

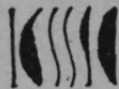
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ECONOMIC THEORY AND ECONOMIC ORGANIZATION, 1,
A CRITIQUE OF THE ANGLO-AMERICAN
THEORY OF FIRM STRUCTURE

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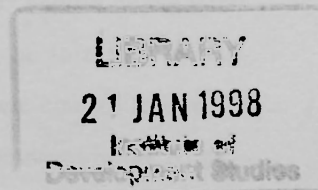
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**ECONOMIC THEORY AND ECONOMIC ORGANIZATION, I,
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THEORY OF FIRM STRUCTURE**

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SEPTEMBER 1997

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**Economic Theory and Economic Organization, I,
A Critique of the Anglo-American
Theory of Firm Structure**

Abstract : This paper seeks to summarize the literature on the rationale for firms as essential adjunct organizations for allocating resources. It also sets out a critique of attempts to negate the idea that a capitalist firm is necessarily an authority structure and involves the subordination of workers to capitalists. In the process it also advances the idea that workers, close collaborators of firms as well as shareholders and managers should be regarded as stakeholders in a firm. One corollary of this idea is that permitting an unregulated market for corporate control to operate has little justification in theory, and that alternatives to the Anglo-Saxon model of corporate control must be seriously constructed. Finally, the paper also argues that a long-established firm has history and path-dependence built into its structure and functioning, and game theory can at best illuminate particular corners and aspects of the working of firms.

1. Introduction

I start with what I take to be a self-evident proposition, namely, that there is no mainstream economic theory of the structure, function, reproduction, growth or transformation of economic organizations. It will take too long to enumerate the requirements of such a theory. In any case, I hope to make out a plausible case for claiming that such an economic theory can be constructed only by abstracting from many crucial aspects of the structure, function and reproduction of economic organizations and therefore is likely to be not only useless for most purposes but also positively misleading if we want to use it for description or prescription.

In order to clarify the kind of assumptions that mainstream economics makes when its practitioners go about practising 'normal science' in Kuhn's sense (Kuhn, 1970), it will be useful to give an example of what I regard as a relatively successful branch of economic theory. The theory I have in mind is that of consumer behaviour. Under standard mainstream theory assumptions, a consumer is endowed with a utility function or a well-behaved field of preference orderings. She then sets about maximizing her utility or getting to the most preferred

consumption bundle subject to the budget constraint she operates with. In more ambitious exercises which seek to chart the individual's pattern of consumption over time, she is endowed with an intertemporal utility function, and maximizing some integral of utilities over time yields the desired trajectory of the most-preferred consumption bundles. By aggregating the consumption of the collection of individuals with appropriate weights given to income classes or consumers classified according to age or sex, or any other criterion which serves to differentiate consumers with different patterns of consumption (vegetarians and non-vegetarians, for example) we arrive at the total of consumer expenditure patterns for the collection of individuals (for a masterly survey of the field of consumer behaviour theory, see Deaton and Muellbauer, 1983).

However, both in theory and in actual observation it is not the consumption decisions of all individual consumers, which are taken into account. Consumption surveys are carried out on the basis of households (some households may, of course, consist of single members but they are still a minority group in most countries). Within households, consumption expenditures are

made by the head of the household, or let us say, a couple, or stretching it further, a coalition of decision-makers in a joint family. So theorists have tried to construct credible social welfare functions for households; in doing so, they often had to sacrifice the assumption that decisions are made by rational individuals maximizing their own utility (they are rational in the prior sense that they have well-ordered preferences for all possible choice situations - an assumption which has been found to be violated in experiments conducted by Tversky and Kahneman (1974/1978) and other social scientists).

However, even if we accept that there is a theory of the household's behaviour as a consumer, there is as yet no economic theory of the household as a producer and a reproducer of itself. Stigler and Becker (1977) have advanced a theory of production of nonmarketed household goods and services, and Becker (1991) has produced an ambitious, grand theory of household size, household behaviour, and human fertility. As for the effort of Stigler and Becker to theorize the use of leisure time and preference for particular goods or services (such as drugs or music) by household members, the comment of Deaton and

Mucllbauer (1983, pp.243-4) is worth quoting : 'Our only qualm is that, when the intervening variables are not observable, there may be little cutting edge to the distinction between preferences and constraints, and the "explanation" offered by the approach can sometimes be complicated ways of making rather simple points'.

