

Institutions

**forthcoming in: SAGE Handbook of Philosophy of Social Science
(Eds.) Ian C. Jarvie and Jesús Zamora Bonilla, 2009**

**C. Mantzavinos
Witten/Herdecke University
Chair of Economics and Philosophy
Alfred Herrhausen Str. 50
58448 Witten
Germany
Tel.: +49 2302 926 514
Fax.: +49 2302 926 516
Email: mantzavinos@uni-wh.de**

Institutions

C. Mantzavinos

1. Introduction

2. Basic Concepts and Principles of the Theory of Institutions

3. Mechanisms of Emergence and Evolution of Social Institutions

4. Formal and Informal Institutions

5. The Problem of Path Dependence

6. Epilogue

1. Introduction

“Institutions keep society from falling apart, providing that there is something that keeps institutions from falling apart”

(Jon Elster, 1988, p.147)

In this phrase of Jon Elster the relevance of institutions for society comes successfully to the fore. It also pinpoints the reason institutions have been the object of inquiry for many scholars and philosophers from early on. The contemporary theory of institutions differs from earlier theories in two main ways: Firstly, the very existence of institutions is no longer explained by the will of gods, the spirit of history, the decisions of a wise lawgiver or by drawing on other simplistic causal patterns. Secondly, those explanatory schemes that have attempted to analyze the complex

phenomenon of the emergence and change of institutions based on the tradition of methodological holism or functionalism seem to be of low credibility and on the retreat. There is instead a great interest in most social sciences today in scientifically understanding institutional phenomena on the basis of methodological individualism,¹ that is, the meta-theoretical principle according to which all social phenomena, and thus also social institutions, must be explained as the outcome of the interplay of individuals who are acting under different conditions.²

It is definitely compatible with the developments in the different disciplines of the social sciences to claim that in the last decade we have been witnessing the development of a new research programme, “The New Institutionalism in the Social Sciences”. In Economics, for example, New Institutional Economics has become quite popular and widely accepted, mainly as it has been shaped by the works of Ronald Coase,³ Douglass C. North⁴ and Oliver Williamson.⁵ In Sociology there is also a discussion of New Institutionalism by Paul DiMaggio,⁶ Walter Powell,⁷ Victor Nee⁸ and other authors.⁹ In Political Science New Institutionalism has been shaped by the work of a long series of authors such as Jim March,¹⁰ Peter Hall,¹¹ Lin Ostrom,¹² Terry Moe¹³, etc. In

¹ The first who has employed the term “methodological individualism” in order to describe this metatheoretical principle was Joseph Schumpeter in his Habilitation thesis «Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie» (1908), drawing a clear boundary vis-a-vis “political individualism”: “Wir müssen scharf zwischen *politischem* und *methodologischem* Individualismus unterscheiden. Beide haben nicht das geringste miteinander gemein. Der erstere geht von allgemeinen Obersätzen aus, wie daß Freiheit zur Entwicklung des Menschen und zum Gesamtwohle mehr als alles andere beitrage und stellt eine Reihe von praktischen Behauptungen auf; der letztere tut nichts dergleichen, behauptet nichts und hat keine besonderen Voraussetzungen. Er bedeutet nur, dass man bei der Beschreibung gewisser Vorgänge von dem Handeln der Individuen ausgehe.” (1908. p. 90f).

² See Albert (1998, p.18): “[...] den *methodologischen Individualismus*, das heißt: die Idee der Erklärung sozialer Tatbestände aus dem Zusammenspiel individueller Handlungen unter verschiedenen Bedingungen.“ See also Watkins (1953, p. 729): “[The principle of methodological individualism] states that social processes and events should be explained by being deduced from (a) principles governing the behaviour of participating individuals and (b) descriptions of their situations”. For a discussion of methodological individualism from a philosophical perspective, see the classic work of Popper «The Poverty of Historicism» (1957, p. 142f.). (This discussion of Popper is unfortunately tied to a rather confused discussion of the so called zero-method. For a critique of this, see Mantzavinos (2005, ch. 5)). For a discussion of methodological individualism from a sociological point of view, see Vanberg (1975) mainly ch. 8, and Bohnen (1975 and 2000). For a discussion of the role of methodological individualism in economics, see Arrow (1994), Suchanek (1994, p. 125f.), Kirchgässner (1991, p. 23f.) and mainly Blaug (1992, p. 42f.). Methodological Individualism in political science was discussed in the 1990s with respect to the “Rational Choice Controversy”. See Green and Shapiro (1994, p 15f.), the collection of articles in Friedman (1996), but also Riker (1990) and Elster (1986).

³ See R. Coase (1937) and (1960).

⁴ See North (1981), (1990), (1994), (2005).

⁵ See Williamson (1985) and (1996).

⁶ See mainly DiMaggio (1998).

⁷ See mainly the edited volume by Powell and DiMaggio (1991).

⁸ See mainly Nee and Brinton (1998).

⁹ See for example Hasse and Krücken (2005).

¹⁰ See mainly March (1999).

Anthropology it is mainly the work of and Jean Ensminger¹⁴ that has had the greatest influence over the past few years. As is frequently the case when a research programme is at its beginning stages, there are many problems that have not yet found a satisfactory solution. And as is frequently the case when different disciplines with different traditions and techniques of scientific research are to collaborate towards the solution of common problems, there are ambiguities, uncertainties and difficulties in the communication of the results of the scientific research. This kind of weakness is even more weighty in the case at hand, since the respective disciplines largely use theoretical patterns that lack an axiomatic basis, and the terms and concepts are therefore not always precisely defined.

In spite of these difficulties – and with a full awareness of the disagreement on a series of issues – I will start with an overview of the main principles and concepts of the theory of institutions. After explaining some basic concepts and principles of the contemporary theory of institutions (Sec. 2), I will focus on the analysis of the mechanisms of the emergence and evolution of institutions (Sec. 3). I will then proceed by providing the distinction between formal and informal institutions (Sec. 4) before discussing the problem of path dependence in the last part of the article (Sec. 5) and closing with a short epilogue (Sec. 6).

