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Economic Power and the Firm in New Institutional Economics: Two Conflicting Problems

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The problem of the nature of the firm is at the origin of the research program of New Institutional Economics (NIE). The problem was first addressed by R. H. Coase [1937], who explored the reasons why authority and direction are economically superior to market relations. In my interpretation of NIE, starting with the contribution of Coase, research has developed along two distinct lines. In the former, Coase's intuition has been developed by denying the existence of real authority relations within the firm. The work of A. A. Alchian and H. Demsetz [1972] and the developments of M. C. Jensen and W. H. Meckling [1976] and S. N. S. Cheung [1983] are the main contributions to this research line. In the second approach, costs and benefits of hierarchies have been analyzed systematically by specifying the theoretical categories that make hierarchical relations economically superior to markets. O. E. Williamson [1975, 1985] is the main contribution to this line.

The different views of the roles of authority in the institutions of capitalism lead to different theories of institutions. Two particular aspects of these theories are discussed in this paper: (1) the possibility of providing a straightforward characterization of the firm and (2) the internal coherence of the theories with respect to the problem of economic power.

The approach of Alchian and Demsetz, if developed to its extreme consequences, leads to the conclusion that it is impossible to characterize the firm as an institution qualitatively distinct from the market; in Williamson's framework, on the contrary, the analysis of the different kinds of contractual relations that take place

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within the firm and within the market provides a clear-cut distinction of the two institutions.

My position is that neither of the streams develops an analysis of economic power sufficiently. This, however, has different implications for the internal consistency of the two streams: the lack of an analysis of economic power in the approach of Alchian and Demsetz stems from the denial of its relevance in the investigation of reality; Williamson instead considers economic power as relevant but does not develop its implications, which makes his position vulnerable on the ground of theoretical consistency.

In the one case, reconciliation of economic power and the firm raises problems in the analysis of the firm and, in the other, in the analysis of economic power. In my view, these difficulties are not occasional. In order to characterize the firm and the market, it is necessary to investigate the social relations that take place in them. Here is the bifurcation: on the one hand, the attempt to build a theory of the firm with no reference to its particular power relations makes the firm hardly distinguishable from the market; on the other hand, the analysis of such power relations cannot be fully developed, since it collides with one of the fundamental assumptions of NIE, i.e., the hypothesis that institutional arrangements are Pareto-efficient outcomes of *free* voluntary interactions.

My conclusion is that in NIE the problem of economic power and the characterization of the firm are conflicting and that a step out of NIE is necessary in order to deal coherently with the two problems. A possible way out, I suggest, may be an explicit analysis of the role of economic power in the relations within and among the institutions of capitalism. This analysis of economic power, in light of the theoretical problems of NIE, should be founded on its social and dynamic dimensions. My proposal is to develop such an analysis by building on the existing bridges between institutionalism and Marxism. The resulting approach is clearly incompatible with NIE and casts doubts on the whole theory of efficiency of capitalist institutions.

The structure of the paper is as follows. I commence by discussing the general features of the approaches of Alchian-Demsetz and Williamson. Then, I focus on a particularly relevant aspect that the two streams have in common, the role of the Pareto principle in the explanation of institutional evolution; the unanimous reference to such a principle constitutes, in my view, the main obstacle to a coherent analysis of economic power and the firm within NIE. In the following two sections, I analyze the contradictions of the two approaches as concerns the problem of economic power and the theory of the firm. Finally, I present my proposal on how to deal consistently with the two problems.

The Approach of Alchian and Demsetz

Alchian and Demsetz [1972] consider production in the firm as being the result of the cooperation of individuals belonging to a team. The essential feature of team production is the impossibility of determining the relative contribution of each component of the team to final production, which makes it difficult (1) to fix the efficient remuneration of the different work activities and (2) to prevent negligent and free-riding behaviors within the team [cf. also Alchian 1987]. Such difficulties raise the problem of monitoring. From the assumption that the benefits of monitoring (in terms of retrieved efficiency) are greater than its costs (the wage of the monitor), it follows that there is an incentive to establish a monitor. In this way, Alchian and Demsetz bring back all the relations within the firm to price relations (the price of the monitoring activity) and show that the hierarchical relations within the firm are only apparent:

> It is common to see the firm characterized by the power to settle issues by fiat, by authority, or by disciplinary action superior to that available in the conventional market. This is delusion . . . [The employer] can fire or sue, just as I can fire my grocer by stopping purchases from him or sue him for delivering faulty products [1972, 777].

The opposition between firm and market is thus illusory. The market is universal since the price mechanism is always at work in any institution of capitalism. The firm, in this sense, is nothing but a particular form of market—one in which price is not continually rebargained, though the outcome is as if it were.

Alchian-Demsetz's theory is not sufficiently general in the eyes of Jensen and Meckling [1976], for it explains only a limited typology of firms (those based on team-production technologies). Hence, they propose a more general theory based on the principal-agent relation. An agency relation is a contract by which the *principal* hires the *agent* to perform services on his/her behalf. The principal-agent problem emerges if information is asymmetric and if the optimal strategy of the agent does not optimize the utility function of the principal; the problem of the principal is thus to establish a system of incentives and/or to monitor the activity of the agent so to make the agent behave in accordance with his/her own optimal strategy. An equilibrium solution is one in which the principal minimizes agency costs and the agent maximizes his/her utility (given the incentive system provided by the principal).

According to Jensen and Meckling [1976], the firm (even those that do not presuppose team production) is a nexus of contractual relations whose principles are the same of the market: "The 'behavior' of the firm is like the behavior of the market; i.e., the outcome of a complex equilibrium process."

As with Alchian and Demsetz, the asymmetry between the parties is not assumed to be substantial.[1] Hierarchy stems from assumptions on information and technology: in Alchian and Demsetz, technology *requires* team production; in Jensen and Meckling's generalization, technology *requires* an agency relation.[2]

The point is pushed to its extreme consequences by Alchian's pupil, Cheung [1983, 1987a, 1992]: what we generally call a "firm" is, in fact, simply a complex nexus of (market) contracts. The concept of the *firm* is thus unimportant and analytically useless. Nobody is clearer about this than the author himself:

> It is often the case that the entrepreneur who holds employment contracts (and it is not clear whether it is the entrepreneur who employs the worker or the worker who employs the entrepreneur) may contract with other firms; a contractor may sub-contract; a sub-contractor may sub-sub-contract further; and a worker may contract with a number of "employers" or "firms" . . . With this approach the size of the firm becomes indeterminate and unimportant [Cheung 1987a, 57].

> The truth is that according to one's view a firm may be as small as a contractual relationship between two input owners or, if the chain of contracts is allowed to spread, as big as the whole economy [Cheung 1983, 17].

> . . . if we cannot in any meaningful economic sense identify "firms," as separate entities, we do not know what a firm is when we see one in the real world [Cheung 1992, 56].

Cheung's contribution is peculiar: he assumes that market is a universal category and, on this basis, develops the Alchian-Demsetz theory of the firm to its logical conclusion.

Faced with the conflict between such a theory and reality, Cheung rejects, on theoretical grounds, the reality he wished to explain.[3]

The Approach of Williamson

Williamson's [1975, 1985] contributions constitute the most organic attempt to approach the problem of institutions within NIE. The author starts with the theoretical assumption that "in the beginning there were markets" [Williamson 1975, 20] and, from such an assumption and through successive exercises in comparative statics, explains the economic role of other institutions. The general method consists of introducing non-market institutions every time the market fails to allocate resources efficiently. Market and firms are thus considered explicitly as alternative instruments for the same end (to complete transactions) and are analyzed for their efficiency properties [Williamson 1975, 8].

