "structural embeddedness" to indicate that not only the personal relations (the "relational" aspect of embeddedness) matter but also the "the structure of the overall network of relations" (1990, 98-99).

In Sharon Zukin and Paul DiMaggio's (1990) wider conception, four kinds of embeddedness of economic action are identified: cognitive, cultural, structural, and political embeddedness. *Cognitive embeddedness* refers to "the ways in which the structured regularities of mental processes limit the exercise of economic reasoning." This notion calls attention to "the limited ability of both human and corporate actors" (15-16) to employ the kind of rationality required by neoclassical economics. *Cultural embeddedness* refers to "the role of shared collective understandings in shaping economic strategies and goals" (17). *Structural embeddedness* is defined, following Granovetter, as "the contextualization of economic exchange in patterns of ongoing interpersonal relations" (18). Finally, by *political embeddedness* they mean "the manner in which economic institutions and decisions are shaped by a struggle for power that involves economic actors and nonmarket institutions," such as the legal framework of the state (20).

The largest part of the research in economic sociology since its revival has studied embeddedness by focusing on networks, so much so that this has become known to many people as *the embeddedness perspective* (see, for example, the surveys in Swedberg 1997, 162, 166; Lie 1997, 349-350; and Hamilton and Feenstra 1998, 158). This is a valuable point of view, but this paper will emphasize cognitive and cultural aspects. As the surveys just mentioned indicate, only a minority of writings in the new economic sociology has adopted a cultural perspective<sup>1</sup> and, among these, some have discussed cognitive issues.

It is useful, then, to present Zukin and DiMaggio's concepts of cognitive and cultural embeddedness in somewhat more detail. They have not written much on cognitive embeddedness but have indicated that the limitations in the exercise of economic reasoning to which their concept refers have been revealed mostly by research in cognitive psychology and decision theory.<sup>2</sup> In addition, in consonance with their emphasis on the limited ability of both human and corporate actors, Zukin and DiMaggio have associated cognitive

embeddedness with the notion of bounded rationality. They went into more detail when explaining how economic behavior is culturally embedded: “Culture sets limits to economic rationality: it proscribes or limits market exchange in sacred objects and relations . . . or between ritually classified groups. Moreover, . . . culture may shape terms of trade. . . . Culture, in the form of beliefs and ideologies, taken for granted assumptions, or formal rule systems, also prescribes strategies of self-interested action . . . and defines the actors who may legitimately engage in them. . . . Culture provides scripts for applying different strategies to different classes of exchange. Finally, norms and constitutive understandings regulate market exchange” (17).

### ***Culture, Institutions, and Economic Behavior***

*Culture* has been given several different meanings (which will not be discussed here, except for a few references). For any given meaning, *culture* may have several facets or varieties. As such, it has been the object of different taxonomies (DiMaggio 1994, 27–28). One of them, due to Talcott Parsons, distinguishes between the cognitive, expressive (or affective) and valuative aspects of culture. Another compares that which culture provides: strategies or means, on one hand, and values or goals on the other. Yet another establishes a hierarchy between the taken-for-granted and the more consciously accessible aspects of culture, with the former being treated as foundational.

When discussing economic sociology, DiMaggio himself has preferred to distinguish between constitutive forms of culture (such as categories and scripts) and regulatory ones (such as values and norms). “Those who view culture and economic behavior as mutually generative tend to emphasize the former: culture provides the categories and understandings that enable us to engage in economic action. Those who treat economic behavior as analytically distinct from culture stress the ways in which norms and conventions constrain the individual’s untrammelled pursuit of self-interest” (1994, 28).

All these distinctions seem to partially overlap instead of being mutually exclusive. They have interesting parallels with my own taxonomy, based on the work of several institutional economists, of how institutions influence economic behavior.

At least three types of influence can be identified (Dequech 1998, 2002). The first, which may be called the *restrictive function* of institutions, consists in their role as constraints on economic behavior.<sup>3</sup> This is the type of influence emphasized by neoclassical economists and many new institutional economists. I therefore agree with DiMaggio’s (1994, 28–29) description of most economists as being among those who prefer to stress how culture, in its regulatory forms, constrains behavior. The second type of influence refers to the *cognitive function* of institutions, which is related to the (strictly) cognitive aspects of culture. The cognitive function refers, first, to the information that institutions provide to the individual, including the indication of the likely action of other people. I call this the *informational-cognitive function* of institutions. Second, 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*. Institutions perform a third function through their influence on the ends that people pursue. For want of a better term, this can be called their *motivational*, or teleological, function. This function is related to the valuative aspect of culture and to the identification of culture as providing values.<sup>4</sup> I would now like to explicitly add a fourth function, through which institutions influence the emotions guiding economic behavior.<sup>5</sup> This *emotional* function is related to the expressive, or affective, aspects of culture.