2. Basic Concepts and Principles of the Theory of Institutions

Institutions are normative social rules, i.e., the rules of the game in a society, enforced either through the coercive power of the state or other enforcement agencies that shape human interaction (Mantzavinos, 2001).¹⁵

¹¹ See mainly the article by Hall and Taylor (1998), which gives an overview of the field, as well as the edited volume by Hall and Soskice (2001).

¹² See especially Ostrom (1990) and (2005).

¹³ See Moe (2005).

¹⁴ See especially the paper by Ensminger (1998) containing an overview of the field and her work on Orma in Kenya, Ensminger and Knight (1997).

¹⁵ This definition follows both North and Parsons. According to North's definition (1990, p. 3): "Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence, they structure incentives in human exchange, whether political, social or economic." According to Parsons (1975, p. 97): "Institutions [...] are complexes of normative rules and principles which, either through law or

Institutions as normative patterns of behavior serve to (partially) solve the problem of cooperation in a society by providing a more or less permanent platform of conflict resolution. They define the rules of the socio-economic game, i.e., the strategies which individuals are allowed to employ in order to pursue their goals and solve their problems. The existence of social institutions provides the first step towards overcoming the Hobbesian problem of social order, the second being the cooperation of individuals via exchange within the institutional framework.

It is quite common in the literature to employ the term “institution” in order to designate organizations of every kind. In order to avoid confusion, it is useful to distinguish between institutions and organizations. Institutions are the rules of the game; organizations are corporate actors, that is, groups of individuals bound by some rules designed to achieve a common objective (Coleman, 1990). They can be political organizations such as political parties, educational organizations such as universities, or economic organizations such as firms. Thus, organizations, when interacting with other organizations or individuals, submit to those general social rules that we have called institutions, that is, they are equally constrained by the general rules of the game.

Having now defined institutions and having provided the distinction between institutions and organizations, let us now proceed to the most fundamental problem of every theory of institutions: Why do institutions exist? There are two classes of reasons that can explain the existence of institutions on the basis of an individualistic approach. The first class of reasons refers to the motivational possibilities of Homo sapiens and the second class to the cognitive ones. Starting from the main assumption about motivation – namely, that every individual strives to increase his utility or, in other words, that every individual strives to better his condition by all means available to him – it becomes obvious that conflicts between individuals are bound to arise. Those settings in which the increase of one’s utility presupposes the direct or indirect cooperation of other individuals can be defined as social problems. Such settings are to be termed “social” neither in the sense that the individuals involved are conscious of their involvement in such settings nor in the sense that they explicitly recognize their involvement in such settings.

other mechanism of social control, serve to regulate social action and relationships of course with varying degrees of success.”

From the perspective of the observer, however, such social problems are clearly identifiable, and their basic characteristic is that the utility obtained by some kind of individual behavior depends in one way or another on the behavior of other individuals. Some stylized social problems have been worked out in game theory, such as the well-known prisoner's dilemma, the coordination game, the game of trust and so on.

Let us concentrate for a while on the prisoner's dilemma. The structure of this game is encountered very often in settings that constitute "social problems", defined as above. Let us think for a while of the setting that we are all involved in very frequently in our everyday lives, mainly on the sidewalks of Athens and other major cities in the world.

Prisoner's Dilemma

		B	
		Does Not Park on the Sidewalk	Parks on the Sidewalk
A	Does Not Park on the Sidewalk	(1, 1)	(-2, 2)
	Parks on the Sidewalk	(2, -2)	(-1, -1)

Each of us can increase his utility if he parks his car on the sidewalk (instead of incurring the costs of a parking lot) as long as others do not do so. The socially optimal and thus desirable situation is the one in which nobody parks on the sidewalk ($1+1=2$ units), whereas the worst situation is the one in which everybody parks on the sidewalk [$(-1)+(-1)=-2$ units]. Given the structure of the game and that we are all self-interested, we end up parking on the sidewalk; that is, we end up with the worst possible solution.

Now, we can come back to institutions and to our central problem, namely why institutions exist: The first and most important reason for their existence has to do precisely with the fact that institutions are social rules constituting solutions to social problems and social conflicts that appear in the above mentioned form or some similar form. This is their most fundamental *raison*

d' être: The life of man in a society without institutions would be, in the words of Hobbes, “solitary, poore, nasty, brutish and short” (Leviathan, ch. XIII, p.89). This argument is presented by most social and political theorists, old and new, with the sole exception of the anarchists. But even the most optimistic among them, who doubt the necessity of the existence of a state, do not deny the necessity of informal institutions such as moral rules, social norms and conventions for the existence of social order. Human egoism must be moulded by some form of social control in order for cooperation to emerge, and social institutions provide this mould.

But why do people agree to or accept institutions, i.e., social normative **rules**, rather than deciding each time anew on particular norms or conventions to regulate a particular conflict every time one arises? Why not solve social problems ad hoc since, in a way, every problem situation – and thus also every **social** problem – is unique? The answer to this question lies in the cognitive structure of the human mind and provides the second class of reasons explaining the existence of social institutions. The human mind is far from being a perfect tool, able to perform all the difficult computations needed for solving problems that arise from interaction with other minds. Because of a restricted cognitive capacity, every individual mobilizes his energies only when a ‘new problem’ arises, and follows routines when he classifies the problem situation as a familiar one. This distinction is rooted in the limited computational capacity of human beings and is a means to free up an individual’s mind from unnecessary operations so that he can deal more adequately with the problem situations arising in his environment.