Becker's theory of the family is not easily dismissed. But its basic assumptions make it rather a dubious candidate for being the foundational theory of family behaviour or reproduction in a typical less developed country. By and large, the participants are all determinedly 'rational', free individuals operating in markets which have few nonmarket constraints. Class distinctions and built-in inequalities between men and women, adults and children are either assumed away or are taken as part of the data. Such a theory, for all its remarkable conceptual clarity, can have little appeal as a framework for building up even a 'thick description' (a phrase coined by Clifford Geertz) of economic organizations in India, let alone anything resembling a theory with real explanatory power. By and large, the basic assumptions of Becker's theory bind it down to the functioning of white, American, transient, nuclear families.

Households are producers in almost every cultural milieu. Unpaid housework produces cups of tea, meals for the family, cupboards for clothes, shelves for books, or in more privileged families, supervision in the kitchen or in the garden, and so on. The extension of such work into the market produces self-employment or when there is an outside employer putting out the work to the household, paid employment in the so-called informal sector. As the employment of child labour under the control of their guardians or the differences in the formation or subdivision of families of agricultural labourers and of substantial landowners illustrate (see e.g. Krishnaji, 1980/1992), the production activities of household members and their patterns of reproduction are intimately related. As far as I am aware, no economist has as yet produced a plausible theory with postulates of individual maximization for explaining the functioning of households as producers and their biological and social reproduction.

A large number of economists have attempted to explain the structure and functioning of business firms, or more narrowly, capitalist firms in which the owners or controllers of capital and

the workers are clearly distinguished. However, most of these developments have occurred since the 1930s, in which the work of R.H. Coase, Herbert Simon, and Oliver Williamson have played a key role. But beginnings of conceptualization of the functioning of capitalist firms can be traced back to Adam Smith and Karl Marx. We will have occasion to refer to the work of Marx because he was the first social scientist to point to a key distinction between a capitalist firm and the market in which it operates.

2. Conceptualization of the capitalist firm : Coase, Marx, Simon and beyond

Most of the analysts of the modern business firm start from two key questions asked by Coase in his 1937 paper (Coase, 1937). These questions are : why should there be a firm employing labour or investing other people's capital for a reasonably long period rather than just markets in which commodities and services, including labour power and credit, are bought and sold in arm's-length transactions like potatoes, fish or rice, in daily markets, daily or hourly labour exchanges and in moneylenders' shops ? The second question is, if, under certain

conditions firms are more efficient devices for allocating resources than markets, why is there not a single firm covering all allocation decisions throughout a country, or for that matter, throughout the world?

The great virtue of Coase's article was to pose these two questions simultaneously and in a stark manner. The first of these questions had been asked and answered by Marx (1887/n.d., chapters 13 and 14) : a capitalist firm is there because a great number of workers working together under the direction of a capitalist are more productive than the same number of workers labouring separately. It was Marx who saw that the controller of capital was also the coordinator in a firm. He used an apt military analogy (some of the military establishments of Europe turning out armaments were among the first modern factories) to bring out the authority relation in a firm : 'By the co-operation of numerous wage-labourers, the sway of capital develops into a requisite for carrying on the labour-process itself, into a real requisite of production. That a capitalist should command in the field of production is now as indispensable as that, a general should command on the field of battle' (Marx 1887/n.d., p.330).

The second question of Coase had been asked, as Coase acknowledged, by Austin Robinson (1934) and Nicholas Kaldor (1934) among others, who pointed by and large to limits on managerial ability as determinants of the maximum size a firm can grow into at any given moment of time.

Coase simply accepted that the owner-manager of the firm will exercise authority over the employees and then enquired in detail into the costs that limit the size of the firm. These costs are those of use of the market or short-term contracts rather than of planned allocation of resources and tasks within the firm. These costs, designated 'transaction costs', became then the domain of analysis of a number of economists, of whom Oliver Williamson can claim to have made the greatest contribution to this strand of the literature (Williamson, 1975, 1985). The concept of transaction costs allowed the economists' tools to be brought into play. At every point where the manager faces the choice of using the price mechanism or short-term contracts rather than internalizing the supply within the firm and entering into long-term contracts with those who would accept the authority of the manager, he decides on the least-cost method of going about

his business, and that set of decisions determines the boundaries of the firm.