As a theoretical reference, the system of pure markets is defined in a context of zero transaction costs.[4] In such an ideal context, as is well known, there can be market failures. The analysis of such failures, however, is not developed by Williamson. Instead, the definition of a zero transaction costs context has only a *negative* role in the construction of Williamson's framework: its definition serves uniquely as reference to define contexts of positive transaction costs.[5] Williamson thus focuses only on those failures caused by transaction costs, leaving apart other kinds of market failures [Williamson 1975, 20].

The "market and hierarchies" framework is built on three theoretical categories: (1) opportunism, (2) bounded rationality, and (3) asset specificity. The simultaneous presence of (1), (2), and (3) prevents the market from allocating resources efficiently.[6] Market failures, under given conditions, can be reduced by means of hierarchical organizations (such as firms).

The benefits of hierarchy flow from the fact that it (1) attenuates opportunism (both by means of the authoritarian mechanism and by stimulating solidarity), (2) attenuates the problem stemming from bounded rationality (by facilitating adaptive sequential decision-making processes in situations in which contracts on the contingent states of nature are not possible and spot markets are risky), and (3) reduces bargaining costs deriving by assets specificity (both through the authoritarian principle and by generating convergent expectations between the parties) [Williamson 1974, 40].

The benefits of market are constituted by (1) the incentive mechanism of competition and (2) the increasing diseconomies that are produced by the hierarchical organization the more it grows [Williamson 1975, chap. 7].

Starting from a system of pure markets, firms are thus explained by determining the conditions that make a centralized organizational structure more efficient than the market. Once hierarchy is introduced, the (virtual) process of centralization proceeds until economic benefits exceed economic costs; in this way, Williamson's framework explains not only the nature of the firm, but also its boundaries, since the optimum degree of centralization defines the optimal extension of the firm.[7] Thus, if firm and market coexist, it is because none of them, in a context of costly transactions, is able to solve efficiently the whole allocation problem.

For the purpose of my inquiry, an important application of Williamson's framework is to the work relation. Such an application is particularly important for, as C. Pitelis [1991, 13] notes, it is only the work relation that can explain the emergence of hierarchies from a situation of pure markets.[8]

The work relation, as a hierarchical relation, represents, in the story started with "in the beginning there were markets," the first suppression of the market. All other changes in the internal structure of the firm and in the relations among firms are *subsequent* and presuppose a certain degree of hierarchy, i.e., the existence of a work relation. If at *time 0* there were only markets, at *time 1* there are markets and work relations, i.e., firms; then, since *time 2* onwards, all the more complex forms of hierarchical relations develop.

The importance of the (hierarchical) work relation in the explanation of the firm makes Williamson's framework unlike Alchian-Demsetz's approach: Williamson's framework implies (1) a clear-cut distinction between firm and market based on the presence/absence of hierarchical relations and (2) a distinction between the work relation and the other economic relations (like the grocer-consumer one) [Williamson 1975, 68].

Institutional Evolution and Pareto Efficiency

Notwithstanding its internal differences, NIE is consistent on the issue of the Pareto efficiency of capitalistic institutions: capitalist institutions are efficient since they evolve according to the principle of minimization of transaction costs.

In Alchian-Demsetz's approach, the issue is developed in particular by Cheung, who claims the absolute superiority of capitalism not only over pre-capitalist systems, but also over communism. Curiously enough, a contribution to this line of thought comes from the radical economist L. Putterman. This author, although to a great extent critical of NIE, argues, in agreement with Cheung, that the superiority of capitalism over communism stems from the principles of *free entry* and *free exit*, which are unhampered in the former and impeded in the latter.

Williamson's analysis is less radical. The method, however, is the same: efficiency can be guaranteed only if human interactions take place with no coercion; only if individuals are free to choose whether or not to interact within a determinate economic institution. If they are free to interact, the resulting social interaction is Pareto efficient.

Institutional Evolution in Cheung and Putterman

Cheung's theory of institutional evolution is based on the concepts of *freedom of entry* and *freedom of exit*. The former is the right to choose whether or not to start an interaction within the context of an existing institution; the latter is the right to interrupt the interaction once it has started.

According to Cheung, the efficiency of capitalist institutions stems from the presence of this double freedom. In capitalism, there is no coercion in social interactions: hierarchies, as we have seen, are only apparent—the participation to a hierarchical relation being the result of free choices. Hierarchy then does not imply, per se, either efficiency, or inefficiency. It is the freedom to constitute and to interrupt a relation that determines its efficiency.

Cheung's problem, thus, is to explain why free individuals have chosen to renounce part of their freedom of action, putting themselves under the direction of a coordinator:[9] the only reason, according to the author, is for their reciprocal benefit. Given that nobody has been obliged to enter into the firm,[10] the nature of the latter must be sought by investigating the reasons that allow it to increase the expected returns of all the participants. If Coase determined the conditions that make it convenient for an entrepreneur to coordinate production within the firm, Cheung determines the conditions under which the worker finds convenient to be coordinated and "proves" in this way the Pareto efficiency of the firm:[11] freedom of entry guarantees that firms are established every time they are mutually convenient; freedom of exit guarantees that if firms still exist, they are still mutually beneficial.

Once analyzed the institutions of capitalism, the double freedom principle is then applied to the institutions of communism. The inefficiency of communism does not stem from its hierarchical structure, but from the lack of freedom to exit (from the communist state), which unavoidably increases transaction costs:

> The transaction costs of operating an organization are necessarily higher in a communist state than in a free enterprise economy, due to the lack of option of not joining and the lack of competition both to recruit members among organizations and to induce members to perform well [Cheung 1987a, 57; see also Cheung 1987b].

The idea is further developed by Putterman [1995]. In his analysis, the origin of communism was not the free association of individuals, but a violent act of prevarication. The capitalist firm and the communist state, though both involve hierarchy and direction, are different on the ground of economic efficiency:

> With the latter [Soviet-type economies] hierarchies being established by fiat rather than by mutual agreement of the parties concerned, there is no reason to expect them to be marked by the kinds of conflict-reducing decision-making mechanisms and incentives to share information which were above said to mark firms in market economies . . . The advantage of the incentive structure of the voluntary formed firm over the imposed hierarchy come into their own again at this point in the argument [Putterman 1995, 387-8].

That revolution is a violent act, inefficient according to Pareto's principle, is unquestionable. That evolution of capitalist institutions is based on the unanimous agreement of the parties involved requires deeper historical investigation. Historical problems apart, the analysis of Cheung and Putterman offers a solution to the question of the relation between hierarchy and efficiency: hierarchy is *apparent* in the capitalist firm (in which the principles of free entry and free exit hold) and *real* in the communist state (in which the two principles do not hold), and this makes the former efficient and the latter inefficient.[12]

But, at what price is this formal solution obtained? If history can be simply assumed, then the whole theory of efficiency of capitalist institutions risks being a pure tautology: taken as given that capitalism arises from an abstract primordial state of free individuals (an assertion that is, by the way, false), it follows that whatever institution emerges and survives is efficient (otherwise it would not arise or would be abolished).

Institutional Evolution in Williamson

As we have seen, Williamson's assumption that *in the beginning there were markets* is formulated in a context of comparative statics. Indeed, Williamson observes, one may well assume that *in the beginning there was central planning* and the emphasis would simply shift from market failures to planning failures. In any case, the use of comparative statics ensures that the same result would occur, since the efficient institutional arrangements do not depend on initial conditions.[13]

Williamson's theory, however, is more ambitious. Its objective is to explain the institutions of capitalism as the result of an evolutionary process. Hence Williamson introduces the principle of Pareto efficiency as the explanatory key of institutional evolution. After having defined the initial starting point as a system of pure markets in which there are no hierarchical relations, Williamson's story of the introduction of hierarchy in the evolution of capitalist institutions is that only Pareto-efficient institutions emerge and survive. Such a story is based on the idea of free intentionality of human action: institutional evolution proceeds toward higher and higher degrees of efficiency as long as individual interactions take place *spontaneously*, *without coercion*.