When we say that the environment of the individual is **complex**, we mean precisely this: His limited cognitive capacity makes his environment appear rather complicated to him and in need of simplification in order to be mastered. This refers to both the natural and the social environment of the individual, the latter being the focus here. Because of the perceived complexity of the social environment, people – consciously or unconsciously – adopt **rules** as solutions to social problems rather than deciding each time anew how to act and react to the settings where coordination with other individuals is needed. Rules in general, as Hayek (1976/1982, p. 8) put it, “are a device for coping with our constitutional ignorance”, they are the “device we have learned to use because our reason is insufficient to master the full detail of

complex reality” (Hayek, 1960, p. 66). And social rules or institutions are our devices to deal with **recurrent** social problems arising in situations where self-interested individuals interact.¹⁶

The German anthropologist Arnold Gehlen made the same point when he stressed the role of institutions as a means of unburdening individuals from the need to constantly make decisions. Compared to animals, human behavior, according to Gehlen, is much more plastic and adaptable to varying environments. But this plasticity and openness regarding behavior, although beneficial on its own, causes uncertainty about the behavior of other individuals. Institutions serve to remove this difficulty:¹⁷ By defining general normative patterns of behavior shared by the individuals, they serve individuals, unburdening them from having to decide each time anew. This relief provided by institutions is productive, according to Gehlen, because it makes it possible for an individual to concentrate his energies on other creative enterprises. Social rules make it possible for us to focus our energy on generating novel solutions to the *new* problems that emerge, a fact of obvious importance for social progress. This liberating function of institutions – their *Entlastung* (unburdening), according to Gehlen – is extremely important exactly for a cognitively deficient being like man, because it provides him with the possibility to concentrate his limited cognitive resources on other activities and finally with the possibility to unfold all those activities that distinguish him from his fellows as a *unique personality*. As Gehlen splendidly puts it (1961, p. 72): “If the institutions provide us with a schema in certain respects, and if they shape our thoughts and feelings along with our behaviors and typify them, we can take advantage of these energy reserves in order to show within our particular set of circumstances the uniqueness which is bountiful, innovative, and fertile. He, who does not want to be a personality in *his own* circumstances but in *all* circumstances, can only fail.” [Translation, C. M.]

¹⁶ Whereas the traditional sociological analysis stressed mainly the normative dimension of institutions, new institutionalism puts a new emphasis on the cognitive dimension (Hall and Taylor (1998, p. 25), DiMaggio and Powell (1991, p. 15). See also Lindenberg (1998, p. 718): “In NIS [New Institutional Sociology] the full internalization argument (which implied moral guidance of behavior) has been replaced by the idea of behavior guided by cognitive processes [...]. The point is that institutionalization is linked to the establishment of cognitive habits which influence the very experience of reality (as a taken-for-granted reality) rather than just the response to reality.”

¹⁷ See Gehlen (1961, p. 68): “Institutions like laws, marriage, property, etc. appear then to be supportive and formative stabilizers of those driving forces, which, thought of in isolation, appear to be plastic and lacking direction. Each culture ‘stylizes’ certain modes of behavior, making them obligatory and exemplary for all those who belong to it. For individuals, then, such institutions mean a release or relief from basic decisions and represent an accustomed security of important orientations, so that the behaviors themselves can occur free of reflex, consistently, and in mutual reciprocity.” [Translation, C. M.]

There are thus also cognitive reasons for the existence of institutions (DiMaggio and Powell, 1991, p. 10f.); they are a means of coping with the ignorance that individuals are facing when interacting with each other. The institutions, as the rules of the game, *stabilize expectations* and thus reduce the uncertainty of the agents.¹⁸ They provide a preliminary structuring of their environment, a first more or less secure approximation of what will happen and what will not, and what might appear and what might not. But although the stabilizing *function* of institutions is very important, one should be careful to avoid the functionalist fallacy. It is therefore necessary to clearly distinguish between cause and effect. That institutions stabilize expectations is a mere effect of their existence. The *cause* of their existence lies – along with the motivational one – rather in the more general fact of the limits in the cognitive capacities of humans.

3. Mechanisms of Emergence and Evolution of Social Institutions

Having presented, in as short of order as possible, some basic concepts and principles of the theory of institutions, I will now focus on the mechanisms at play in the emergence and evolution of social institutions. Institutions emerge either deliberately or spontaneously, i.e., either as a product of collective action or as a product of a spontaneous process of social interaction. The institutions which emerge as a result of collective action, that is, the institutions that are designed deliberately, have been the object of inquiry of many scholars for centuries. The mechanisms of the emergence of spontaneous institutions, however, were first studied by the Scottish moral philosophers of the 18th century. David Hume, for example, envisioned a system of rules of justice which “is of course advantageous to the public; tho’ it be not intended for that purpose by the inventors” (1740/1978, p. 529). Ferguson (1767/1968, p. 188) similarly observes that “[n]ations stumble upon establishments which are indeed the result of human action, but not the execution of any human design.” And in Smith’s famous metaphor, the merchant who intends

¹⁸ This is a common argument of all institutionalists, old and new. See, e.g., Commons (1924/1968, p. 138) and Hayek (1973/1982, p. 102): “The task of rules of just conduct can thus only be to tell people which expectations they can count on and which not.” See also Lachmann (1963, p. 63): “What is particularly required in order to successfully coordinate the transactions of millions of people is the existence of institutions. In these institutions, an objectification is achieved for us of the million actions of our fellow men, whose plans, objectives, and motives are impossible for us to know.” [Translation, C. M.]. See also Hall and Taylor (1998, p. 17f.).

only his own gain is “led by an invisible hand to promote an end which was no part of his intention” (1776/1976, p. 477).

