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THE FIRM AS A SOCIAL INSTITUTION: THE FAILURE OF THE CONTRACTARIAN VIEWPOINT

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I. THE FIRM IN ECONOMIC THEORY

The economic theory of the firm has for a long time been preoccupied with the market behavior of the firm while at the same time largely neglecting its internal organization. Not only the traditional marginalist approach in this field, but usually even the more recent managerial and behavioral theories treat the firm implicitly as one single maximizing or satisfiying individual reacting to changed market conditions.[1]) The rationale behind this apparently simplistic view is a specific assumption about the conflict resolution between different individuals and groups with different claims and expectations within the firm: it is implicitly or explicitly assumed that the ultimate decision-making power lies in the hands of one or a few individuals 'at the top' of the firm. This means that the firm is viewed as a 'vertical' or 'hierarchical'[2]) organization where authority, subordination and command instead of contractual arrangements prevail. Of course, this hierarchical viewpoint needs some more specification and leaves many problems unsolved; but it seems basically in accordance with everyday experience.

A remarkable attack at this point of view has been made by Armen Alchian and Harold Demsetz in a well-known and frequently quoted article (1972). According to them, there is no essential difference between ordinary market exchange and the organization of production within the firm. The relationship between employer and employee is considered a usual market relation. Consequently, Alchian and Demsetz deny any specific element of power and authority within the firm. They argue that no authoritarian control or subordination is involved in the wage contract. For them the distinguishing mark of the enterprise »is the *centralized contractual agent in a team productive process* — not some superior authoritarian directive or disciplinary power« (p. 778).

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1) See, for instance, Machlup (1967).

2) We use the notion of hierarchy here only in an informal way to indicate an unequal distribution of decision-making power.

More specifically, Alchian and Demsetz characterize the classical capitalist firm »as a contractual structure with: 1) joint input production; 2) several input owners; 3) one party who is common to all the contracts of the joint inputs; 4) who has rights to renegotiate any input's contract independently of contracts with other input owners; 5) who holds the residual claim; and 6) who has the right to sell his central contractual residual status« (p. 794). This characterization *at the end* of Alchian and Demsetz's article emphasizes, though in a biased way, the fundamental role of the employer as the central agent of production. Nevertheless, they maintain their rejection of any authority in the firm and in the wage contract: »No authoritarian control is involved; the arrangement is simply a contractual structure subject to continuous renegotiation« (p. 794).

Before we go into a detailed critique of their propositions, we sketch the prevailing more or less idealized notion of the firm as a hierarchical organization. Without deep economic reasoning, there appears at first glance a remarkable discrepancy between the formal principles of social organization and the real conditions of work in Western societies. At least formally, the political system is determined by different voting procedures and competition among political parties, whereby every citizen has theoretically the same influence. In a similar manner, the relations between the participants on the markets are characterized by free contractual arrangements: every party — the large corporation as well as the little consumer — has the same legal rights. We do not have to mention the unequal distribution of income, wealth and pover that introduces in practice strong elements of authority and asymmetry into this picture of equal rights on the marketplace. But there is at least no a priori reason why one party should be always 'on the losing side'.

The discrepancy enters by looking at the firm where most individuals spend most of their time. Here, instead of political democracy and market coordination, hierarchical forms of decision-making and of organization seem to prevail. One could go even further to take the substitution of democratic decision-making and market coordination by entrepreneurial and managerial prerogatives as well as workers' *subordination* as a definition of the modern capitalist firm. As Ronald Coase put it in his by now classic essay on the nature of the firm, »if a workman moves from departmen Y to department X, he does not go because of a change in relative prices, but because he is ordered to do so... It can, I think, be assumed that the distinguishing mark of the firm is the supersession of the price mechanism.«[3]) This mutual exclusiveness of market coordination *between* firms and command subordination *within* firms is also emphasized by Marx. He sees the contradiction between market 'anarchy' among the capitalists and workers' subordination under their authority as the distinguishing mark of the capitalist mode of production. For the workers, the social character of their production appears »in the form of strictly regulating authority and of a social mechanism organized as a complete

[3]) Coase (1937), 333—4.

hierarchy« whereas »the bearers of this authority, the capitalists, who meet each other only as commodity owners, are governed by the most complete anarchy«; for them, the social connection of production is only manifested *ex post* through the operation of market exchange.[4]) Moreover, Marx sees this authority as strict vertical hierarchy of different levels, directed by the »command« of the capitalist at the top, and the work organization in the factory system appears as an army of »industrial soldiers«.[5])

Of course, this picture of a complete vertical organization is, at least nowadays, all too idealized: a short look into management literature or, for that matter, only into some daily newspaper, will show this. Today's employers would be more than happy if their critic's assertion of their authority were true for themselves. But even if we mitigate this authoritarian picture by introducing unions, legal restrictions and different forms of limited participation[6]), we still have to explain if and why non-market allocation prevails within the firm, in contrast to Alchian's and Demsetz's belief.