Recognizing the motivational function and perhaps especially the deeper cognitive function of institutions seems to be incompatible with adopting an atomistic conception of individuals, as these functions indicate a fundamental influence of the institutional environment on individuals. These functions seem to be similar to the role performed by at least some of the constitutive forms of culture mentioned above. As to the informational-cognitive function, in contrast, I have suggested that it can be acknowledged without a rejection of an atomistic conception of individuals.

All these parallels between my typology and those referring to culture can be established mainly because, as Walter Neale (1987, 1177–78) pointed out, institutions, for institutional economists in the Veblen-Commons tradition, are similar to culture in the understanding of other social scientists. This is perhaps well illustrated by the fact that Allan Gruchy (1987, 3, 15) used the labels *homo culturalis* and *homo institutionalis* as interchangeable alternatives to the neoclassical *homo economicus*. The proximity between those concepts is also indicated by Anne Mayhew's (1987) identification of culture as a core concept in "old," or "original," institutional economics (implicitly treated as very similar to institutions by Mayhew 1987, 588, 601).

The precise definitional relation between institutions and culture is seldom discussed explicitly by institutional economists. Among the exceptions, Neale (1994, 404) defined a culture as "the sum of and the interrelationships among institutions." (Mayhew 1994 seems to imply a similar distinction, but she sees problems with the idea of culture as an interrelated whole [117].) Geoff Hodgson (2001, 292–99) has recently explored this definitional issue in a somewhat complex way that I cannot discuss in detail here. For the purposes of this article, it is sufficient to point out not how institutions and culture differ, in Hodgson's view, but what they have in common: both institutions and culture are based on habits of thought and behavior. References to habits of thought and behavior are very frequently made by "old" institutional economists when defining institutions, including authors who refer to culture without distinguishing it from institutions.

This is important in the present context because it contrasts with the way in which some sociologists have treated culture: as a system of beliefs, values, and symbols. As such, culture has been distinguished from regularities in social behavior and relationships—these regularities would constitute social structure (Scott 2001, 40–41). For the "old" institutional economists, in contrast, socially spread regularities of behavior or at

least behavioral dispositions are a defining element of institutions and culture, together with the ideas associated with this kind of behavior or disposition.<sup>6</sup>

Closer to the “old” institutionalist economic view, other sociologists have included habitual patterns of behavior or behavioral dispositions in their conception of culture. Within economic sociology (as distinct from sociological theory in general), DiMaggio, for example, has established the above-mentioned hierarchy between the taken-for-granted and the more consciously accessible aspects of culture (1994, 27). In a more complex, multi-level hierarchy, the former aspects can be subdivided into groups, one of which includes “habitual, often preconscious, behavioral or problem-solving routines,” variously called strategies, logics, or *habitus* by sociologists or scripts or production systems by psychologists (DiMaggio 1990, 114). Similarly, DiMaggio and Walter Powell (1991) argued that the new institutionalism in organizational analysis is based on a theory of practical action which emphasizes the habitual nature of action and the role of preconscious processes and schema.

Regarding the centrality of behavioral dispositions, the work of Pierre Bourdieu (highlighted also by DiMaggio and Powell 1991) is an important contribution to sociological theory in general, as well as to economic sociology in particular. “Culture,” wrote Bourdieu (1968, 706n), “may be applied to the system of objective regularities as well as to the competence of the agent as a system of internalized models.” However, he believed the term “culture” may be misunderstood and preferred to use, instead, the concept of *habitus*: “a system of lasting and transposable dispositions which, integrating past experiences, functions at every moment as a *matrix of perceptions, appreciations, and actions* and makes possible the achievement of infinitely diversified tasks” (1977, 82–83).<sup>7</sup>

### ***The Intertwinement of Cognitive and Cultural Embeddedness***

Cognition has appeared in the sociological literature in two distinct senses. The first is a broad one, according to which *cognition* refers to the full range of mental activity. In this broad sense, the cognitive aspects of culture are not separated from, but rather include, its affective (or expressive) and valuative aspects. Values, attitudes, and norms, for example, are considered cognitive elements. The second sense of cognition is narrower, as affective and valuative aspects are separated from cognition *sensu stricto*.<sup>8</sup>

Even understood in the more strict sense, cognition is closely related to culture. So is cognitive embeddedness closely related to cultural embeddedness.