The introduction of the principle of Pareto efficiency and the story of spontaneous interactions mark the change from comparative statics to dynamic analysis: the institutional comparison can now be interpreted as the *evolution* of capitalist institutions, and the story of spontaneous interactions can now be taken as "proof" of the efficiency of the existing institutions.

As far as method is concerned, Williamson's historical analysis is peculiar: the statement that capitalist institutions originated without any coercion is not documented historically, but argued deductively: the origin of hierarchy is found in its relative efficiency with respect to the market. Williamson thus does not investigate what has taken place, but analyses the conditions that make an institution efficient and from it *deduces* the historical emergence of such institution. The internal division of labor of a hierarchical structure is also explained deductively by assuming particular starting conditions in which "administrative talent," "ability with respect to knowledge and oratorical gifts," and "information processing and decision-making skills" are unequally distributed [Williamson 1975, 47-52].

However, even conceding that endowments are heterogeneous (an assertion that should be explained and not simply assumed), that they are the *cause* of hierarchy should still be argued historically. If it were then possible to claim that heterogeneous endowments can *cause* hierarchical relations (an attempt that Williamson does not make), there would remain the need to discuss the circumstances that make such a cause unique, that is, it would need to be argued that no other element influences the institution of hierarchies.

Williamson's analysis is also weak on strictly analytical grounds. In simple words, Williamson's theory states that if human action is voluntary, every institution that *might be* improved would not survive in its inefficient form, since it would be *effectively* improved. Such a statement has been convincingly criticized by some authors of the evolutionary school who reject the equation evolution-efficiency.[14] In such a context, a well-established result is that path dependency is sufficient to produce, under general conditions, inefficient outcomes.[15] Indeed, Williamson, by focusing exclusively on a context of positive transaction costs, has failed to grasp an important result much discussed in the context of zero transaction costs (and valid *a fortiori* with positive transaction costs), namely, the Pareto inefficiency of equilibrium in situations such as the so-called *prisoner's dilemma*.

The Common Elements of the Two Approaches

Although the two approaches have different polemical tones, there are common features of these theories of efficiency of capitalist institutions:

1. The analysis is based on the comparative-statics method.
2. Initial conditions are identified with an abstract system of no coercion.
3. Human action is dichotomized as free or coerced.
4. Capitalist institutions are supposed to be the result of purely free and voluntary interactions.

These four points expose NIE's defense of capitalist institutions to three kinds of critiques: (1) an *analytical* one, because of the incorrectness of the proof of Pareto efficiency; (2) a *methodological* one, stemming from the insufficient rigor in the shift from comparative statics to historical analysis; and (3) a *realist* one, raised by the historical falseness of the processes considered.

First, as we have seen, the four points (even conceding their validity) are not sufficient for the thesis of Pareto efficiency of capitalist institutions. But the very problem is that they are untenable. Williamson's assumption that *in the beginning there were markets* did not arouse attention when presented as part of a comparative statics context. In other contexts, initial conditions matter: we cannot indifferently assume one or another. History can be differently interpreted but cannot be assumed *as if*.[16] *In the beginning there were markets* is simply a false assertion. The same holds for Cheung's assumption of a pre-existing state of completely free individuals: such a state (if it has ever existed) cannot be identified with earlier organizations of production and distribution. Nor does Cheung offer any evidence. The weakness of the historical analysis raises problems of interpretation in the works of Williamson, Cheung, and Putterman: at best, historical examples are chosen ad hoc;[17] in other cases, they are simply *assumed*, with no reference made to real contexts.

One additional, crucial element common to the three critiques is the hypothesis that human action can be separated into free and coerced. This separation is an attempt to bypass the problem of economic power, and in the next section I discuss the limits that this imposes.

The Problem of Economic Power

Let me define *economic power* as the ability of one person (or group of persons) to deliberately generate economic results even (but not necessarily) against the willingness of others. In general terms, such an ability can be exercised by influencing (1) the subjective elements of the voluntary choice of individuals (for instance, preferences and interpretative models) and/or (2) the system of objective constraints that defines the individual decision-making sets. As I am interested in the internal consistency of NIE, I focus on the second channel of influence, the first one being hardly analyzable within the borders of methodological individualism to which NIE adheres.[18]

The (perhaps obvious) point that I want to stress is that individual plans are formulated under material constraints, and it is only in the context of such constraints that the concept of free choice makes sense. The dichotomy *freedom-coercion* thus has no confirmation in reality; it is also untenable analytically.

In real decision-making processes, the institutional context poses a number of constraints, and it is within such constraints that choices are developed (voluntarily and freely) according to individual preferences. Every choice is constrained, thus *coerced*; on the other hand, being the outcome of a decision-making process, it is voluntary, thus *free*. The dichotomy does not exist. As D. Ankarloo said:

> even a robber who offers me to exchange my life for my money gives me a choice and I would "voluntarily" engage in such exchange, even though the conditions for this exchange are "coercive" indeed.[19]

Free voluntary exchange and coerced relations are compatible and constitute two sides of the same coin. Description of human behavior should thus be posed in terms of the *kinds* of constraints that define individual decision-making sets and that delimit the space for the expression of individuals' will.[20] The analysis of the mechanisms through which social interaction modifies constraints on individuals and produces economic results leads then to discuss the problem of economic power.

Economic Power in the Approach of Alchian and Demsetz

According to Alchian-Demsetz's approach, economic power does not exist in capitalism, and apparently authoritarian relationships are, at a closer analysis, relationships between equals. What makes power asymmetries illusory is the working of the principle of exit in a context of perfect competition. In every relation between two parties, each can always exercise its right to exit. The right of one party to exit disciplines the behavior of the counterpart independently of the form of interaction of the two parties within the institution or the organization. Competition on both sides of the relation prevents each party from enjoying an unfair return for functions performed.

In such a context, economic power is identified with the market power stemming from monopoly positions, and it necessarily constitutes a violation of the assumption of perfect competition. In conditions of perfect competition, then, economic power is absent, and the parties are perfectly symmetrical, even if they have different positions in a hierarchically structured organization.

Such analysis is superficial, since it neglects (1) the consequences on both the parties of the decision of one party to exit from the relation and (2) the capability to assert one's own interests even without using the threat of exiting.[21] Nevertheless, the claim that authority and power do not exist and that the principle of exit is universal in capitalism gives coherence to the Alchian-Demsetz's approach: they state (in my opinion, wrongly) that economic power plays no role in social relations and that only the two limit cases of freedom and coercion make sense. On this basis, they develop an evolutionary theory of institutions in which all social interactions are brought back to these limit cases.