Coase also pointed out that many transactions required for production or sale by a firm are long-term in nature, and necessarily involve considerable uncertainty. One way of eliminating delays and uncertainty was to incorporate these transactions within the purview of the jurisdiction of the firm. Later students such as Hymer (1960/1976), Williamson (1975, 1985) and Goldberg (1980) have stressed that many firms possess idiosyncratic assets, and firm-specific ways of learning and knowledge accumulation and are involved in contracts which presuppose a relation which is not mediated by arm's-length market transactions; it is only an organization such as the firm that would allow the full value of these assets or learning processes to be realized at any moment of time, and accumulated at a satisfactory rate over time. Thus transaction costs, the necessarily incomplete nature of all contracts, the necessity of minimizing opportunism in post-contract or post-investment situations (where one of the parties may find it profitable to go back on his word or commitment), and the best way of realizing

the short-term and long-term values of idiosyncratic assets and learning have all been adduced as the *raison d'être* of a firm rather than the market as the best allocational organization under a wide range of circumstances.

In a contribution which was ignored in the literature for a long time, Simon (1951/1982) tried to formalize the necessity of the authority relation by using the device of satisfaction functions of the boss or the manager, and the worker, and asking under what conditions the employee would be prepared to accept the authority of the boss to order him about, and the boss would find it profitable to employ him. Simon's answer was roughly that the boss or employer would take on the worker when he is uncertain about the exact nature and timing of the tasks he might want the employee to perform, and his expected profit exceeds the cost of the wage to be paid under the expected probability distribution of tasks. Conversely, the worker would accept the job when his expected satisfaction (roughly the wage minus the degree of unpleasantness of the work) exceeds or equals the net satisfaction he can enjoy in his best alternative avocation.

It is interesting that Simon had a background in the theory of administrative behaviour, and should have realized that the rationale of the firm could not be grounded without providing the **raison d'etre** of the boss-worker relationship. It is also interesting to note that Simon made two remarks almost incidentally, which many theorists of firm behaviour continue to ignore. He cautioned, first, that his construct was 'a model of hypothetically rational behaviour in an area where institutional history and other nonrational elements are notoriously important' (Simon 1951/1982, p.20). The second was his observation that 'if the worker had confidence that the employer would take account of his satisfactions, the former would presumably be willing to work for a smaller wage than if he thought these satisfactions were going to be ignored in the employer's exercise of authority and only profitability to the employer would be taken into account' (Ibid.). The possible importance of 'job satisfaction' on the part of the employee, and some degree of overlap between his utility and the utility of his boss in an appropriately designed firm architecture have been admitted, if at all, by economists as variables or functions to be manipulated in designing incentive mechanisms that maximize the current value of the firm.

3. **Attempts to gouge out the authority content from the firm and reduce it to a market-like entity**

The idea that at the core of the firm there is an authority relation obviously disturbed a number of economists since that seemed to be a barrier that a mere maximization calculus could not surmount or dissolve. I will discuss three different attempts which have attracted attention in the literature (they are all anthologized by Putterman 1986, and discussed in detail by Hay and Morris, 1991). The first attempt is that of Alchian and Demsetz (1972), who would reduce the firm simply to a team without any locus of superior authority. They write :

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 firm does not own all its inputs. It has no power of fiat, no authority, no disciplinary action any different in the slightest degree from ordinary market contracting between any two parties ... wherein ... is the relationship between a grocer and his employee different from that between a grocer and his customers ? It is in a team use of inputs and a centralized position of some party in the contractual arrangements of all other inputs. It is the centralized

contractual agent in a team productive process - not some superior authoritarian or disciplinary power (Alchian and Demsetz 1972/1986, pp.111-2).

In their article, Alchian and Demsetz practise a sleight of hand, or if you like, a discursive displacement, at two critical points. One is that they simply change the question of who exercises authority within the firm to that of whether the firm exercises any authority which is qualitatively different from that exercised by any other agent. That the firm exercises that kind of qualitatively superior authority is a claim, that to my knowledge, was not advanced by any serious theorist of the firm. The second point at which they practise a sleight of hand is in answering the question as to why it is the grocer rather than his employees who acts as 'the centralized contractual agent' in the team. Their answer is that the grocer rather than the employee acts as the residual claimant to the proceeds of teamwork. The question as to why the grocer is the residual claimant is essentially answered by Alchian and Demsetz in terms of risk-bearing by the grocer. As we shall see, the question of who exercises authority in the firm is tied up with the issue of who gets the profit made by the firm, and the descriptive and the

prescriptive become inextricably tied up. We shall argue that all owners of factors of production working for the firm and not just the owners of capital are risk-bearers and therefore, to say that the grocer alone is the risk-bearer and therefore is the recipient of profit begs the answer.