This insight of the Scottish moral philosophers is relevant because, for the first time, the emergence of institutions is not explained exclusively by intentional action aimed at establishing them. Of the modern social scientists, the one that has offered the profoundest analysis of the spontaneous emergence of institutions, integrating their evolution into a general theory of cultural evolution, is certainly Hayek. We shall therefore linger a while on his work. In Hayek’s theory of cultural evolution, the growth of civilization is equated with the growth of knowledge, where the word ‘knowledge’ is meant to “include all the human adaptations to environment in which past experience has been incorporated” (Hayek, 1960, p. 26). Hence, ‘knowledge’ does not include “only the conscious, explicit knowledge of individuals, the knowledge which enables us to state that this or that is so and so. Still less can this knowledge be confined to scientific knowledge” (1960, p. 25). Moreover it includes “our habits and skills, our emotional attitudes, our tools, and our institutions – all [...] adaptations to past experience which have grown up by selective elimination of less suitable conduct.” (1960, p. 26). Hayek contends, thus, that not only our scientific and practical knowledge is growing and is transmitted through time; so are our social rules and institutions.

But what does this mean more specifically? Hayek draws our attention to the analogy of social rules, used by individuals to solve the recurrent problems of social interaction, with **tools**, which in the same way serve to provide standard solutions to recurrent problems. His main argument is that “the various institutions and habits, tools and methods of doing things, which [...] constitute our inherited civilization” (1960, p. 62) have been submitted to “the slow test of time” (1967, p.111) in an evolutionary process of trial-and-error, (1976/1982, p. 135). “Those rules which have evolved in the process of growth of society embody the experience of many more trials and errors than any individual mind could acquire” (Hayek, 1967, p. 88).

According to Hayek, people, mostly in a subconscious manner, acquire and follow social rules that provide a solution to recurrent problems of social interaction in a quasi-automatic way. There are two main arguments against this view of cultural evolution. The first concerns the notion of group selection found in many parts of Hayek’s work. Hayek, in explaining the evolution of

culture, on the one hand, stresses the *innovation* of individuals experimenting with new rules, and, on the other hand, stresses the *competition* between old and new rules and the *selection* of the ones that led to the success of those groups which practiced them (Hayek, 1979/1982, p. 204 n48). The criterion of selection is, thus, group success; or, in other words, the “*transmission* of rules of conduct takes place *from individual to individual*, while what may be called the natural *selection* of rules will operate on the basis of greater or less efficiency on the resulting *order of the group*” (Hayek, 1967, p. 67, emphasis in original).

The argument against group selection is that it is incompatible with the postulate of methodological individualism and accordingly one has to show a relevant feedback mechanism relating how, in the end, individuals within groups are at least indirectly benefited by following certain cultural rules. It must be shown, in other words, that individuals in the group in the end adopt those rules that lead the group to success. If there is a free-riding problem, however, the argument is no longer sufficient.¹⁹ On the contrary, in order for Hayek’s theory to hold, one has to assume the altruistic behavior of **every** member of the group. This cannot safely be hypothesized, however, because the existence of even one free-rider, who enjoys the group advantage without sharing the group costs, would suffice to falsify the assumption.

The second argument against Hayek’s theory of cultural evolution concerns the rules as tools analogy.²⁰ Although all *personal* rules followed by individuals can easily be understood as tools to solve personal problems, *social* rules cannot be always viewed with the aid of the rules –as tools analogy. This analogy “is less applicable the less the rules in question are susceptible to individual experimenting and selecting. [...] It is less plausible for rules that can only be tried out in collective experiments, in particular if the collective is a political community as opposed to, for instance, a private organization operating in a market environment” (Vanberg, 1994, p. 187f.).

¹⁹ See the detailed discussion of this point in Vanberg (1994, p. 199).

²⁰ See Hayek (1973/1982, p. 21): “Like all general purpose tools, rules serve because they have become adapted to the solution of recurring problem situations and thereby help to make the members of the society in which they prevail more effective in the pursuit of their aims. Like a knife or a hammer they have been shaped not with a particular purpose in view but because in this form rather than in some other form they have proved serviceable in a great variety of situations. They have not been constructed to meet foreseen particular needs but have been selected in a process of evolution. The knowledge which has given them their shape is not knowledge of particular future effects but knowledge of the recurrence of certain problem situations or tasks, of intermediate results regularly to be achieved in the service of a great variety of ultimate aims; and much of this knowledge exists not as an enumerable list of situations for which one has to be prepared, or of the importance of the kind of problems to be solved, or of the probability that they will arise, but as a propensity to act in certain types of situations in a certain manner.”

One has to distinguish, thus, between levels of experimenting with rules and levels of selection of rules, e.g., between whether it is individual agents or collective entities, such as local authorities or national governments, who invent and imitate new social rules.²¹ Accordingly only those social rules individually tried out and individually successfully imitated can safely be hypothesized as serving as a storage of experience for past generations, as Hayek contends.

It thus seems that although Hayek's theory of cultural evolution can be regarded largely as a very serious attempt to construct a general theory of institutional change, it nevertheless suffers in many parts. A more differentiated and systematic analysis of social institutions is thus necessary. In closing this section of the article, I would like to summarize by repeating that there are two basic mechanisms of the emergence and change of social institutions: They can either emerge deliberately as the outcome of collective action or as the unintended results of intentional human action. In the next section I will briefly show which mechanisms lead to the emergence of which kinds of institutions.

4. Formal and Informal Institutions

A very productive and very widely used distinction among types of institutions is based on the criterion of the enforcement agency of institutions. Institutions are commonly classified according to this criterion as follows:

²¹ On this issue, see Vanberg (1992, p. 114f.), where he stresses: "The 'rules as tools' analogy [...] makes it appear as if the experimenting with and selecting among potential alternatives is essentially a matter of separate individual choices in both cases, for tools as well as for rules. [...] It seems obvious, however, that it is not generally applicable in the realm of rules and institutions. [...] To mention only two particular obvious examples: It is hardly possible for an individual driver to experiment with a 'left-driving rule' in a community where driving on the right side of the road is the rule; and it is simply unfeasible for an individual citizen to try out a new rule for electing a parliament - even if such individuals would firmly believe in the superiority of an alternative practice."