If it were possible to establish, for every human act, the free or coerced content, Alchian-Demsetz's theory of institutions might be reasonably applied. The problem is that this *dichotomization* of human action is not possible without discussing the criteria to use in such an operation. Alchian-Demsetz's approach can be criticized for being based on untenable hypotheses (the dichotomy freedom-coercion and the definition of an abstract system of pure freedom), but it is coherent enough from the viewpoint of its analytical developments.[22]

Economic Power in the Approach of Williamson

Williamson's framework lays itself open to a critique of internal consistency: Williamson perceives economic power as a relevant category in the analysis of market and hierarchies but does not develop its implications within his framework. Williamson's defense of this approach is weak. He says,

> Inasmuch as power is very vague and has resisted successive efforts to make it operational, whereas efficiency is much more clearly specified and the possibility of an efficiency hypothesis is buttressed by ecological survival tests, we urge that efficiency analysis be made the centrepiece of the study of organizational design . . . power explains results when the organizational sacrifices efficiency to serve special interests. We concede that this occurs. But we do not believe that major organizational changes in the commercial sector are explained in these terms [Williamson and Ouchi 1983, 30].[23]

Williamson admits that institutional evolution is influenced by power clashes and that the efficiency principle is, sometimes, sacrificed in the name of personal interests (of individuals with economic power). However, he presents two reasons for rejecting the analysis of economic power: (1) in the majority of practical cases, its relevance is secondary; and (2) the concept is analytically vague.[24]

Before discussing these two arguments let me clarify Williamson's conception of power. Williamson's concept [1997, 14] is that power may play a role only in "involuntary, uninformed and myopic contracting" whereas "voluntary, knowledgeable and farsighted contracting" is governed by the efficiency principle.[25] According to Williamson, power matters only in conditions in which contracting is problematic. But problematic contracting is precisely the condition on which Williamson's framework is built (remember that the framework is explicitly defined out of the zero transaction costs context), which means that the extent to which power can be neglected is precisely the extent to which Williamson's framework can be disregarded.

In order to pave the way for a more coherent approach to economic power, let me now consider the two arguments of Williamson in more detail.

Consider the first argument. In order for Williamson's framework to be methodologically valid it is necessary (1) that economic power be a variable whose presence/absence can be ascertained and (2) that economic power be absent (or at least, negligible) in the organizational changes considered by Williamson. If it were so, notwithstanding the limits of applicability of the theoretical framework, Williamson's conclusions could still be analytically valid.

To ascertain the negligible role of economic power, we must verify (at least) that human intentionality is free. However, as we have seen, it is only by taking the system of individual constraints as given that decision-making can be considered a purely free act. Individual constraints depend on (and, in part, are defined by) the institutional system, and if institutional arrangements are the *explananda*, they cannot be taken as given. This means that Pareto efficiency is an empty concept in a dynamic context, since it rests on the assumption that constraints are given, whereas institutional evolution is nothing but the phenomenon of their change in time.[26]

This contradiction exposes the explanations of institutional evolution based solely on the concept of efficiency to internal problems of consistency: if from period t to period $t+1$ social interactions produce Pareto improvements (given the institutional constraints of period t), it is still possible that, by changing the constraints of period $t+1$, someone will be worse off in period $t+2$; indeed, the interaction at time t may well produce institutional constraints at time $t+1$ within which it may not be possible (for someone) to reach the utility level of time t. And all this can happen as a result of purely free choices in each period (given the institutional constraints of the period) and without any change in individual preferences.[27]

The problem of the application of a static method to a dynamic problem are here apparent. The concept of Pareto efficiency makes sense only in a context of fixed constraints. If the system of constraints is allowed to change (a condition that is necessary to the analysis of institutional evolution), the problem of economic power cannot be avoided: the evolution of the institutional system, by modifying the constraints of individuals' decision-making processes (and thus the outcomes of the individuals' free choices), also changes the power structure of society. This means that, *in the analysis of the evolution of the institutional context, it is not possible to* separate the aspects relative to the influence of economic power from the aspects relative to the working of the efficiency principle.[28] But then, Williamson's framework, based solely on the concept of efficiency, is analytically inadequate, for this concept is non-operational without a given power context: Pareto efficiency can be defined only by taking the system of institutional constraints as given, i.e., by taking the power structure of society as given.

This theoretical limit of Williamson's framework has positive and normative implications. First, it reduces the interpretative power of the framework by preventing determination of whether an organizational change is the product of efficient re-arrangements or of power exercise (the two things being perfectly compatible). Second, it invalidates the normative applicability of the framework: if it is not possible to state whether an institutional arrangement is the product of the efficiency principle or of the exercise of economic power, that arrangement cannot constitute a normative guide unless explicit value judgments are introduced; however, if one admits value judgments, there is no need to found the framework on the concept of Pareto efficiency.[29]

In one way or another the *analytical vagueness* of the concept of economic power mentioned by Williamson pours into the concept of efficiency, for economic power manifests itself (among other things) in the modifications of individual constraints, which, in turn, constitute the foundation of the concept of efficiency.[30] This leads to consideration of Williamson's second argument. To recognize the relevance of an analytic category, which in Williamson's framework cannot be clearly specified, amounts to admission of the limits of Williamson's theory. It implies that Williamson's analysis hides a non-measurable degree of imprecision stemming from an insufficient analytical framework that does not allow appreciation of one of the factors that Williamson himself considers influential on the processes of institutional evolution. This limitation means that Williamson's market and hierarchies framework can shed some light on the relative costs and benefits of different institutional arrangements, but it is not suitable to sustain either normative prescriptions or historical interpretations of the institutions of capitalism.

The Problem of the Firm

Although it may appear paradoxical, the discussion of the problem of the relations between firm and market, notwithstanding its centrality in the research program of NIE, rarely involves clear-cut definitions of the two institutions.

One simple characterization of firm and market is that the firm is an organization for the production of goods and services, and the market is an institution for their exchange. Such a general definition, however, is inapplicable to NIE, for production itself is considered as an allocation phenomenon.

The inclusion of production in the analysis of exchange is at the heart of the theoretical problem of definition of firm and market in NIE. The problem is further worsened by the lack, in NIE, and in particular in Alchian-Demsetz's approach, of a clear distinction between *exchange* and *transaction* and by the assumption that exchange is a unique, relevant category.[31] The issue, as I will discuss in a moment, is also related to the problem of economic power. Indeed, in the analysis of modes of production as phenomena related, but not coincident, with modes of exchange, it is possible to grasp not only the nature of the firm, but also the nature of economic power (whose essence is not in unequal bargaining as implicitly assumed in NIE, but, as I will argue, in the division of society into classes).

In what follows, I make explicit the characterizations of the firm underlying the two streams of NIE.

The Firm in the Approach of Alchian and Demsetz

The definition of the production problem as a problem of allocation of (scarce) resources is basic to the analysis of production as a form of exchange. The natural institution where exchange takes place is, according to NIE, the market. The market, if the conditions for perfect competition hold, is considered to be an institution in which there is no room for economic power.

In Alchian-Demsetz's approach, the denial of economic power is extended also to the firm by assuming that the conditions of perfect competition hold in the realm of production. On these bases, let me make explicit the implicit definitions of *exchange*, *perfect competition*, *market*, *production*, and *firm* that sustain Alchian-Demsetz's approach:

1. *Exchange* is a voluntary act governed by the principle of competition.
2. *Perfect competition* entails absence of authority and power relations.
3. The *market* is the place where exchange takes place.
4. *Production* is the exchange between the owners of the factors of production.
5. The *firm* is the place where production takes place.

From such definitions, it follows that:

6. In the institutional system (composed of firms and markets), there is no authority, since there is no authority either in the market [(1)+(2)+(3)] or in the firm [(1)+(2)+(4) +(5)].[32]

By making explicit such definitions, we can appreciate the importance of the result obtained by Alchian-Demsetz's approach: Coase's investigation allowed him to explain the nature of the firm by introducing explicitly the principles of authority and direction in addition to the principle of competition; Alchian and Demsetz and their followers managed to analyze all the institutions of capitalism by referring only to the principle of competition, without making concessions on the matter of authority. Capitalism is thus an egalitarian system in which there is no real authority among individuals.

Such a result, however, is obtained at a dear price. From the above definitions, it follows that:

7. Firms and markets are not distinguishable, for the firm is itself a form of market [(1)+(3)+(4)+(5)], which cancels Coase's problem of the nature of the firm instead of solving it.[33]

This is a price that Williamson is not willing to pay. Let me then consider Williamson's definition of the firm.