This is not so explicit in Zukin and DiMaggio’s (1990) original presentation of the embeddedness typology, where the “structured regularities of mental processes” (mentioned in the definition of cognitive embeddedness) and their possible relation with “shared collective understandings” (mentioned in the definition of cultural embeddedness) are not specifically discussed. Without further specification, the notion of cognitive embeddedness could be combined with an individualistic conception of

cognition and economic behavior. Perhaps it could even apply to a hypothetically non-socialized and isolated individual (more similar to Mowgli or Tarzan than to Robinson Crusoe), as long as his or her mental processes had structured regularities that limit economic reasoning.<sup>9</sup>

Moreover, Zukin and DiMaggio's (1990) discussion of cognitive embeddedness highlights, as seen above, the limited reasoning ability of both human and corporate actors, especially as revealed by research in cognitive psychology and decision theory, and the related concept of bounded rationality, originally developed by Herbert Simon. It thus refers to lines of research in which the social or cultural foundations of cognition have often been neglected.<sup>10</sup>

Nevertheless, the cultural character of cognition is made very clear in other writings by DiMaggio (e.g., 1990, 1997) and other economic sociologists. In fact, DiMaggio (1997), one of the main proponents of a cultural perspective in economic sociology, has provided a profound and comprehensive discussion of culture and cognition, drawing on the sociology of culture and cognitive psychology.

It can be suggested, then, that many of the structured regularities of mental processes to which DiMaggio and Zukin refer are culturally acquired and shared. They are not merely the result of the inherent limitations of any human mind but of social interaction and imitation.

"Old," or "original," institutional economists have also pointed out the cultural, supra-individual character of cognition (e.g., Hodgson 1988, 118–23, who also draws on contributions from different disciplines). From this perspective, one could not accept too sharp a separation between cognitive and cultural embeddedness.

One should also avoid relating the notion of cognitive embeddedness only with the uncertainty resulting from people's limited capabilities in complex situations. Procedural uncertainty has been the focus of attention in economic sociology, but other varieties of uncertainty must also be considered (Dequech 2003a). Elaborating the notion of cognitive embeddedness by referring to culture may facilitate this task.

In any case, cognition and culture are not synonymous. Cognition may have more subjective or idiosyncratic aspects, which are not cultural, while culture is not reduced to cognition *sensu stricto*, for it also has valuative and affective aspects.

Some connections may also be established between cultural and cognitive embeddedness, on one hand, and relational-structural embeddedness on the other. First, the meaning of participation in social relations must be understood, which can be best achieved by situating these relations within a specific institutional context (Friedland and Alford 1991, 252). A particular example is that the establishment of trust in interpersonal relationships depends on the availability and understanding of cultural signals and norms (DiMaggio 1994, 39). Second, patterns of social relationships "drive and channel the acquisition and expression of culture" (DiMaggio 1990, 113). In organizations, for example, David Krackhardt and Martin Kilduff (2002) maintained that shared knowledge, including knowledge about culture, is distributed and

interpreted through social networks (the authors referred to a social network approach to culture). Third, for DiMaggio (1997), networks are crucial environments for the activation of mental structures of cognition. This may illustrate DiMaggio's (1990, 113) broader argument that "patterns of cognition are deeply implicated in the constitution of social structure." While in the first connection social networks depend on culture and cognition, in the latter two culture and cognition depend on social networks. All this lends support to Mustafa Emirbayer and Jeff Goodwin's (1994, 1438) claim that culture and network patterns of social relationships interpenetrate with and mutually condition one another (while being analytically separate). The same could be said of cognition and these relationships.

### ***Culture and Cognition as Constitutive of Economic Actors***

Culture can be seen as constitutive of market actors, in at least four different senses. In all of them, the cognitive aspects of culture play a part. First, culture prepares actors to act according to the market logic, *before* the market society is well established. Second, culture, in the form of a set of frames or logics of action, orients people to perform a specific role (as a market participant, a family member, etc.). A different frame or logic of action corresponds to each role, so that the market logic is just one among other logics of action, all constituted by culture. Third, culture, in the form of rules of relevance, guides people in selecting which specific frame or logic of action to adopt in a specific situation. These first three senses were more or less explicitly considered by DiMaggio (1994). I would add a fourth one: culture influences the specific way in which actors apply a specific logic of action, and particularly the market logic.

The latter point is related to a more general one: the need to distinguish more clearly between different logics of action (the market logic, the family logic, etc.) and different ways of applying a given logic of action. In particular, the argument that actors do not act as assumed by neoclassical economics may be useful for some purposes, but it is not sufficiently clear. Neoclassical economics not only places special (or excessive) emphasis on the market logic but also assumes a specific way of applying this logic. It usually assumes that agents' behavior conforms (or at least should conform) to a set of axioms so that it can be understood as maximizing expected utility. This is, however, only one among other conceivable ways of following the market logic (and, in the opinion of some scholars, an impossible or impractical way). Thus, economic action may violate the assumptions of neoclassical economics in at least two different senses: it may use logics other than the market one, or it may apply the market logic in a non-neoclassical fashion. This difference is not always clear in economic sociology, but it is important to note the possibility of criticizing neoclassical economics even as a theory of market-oriented behavior.