Informal Institutions	Conventions	Self-policing
	Moral Rules	First Party
	Social Norms	Third Party: Social Forces, i.e., Individuals of the Group
Formal Institutions	Law	Third Party: State

It is impossible to analyze in detail here how every type of institution emerges, the mechanism according to which it is enforced and how it is adopted. A short reference to each of these matters must suffice. The most important feature of conventions is their self-policing character: After they have emerged, nobody has an incentive to change rules that everybody else sticks to. In game theory, conventions are usually analyzed with the help of what are known as ‘coordination games’. Examples of such rules are traffic rules, industrial standards, forms of economic contracts, language, etc. The moral rules (as empirical phenomena, not as a branch of normative ethics discussed in philosophy) are largely culture-independent because they provide solutions to problems that are prevalent in every society, as Lawrence Kohlberg has shown in his famous empirical research (Kohlberg, 1984). The mechanisms for the enforcement of moral rules are entirely internal to the individual, and therefore no external enforcement agency for rule compliance is needed. Typical examples of moral rules are ‘keep promises’, ‘respect other people’s property’, ‘tell the truth’, etc. These have a universal character. However, their existence does not necessarily mean that they are also followed, and in fact many individuals break them. (Thus, the empirical phenomenon to be explained is the *existence* of moral rules in a society, which are followed by *part* of the population). Social norms, on the contrary, are not of universal character, and they are enforced by an enforcement agency external to the agent, usually the other group members. The mechanism of enforcement refers to the approval or disapproval of specific kinds of behavior. Social norms provide solutions to problems of less importance than moral rules and regulate settings appearing mainly at specific times and places.

Although the enforcement agency of each different category of informal institution is different, as is the specific enforcement mechanism, a common element to each type of informal institution – and this is very important – is that they all emerge as the unintended outcome of human action.

Their mechanism of emergence is thus an evolutionary process of the invisible hand type. This process starts as an individual perceives his situation as constituting a new problem because the environment has changed, and then in an act of creative choice, he tries a new solution to this problem. Both the problem and its solution are of a strictly personal nature, and the solution is attempted because the agent expects it to increase his utility. This novel response to a problem situation becomes an innovation as soon as other individuals decide to imitate it. In other words, innovation is a social phenomenon because it relates new solutions to new problems, and those solutions are also viewed as new by other individuals. (The case of an individual perceiving something as a new problem and trying out a solution that is novel to him but not to the other members of the social group thus does not constitute an innovation.)

The reaction of other individuals and their imitation of the solution gives rise to a cumulative process through which the new behavior or pattern of action becomes ever more widely adopted by those who expect to better their condition by doing so.²² The diffusion of this innovative behavior among many or all members of a community brings about the solution to a problem, which, from an external point of view, is social in nature. In other words, a social pattern or institution arises and the problem-solving individuals “do not have the overall pattern that is ultimately produced in mind, neither on the level of intentions nor even on the level of foresight or awareness.” (Ullmann-Margalit, 1978, p. 271).

Whereas informal institutions emerge from the unintended results of human action in a process that no individual mind can consciously control, law or the sum of the social rules that I have called formal institutions, are products of collective decisions. The state as an organism²³ creates law, either by constructing, by the conscious decision of its organs new legal rules or by providing – by means of suitable adaptation – existing informal rules with sanctions (Gemtos, 2001, p. 36). Modern public choice theory tries to explain exactly how collective decisions lead to the emergence of institutions in the social arena.²⁴ The presupposition for them is the emergence of shared mental models (Denzau and North, 1994) with respect to the structure of the

²² See Koppl (1992, p. 308).

²³ See the famous definition of the modern state of Max Weber (1919/1994, p. 36): “The state is that human *Gemeinschaft*, which within a certain territory (this: the territory, belongs to the distinctive feature) successfully lays claim to the *monopoly of legitimate physical force* for itself.” [Translation, C. M.]

²⁴ For an overview of the field, see Mueller (2003).

problems. In the end, the collective decisions that lead to the creation of legal rules are the result of the political process during which individuals and organizations succeed to a greater or lesser degree in using the power that they have in order to impose rules that further their interests. Since what we call “political power” is very difficult to theoretically identify, contemporary political theory frequently views ‘resources’ as the decisive factor determining the behavior of the players in the political game. Those resources can be of three kinds – i.e., economic, political and ideological – and the degree of their availability to the players determines the extent of their bargaining power and thus how much they can influence the political process which in turn generates the formal institutions.²⁵

Summarizing what we have said about the formal and informal institutions, we have to stress that the mechanisms for their emergence are distinct: Whereas the informal institutions are generated through an invisible-hand process – in a way endogenously from within the society – the formal institutions are the outcome of the political process which is imposed exogenously onto society from the collective decisions of agents who avail of resources, political, economic and ideological. It is thus natural, if what I have said so far holds, that there is no necessity that informal and formal institutions complement each other in such a way that a workable social order is produced or even more, in order for the economic development of a society to take place.

5. The Problem of Path Dependence

The theory of institutions still needs to grapple with the problem of the interaction between formal and informal institutions. In the philosophy of law, the respective discussion focuses on the relationship between law and the moral rules and on whether the moral rules must be viewed as an integral part of the concept of law or not. In New Institutionalism the problem is formulated in more general terms, mainly around the following two questions: (a) How do formal and informal rules interact to produce social order? (b) What institutional mix of formal and informal

²⁵ For a profound analysis of the role of political power in the emergence of formal institutions, see especially Knight (1992) and Moe (2005).

rules leads to a wealth-creating economic game (rather than to an unproductive game characterized by conflicts between groups for the distribution of wealth)?