The Firm in the Approach of Williamson

The explicit analysis of hierarchical relations in Williamson's framework allows him to characterize the firm on the basis of the peculiar contractual relations that take place in it. The firm is an organization based on the work contract. The work contract establishes a hierarchical relation between employer and employee. Such a hierarchical relation constitutes the efficient solution to the coordination problems that arise in a positive transaction costs context.[34]

Authority involved in the work relation makes the interaction within the firm peculiar with respect to those within the market. The work relation, although based on the free consensus of the parties, produces an asymmetry between employer and employee: the former directs and orders, the latter executes and obeys.[35] The peculiarity of the work relation, with respect to other market relations, is that direction and obedience are not matters of discussion once the contract has been signed. Whereas in Alchian-Demsetz's approach the price mechanism is also supposed to work when it is actually suppressed (by assuming that the relations within the firm are regulated by a *theoretical* continuous re-bargaining process), here the work contract constitutes an *effective* suppression of the price mechanism for a determined period of time.[36]

The definition of the firm relies thus on the asymmetry between the parties and involves the concept of power. The hierarchical work relation is based on a contract that circumscribes the sphere of exercise of power—a power thus derived from a mutual consensus and that ceases with the expiration of the contract, i.e., with the leaving off the consensus that supports it and justifies it.

Even though based on mutual consent, economic power exists and is a constitutive element of the definition of the firm. This allows Williamson to manage the problem of compatibility between authority and equality in social interactions in a more elegant way than in Alchian-Demsetz's approach. The latter tries to show that authority is only formal, not substantial; Williamson, on the contrary, does not try to deny the existence of hierarchies, but to explain it: authority exists; why? Because it is efficient.

How to Make Economic Power and the Firm Consistent

In order to show how economic power and the firm can (and should) be coherently analyzed together, I propose a framework in which power can be analyzed in its social and dynamic dimensions. This leads me to depart from NIE but also from a number of approaches that are, in my view, very effective in pointing out the limits of NIE but that are not well equipped with proposals to overcome them. What I propose is to develop affinities between institutionalism and Marxism with the explicit aim of overcoming the internal limits of NIE from an external perspective.

Social Classes and Dynamic Analysis

At the core of both the problems of economic power and the firm is the dichotomy of freedom-coercion. The attempt of NIE to reduce economic power to a binary variable (freedom-coercion) is based on the implicit assumption that individual constraints are given. This implies that the institutional system, too, is to be taken as given. In this case, the whole project of explaining the institutions of capitalism risks becoming a tautology.[37] In order to overcome such a risk, an investigation of the power implications of different institutional systems is required.[38]

Capitalist contractual relations, although voluntary, are realized within the constraints of the institutional system. The work contract in which freedom of entry and freedom of exit are guaranteed on both sides does not cancel the asymmetrical essence of economic power relations between the parties. On the contrary, it depends on it: without an institutional context in which labor power can be *freely* exchanged in the market, the work contract would not exist. The asymmetric power relation between the parties derives from the establishment of social relations that are capitalistic, which necessitates that labor power be a commodity and the means of production be private. In a sense, therefore, although NIE does not analyze economic power relations, it is still based on them.

To understand the nature of hierarchies in a context of economic power and free contractual relations, it is necessary to analyze the features that differentiate the individual decision-making sets and the reasons why hierarchical relations exist. If two parties voluntarily agree to establish a (hierarchical) work relation, one in the position of *worker* and the other in the position of *boss*, it is because their respective constraints make these positions the best option for both of them: rational agents do not choose to be workers if they can be bosses (by the way, the next-best alternative for workers is not command and direction, but unemployment).

By establishing a relation between the decisions of rational agents and the features of their individual decision-making sets, we introduce the concept of social classes: social classes here are defined very broadly by the different types of constraints faced by individuals.[39] It is the analysis of the features of individual decision-making sets that explains why rational people voluntary choose their different roles in the institutions of capitalism.[40] This implies a break with NIE in that class analysis is not developed. At the same time, it allows us to overcome the risk of tautological statements about the efficiency of capitalist institutions to which NIE exposes itself: that the best option for someone who has nothing but his/her labor power is to work only proves that the work relation is the best thing such an individual can aspire to *within capitalist institutions*, but it does not prove that capitalism is the best institutional system he/she can desire. In capitalism, the worker is not obliged to exchange his/her labor power with the wage of a *particular* capitalist, but is obliged to exchange his/her labor power with the wage of *a* capitalist. Freedom of choice for the worker is thus peculiar: he/she *must* obey the orders of a capitalist or *choose* another capitalist to obey. Freedom and coercion, then, are not in an antagonistic relation; they express an individual and a social viewpoint, both simultaneously valid and necessary to understand the nature of capitalist institutions.

A second essential feature of the concept of economic power, besides its class content, is its dynamic nature. Even remaining within voluntarism, the fact that individual constraints change in the process of social interaction (and as a consequence of it) suggests that one form of manifestation of economic power is in the evolution of the systems of constraints faced by individuals.[41] As V. P. Goldberg [1974, 461] stresses, if one accepts the opportunist individuals of NIE, not only must one analyze how people pursue their self-interest *within* the rules, but also how they allocate resources toward *changing* the rules to their own benefit.[42] NIE tends to analyze institutional arrangements only for their effects on the performance of the organizations that act within them, but the relation between institutions and organization is a mutual one, the behavior of the organizations depending of the institutional framework and the institutional framework being shaped by the actions of organizations [cf. Khalil 1995]. On the one hand, it is the institutional framework that confers economic power to the different classes of agents; on the other hand, institutions evolve under the interaction of agents who, in their action, exercise power. This means that economic power has a cumulative nature that influences the whole process of institutional evolution.[43]

Once the social and dynamic essence of the concept of economic power is specified, it is possible to more accurately discuss the problem of the nature of the firm. Cheung's analysis of the principles of *free entry* and *free exit* and Williamson's idea to seek the nature of hierarchies in the work relation are not wrong, but they do not grasp the social dimension of interpersonal relations. The point then is not simply to reject these theories, but rather to coherently develop them in a social framework. In particular, the principles of *free entry* and *free exit* imply that the relations within the firm are intimately linked to the relations outside the firm, at least because the choices to enter and to exit imply a comparison with the situation outside the firm. This means that the authority relation used by Williamson to characterize the firm cannot be understood by remaining within the boundaries of the firm: in order to understand such a relation, we must consider the types of alternatives offered to the different classes of individuals. For the worker, the only alternative to a work relation is (at best) another work relation that still involves a subordinate position with respect to the capitalist. The relation is thus not a symmetrical one: one party commands, the other obeys, and the foundations of such an authority relation within the firm cannot be modified simply because they express the asymmetric economic power relations that exist outside the firm.[44]

Considering now the implications of the definition of a dynamic framework, a first result is the possibility of overcoming the limits of NIE caused by the implicit identification of *transaction* and *exchange*. Although power disappears in the act of exchange, it can be incorporated in the analysis of the process of transaction on which the act of exchange is based [Commons 1934]. But the implications of a dynamic context do not end here. The history of capitalism is unidirectional and is characterized by quantitative and qualitative transformations of its organizations and institutions. If we investigate the nature of the firm, we must analyze both its general features in the history of capitalism and its transformations in the course of this process. The problem of the nature of the firm is itself a dynamic problem, which requires a historical and context-specific definition. The historical transformation of the capitalist firm is not a linear process, for the firm is just one actor in the process of social interaction, and the point is that the actors in the game and the rules of the game evolve together and influence each other. This means that the nature of the organizations and institutions of capitalism cannot be grasped by analyzing them in isolation and out of the historical context. A possible definition of the problem of the nature of the firm, in this view, might be in terms of its relations with the other organizations and institutions of capitalism, of its dependence on them, and of its ability to modify them.[45]

Internal and External Criticisms

The fact that the authority relation within the firm has to be put in relation to the general power relations that exist also outside the firm has been well put by S. Bowles and H. Gintis [1988, 1993a, 1993b, 1993c, 1994] and Goldberg [1980]. These authors have focused on power and the work relation, but I believe with a different objective than that of the research program I am proposing. In the latter, the emphasis on power as a social phenomenon stems directly from the objective of the inquiry that is the nature of capitalist institutions.