The idea that culture influences the specific way in which actors apply a specific logic of action (the fourth sense in which culture constitutes economic action) can be



related, for instance, to the sociological discussion of “organizational cultures” (this is an important example, given that most studies of cognition in economic sociology have taken place at the organizational level).<sup>11</sup> Different cultures may imply different ways in which actors, in this case collective actors such as organizations, apply a specific logic of action, including, in the case of for-profit organizations, the market logic.

The specific way of applying the market logic also depends, in situations of fundamental uncertainty, on how culture affects creativity and “animal spirits” and on how these two factors interact with the existing knowledge in the formation of images of the future. Economic sociology can be very useful in studying this.<sup>12</sup>

### Notes

1. Culture has been mentioned by critics such as Bernard Barber (1995, 406–07) and John Lie (1997, 351) among the factors neglected by the network branch of embeddedness theory in economic sociology.
2. Similarly, Joel Baum and Jane Dutton (1996) argued that “psychologists Kahneman and Tversky . . . have demonstrated the cognitive embeddedness of individual decision-making in a range of fundamental heuristic biases.”
3. Although I describe the influence of institutions in terms of functions, I do not adopt a functionalist approach. In particular, I do not argue that institutions (a) exist because they perform these functions or (b) are always efficient.
4. In W. Richard Scott’s (2001) typology, this function is performed by what he calls the normative element of institutions. This element, however, includes not only values (which seem to be what defines the ends worth pursuing) but also norms, which act as constraints (designating appropriate ways to pursue these ends). In turn, this latter part of the normative element shares the restrictive function with what Scott calls the regulative element.
5. I have referred less explicitly to this function in my work on economic behavior under fundamental uncertainty (e.g., Dequech 1999) when mentioning the influence of institutions on the emotional states underlying the optimistic disposition to face uncertainty (“animal spirits” redefined).
6. On the links between institutions, behavior, and ideas, see also Dequech 2004. Geoff Hodgson (2001, 292–97) has criticized what he calls, following Roger Keesing, the “ideational” conception of culture, which neglects habits. Moreover, for Hodgson, as well as for other institutional economists, habits are propensities or dispositions (as distinct from actual behavior) and institutions are a kind, or part, of social structure.
7. Among “old” institutional economists, Hodgson (2001, 293) has praised Pierre Bourdieu while also criticizing him for using the word “habitus” instead of “habit.” According to Bourdieu and Loic Wacquant (1992, 122), one of the reasons for doing so is to differentiate his concept from previous usages of the term “habit” (also Bourdieu 1977, 218). They note, however, some similarities between Bourdieu and American pragmatist philosophers (especially John Dewey), whose views on habits have influenced institutional economics (see also Shusterman 1999).
8. Some writings in economic sociology have adopted the broad sense of cognition (e.g., DiMaggio 1990, 129n). Accordingly, culture, in this conception, becomes very similar to, or virtually synonymous with, social cognition (DiMaggio 1990, 113). In contrast, the cognitive aspects of culture on which this section will focus are those related to cognition in the narrower sense (to which Paul DiMaggio himself shifts in DiMaggio and Powell 1991, 35 n. 10).
9. Perhaps the same could be said at first of Philippe Steiner’s (1999, 101) concept of cognitive embeddedness, if interpreted strictly as meaning that economic behavior is based on a specific

- economic knowledge available to agents. In fact, this idea may not even require the regularities mentioned by Sharon Zukin and DiMaggio. Conveying such an impression was not, however, Steiner's intention. He emphasized the cultural dimension of the sociology of economic knowledge (197).
10. According to Eviatar Zerubavel (1997, 116 n. 8, 119 n. 34), psychologists normally use the terms "social cognition" and "sociocognitive" in a narrow sense, referring to the cognition of social objects but not to the social foundations of cognition (see also Tenbrunsel et al. 1996, 315). Similarly, and drawing on cultural anthropology, Jack Knight (2000) criticized the individualistic approach of standard psychological research on cognition and decision making. DiMaggio (1994, 29) himself has implicitly recognized that cognitive psychology has not paid much attention to how culture affects schemes of perception and value, but he has pointed to more recent work that has partly reversed this trend (DiMaggio 1997, 265-66).
  11. Cognition has not, however, been the only or the main aspect examined by the literature on organizational culture. For references to studies focusing on ethics, see, for example, Dobbin (1994, 120).
  12. For further discussion on knowledge, creativity, and "animal spirits" as determinants of the state of expectation about the future, see Dequech 1999. On how these factors affect the adoption of conventional or unconventional ways of pursuing pecuniary gain, see Dequech 2003b. As these two articles focus on individual agents, economic sociology can also be very useful in adapting their theoretical framework to deal more adequately with collective agents such as economic organizations.

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