I cannot refer to all the theoretical attempts that have been undertaken in an attempt to address these questions, and I will just mention that most of them have not been successful and we have only just begun to answer them. I will try to shed some light on one dimension of the problem since it has to do with the evolutionary change of institutions and is of fundamental importance. I thus will briefly deal with the evolutionary paths that societies follow and with the phenomenon of path dependence. Let us approach the issue in a systematic way.

New Institutionalism differs from other theories of economic development precisely in systematically stressing the role of institutions for the development process of societies. The accumulation of physical and human capital and the technological progress, as they are stressed by neoclassical economic theory, are nothing but secondary factors of economic development. The problem of wealth creation is much more complex, and New Institutionalism stresses precisely the dominant role of institutions play as the rules of the economic game that define the incentives and more generally the behavior of economic agents, and thus channel their activities, lead to the accumulation of physical and human capital and to technological progress and, in the end, to economic growth and welfare.

It is important that neither the formal institutions nor the informal institutions alone are sufficient for economic development. The natural experiments that history has performed offer, I think, decisive support for this thesis. Germany, China and Korea were divided by the accidents of history and as a result came to live under different formal rules during most of the postwar period. The economic performance of West Germany, South Korea, Hong Kong and Taiwan have been incomparably greater than the respective performances of East Germany, North Korea and Mainland China (Olson, 1996, p. 19). The informal rules that the populations in the divided nations shared did not reverse the different trajectories of growth. Societies with the same cultural heritage but different formal rules will exhibit different patterns of economic growth.

Societies that avail of the same formal institutional structure but whose populations have different informal rules are also bound to follow different economic paths. In other words, formal

institutions alone are not sufficient to lead to economic growth. The experience with the transformation process of the ex-communist countries in Eastern Europe seems to corroborate this thesis. The dogmatic transplantation of a set of formal institutions that have prevailed for decades or centuries in the countries of the West to those countries of the East did not automatically allow a good economic performance. Formal rules remain a piece of paper as long as they are not followed by the citizens.

It thus seems that only a sufficient condition for economic growth is met when both formal and informal institutions build an appropriate framework for a wealth-creating game. With regard to economic growth, the relationship between formal and informal rules is clearly a complementary one. Only when the whole network of institutions is mutually complementary in an appropriate way is it possible that a framework will be created that will lead economic subjects to proceed to productive activities and, thus, to the augmentation of the wealth of a society. Empirical research and the studies of economic history have shown that two kinds of formal institutions are *sine qua non* for economic development: 1) secure property rights and 2) those economic institutions that secure open markets. Since I cannot go into the details here, I just want to mention that this refers only to the *content* of the appropriate formal institutions, but there is of course the additional problem of the *credible commitments* on the part of the state that these institutions will in fact be provided and enforced.

The empirical research regarding the type of informal institutions that lead to economic development is still in its infancy²⁶. The only thing that seems certain from a contemporary perspective is that only when the level of trust in a society is high – something that mainly informal institutions produce – can a wealth-creating game take place. More specifically, what is necessary is the existence of appropriate informal institutions that lead the citizens to protest every time that state actors do not respect their commitments to the rule of law.

I have tried to consistently argue in this article that the mechanisms behind the emergence of formal and informal rules are distinct. This enables me to reach two basic conclusions:

²⁶ For an interesting and thought-provoking analysis of the connection between culture, institutions and economic development see Greif (2006).

1. It seems to be rather rare that the spontaneous evolutionary process of the emergence of informal institutions and the conscious design of a polity coincide in an institutional mix which is appropriate for a wealth-creating economic game. Two distinct processes of a different nature and following a thoroughly different direction must coincidentally result in a framework suitable for economic growth to happen. The chances that this will happen do not seem to be that high, something that even a cursory glance at the world map can confirm since it reveals that only a few countries are on such a developmental path.
2. The complementary relationship between formal and informal institutions, plus the presence of learning, creates path dependence.

The recognition of the phenomenon of path dependence is in fact the recognition on part of the modern theory of institutions that history plays a decisive role in the further process of institutional change, or, to put it differently, that tradition shapes the further evolution of institutions. If, however, path dependence indicated nothing other than the rather commonsensical position that the choices of the present are dependent on the choices of the past, then nobody could seriously maintain that we have made serious progress vis-a-vis the older theories of institutions. 'Institutional path dependence', however, refers more specifically to the fact that once an institutional mix has been established, then there are increasing returns²⁷ since agents adapt to their social environment, according to the prevailing institutional framework, at decreasing individual costs (adaptive efficiency). This phenomenon exists because two mechanisms are at work: On the one hand, the institutions that have been created lead to the emergence of organizations whose survival depends on the perseverance of these institutions, and these organizations therefore invest resources in order to block any change which could endanger their survival (North, 2005, p. 51).

On the other hand, the second and probably most important mechanism is of a cognitive nature. Setting up institutions requires collective learning on the part of the individuals during which individuals perceive, process and store in their memories the solutions to social problems. Since a considerable period of time lapses before this learning process is completed, the initial setup costs are very high. Once all or most individuals have internalized the rules of behavior, the institutional framework starts solving a variety of social problems in a specific way. One can

²⁷ See North (1990, p. 95) and for a thorough study Ackermann (2001, ch. 3).

speak of the “increasing returns of the institutional framework” in the sense that once the problem solutions have been learned by the agents, they are unconsciously applied each time the same or similar problems appear (Mantzavinos, North, Shariq, 2004). The combination of those two mechanisms leads along paths which a society cannot easily abandon, firstly because of the organized interests that resist doing so, and secondly because cognitive mechanisms make it easy or automatic to follow the rules of the status quo. We end up being locked into a path that frequently nobody or very few wished for; and nobody has the incentive to start the enterprise of moving into a new one.