In the approach of Bowles and Gintis, the objective is to show that, in a competitive capitalist economy, voluntary exchange engenders a structure of power relations among agents in equilibrium. Power is thus dealt with as a relation between *individuals* originating ultimately by the existence of non-clearing markets. In order to realize their objective, Bowles and Gintis introduce imperfections in the Walrasian model, thus rejecting the assumption that contract enforcement is free and unproblematic. In doing so, they develop an operation that theoretically is not far from that of NIE (in the sense that it introduces positive transaction costs in a perfect decision-making context) but that leads to opposite conclusions as far as the image of a harmonious market society is concerned. To put it differently, Bowles and Gintis, by accepting the challenge of neoclassical economics in a positive transaction costs context, are very effective in pointing out the internal limits of NIE;[46] however, precisely for the same reason (the acceptance of neoclassical method), their theory cannot contribute to overcome the limits of the neoclassical understanding of power relations in capitalism.[47]

In his attempt to build a bridge between NIE and radical theories, Goldberg [1980][48] assumes a context of imperfect information, opportunist individuals, costly contract enforcement, and historical time.[49] In such a problematic decision-making context, discrepancies between *promise* and *execution* in contract relations can emerge, making room for the exercise of power.[50] However, he argues, this discrepancy is not peculiar to the employment relation as the radicals suggest (by insisting on the distinction between labor and labor power), but characterizes, in varying degrees, most exchange relations [Goldberg 1980, 252-3]. Here again, the explicit reference to a problematic decision-making context—notwithstanding its merit in pointing out the limits of Williamson's approach and the benefits of integrating in it the radical account of the employment relation—may be misleading if considered as the basis for understanding the nature of capitalism:[51] as I will show in a moment, the peculiarity of the employment relation is not in the discrepancy between what is promised to the worker and what is given to him/her; on the contrary, it is precisely their coincidence that makes the employment relation unique.[52]

Power relations, I claim, are not a consequence of the complexity of the decision-making context: uncertainty, asymmetric information, bounded rationality, historical time, and complex contract enforcement, of course, modify power relations in society, but rather modify something that exists independently from them.[53]

In order to show this, consider a Walrasian model of certainty, perfect information, full rationality, and free and instantaneous contract enforcement. Assume also that the conditions for markets clearing hold. Here capitalists (as a class) can do without workers (by working themselves), whereas the latter cannot live if the former deprive them of the means of production. Hence capitalists can affect workers actions by imposing or threatening to impose sanctions on them. But this is precisely the definition of power of Bowles and Gintis [1993a, 326-7], applied to classes, instead of to individuals. In a class view of power, thus, transaction costs are not necessary (although, of course, desirable on the ground of realism) to grasp the asymmetric relations that characterize voluntary contracts in capitalism.[54]

With respect to Goldgerg's emphasis on the gap between promise and execution, a standard Sraffian model of certainty and perfect information shows that even if the worker knows well that he/she will receive the price of his/her labor power, he/she still has to work more than the time necessary to reconstitute the value of his/her labor power [Sraffa 1960]. In capitalism, the fact itself that capitalists are remunerated by a profit (as Marxists and neo-Ricardians know well) means that workers are exploited. But then, in the (power) relation between capitalists and workers there is not necessarily any discrepancy between promise and execution: capitalists promise to exploit the workers by paying them less than their value, and the point is that they then maintain the promise.

Power and Competition

We can now see that to consider the firm as a form of market (even a competitive one) does not prove that economic power relations do not exist. Economic power relations exist in the firm, for they exist in (competitive) markets too. Economic power does not stem from the lack of competition in the market (or in a particular form of it, called the firm). It originates in the overall institutional system, for such a system imposes different kinds of material constraints on different individuals. Perfect competition implies simply that given such an heterogeneous distribution of constraints (and thus of economic power) nobody can increase her/his returns by allying with the individuals with similar kinds of material constraints, but does not imply any symmetry in the relations between the parties.[55] To say that the firm is a form of market and to assume that markets are perfectly competitive is thus not sufficient to prove that there is no authority in the firm, simply because it is not sufficient to prove that there are no power relations in the market. On the contrary, the investigation of the origins of economic power relations suggests that the authority relation within the firm is simply one of the forms of realization of the economic power relations on which the whole capitalist system is based.

The explicit discussion of the problem of economic power leads thus to redefine the question itself of the nature of capitalist institutions: the problem is not to explain why authority reigns in the firm, in contrast with the reign of freedom of market relations, but to understand the different manifestations of economic power in the different institutions of capitalism.

Conclusions

The main conclusion of my investigation is that in NIE the analysis of economic power and the analysis of the nature of the firm are incompatible. Such an incompatibility theoretically weakens the general explanation of the institutions of capitalism as the efficient result of a process of minimization of transaction costs. The weakness of the theory is the result of two incompatible objectives: (1) the description of social relations within capitalist institutions as being egalitarian and (2) the analytical characterization of the institutions of capitalism (the firm, in particular). Such a weakness manifests itself in different forms depending on which of the two objectives is given priority.

In Alchian-Demsetz's approach, the priority task is the first one. In order to achieve such a task, the authors believing in this approach deny the existence of real authority relations in both the firm and the market and renounce the objective of characterizing the capitalist firm in the frame of capitalist institutions. This makes the problem of compatibility between economic power and the firm manifest itself in the theory of the firm.

In Williamson's approach, the priority task is the second one. In order to provide a consistent definition of the firm, Williamson introduces the concept of power. Although it is treated in purely voluntary terms, the introduction of economic power compromises the general consistency of the theory of efficiency of capitalist institutions. Then the problem of compatibility between economic power and the firm manifests itself in the discussion of economic power, for economic power is used to characterize the firm but is put aside in the analysis of the efficiency of capitalist institutions.

The incompatibility of the two objectives may suggest that it is possible to maintain one of them by renouncing the other. This is only apparent. The origin of the weaknesses of both the approaches is, in fact, in the dichotomy freedom-coercion. Such a dichotomy, on the one hand, is essential to affirm each of the two objectives, but, on the other hand, it is without theoretical and empirical foundations. A closer analysis shows that the two approaches are less different than it may seem. They both analyze capitalist relations as the result of purely voluntary interactions. This requires that the system of institutional constraints be taken as given: although not affirmed explicitly, it is only by taking individuals' constraints as given that social interactions can be considered the result of *free* voluntary acts. The different position with respect to the existence of power relations in capitalism is thus only formal: Williamson's analysis of hierarchies is based on a conception of economic power in terms of voluntary contractual relations; power and authority relations are defined by the mutual agreement of the parties and cease with the expiration of the contract. Authority is thus itself a voluntary decision (given the constraints that the institutional system imposes on each individual). As well as in Alchian-Demsetz's approach, it is the assumption that institutional constraints are given that allows consideration of the choice to establish an authority relation as a mutually free one.