The natural starting point for an analysis of this question will be the deeper investigation of the specific kinds of contracts involved in the legal and social organization of the firm. After analyzing the characteristics of those contracts, we have to explain the economic and social conditions that give rise to their specific — apparently authoritarian — features, even under idealized perfect competition.[7])

II. THE EMPLOYMENT CONTRACT

Alchian and Demsetz raise serious objections against the notion of power and authority as being involved in the employment contract: »To speak of managing, directing or assigning workers to various tasks is a deceptive way of noting that the employer is continually involved in renegotiation of contracts on terms that must be acceptable to both parties« (p. 777). They see no difference between the employer's »presumed power to manage and assign workers to various tasks« and »one little consumer's power to manage and assign his grocer to various tasks«, namely »the task of obtaining whatever the customer can induce the grocer to provide at a price acceptable to both parties«. The only difference they are willing to accept between the two cases is »a *team use* of inputs and a centralized position of some party in the contractual arrangements of all other inputs« as a specific feature of the firm. This fact — and »not some superior authoritarian directive or disciplinary power« (p. 778) constitutes for them the distinguishing mark of the enterprise.

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[4]) Marx (1894), 888.

[5]) Marx and Engels (1848), 469.

[6]) Those forms of limited participation which are designed to *maintain* the basic hierarchy in the firm by weakening some of its features are, following Pateman (1970, p. 69), better termed »pseudo-participation«.

[7]) One could, however, include additional requirements relating to technology and information into an idealized notion of perfect competition so as to describe the whole problem in terms of »market failure«. But this approach would go beyond the traditional notion of perfect competition in economic theory.

Alchian and Demsetz seem not to be aware that their characterization of production is much closer to the earlier putting-out system than to the firm.[7a] This is even more surprising as they themselves mention the transition to the following factory system.[8] They fail, however, to note the *qualitative change* in the labor contracts involved in this transition and recognize only one minor advantage of the factory system in this respect, namely »a reduction in the cost of negotiating (forming) contracts« (p. 784). But remembering the above mentioned definitions of the firm, provided by Alchian and Demsetz, we see easily that their market analogies in produotion hold to some degree for the putting-out system. There is a central agent of production with whom all contracts are made — the putter-outer —, and we have team production in the sense of interdependent and not always separable ope rations. As Williamson *et al* (1975, p. 255) observe, »it is not the nonseparability by itself that occasions the problem« since most task are separable simply by introducing buffer inventories. And even with technologically nonseparable tasks — e. g. Alchian and Demsetz's example of two men loading jointly freight into a truck[9] — the arising metering problems do not *per se* call for a central monitor as they seem to believe; under the putting-out system these problems were solved simply by the contracting teams themselves.[10] The imputation of each member's share in effort and reward had usually been carried out by the immediate producer and his family; the putter-outer received the joint output of the whole family and paid for it, leaving the internal distribution to the other cooperating party.

The »monitor« under the putting-out system faced the problem of coordinating the results of the different contracting parties and of metering these results, i.e. the outputs, not the inputs involved. We would not deny strong power relations even in this case (remember only the factual assymetry in this exchange relation through the putter-outer's ownership in part of the means of production and his privileged access to the markets), but the view of the putting-out system as a centralized market relationship seems not to be as inadequate as in the case of the subsequent factory system.

In order to grasp the specific difference between both systems — overlooked by Alchian and Demsetz —, a short look into history may be useful. Alfred Marshall's illustrative description of the development within the British textile industry seems worth quoting at some length:

> »At the time of the French revolution there was not a very great deal of capital invested in machinery whether driven by water or by steam power; the factories were not large, and there were not many of them. ***But nearly all the textile work of the country was then done on a system of contracts.*** The industry was controlled by a comparatively small number of undertakers who set

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[7a] In fact, they are describing the system of *'inside contracting'*.
[8] Alchian and Demesetz (1972), 784.
[9] Alchian and Demsetz (1972), 779.
[10] Even without family relationships there are only transactional problems caused by nonseparability as convincingly argued by Williamson *et al* (1975), 255—260.

> themselves to find out what it was most advantageous to buv and to sell, and what things it was most profitable to have made. They then let out contracts for selling these things to a great number of people scattered over the country. The undertakers generally supplied the raw material, and sometimes even the simple implements that were used; those who took the contract executed it by the labour of themselves and their families, and sometimes but not always by that of a few assistants.«[11])

Marshall's description of the English textile industry *at that time* comes very close to the idealized picture of *modern* industrial production as constructed by Alchian and Demsetz. In clear contrast to them, Marshall was anxious to emphasize the qualitative changes that took place thereafter. He saw the development towards the factory mainly determined by technical progress, but also acknowledged implicitly the reduction of transaction costs[12]) by gathering people into factories where they lost the control over their work and got suvervised by their employer. For Marshall, one of the most distinguishing marks of the new system is what Alchian and Demsetz try to define away: the notion of managing, directing and superintending of workers by their employers in the place of the former contractual exchange relations.

> »As time went on, the progress of mechanical invention caused the workers to be gathered more and more into small factories in the neighborhood of water power; and, when steam came to be substituted for water power into larger factories in great towns. *Thus the great undertakers who bore the risks of manufacturing, without directly managing and superintending, began to give way to wealthy employers, who conducted the whole business of manufacturing on a large scale*... Thus at length general attention was called to the great change in the organization of industry which had long been going on; and it was seen that *the system of small businesses controlled by the workers themselves was being displaced by the scystem of large businesses controlled by the specialized ability of capitalist undertakers*. The change would have worked itself out even if there had been no factories... The new organization of industry added vastly to the efficiency of production; for it went far towards securing that each man's labour should be devoted to just the highest kind of work he was capable of performing well, and that his work should be ably directed and supplied with the best meachanical and other assistance that the wealth and knowledge of the age could afford.«[13])

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[11]) Marshall (1920), 618 (emphasis added).

[12]) This point is well illustrated by Williamson *et al* (1975) who use Adam Smith's pin-making example to demonstrate that the whole process could have been organized by a system of contracts and conclude: »Transaction costs militate against such an organization of tasks, however« (op. cit., 255).