The issue of path dependence can be further clarified with the help of a simple example. Suppose that we are in front of an urn in which there are two balls, one white and the other red. If we put our hand into the urn without looking and randomly choose one ball, then the probability of the ball being white or red is $\frac{1}{2}$. We proceed now according to the following rule: Each time that we choose a ball of a certain color out of the urn, we put that ball into the urn, as well as a new ball of the same color. If, in other words, we initially choose a white ball, the second time that we put our hand into the urn, there will be two white balls and one red one. The probability of choosing a white ball will now be $\frac{2}{3}$, whereas the probability of choosing a red one will be $\frac{1}{3}$. If we again choose a white ball, then the next time, three out of four balls in the urn will be white. The probability that we will choose a white ball the next time will be $\frac{3}{4}$ and so on.

The described procedure – Arthur et al (1994, p. 36) call it the ‘Standard Polya Process’ – is a path-dependent procedure, though of course it is of a simple nature: Each time that we choose a ball from the urn, the probability that we choose a ball of a specific color depends on the colors of the balls that were chosen in the past and the structure towards which this process tends to settle. In the case at hand, the specific analogy between white and red balls depends on the path that has been followed. The events that took place at the beginning of the process are especially important since the overall number of balls is still small and the proportion of one color decisively changes due to the addition of a ball of this color. After time lapses, however, the overall number of balls increases and the ‘perturbations’ have only a very minor effect: The structure that has emerged no longer changes.

6. Epilogue

Let us summarize: New Institutionalism in the Social Sciences offers theoretical tools which facilitate the analysis of the complex phenomena of institutional change and provide some answers to the difficult questions which have been asked for centuries by social theorists. We are, however, only at the beginning. Many more questions remain open than have been satisfactorily answered. This is even truer with respect to the issue of the evaluation of institutions, which I could not touch upon here. Numerous problems remain to be addressed: What criteria are needed to evaluate institutions, what rational evaluative procedures can be used and, even more importantly, what are appropriate ways to move societies from the inefficient paths that they are often locked in? Only a theory of institutions that increases our information about the structure of social reality can provide us with the means of reorienting this reality in a direction that we find desirable. Some of the basic elements of such a theory and some of the problems involved with it have been discussed here.

References

Ackermann, Rolf (2001): Pfadabhängigkeit, Institutionen und Regelreform, Tübingen: Mohr Siebeck.

Albert, Hans (1998): Marktsoziologie und Entscheidungslogik, Tübingen: Mohr Siebeck.

Arrow, Kenneth (1994): «Methodological individualism and Social Knowledge», in: American Economic Review (Papers and Proceedings), vol. 84, p. 1-9.

Arthur, Brian, Yu. M. Ermoliev and Yu. M. Kaniovski (1994): «Path-dependent Processes and the Emergence of Macro-Structure», in: Arthur, Brian : Increasing Returns and Path Dependence in the Economy, Ann Arbor: University of Michigan Press, p. 33-48.

Blaug, Mark (1992): The Methodology of Positive Economics: Cambridge. Cambridge University Press.

Bohnen Alfred (1975): Individualismus und Gesellschaftstheorie, Tübingen: Mohr Siebeck.

Bohnen Alfred (2000): Handlungsprinzipien oder Systemgesetze, Tübingen: Mohr Siebeck.

- Coase, Ronald (1937): The Nature of the Firm, in: *Economica*, vol. 4, p. 386-405.
- Coase, Ronald (1960): The Problem of Social Cost, in: *Journal of Law and Economics*, vol. 3, p. 1-44.
- Coleman, James (1990): *Foundations of Social Theory*, Cambridge/Mass: Harvard University Press.
- Denzau Arthur and Douglass C. North (1994): «Shared Mental Models: Ideologies and Institutions», in: *Kyklos*, vol. 47, p.3-31.
- DiMaggio, Paul (1998): «The New Institutionalisms : Avenues of Collaboration», in: *Journal of Institutional and Theoretical Economics*, vol. 154, p. 696-705.
- DiMaggio, Paul and Walter Powell (1991) (eds): *The New Institutionalism in Organizational Analysis*, Chicago and London: Chicago University Press.
- Douglas, Mary (1986): *How Institutions Think*, Syracuse: Syracuse University Press.
- Elster, Jon (1986): «Introduction», in: Elster, Jon (ed): *Rational Choice*, Cambridge: Cambridge University Press, p. 1-33.
- Elster, Jon (1989): *Nuts and Bolts for the Social Sciences*, Cambridge: Cambridge University Press.
- Ensminger, Jean (1998): «Anthropology and the New Institutionalism», in *Journal of Institutional and Theoretical Economics*, vol. 154, p. 774-789.
- Ensminger, Jean and Jack, Knight (1997): «Changing Social Norms», in: *Current Anthropology*, vol. 38, p. 1-24.
- Ferguson, Adam (1767/1966): *An Essay on the History of Civil Society*, Edinburgh: Edinburgh University Press.
- Friedman, Jeffrey (1996): *The Rational Choice Controversy*, New Haven and London: Yale University Press.
- Gehlen, Arnold (1961): *Anthropologische Forschung*, Reinbek bei Hamburg: Rowohlt.
- Γέμτος, Πέτρος (2001): *Οικονομία και Δίκαιο, Τόμος Β΄*, Αθήνα: Εκδόσεις Αντ. Ν. Σάκκουλα.
- Greif, Avner (2006): *Institutions and the Path to the Modern Economy. Lessons from Medieval Trade*, Cambridge: Cambridge University Press.
- Green, Donald and Ian, Shapiro (1994): *Pathologies of Rational Choice Theory*, New Haven and London: Yale University Press.
- Hall, Peter and David, Soskice (2001) (eds): *Varieties of Capitalism*, Oxford: Oxford University Press.

Hall, Peter and Rosemary Taylor (1998): «Political Science and the Three New Institutionalisms», in: Karol Soltan, Eric M. Uslaner, and Virginia Haufler (eds): *Institutions and Social Order*, Ann Arbor: University of Michigan Press, p. 15-43.