The fact that NIE individual decision-making sets are taken as given and that the qualitative and quantitative aspects that make them different are not discussed gives the problem of efficiency of capitalist institutions a singular specification: efficiency of capitalist institutions is not proved by comparing the constraints of different institutional systems and the economic outcomes that they generate; instead, it is derived by assuming that individual behaviors are the result of optimizing decision-making processes (perhaps bounded by computational abilities), *given the existing institutional constraints*. The pure voluntary contractual approach to the analysis of efficiency of economic institutions wound in this way in circular reasoning.

In order to avoid this problem, my proposal is to analyze the relations between the institutional system and economic power relations. Two features of the analytical context are, in my view, required to develop this project coherently: it must be (1) compatible with class analysis and (2) dynamic. Class analysis is necessary to understand the processes through which free voluntary interactions modify and are modified by the institutional system. The adoption of a dynamic context is necessary to endogenize the institutional system and to deal with the problem of its evolution.

This research program is evidently incompatible with NIE and casts doubts on the whole theory of efficiency of capitalist institutions that NIE develops. The abandonment of (some of) the tenets of NIE, on the other hand, is necessary to overcome its internal limits. This requires a radical approach to the analysis of economic power in which its very essence is not in the definition of a positive transaction costs context, but in the social division of labor which characterizes capitalism.

In the research program proposed, economic power is considered as a pervasive element both in the relations within the firm and in the relations within the market and is thus no longer incompatible with the theory of the firm. The development of this line of research, I believe, may contribute to provide a reasoned discussion of the problem of efficiency of the institutions of capitalism—a problem whose solution is tautological when defined according to NIE.

Notes

1. Competition in the market of managers assures that managers do not perceive any rent for their directing activity within the firm [Jensen and Meckling 1976].
2. Technology and information are taken as given.
3. G. S. Becker's [1992, 68] comment to Cheung [1992] is sharp: "We generally know a firm when we see one."

4. Transaction costs are never defined in Williamson's work: by quoting the (not very precise) definition of K. J. Arrow [1969, 48], Williamson [1985, 18] talks of "costs of running the system"; later on [Williamson 1985, 19], he defines transaction costs as "the equivalent of friction in physical systems." A rigorous definition of transaction costs is not provided neither by the authors of Alchian-Demsetz's approach: Cheung [1992, 51] defines transaction costs as the costs that would be absent in a Robinson Crusoe economy. According to Coase [1992, 73], Cheung's definition is too wide and imprecise and derives from an incorrect interpretation of his article of 1937: "If I were asked [when I came to be interested in transaction costs] to imagine an economic system in which transaction costs did not exist, it would be a completely communist society."
5. As a matter of fact, such an expedient is not sufficient to make Williamson's definitions more precise, since the zero transaction costs context itself is never rigorously defined.
6. Lacking one of the three factors, the market can still allocate resources efficiently vis-à-vis the firm: (1) without bounded rationality, all future potential problems can be solved once for all, and opportunism and assets specificity can be managed by the market; (2) without opportunism, *stewardship* can be used to replace hierarchy (since the parties can rely on each other for the respect of the commitments); and (3) without asset specificity, contestable markets in the Baumol's sense can be defined [Pitelis 1991, 12].
7. In Williamson's approach, although market failures remain the presupposition of the existence of the firm, as in Alchian-Demsetz's approach, the demarcation line between market and hierarchy is a more problematic issue: costs and benefits of different organizational structures cannot be brought back to the pure information dimension as in Alchian-Demsetz's approach; in Williamson, to every organizational structure there is an associated package of costs and benefits with respect to the three categories of opportunism, bounded rationality and assets specificity and the choice of an organizational structure implies the choice of the entire package of costs and benefits [Williamson 1975, 130].
8. All the other applications of Williamson's framework (vertical integration, M-form, conglomerates) presuppose the existence of the firm and deal thus with the problem of the *evolution* of the firm, not with its *origins*.
9. The assumption of a pre-existing state of free individuals, as we will see, plays the same methodological role in Williamson's story that *in the beginning there were markets*.
10. The statement that there have been (and there is) no coercion in the worker's choice to enter into a hierarchical relation assumes in Cheung the character of an axiom, i.e., it is not considered a matter of historical investigation, but an a priori true proposition.
11. In Cheung's terminology, there is no *establishment of the firm*, but a *substitution of contracts on products with contracts on factors of production*.
12. The idea that capitalist institutions effectively guarantee the *freedom of entry* poses problems not only with respect to the question of equal opportunities (i.e., of the effective freedom to access to enviable positions), but also with respect to the real openness of advanced capitalist states to those people who try to enter from the outside.
13. The institutional starting point, as Williamson [1985, 21] notes, affects the results of the framework only in the case of equal efficiency, since the general idea is that an institution is substituted only if a *more* efficient one emerges.
14. For a synthetic presentation of the arguments of the evolutionary school against the equation evolution-efficiency, see G. M. Hodgson [1994]
15. E. Ullmann-Margalit [1978], for instance, has shown that Pareto efficiency is neither necessary nor sufficient for survival. Path dependency also can produce inefficiency in the technical sense: the case of the spread of QWERTY keyboards in computers, notwithstanding their technical inefficiency (once abandoned the mechanical technology of old typewriters), is perhaps the most quoted example [David 1985].

16. That history can be interpreted differently does not remove the fact that some interpretations are more valid than others and that some are completely false; the criterion of judgment cannot be but the argumentation itself of facts.
17. Cheung [1983, 8], once again, is most explicit: "My own favourite example is riverboat pulling in China before the communist regime, when a large group of workers marched along the shore towing a good-sized wooden boat. The unique interest of this example is that the collaborators agreed to the hiring of a monitor to whip them." That Cheung's favorite example is representative of the process of institution of the capitalist firm is perhaps something that not all historians would subscribe to.
18. Curiously enough, neoclassical economics and NIE, although based on the constrained optimization model of individual decision-making, tend to reject even this restricted conception of power. For a more organic presentation of my view of the mechanisms of exercise of economic power, see Palermo [1997].
19. Quote from personal correspondence with Ankarloo.
20. The risk that the theory of efficiency of capitalist institutions of NIE ends up in tautological statements can now be better specified: it lies on the fact that the discussion of (free and voluntary) exchanges is developed without analyzing the kinds of constraints that govern them. Each exchange, if it happens, is because, in the context of the existing constraints, it is convenient to both the parties and thus is a Pareto improvement.
21. Referring to A. O. Hirschman's [1970] investigation, here is considered only the principle of "exit" neglecting the principle of "voice."
22. Although, as we have seen, the proof of the Pareto efficiency of capitalist institutions is not correctly developed, for voluntary action is not sufficient to Pareto efficiency.
23. A similar position is defended in Williamson [1995, 1997].
24. On the matter of analytical precision, Hodgson [1988, 200] observes that such an issue does not lead Williamson to seek a less vague definition of the concept of transaction costs (on which is based the whole research of NIE).
25. As we will see, this implies too narrow a definition of power.
26. S. T. Lowry [1976] stresses the same problem from a different angle: the prime normative objective of transaction costs analysis is to eliminate unnecessary transaction costs, but this problem can be coherently defined only by taking the institutional framework as given.
27. Consider the following example. At time t, with a high rate of unemployment and a cheap cost of labor, an entrepreneur chooses to employ new workers. At time $t+1$ (as a result of decisions of such a kind), the rate of unemployment is low and the labor movement is strong, and our entrepreneur is left with just two options: (1) to continue his/her activity with reduced profits (at $t+2$), or (2) to sell his/her firm at a discounted price (with respect to $t+1$). Whatever option he/she chooses, he/she will be worse off at time $t+2$ with respect to time t, for the constraints at time $t+1$ are more stringent.
28. In a dynamic context, it is also dubious that the efficiency principle will have any relevance in the explanation of institutional evolution. Pareto efficiency, indeed, makes sense only in a context of given constraints, so it cannot explain the origin of an institution, but, at best, its permanence once it is in place. However, at a thorough analysis, Pareto efficiency is irrelevant even for the question of the permanence of institutions. Indeed, if the point is to determine the conditions that prevent an institution from changing, the appropriate concept is that of equilibrium, not that of efficiency. Efficiency, thus, is not suitable to explain either change or perpetuation of institutional arrangements.
29. By the way, as noted by V. de Graaff [1957], even the economist that pronounces himself/herself only on the ground of Pareto efficiency uses, in fact, value judgments. It thus can be claimed that the pursue of Pareto efficiency is itself a value judgment.
30. Note also that the fact that power is a vague concept is taken more for granted than discussed analytically in Williamson's work.