[13]) Marshall (1920a), 618; emphasis added. We should note that this technological argument for the factory system, shared more or less by all classical writers, even including Marx, has recently been seriously questioned by Marglin (1975). He finds that »the transformation of the independent produoer to a wage laborer took place *before* machinery became expensive« (p. 27).

The remarkable[14]) similarity to Marx's extensive description of the process[15]) will be clear for any reader of the first volume of *Das Kapital*. Even more striking is their coincidence in relating this process to basic changes of the labor contract compared with the putting-out system. Like Marx, Marshall sees the evolution of a mass of free wage-workers:

> »The new movement, both in its earlier and later forms, has tended constantly to relax the bonds that used to bind nearly everyone to live in the parish in which he was born; and *it developed free markets for labour,* which invited people to come and take their chance of finding employment. *And in consequence of this change the causes that determine the value of labour began to take a new character. Up to the eighteenth century manufacturing labour had been hired, as a rule, retail; though a large and fluid labour class, which could be hired wholesale, had played a considerable part in the industrial history of particular places* on the Continent and in England febore then. *In that century the rule was reversed,* at least for England...«[16])

This distinction between *labor* as the worker's productive activity and *labor-power* as the commodity which the free wage-worker has to sell on the market is central for Marx's critique of political economy and his sharp confrontation of the commodity owners's equality in the circulation sphere and the basic inequality within the sphere of production, namely workers' subordination under the capitalist's command. As argued elsewhere it is only in this context in which the notions of labor values and of exploitation by Marx become understandable.[17]) Since we are not interested in a (re-) interpretation of Marxian economics we do not go further into these questions and we note only that this distinction between labor and labor-power can be used as a fruitful starting point for an explanation of the labor exchange and the nature of capitalist production as has been done by Gintis (1975).

The notion of labor-power or labor-capacity[18]) gives a clear hint to the alteration of the labor contract due to the transition from the putting-out system to the modern industrial enterprise. The worker now has to supply on the market not a specific product but his productive capacity. The concrete use of this capacity is not determined by the labor contract but is at the employer's disposal within the contractual and legal limits. Precisely for this reason, the notion of authority and subordination becomes crucial for the understanding of the wage contract. To quote again Ronald Coase: »It is important to note the character of the contract into which a factor enters that is employed within a firm. The contract is one whereby the factor, for a certain

[14]) This is especially remarkable in comparison with the very infrequent and unfavorable quotations of Marx by Marshall in his *Principles*.

[15]) See above all the chapters on industrial organization, machinery and big industriy, and on »primitive accumulation« in Marx (1867).

[16]) Marshall (1920a), 619 (emphasis added).

[17]) See Nutzinger and Wolfstetter (1974), Gesamteinleitung: Nutzinger (1974), sections II. 2 and II. 3.

[18]) The latter even more illuminating term (»Arbeitsvermögen«) has been used by Marx in his hitherto untranslated *Resultate des unmittelbaren Produktions-prozesses* (Results of the Immediate Process of Production), published in 1933.

remuneration (which may be fixed or fluctuating), agrees to obey the directions *within certain limits*. The essence of the contract is that it should only state the limits of the power of the entrepreneur. Within these limits, he can therefore direct the other factors of production.«[19])

In fact, it is this peculiar feature of the wage contract that consitutes the distinguishing mark from other economic and legal relations in Western societies and in comparison with preceding forms of social organization. This contract comprises a *general* agreement »to obey the directions« of the entrepreneur or his delegate within the contractual and legal limits. The ordinary contract on the other hand, specifies the object to be dealt with in more or less detail. One should, however, take care not to exaggerate this esentially legal distinction as telling the whole story. Therefore, we analyze in the next section some legal and institutional complications which sould be taken into account; after that we deal with the even more important economic objections against this abstract characterization of the wage contract.

III. SOME LEGAL AND INSTITUTIONAL CONSIDERATIONS

The employment contract implying a general willingness of the worker to obey his employer's directions may be considered as an extreme example of a more general phenomenon. First we must note that even ordinary contracts and market exchange — apart from the most simple examples usually provided by textbooks — cannot be completely specified in advance. Very frequently, neither the commodity to be sold nor its market value — the return or 'payment' to be provided by the seller — are predetermined in every respect. And even it they were, we had a high probability of the nonfulfilment of some detail of a very detailed contract, but hardly a precise and comprehensive specification of the consequences of some nonfulfilment. In practice, market exchange is very often not a simple equation of the form »x apples equal y dollars« but a highly complicated relationship involving the comparison of two different vectors whose components are not completely specified. This means in turn that even ordinary contracts imply some secondary obligations and the need for a certain degree of loyalty and trust. As Alan Fox (1974) has convincingly demonstrated, the idealized »economic exchange« with predetermined and well-defined properties of the commodities involved and without any reference to the personal characteristics of buyers and sellers is only the limiting case of a broader *social exchange*. This social exchange includes both personal relationships and some general obligations and expectations for the respective parties.