Another attempt to divest the firm of an authority relation was made by Fama (1980/1986). His avowed aim was to carry forward the analysis of a firm as a team. He explicitly takes as his model a joint-stock company, in which equity is owned by one set of persons and the management is vested in another set of persons who will not generally fully coincide with the first. In his own words :

The main thesis of this paper is that separation of security ownership and control can be explained as an efficient form of economic organization within 'the set of contracts' perspective. We set aside the typical presumption that a corporation has owners in any meaningful sense. The attractive concept of the entrepreneur is also laid to rest at least for the purposes of the large modern corporation. Instead, the two functions usually attributed to the entrepreneur, management and risk-bearing, are treated as naturally separate factors within the set of contracts called a firm.

The firm is disciplined by competition from other firms, which forces the evolution of devices for efficiently monitoring the performance of the entire team and of its individual members. In addition, individual participants in the firm, and in particular its managers, face both the discipline and opportunities provided by the market for their services, both within, and outside of the firm (Fama, 1980/1986, p.197).

Let me first note that Fama, shares the tendency towards amnesia of the average modern economist, and seems to be unaware that in trying to decide between pure Schumpeterian entrepreneurship and risk-bearing as the locus of the residual claimant, and associating risk-bearing only with the owners of capital, he is reproducing the ideologically fraught debates of the 1930s between the followers of Schumpeter and Knight. In none of the papers I have cited so far, there is a recognition that workers also are risk-bearers and that their exposure to risk in the case of a failing firm is in some senses greater than for the owners of equity or the managers of the firm. (Among mainstream economists, surprisingly enough, Harrod (1952) seems to have been one of the few to have made this point).

A parallel attempt to decentre the concept of the firm developed through providing a justification for a virtually unregulated market for corporate control. Takeovers of joint-stock companies had been seen by Marris (1964), Manne (1965) and other economists and lawyers as providing an ultimate device for monitoring and disciplining managers. The argument was now made that a competitive market for firms would always be able to find out the true value of the components making up a firm, and would provide a natural selection process for singling out not only inefficient managers but also inefficient structures of firms. The arguments in this area have often resembled those used to establish the Modigliani - Miller style theorems to argue the case for the irrelevance of capital structures of joint-stock firms in a truly competitive market for capital (Modigliani and Miller, 1958). Since a competitive capital market will 'discover' the true value of the components of a firm and its value when they are put together in a particular design of exercise of authority, monitoring mechanisms, and incentive systems, the need for separate discussion of the issue of who exercises authority in a firm virtually disappears. However, the recognition of informational inadequacies of capital markets and the empirical finding that

U.S. firms do care about whether their capital expenditures are financed by debt or equity have badly damaged the credibility of the Modigliani-Miller hypothesis (see Greenwald, Stiglitz and Weiss, 1984; Mackie-Mason, 1990).

4. Asset specificity, historicity, and relational exchange as a rationale for the existence of firms

Heated debates have been carried on in the Anglo-Saxon literature on the efficiency of the take-over mechanism in practice, ways of improving it and preventing its abuse, and various codes and regulatory devices have been evolved to minimize the chances of takeovers that damage the interests of shareholders in general, and in some countries, of minority shareholders, and even of workers. At this point I am not concerned with these issues, which are undoubtedly important in finding out how a market for corporate control, if it is allowed to come into existence, can perform the task of protecting stakeholder interests. At this point I would like to bring out certain basic assumptions made by analysts who would put their faith in the market for corporate control as the final arbiter of the fate of firms.

The first such assumption is that the capital market can not only discover the true present value of a firm but can ensure that the takeover payments are made in accordance with that value. However, even with transparent accountancy and auditing methods, it is very difficult to get at the true present value of a large firm with many divisions and many products as its domain of operation. Problems of asymmetric and incomplete information foul up the process of arriving at a precise measure. Moreover, the capital market is a notoriously imperfectly competitive mechanism, in which bubbles, share-pushing, insider trading and bear interests can play havoc with attempts to judge the true value of a firm. Finally, the managers of financial funds can have the same incentive problems as managers of other firms. (For an empirical investigation, see Lazonick, 1992; for a summary of theoretical underpinnings see Gertler, 1988).