Hasse, Rainmund und Georg, Krücken (2005): *Neo-Institutionalismus*, 2nd rev. Edition, Bielefeld: transcript Verlag.

Hayek, Friedrich A. von (1960): *The Constitution of Liberty*, London and New York: Routledge.

Hayek, Friedrich A. von (1967): *Studies in Philosophy, Politics and Economics*, London: Routledge & Kegan Paul.

Hayek, Friedrich A. von (1973/1982): *Rules and Order*, vol. I of *Law, Legislation and Liberty*, London: Routledge & Kegan Paul.

Hayek, Friedrich A. von (1976/1982): *The Mirage of Social Justice*, vol. II of *Law, Legislation and Liberty*, London and New York: Routledge.

Hobbes, Thomas (1651/1991): *Leviathan*, Cambridge: Cambridge University Press.

Hume David (1740/1978): *A Treatise of Human Nature*, Oxford: Oxford University Press.

Kirchgässner, Gebhard (1991): *Homo Oeconomicus*, Tübingen: Mohr Siebeck.

Knight, Jack (1992): *Institutions and Social Conflict*, Cambridge: Cambridge University Press.

Kohlberg, Lawrence (1984), *Essays on Moral Development*, vol. II: *The Psychology of Moral Development. The Nature and Validity of Moral Stages*, New York: Harper & Row.

Koppl, Roger (1992): «Invisible-Hand Explanations and Neoclassical Economics: Toward a Post Marginalist Economics», in: *Journal of Institutional and Theoretical Economics*, vol. 148, p. 292-313.

Lachmann, Ludwig (1963): «Wirtschaftsordnung und Wirtschaftliche Institutionen» in: *ORDO*, vol. 14, 1963, p. 63-72.

Lindenberg, Siegwald (1998): «The Cognitive Turn in Institutional Analysis? Beyond NIE and NIS?», in: *Journal of Institutional and Theoretical Economics*, vol. 154, p. 716-27.

Mantzavinos, C. (2001): *Individuals, Institutions, and Markets*, Cambridge: Cambridge University Press.

Mantzavinos, C. (2005): *Naturalistic Hermeneutics*, Cambridge: Cambridge University Press.

Mantzavinos, C., Douglass, North and Syed, Shariq (2004): «Learning, Institutions and Economic Performance», in *Perspectives on Politics*, vol. 2, p. 75-84.

March, James (1999): *The Pursuit of Organizational Intelligence*, Oxford: Blackwell Publishers.

- Moe, Terry (2005): «Power and Political Institutions», in: *Perspectives on Politics*, vol. 3, p. 215-233.
- Mueller, Dennis (2003): *Public Choice III*, Cambridge: Cambridge University Press.
- Nee, Victor and Mary, Brinton (1998) (eds): *The New Institutionalism in Sociology*, New York: Russell Sage Foundation.
- North, Douglass (1981): *Structure and Change in Economic History*, New York: W.W. Norton.
- North, Douglass (1990): *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- North, Douglass (1994): «Economic Performance through Time», in : *American Economic Review*, vol. 84, p. 359-68.
- North, Douglass (2005): *Understanding the Process of Economic Change*, Princeton: Princeton University Press.
- Olson, Mancur (1996): «Big Bills Left on the Sidewalk: Why Some Nations Are Rich and Other Poor», in: *Journal of Economic Perspective*, vol. 10, p. 3-24.
- Ostrom, Elinor (1990): *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press.
- Ostrom, Elinor (2005): *Understanding Institutional Diversity*, Princeton: Princeton University Press.
- Parsons, Talcott (1975): «Social Structure and the Symbolic Media of Exchange», in: Peter M. Blau (ed.): *Approaches to the Study of Social Structure*, p. 94-120, New York and London: Free Press.
- Popper Karl (1957): *The Poverty of Historicism*, London: Routledge.
- Riker, William (1990): «Political Science and Rational Choice», in: Alt, James E. and Kenneth, A. Shepsle (eds.): *Perspectives on Positive Political Economy*, Cambridge: Cambridge University Press, p. 163-181.
- Schumpeter, Joseph A. (1908): *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie*, Berlin: Duncker & Humblot.
- Smith, Adam (1776/1976): *An Inquiry into the Nature and Causes of the Wealth of Nations*, Edwin Cannan (ed.), Chicago: Chicago University Press.
- Suchanek, Andreas (1994): *Ökonomischer Ansatz und theoretische Integration*, Tübingen: Mohr Siebeck.
- Ullmann-Margalit, Edna (1978): «Invisible-Hand Explanations» in: *Synthese*, vol. 39, p. 263-291.

Vanberg, Viktor (1975): *Die zwei Soziologien*, Tübingen: Mohr Siebeck.

Vanberg, Viktor (1992): «Innovation, Cultural Evolution and Economic Growth», in: Ulrich Witt (ed.): *Explaining Process and Change. Approaches to Evolutionary Economics*, pp. 105-121, Ann Arbor: Michigan University Press.

Vanberg, Viktor (1994): «Cultural Evaluation, Collective Learning and Constitutional Design», in: David Reisman (ed): *Economic Thought and Political Theory*, Boston, Dordrecht and London: Kluwer, p. 171-204.

Watkins, John (1953): «Ideal Types and Historical Explanation», in: Feigl, Herbert and Brodbeck, May (eds.): *Readings in the Philosophy of Science*, New York: Appleton –Century-Crofts, Educational Division, Meredith Corporation p. 723-743.

Weber, Max (1919/1994): *Politik als Beruf*, Tübingen: Mohr Siebeck.

Williamson, Oliver (1985): *The Economic Institutions of Capitalism*, New York: Free Press.

Williamson, Oliver (1996): *The Mechanisms of Governance*, Oxford: Oxford University Press.