Pure economic theory considers this limiting case as the fundamental paradigm of exchange. Moreover, for perfectly competitive markets the absence of any personal or social relations is a *conditio sine qua non*.[20]) What might be a permissible abstraction for ordinary market exchange becomes highly doubtful in the labor exchange. Yet,

[19]) Coase (1937), 336–7.
[20]) Cf. Arrow and Hahn (1971), especially p. 23.

general equilibrium theory treats labor markets not differently in any degree from other idealized exchange relationships.[21]) But the labor services that households are supposed to offer to the firms are not clearly determined in advance. They imply even under perfect competition necessarily some personal relationships, namely the willingness to »obey the directions« of *one* employer and not of some other. If we assume — as general equilibrium theory does — that labor services are specified the same way as other commodities, we come back to some idealized putting-out system, but not to the factory system or any reasonable abstraction of the firm.

Another way of looking at labor exchange in general equilibrium theory would be the assumption of a peculiar form of voluntary slavery: workers neither sell their own output (as in the case of craftsmen or in the putting-out system) nor their labor-power (as in the factory system). They are assumed to *sell themselves* to a firm — or introducing future markets — to a series of different firms.[22]) This holds since all labor supply decisions under general equilibrium are telescoped into the present. With respect to labor markets, we have to *reverse* the assumption of *impersonal exchange* stated clearly by Arrow and Hahn (1971) by introducing a few alterations and negations: The decision to supply *labor-power, even* in a perfectly competitive economy, is *in fact* a decision to supply so-and-so much *labor-power* to such-and-such *entrepreneurs*, and *not* simply to exchange so-and-so much of the good for other goods.[23])

As we indicated above, one possible objection against the peculiarity of the employment contract could be the complexity of many so-called ordinary contracts that imply also some general obligations and some personal relationships. We could look at long-term contracts such as apartment renting, raising of credits or life insurance. Especially in the first example we have some personal relationship (with the house-owner or his delegate) and some far-reaching secondary obligations that can be partly fixed even unilaterally by the owner (e. g. rules of the house). But the extent of non-specified secondary obligations is considerably smaller than in the wage contract; similarly, the power of one party (hirer, lender, insurance company) to specify unilaterally those general rules is decisively weaker. Finally, long-term contracts tend to be shifted more and more into the category of ordinary contracts by legislation confining the one-sided authority of the hirer, lender or insurer. So it seems to us that, despite some similarities, the specific features of the employment contract remain serious enough as to constitute an important distinction to other long-term agreements.[24])

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[21]) Cf. Arrow an dahn (1971), 75—6.

[22]) We could look at the *sale* of labor-power also as a *renting* of the laborer. David Ellerman (1974a) goes even further to denote the wage contract as »temporary servitude«. By introducing a specific form of production arbitrage — markets for becoming the central hiring party — he shows the impossibility of general equilibrium with positive profits in a static context without uncertainty (1974. b).

[23]) For the original assertion, see Arrow and Hahn (1971), 23. The italics mark the alterations. — I owe this quotation to Gintis (1975, 24) who also emphasizes the distinction between personal and impersonal exchange.

[24]) The notion of »long-term contract« is here not related to the legal specification but to the expectation of a continued cooperation between both of the contracting parties. See also the discussion of this question at the end of this section.

Another kind of borderline cases should not be overlooked. There are lots of examples in reality where the employment contract, due to social legislation, appears even as *improvement,* if we compare it with the factual dependence of some 'independent' producers. We need only to remember the conditions of many freelance writers and artists who are, in effect, employed by publishers and agencies without enjoying the protection of modern labor law. In a similar way, many small firms delivering their products to big corporations and mail-order houses (very often to a single one) are just as dependent from the other contracting party as if they were integrated into these firms.

One last institutional point has to be considered. When comparing the employment contract with other long-term agreements we do not claim that the *time span* of the employment contract is its distinguishing mark. We quite agree with Alchian and Demsetz (1972) when they state: »Long-term contracts are not the essence of the organization we call a firm« (p. 777). Indeed, most often wage-contracts are not long-term in the sense of involving legally a fixed and far-reaching time space. Usually their duration is only *undetermined:* wage-contracts are open-ended and subject to a notice of one of both parties that becomes valid after a relatively *short* period.[25]) And it would be seriously misleading to take Coase's 'general agreement' or Marshall's 'wholesale hiring' as meaning primarily or essentially a long space of time. *It is the large degree of indeterminateness in the wage contract which leads to a longer duration than in many (not all) other contracts, and not the long duration which leads to its indeterminateness.*

Since the validity of the employment contract is unspecified rather than long-term, the whole question becomes a matter of empiric investigation. Here, we have even more reason to accept Alchian and Demsetz's assertion than they would seem to believe themselves. As many reports indicate, the factual duration of wage contracts in occupations with low job satisfaction is suprisingly short. Thus, Porter *et al* (1975, 278) report high turnover rates for assembly line workers, occasionally »over *100 percent* in a single year«. Indeed, an average duration of half a year is very short compared with many other contracts, e.g. subscriptions, renting, borrowing and lending, insurance and several other contracts. In this example, it is precisely a specific characteristic of the employment relation — that the employee has little or no control over his work — which causes the short, and not the long, duration of the wage contract.[25a])

All these apparently 'authoritarian' features of the employer-employee-relationship take place within market economies. Hence the question arises for the economist: Do we have to relate these features to some market deficiencies, or do we have to go deeper in our analysis? In order to meet this question, we first analyze the effects of exit and entry upon the employment contract.

[25]) But even most other 'long-term contracts' are subject to a notice of one party, e.g. in house renting and many insurance contracts. So, Alchian and Demsetz's criticism of this notion is not very specific.

[25a]) One must note, however, that assembly lines are not the predominant form of industrial production.