Apart from problems with the functioning of capital markets, there are other obstacles against the attempt to establish the true value of a firm, especially if a takeover is expected to lead to a change in the personnel of managers or other key personnel, or even the management style of the firm. One of the

major reasons advanced in the theory of the firm, of both the domestic and multinational variety, has been that firms have idiosyncratic assets, including human capital, and that a free-wheeling market would be unable to establish or bring out the true productive potential of such assets. Economists have also increasingly realized the importance of learning within a firm (cf. the Horndahl effect cited by Arrow, 1962). Thus there is a historicity in the behaviour of good firms, as, of course, there is in the functioning of bad firms. But there is historicity also in the environment that firms work in.

This alerts us to the fact that most theorists of firms have ignored the many linkages between firms and other economic, social and political organizations with which they are linked (cf. Richardson, 1972). Firms do not only compete with one another, they also collaborate, and firms might compete in one field and collaborate in others. This enormous area has been captured only through some empirical studies of subcontracting, industrial clusters, and industrial districts, and of strategic behaviour of big or innovative firms. As even a cursory study of these phenomena will reveal, it is impossible to have a purely economic theory in

the sense indicated earlier, of such economic organizations as well.

In a new introduction (1995) to her pioneering work on the theory of growth and strategic behaviour of firms, Edith Penrose (1959/1995) writes : 'One of the primary assumptions of the theory of growth of firms is that history "matters"; growth is essentially an evolutionary process and based on the cumulative growth of collective knowledge, in the context of a purposive firm'. If we recognize this, we can see that history also matters in conceptualizing the structure of firms. If workers acquire specialized, idiosyncratic knowledge by working in a firm and thereby render it more productive, then workers also become value-adding stakeholders in a firm.

In recent years, many other economists have recognized the hysteresis inherent in many economic decisions and structures. Since no major investments can be 'reversed' or undone without incurring substantial costs, and since investments of one kind or another are at the heart of economic growth, irreversibility and path-dependence emerge in many historical processes (see in this

connection, Arthur, 1989, and Dixit and Pindyck, 1994).

The reservations we have sketched about relying on the stock market alone, or principally, for disciplining the managers of a firm, and about regarding the owners of equity as the only stakeholders in a firm have been reflected in devising governance structures in which there are other disciplining devices than the stock market and in which workers are given a voice in running the firm and in strategic decisions that affect their own future. Such governance structures are to be found in Japan and Germany. Even in Britain, the home of the ideology of regarding the shareholder as the king in a company, malfunctioning of major companies and disastrous results in several takeover bids have led Kay and Silberston (1995) to propose a governance structure for British public limited companies which is very different from what is observed there at the present time.

5. Research strategies : Game theory and/or comparative studies of economic organizations (including firms) in their historical setting

The typical form of an economic organization in a capitalist society is a firm with a set of employers (a single person or a management board or coalition) and a set of employees. The most advanced form of that firm in most countries is a joint-stock company with widespread shareholding and a group of directors or managers who will normally hold only a fraction of the shares of the company they manage (in some cases, none at all). Either of these forms must have an authority structure under which some directives are obeyed simply because they have been issued by superiors, and not necessarily because the subordinates find it utility - maximizing to obey those directives at that moment. Extending this further, the structure of boss-subordinate relations within which directives are issued and obeyed, can be U-form or M-form (Chandler, Jr; 1977) or a typically Japanese form (which Aoki (1994) styles J-form or J-mode). It may be governed by Anglo-Saxon-style hierarchy or Japanese-style polyarchy (Sah and Stiglitz, 1985). It may have a single board of directors, answerable to the shareholders in the

ultimate analysis as in the Anglo-Saxon mode of governance, or as in Germany, it may have two boards, a supervisory board meeting infrequently, and a management board responsible for day-to-day management. All these variations on the authority and governance structures of firms are the result of differing historical circumstances and conjunctures in different countries, and the Anglo-Saxon or Fama-Jensen-Meckling style of governance structure has no claim to be regarded superior under all circumstances or as the ultimate form into which all well-functioning firms must evolve (Gilson and Roe, 1993).