31. This impedes a reasoned discussion of the different economic implications of the different kinds of transactions.
32. The state, although not explicitly considered, may be the only context for the expression of power and authority.
33. The only distinction between firms and markets that we can derive is that there are some markets that are not firms: these markets are those of the final goods that are not utilized in the production of any other good.
34. In his more recent works, Williamson [1995, 1997] insists on forbearance, rather than on the employment contract as separate and complementary explanation of the origins of fiat in the firm. However, in the forbearance law, which is different than the employment relation, power relations can go in one direction or another. As E. L. Khalil [1996, 293; 1997, 526-8] observes, if the employment contract ceases to be considered as substantially different from commercial contracts, the dichotomy of market-hierarchy tends to collapse exactly as it collapses in the contractarian approach of Alchian and Demsetz.
35. Williamson's distinction between market relations and infra-firm relations corresponds in some respects to Commons's [1934] distinction between bargaining and managerial transactions [Rutherford 1996, 127]. This allows Williamson to overcome the limits of Alchian-Demsetz's approach in which not only such a distinction is absent, but also any distinction between transaction and exchange is lacking. However, as far as Williamson is concerned, although he explicitly refers to Commons, it is not clear whether his conception of transaction is compatible with that of Commons: the point, I think, is that bargaining transactions, in Commons's analysis, although based on voluntary agreement between legal equals, are not necessarily between equals in economic power, whereas Williamson's analysis of market transactions is based on the implicit assumption that they do not involve any economic power.
36. Explicitly referring to Alchian and Demsetz [1972], Williamson [1997, 23] affirms: "Firms can and do exercise fiat that markets cannot "
37. The claim of Pareto efficiency of capitalist institutions is based on the observation that, given the institutional constraints, a transaction benefits both of the parties that realize it. However, this does not prove that capitalism is an efficient institutional system, but, at best, that, given the institutional constraints, it is socially desirable to allow transactions.
38. As a matter of fact, NIE is based on the assumption that individuals face different constraints and thus that economic power is heterogeneous, but it does not investigate the social origins of such differences and heterogeneity.
39. This broad definition of classes allows, in my view, to exploit what institutionalism and Marxism have in common. According to W. M. Dugger and H. J. Sherman [1994], the emphasis of these two streams of thought respectively on the concept of power and class makes them *complement* in some respects and *competing* in some others, but certainly not *contradictory* or *unrelated*. The similarities and differences between the role of class analysis in modern institutionalism and in conventional Marxism are discussed more skeptically by P. A. Klein [1992]. Within modern institutionalism, one of the aspects of the relation with Marxism that gives rise to debate concerns the relative importance of the ownership of the means of production and the ability of modern Marxism to deal appropriately with the phenomenon of separation between ownership and control [Lucore 1993; Klein 1993].
40. I wish to stress that this analysis is necessary but not sufficient, since decision-making is a complex process whose outcomes do not stem automatically from the existing material constraints.
41. Other dimensions of economic power that I do not discuss here include the possibility of influencing the subjective perception of reality and the preferences of individuals. For an analysis of the multidimensional views of power, see S. Lukes [1974].

42. To give just one example of the relevance of this theoretical argument, the businessman and theoretician G. Soros [1994] writes that when he speculated against the British pound and the Italian lira in 1992, he calculated not only the immediate benefits of the operation, but also the benefits (from his own standpoint) of the institutional change that it would have probably caused (the end of the European Monetary System).
43. L. Magnusson and J. Ottosson [1996] point out that this cumulative process may lead to suboptimal conditions.
44. K. Marx [1959], on the matter, wrote: "In general, we should note that where worker and capitalist both suffer, the worker suffers in his very existence while the capitalist suffers in the profit on his dead mammon."
45. Here again, it might be useful to distinguish between the ways the different dimensions of economic power affect the process of institutional change and transform the nature of the firm: on the one hand, the nature of the firm evolves as a consequence of the processes of concentration and centralization of capital, which increases tremendously the power of the firm; on the other, the modern corporation affirms itself also at a cultural level modifying the nature and functions of the other institutions of capitalism and the overall relations among them [Dugger 1989].
46. The result obtained by Bowles and Gintis, according to which power relations between individuals are unavoidable in a positive transaction costs context, gives analytical consistence to the critique raised against Williamson according to which his framework rests implicitly on the concept of power, even though power analysis is explicitly rejected.
47. D. Baker and M. Weisbrot [1994] develop a different but compatible critique of the Bowles-Gintis approach by stressing the limits of methodological individualism in the understanding of the nature of capitalist social relations. The departure of Bowles and Gintis from the traditional Marxian view of power as concerns class analysis is discussed by D. Young [1995].
48. Goldberg's discussion of radical economics focuses on Edwards [1979].
49. A previous contribution to a theory of contracts in a problematic decision-making context is provided by Goldberg [1976a]. Here the author analyzes the introduction of the time dimension in a zero transaction costs context, pointing out the implications of the fact that contract enforcement necessarily take place in time.
50. The idea that power is relevant only if contracting is problematic, as we have seen, is essential in Williamson [1995, 1997].
51. Goldberg's objective is not to understand the nature of capitalist institutions, but to develop a theoretical framework for a normative analysis of institutional change. In particular, Goldberg [1974, 1976b] applies his framework to a comparison between private contract and regulation. It is interesting to note that his criticism of the way economists tend to defend the "private contract" system [Goldberg 1974] has raised the polemical response of Coase [1974].
52. In my view, this limit of Goldberg's analysis is a consequence of his attempt to build a bridge between radical economics and NIE, notwithstanding the internal limits of the latter. Let me note here that the bridge erected by Goldberg [1980] between the works of Edwards and Williamson is explicitly rejected by Edwards [1990, 53-4], who criticizes Goldberg's [1980, 253] idea that the labor contract is like any other contract, stressing that, unlike any other, the labor contract is exploitative.
53. E. Schutz [1995] correctly notices that there is a tendency in economic theory to associate power with market "imperfections," assuming implicitly that people meet as equals in perfect markets. But the fact that people are unequally conferred with property endowments (both in reality and in standard models) is sufficient to create a power structure in society.
54. As Marx understood, if non-owners of the means of production *freely* decide to work, it is not because they believe that they will receive (in the form of wage) the equivalent of the value of their work, but because they cannot do otherwise. Both workers and capitalists

know about exploitation and both freely choose to establish an exploitative relation. Why? The former because they have no alternative, and the latter because they are not so silly to exploit themselves.

55. The ability to form coalitions and/or to oppose resistance in the confrontation between the parties can influence the social structure of economic power relations but cannot cancel the basic asymmetry of capitalism as far as the distribution of economic power between social classes is concerned. In a social approach to economic power, the origin of power relations is to be found in the control of socially strategic resources, and in capitalism the very strategic resources, I think, are the means of production. A coherent theory of power has, of course, to distinguish the different effects of the control of different kinds of resources, but it cannot abstract from the general role of social control of scarce resources.

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