IV. EXIT, ENTRY AND HIERARCHY

IV. 1. Leaving the firm

The most common objection to the authoritarian view of the firm and of the employment contract as developed above is the possibility of leaving a hierarchical organization. Indeed, the most effective limit to the employer's authority from an economist's viewpoint are not the legal and contractual restrictions mentioned above. Why should the free wage-worker not simply leave the firm if he dislikes its hierarchy and his own subordination under the aims of the firm, instead of appealing to the courts or hiring a lawyer for better contractual protection? And why should the employer refuse to change the wage-contract if he wants to keep his employee from quitting? Undoubtedly, the possibility to leave the firm is one of the *certain limits* to the employer's authority in the employment relation. But we strongly dispute the picture painted by Alchian and Demsetz that we would have only the same »presumed power« as the little consumer's influence on his grocer to supply the goods he wants to buy. The notion of power and authority does not dissolve into pure fancy or into the same kind mutual dependency inherent in all contracts — simply by leaving the firm.

Alchian and Demsetz themselves give a clear hint for the refutation of their simplistic view of the hierarchy problem. They emphasize »Coase's penetrating insight... to make more of the fact that markets do not operate costlessly and to rely on the costs of using markets to *form* contracts as his basic explanation for the firm«, and they agree »that, *ceteris paribus*, the higher the cost of transacting across markets the greater the comparative advantage of organizing resources within the firm (1972, 783). But precisely the notion of transaction costs becomes central for the firm as a social institution involving a specific authority relation.

Coase's »penetrating insight« can also be supported by historical evidence: The fundamental cause for the modern enterprise to become the dominant form of production was not its technological superiority. Even under the putting-out system we had a 'minute division of labor' in the sense of Adam Smith.[26]) The metering problem put forth by Alchian and Demsetz were not essential for the rise of the firm. As has been observed by Marglin (1971, 6—20), the example of a *pin-factory* given by Adam Smith explains only the advantages of the division of labor in *pin-making, not the factory itself*. While, on principle, each of the activities involved in pin manufacture (wire straightening, cutting, pointing, grinding etc.) »could be performed by and independent specialist and work passed from station to station *by contract, ... transaction costs* militate against such an organization of task, however« (Williamson *et al*, 1975, 255).

These costs did not only give rise to the modern enterprise, they also exercized an important influence on its internal structure. This

[26]) For this, see Marglin (1971, 15) who asks: »Why, then, did the division of labor under the putting-out system entail specialization as well as separation of tasks? In my view the reason lies in the fact that without specialization the capitalist had no essential role to play in the process.«

has been emphasized by Arrow (1974) who defines organizations, similar to Coase's notion of the firm, as »means of achieving the benefits of collective action in situations in which the *price system fails*«[27]). This failure is intimately linked, at least in the case of an enterprise, with the transaction costs of market organization, especially with the costs of forming and enforcing contracts. But essentially the same holds for the individual within the organization: Leaving the firm does not only mean terminating one contract but a whole system of formal and informal relations. The individual loses many of 'the benefits of collective action'.

In this situation, lots of transaction costs arise. First, the need for finding a new occupation in another enterprise leads to search and information costs, not only in terms of money. The costs of leaving imply the loss of informal relations with fellow workers, the claims and respect acquired during the occupation and the need for building-up new social relations at the next workplace. Very often, also other areas are involved: new housing, new schooling, new neighborhood relatioships, and so on. In a way very similar to the firm that can be thought of as a concentration of a highly complex system of specific agreements in a reduced set of generalized contracts involving direct authority relationships, the single can view the employment contract as a concentration of various arrangements into a reduced hierarchical system of contracts, governed by the wage contract. Most other formal and informal arrangements can, at least to some extent, be derived from the former.[28])

The consequences of these transaction costs for the worker are obvious: »The employee is always free to leave, but since the costs of leaving are always present and frequently nontrivial, the employment relation creates an expectation of continued participation«.[29]) As argued above, these costs comprise much more than what would have been imagined at a first glance. The further effect of this long-run expectation mentioned above by Arrow is a certain attitude of loyalty and trust in the organization. This, in turn, weakens the influence exercized by the external market even further. So we can approve of Arrow's illustrative description of the consequences: »Within the scope of the wage contract, the relation between employer and employee is no longer a market relation but an authority relation. Of course, the scope of this authority will usually be limited by the freedom with which one can leave the job. But since there is normally some cost to the exercise of this freedom, the scope of this authority is not trivial«. These consequences of transaction costs are in clear contrast to the pure contractarian viewpont empasized by Alchian and Demsetz (1972).

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[27]) Arrow (1974), 33; emphasis added.

[28]) If one likes systems theory one could follow Luhman (1971) to denote this case as an example of *Komplexitätsreduktion* (reduction of complexity).

[29]) Arrow (1974), 64. The transaction costs of workers' replacement arising to the firm are less important since this is a *routinized activity* for the enterprise.

IV. 2. Founding participatory firms

We did not exhaust the question of leaving the firm and will take it up again in the next subsection; before that we should discus a connected problem: the possibility of new entry. The denial of a *specific* authority element in the firm could be based on an *argumentum e contrario:* If there were a specific element of authority and power in the firm, why did these presumably hierarchical enterprises not become superseded by 'democratic' organizations? Then the reasoning goes on to the assertion that there is either no such particular authority relation or, if there is one, it must have been optimized by the market process. According to the second version, the degree of power and subordination is determined so as to find a delicate balance between efficiency — presumably due to the internal hierarchy — and the extent of workers' participation sufficient to satisfy some non-monetary wants. In its simplest form, a trade-off between payment and participation could be imagined whereby lower payment is the implicit cost of less hierarchy.