Attempts have been made by game theorists to model particular incentive systems on the basis of interaction of two players or $n (> 2)$ players in Nash non-cooperative games with appropriate assumptions regarding pay-offs of the players and the rules of the game. These exercises have yielded remarkable results once the contours of the basic rules of governance or firm structure have been laid down. In some situations, bargaining between players (employers and employees) can also shed light on the way particular aspects of industrial relations have taken shape. However, bargaining behaviour is shaped by broader

political circumstances. The evolution of the postwar Japanese system of industrial relations was, for example, shaped first by the decision of the US occupying authorities to allow the formation of free trade unions and collective bargaining, and later on, their determination to root out communist influence on trade unions and the extension of their help to Japanese company managers to establish company-friendly enterprise unions and more or less, abolish industrywise unions (Armstrong, Glyn and Harrison, 1984). Thus the limits of bargaining have to be found in actual events and major conjunctures in history as well as the customary relations of particular nations, and only then can bargaining theory get to work.

Turning now to game theory, with all its attractive features, we find that it is still unable to deal with really complex interactions. Moreover, game theoretic models are fraught with the some problems of bounded rationality and the necessarily incomplete nature of information in many real life situations, which provide the *raison d'etre* for the capitalist firm as islands of planning in a sea of impersonal (or not always so impersonal) markets in the first place. The implications of the limits of

'rationality' and incompleteness of information for the strategy of deriving results in organizational behaviour and structure have been emphasized by Radner (1996) in a recent paper :

Two issues have become increasingly apparent in attempts to apply the present notions of "economic rationality" to the theory of organisation of business firms. The first goes under the rubric of **bounded rationality**... I shall try to provide a more detailed account of bounded rationality than is usually done. In particular, it is important to distinguish between (1) costly rationality, like the costs of observation, communication, and even computation, that require only an extension of the standard "Savage Paradigm", and (2) truly bounded rationality, like not knowing the implications of everything that one knows, which goes far beyond the Savage paradigm.

The second issue, which I shall call **indeterminacy**, arises in attempts to apply the theory of strategic games to models of organisations, namely, one often faces a very large multiplicity of solutions, which significantly weakens or even destroys the predictive power of the theory. By "solution" I mean here the so-called non-cooperative equilibrium, usually associated with the names of Auguste Cournot and John Nash (and extended and refined by John Harsanyi, Reinhard Selten and others to cover games in which the players have incomplete information) (Radner, 1996, pp.1360-1).

To illustrate his point about indeterminacy, Radner provides an analysis of the usual sealed-bid mechanism for arriving at the contract price in situations where the buyer and seller have only an incomplete information about the cost and value of the commodity or service concerned to each other. While theoretical solutions to problems in the presence of 'truly bounded rationality' or indeterminacy of equilibria are fragile or absent altogether, in real life, conventions, accepted rules of the game, social or organizational devices for damage limitation, and so on decide the actual outcome. One major objective of research in these areas would be to find out the conventions, social and political constraints, the nature of legal delimitation of rules of the game and so on as a way of understanding the structure, functioning, reproduction and transformation of economic organizations. This would be an exercise in 'contextual social science' (Bagchi, 1996) and would draw upon the resources of all the relevant social science disciplines.

It would be tempting to see 'evolutionary game theory' as a framework for understanding the evolution of the social norms and conventions. While exercises in this branch of game theory

can yield interesting results (Weibull, 1995), the narrowness and fragility of the solutions are even more apparent in this area of research. The tracking of evolution of 'common knowledge', trust, or shared notions of rules of the game depends on the author's prior, often arbitrary-looking assumptions about what the players believe in. Biology has provided the notion of 'evolutionary stable strategies' (the pioneering work in this area is Maynard Smith, 1982). Evolutionary game theory with applications in social science has grown in analogy with biological evolutionary game theory. However, as Maynard Smith (1995) has pointed out, there is nothing corresponding to genes, or Mendelian laws of genetic reproduction in the patterns of human thinking or behaviour. Dawkins (1976) had coined the terms 'memes' and 'memetics', as units of human ideas and the dynamics of those ideas, but they remain virtually empty constructs since we do not have the basic laws of 'memetics' (Maynard Smith, 1995; and Borgers, 1996).