Alchian and Demsetz deny the notion of a *specific* power relation at all. So they have no room for the above-mentioned optimizing considerations. They are, however, anxious to stress the underlying *argumentum e contrario.* So they assume »that general sharing in the residual results in losses from enhanced shirking by residual-sharing employees. If this were not so, profit sharing with employees should have occured more frequently in Western societies where such organizations are neither banned nor preferred politically« (p. 787). Since we are not bound to deny the notion of authority we can easily extend their argument as saying that general *participation* results in losses. The simple reason for this extension is the close connection between participation *in earnings* and participation *in decisions* which we observe in several Western countries.[30]) So we can take this assertion to describe a trade-off between »pay« and »say«. In this view, competition is assumed to effect »precisely the optimal level of alienation« (Dolan, 1971).

As a very quick look into modern management and organization literature will show,[31]) this reasoning is far too simple to provide much understanding of the firm. In addition, there are lots of purely economic considerations which contradict this naive view. One important point overlooked by the adherents of the 'trade-off view' is the interdependence between the social organization of production and the development of technology. After the factory system had been established mainly because of reduced transaction costs without great technological change *at the beginning,* the further technological progress has been adopted to the needs of *this* hierarchical system as to facilitate supervision and to monopolize technical knowledge in the hands of the employers. Marglin (1971) and Braverman (1974) give a lot of striking examples for this process. Catherine Stone's (1974) in-

[30]) See the numerous examples in Vanek (1975), part II.

[31]) For this see FitzRoy (1977) and FitzRoy and Dutzinger (1975) with numerous references to literature.

vestigation of the development of job structures in U.S. steel industry shows the further development *within* the steel mill system as a *replacement of contract relations* between employers and more or less independent steel workers selling their *output* to the central agent of production, *by direct authority relationships* involving the immediate instruction of less qualified steel workers after some technological change had been introduced.[32]) In our view this demonstrates the dynamic implications of a certain social organization of production — in the firm — for the way how competition influences technological change.

Though this argument contains some critique of traditional economic theory — especially of its implicit assumption of 'technological neutrality'[33]), there are also a lot of 'neoclassical' reasons for our assertion of a specific technological development. First, the strong separation of tasks in the firm, combined with a *long-run* specialization of workers' activities, raised the central monitor's indispensability for the whole process, and hence his »marginal product« in and for that organization. The often lifelong repetition of a few simple operations did seriously dequalify the factory worker as already observed by Adam Smith in a wellknown passage[34]); this in turn — neoclassically speaking — lowered their marginal productivities, i.e. their marginal contribution to the value of the *firm*. In addition, the specific division of labor in the factory system gave the employer — the only central agent of production — a monopoly of information over the operation of the firm.[35]) So, even specialized workers could not expect to become the central agent of another competing firm after leaving the enterprise.

New entry of former employees into the market was seriously hindered by this fact, and this again strengthened the employer's power over his workers. Finally, in a social environment basically determined by hierarchical firms, leaving one enterprise was not very likely to arise because of the expectations of a lesser degree of authority within other firms. This contributed both to the formation of primarily monetary motivations of the workers and to a reduced desirability for the workers to quit their job. The latter reduced the threat of leaving the firm — and hence the workers' bargaining power —, while the former contributed to a partial integration between the aims of the employers and of their employees. This monetary link of both parties' motivations became then the object of scientific management as developed by Taylor and others[36]). Both these factors strongly supported the maintainance of the authority relations in the work contract.

It might be a simple matter of terminology whether one would choose to view these forces as market deficiencies or not. *In the sense*

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[32]) This can be viewed as an example of the general *Babbage principle* (1832) connecting labor division and machinery with workers' dequalification. As Ioanides has observed in his excellent survey (1975), Marshall, in his *Industry and Trade* (1920b), was one of the few economists who took notice of this principle.

[33]) For a critique of this assumption see especially Gintis (1975).

[34]) Smith (1937), 734—5.

[35]) A good discussion of this aspect is provided by FitzRoy (1973).

[36]) See Braverman (1974), chapters 4 and 5.

of traditional economic theory, which presupposes a vertical organization of the firm, they are not. But one should not forget the market imperfections in the usual sense. One important case analyzed convincingly by Doeringer and Piore (1971) is the formation of 'internal labor markets' within the corporation. Historically, even more important were certain imperfections on the capital markets, which we shall analyze in more detail.

Here again, Alchian and Demsetz give a hidden hint for the failure of the cooperative movement to succeed against the factory system in the nineteenth century. They mention »the inability to capitalize the investmtent value as 'take home' property *wealth* of the members of the socialist firm« (p. 787), and indeed this peculiarity was detrimental for most nineteenth century cooperatives. Apart from shifting self--financed investment projects to those with shorter life compared with external financing or with the investment behavior of a traditional ca pitalist firm, this effect tended furthermore to dissolve solidarity among the members.[37]) The desire to share the yields from self-financed investment with as few members as possible and in any case not with new members who did not contribute to the investment foregone by a sacrifice of former current earnings resulted in obvious reactions: rejection of new members and dismissal of old members (or at least failure to replace them). So, the cooperative firm did either wither away with its founding members or it degenerated into a traditional capitalist firm by hiring wage-workers in the place of retired members. Especially at that time self-financing — at least to a considerable degree — was unavoidable as capital markets were not very well developed and the opportunities of obtaining external funds were seriously limited. These problems were even more serious for cooperative firms that faced additional difficulties, from prejudice and open hostility in the banking institutions and from unresolved problems of liability.[38])

Up to now, a particular obstacle against the founding of worker-managed firms in a capitalist environment stems from the fact that workers usually can only provide their human capital, and scarcely material capital or money. The latter can easily be mortgaged, the former not. Apart from simple prejudices and some specific (but only transactional) problems of estimating the expected present value of the founding members' future incomes, a particular difficulty arises from the uncertain marketability of this 'security'. In contrast to material wealth or money that can be taken away from the borrower if he does not meet his obligations it is hardly possible to force an individual to provide his human capital on the (job) market: how can you force him to earn future income or, more precisely, to earn more income in the future than necessary for his subsistence[39]), especially since slavery, feudalism and debtor's prison are abolished? Of

[37]) For and extended discussion of the connected theoretical problems see Vanek (1973), Vanek (1975, article 28), and Nutzinger (1975).

[38]) Also the personal feeling of responsability among cooperative workers was sometimes seemingly underdeveloped. So, Drèze (1975, 3—7) reports complaints of Walras when he was Director of the Caisse d'Escompte des Associations Populaires: »Unfortunatelv these cooperatives insisted on low selling prices and high wages, and showed little concern for their capital, still less for the capital they borrowed. None of them succeeeded or paid back its loans.«

[39]) Remember that subsistence income (in the legal sense) cannot be seized.

course, an insurance system, combined with borrowing on human capital, could provide a solution, as there is a considerable average likelihood that men will earn more than their legal subsistence. We would, however, have to expect that the transaction (above all, insurance) costs are nontrivial and tend to disfavor those contracts in comparison with traditional credit arrangements.

IV. 3. Bargaining power in the Alchian-Demsetz model

We take up again the question of leaving the firm; in the model of Alchian and Demsetz this is the *only* measure an employee can take against the employer. Possibilities of *collective* action, such as strikes, are in practice the most powerful weapon for ordinary workers; but this is beyond the individual relation between the 'monitor' and the employee presupposed by Alchian and Demsetz. On the individualistic level, there is some additional bargaining power for experts and skilled workers in discretionary work rules, arising from their scarcity and the monitor's inability to control completely their activities.[40])

But apart from that, there is a basic inequality in the employment contract. The employer does not have to fire a worker but has a large scale of different instruments at his disposal: admonition, denial of promotion, demotion to another job or department, provision or refusal of certain amenities; granting further training and education (or not!), threat of firing, up to the dismissal itself. What has the oridinary employee to oppose? Apart from moral suasion and court appeals — two very indirect instruments — his only instrument is: leaving the firm. But this is not the adequate weapon against every measure the employer can take. So, if we want to construct a market analogy at all, it is the case of option fixing: either accepting or leaving the »market« — i.e., the firm.

As already mentioned, leaving a grocer and leaving a firm are quite different in terms of the transaction costs involved. But here we have another type of transaction costs meeting the difference between the »costs« of tolerating a certain measure and the costs of leaving the firm.[41]) As a consequence of the inequality of weapons in the employment relationship, this difference is not subject to bargaining, but only to the employer himself. Only in the limiting case where both kinds of costs are equal, does this particular form of transaction costs disappear. Again, we have to relate these costs of transaction (bargaining) to the notion of power.

Since Alchian and Demsetz apparently like market analogies, we follow them and use a few other examples from the sphere of exchange

[40]) They can, for instance, work strictly by rules in a perfunctory way. — For an analysis of the problems involved in those 'ideosyncratic' job structures, see Williamson *et al* (1975).

[41]) Whenever this difference is negative the worker is not likely to terminate his labor contract in response to a particular decision made by his employer. One must, however, note that the »costs of tolerating an order« are highly subject to the employee's personal evaluation; they tend to be higher with higher degrees of information, education and qualification. This again increases the bargaining power of the skilled workers beyond the possibility of leaving the firm (cf. footnote 40 above).

in order to illustrate the weakness of their initial propositions.[42]) Identifying the employment contract with other exchange relationships comes very close to disputing the case of traditional monopoly. There the consumer is always free to leave the market and to buy another — distinct — commodity if he is not willing to accept the monopolist's terms of sale. But no one (to the best of my knowledge) has argued that there is no such thing as a monopoly at all.

A similar analogy holds with respect to the proposition that *not* the *actual leaving* but the *threat of leaving* constitutes the essential bargaining power of the employee since he would lose any influence on the organization after quitting it. As a possible defense of Alchian and Demsetz's notion of the employment contract as an (implicit) system of continual renegotiation[43]) one could say that the employer always considers the probability that his employee will leave the firm in reaction to a particular decision he takes. So, any order he gives his employee may be viewed as an implicit agreement between both. If the subjective evaluation by the employer proves to be wrong he will either be 'fired by his employee'[44]) or has to revoke his order; again, the notion of authority would tend to vanish.

Against this line of defense there are apparently legal objections: the standards for implicit contracts must be very high if one does not want to justify everything. By using this construction Reverend Samuel Seabury (1861) succeeded in reducing the obviously non-contractarian institution of antebellum slavery to an ordinary contract. He simply applied an extensive interpretation of implicit agreements.[45]) Also, the idea of looking at the wage contract as a system of continual (implicit) renegotiation in order to reduce it to an ordinary contractual relation is not new at all: Alchian and Demsetz seem to have made independently the same mistake as Commons (1924)[45a]) fifty years ago, since they use the same construction without mentioning him. The mistake of this attempt will become clear by another market analogy related to the threat of new entry into monopolistic markets.