Thus while evolutionary game theory will continue to yield interesting results for models of relatively simple interactive behaviour of individuals and firms, for credible insights into

actual firm structures and behaviour, we must look towards comparative and historical studies.

6. Concluding remarks

Practically all the issues raised in this paper have been raised by other analysts. Adherents of the proposition that contracts between persons extending over any period of time and involving costly or irreversible investments in the real world of uncertainty must necessarily be incomplete have then advanced it as reasons for vertical integration and organization of non-market allocation mechanisms in the first place (Williamson, 1975; Klein, Crawford and Alchian 1978/1986). They have gone on to theorize the necessity of a decision-maker in such situations and have analysed the reasons why in a corporate organization the monitoring and decision-making functions are exercised by managers who may or may not be owners of capital (Holmström and Tirole, 1989; see also Hart, 1993). Much of their discourse in this regard, as we have pointed out earlier, parallels the debates of the nineteen thirties about the locus of profit-earning in a

business enterprise (for representative examples of this literature, see Knight, 1934/1950 and Gordon, 1936/1950). Economists have produced a number of models showing how particular social institutions can foster skills and raise efficiency wages when they act as mechanisms for correcting market failures. Internal labour markets of firms and networks of connected firms can be such enabling institutions (Akerlof and Yellen, 1986; Booth and Snower, 1996). But these different strands of analysis have remained isolated from one another. It is necessary to connect them together to at least provide a thick description of an enterprise system, of which the theory of the corporate enterprise will be only a part. Such a theory has also to be historically grounded because as we have argued, firm structures and their relations with the rest of society are fundamentally influenced by the internal histories of firms and related institutions and by external shocks or conjunctures affecting the particular society concerned.

Finally, I would like to sketch the relation of our analysis to some of the areas of discussion which have directly impinged on our views about how institutions and learning processes are

put in place and evolve. First of all, there is the corpus of work which has gained currency as the new institutional economics. From what we have said above, it would follow that the structure of economic institutions would be shaped not only by considerations of minimizing transaction costs or incentive conflicts between principals and agents but also by norms and rules of behaviour in a particular society and the loci of power in households, firms, property right-holders, and the state (for an insightful discussion of the new institutional economics and references to the literature, see Vromen, 1995; for a broader canvas of theories of development in which states, markets and societies interact in different ways, see Martinussen, 1997). Secondly, attempts to derive the evolution of institutions purely on the basis of strategic interactions between individuals or coalitions of individuals can only have a limited reach at best. Attempts to derive the rules governing the inner workings of firms on the basis of their survival value *a la* neoclassical economists such as Alchian and Friedman (for references, see Vromen, 1995, Chapter 2) or following the methods of Nelson and Winter (1982) can also have applicability only within a limited framework, and over such a long run that many of the

basic assumptions must be upset by other movements of history. But, of course, this does not mean that research into survival values of particular rules governing economic organizations and their mutual interaction is useless. Such research may be essential to discover those rules which are not formalized but which nevertheless guide the behaviour of surviving organizations and their modes of interaction.

Finally, our analysis also directs our attention to the necessity of enquiries into learning processes within firms, within interfirm networks and society in general. The perspective on learning processes has followed broadly two mode of development. One might be called the Babbage-Taylor mode in which the division of labour is determined by the owners or controllers of capital, and the workers merely follow the set routines. All the learning takes place at the level of the managers. The other follows Adam Smith's mode of analysis in which the division of labour and learning processes evolve as the market expands, or conditions governing production change. Marx's analysis stands at the crossroads of the two, in which the capitalist tries to convert the worker into an animated machine, but the

worker's subjectivity asserts itself from time to time in class struggles and revolutions (for an interesting discussion of the contrast see Pagano, 1991). Studies of Japanese and German enterprises and of industrial districts in the Third Italy have shown that the extremist Marxist or Babbage-Taylor views have to be modified, and we must also study the learning processes within firms and in the broader arena of economic and social institutions in general (see also Booth and Snower, 1996). Viewed against this perspective also, the Alchian-Demsetz-Jensen-Meckling view of the firm structure also turns out to be grossly inadequate as a conceptual tool.

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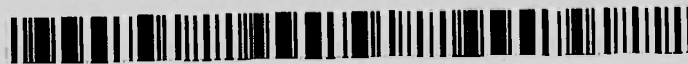
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