In a way similar to the entrepreneur in the case above, the monopolist must look at the possibility of new entry if the price he charges

[42]) Interestingly enough, Alchian and Demsetz, in the later sections of their article modify the starting propositions when they come to the details of productive organization. So they characterize the monitor not only as that party which renegotiates but also »hires, fires, changes, promotes« (p. 786). Indeed, the monitoring functions they attribute to the employer exceed the role of a simple Walrasian *auctioneer* and hence are in clear contrast to their market view of the firm.

[43]) Alchian and Demsetz (1972), 777, 794.

[44]) If work contracts were ordinary settlements we would have to look at a worker leaving the firm as 'firing his employer'. This in turn illustrates the inadequate view provided by Alchian and Demsetz: worker's withdrawal from the firm makes him unemployed but doesn't change the central agency position of the entrepreneur. But only this would allow the phrase of firing the employer'.

[45]) Seabury made a remarkable attempt to distinguish American slavery as a system of implicit contracts offered to the slave's newborn children from mere kidnapping. The content of these implicit contracts was, of course, providing the means of subsistence during childhood and expecting the reward (slave labor) later on. For Seabury, fugitive slaves escaping to the North were not 'voting by feet' but simply unwilling to fulfil their part of the 'implicit contract'. — I owe this knowledge to J. Philmore (1975) who does not only accept Nozicik's (1975, 331) approval of voluntary slavery but goes even further to claim that it is the necessary consequence of libertarianism.

[45a]) J.R. Commons, in his *Legal Foundation of Capitalism* (1924), argued that the labor contract »is a continuing implied *renewal* of contracts at every minute and hour, based on the continuance of what is deemed, on the employer's side, to be satisfactory service, and, on the laborer's side, what is deemed to be satisfactory conditions and compensation« (p. 285). — I owe this quotation to Fox (1974), 189, who uses it in a quite different way: to illustrate the employer's superiority in the employment relation.

becomes to high. If he demands excessive prices so as to attract new firms into this market he would either lose his monopoly position (i.e. he would be 'fired as a monopolist') or he must cancel his price increase *before* a new competitor enters the branch. The possibility of new entry plays here much the same role as the threat of leaving: both *limit the power of the* 'monopolist' without removing the 'monopoly' iself. We can rather take the extent of the existing barriers to new competition (Bain, 1956) as a measure of market monopoly power, and, accordingly, can look at the improbability of workers' withdrawal from the firm in response to a particular order as an index of the enterpreneur's decision-making monopoly power.

V. Some concluding remarks

In using market analogies we do not want to claim a basic identity of market exchange and production — far from it. We only tried to demonstrate that those comparisons can be used in the opposite direction: to show that there *is* authority and power as a basic feature of the firm even if we relate it to market exchange. One only has to apply the appropriate examples. But, since the contractarian viewpoint of Alchian and Demsetz appears so appealing to economists, some general remarks are necessary. The one-sided emphasis of traditional economic theory on exchange relations has highly influenced the way economists are accustomed to look at all problems they face. True, this particular view leads to an improved understanding of many issues that seem, at the first glance, not to be related to economics, such as marriage, crime and even politics.[46]) It would be counterproductive to refuse that point of view from the outset, as some Marxists seem to be inclined.[47]) On the other hand, economists tend to overlook the limits to this approach and take one feature of the picture for the whole painting.

Without any doubt, one can look formally at the firm from a purely contractarian viewpoint. But, as we have attempted to show, this way of looking at the firm is seriously misleading in many respects. It contradicts the historical evolution of the firm and leaves out the *essential feature of this institution:* the firm as *a displacement of numerous ordinary agreements by a reduced set of highly undeterminate contracts involving an authority relationskih between employer and employee in order to reduce the transaction costs in production.* Yet, Alchian's and Demsetz's view contains an important grain of truth, often neglected by the adherents of a purely hierarchical view of the firm: the market system does not stop at the entrance of the factory but intervenes in different ways into the internal structure of the firm. But one must note that this general assertion holds also in the opposite direction. Free market exchange and political democracy are influenced by the hierarchical division of labor in the sphere of production.

The basic bias of Alchian and Demsetz's approach is their far too extensive notion of market, exchange and contract in analyzing the

[46]) See e.g. Becker (1964), Becker and Landes (1974).
[47]) This is one troublesome point in Gints' otherwise illuminating paper (1975).

firm. Looking at the firm as a specialized market comes close to considering the courts as markets for crime. Denoting the wage contract as a system of continual renegotiations comes close to analyzing the gift relationship as an exchange under uncertainty.[48]) To deny a specific element of power in the firm is not very far from the assertion that *marriage* is not »different in the slightest degree from ordinary market contracting between any two people« since each of both partners can »punish« the other »by withholding future business or by seeking redrees in the courts for any failure to honor [the] exchange agreement«[49]). The particular problem with this deformation of concepts is not the complete faultiness of this position but its deceptive half--truth.

In order to comprehend the specific operation of the firm one has to emphasize the characteristic difference between market exchange and internal organization, and not to overstress the similarities. Further insight can be gained by relating the firm to market failure (Williamson, 1971) and to the problems arising from uncertainty Knight, 1921).[50]) The process of »internalization« of economic relations in the enterprise has to be analyzed as the »substitution of internal organization for market exchange«[51]), and not as a switching from one form of marketing to another one. Of course, Alchian and Demsetz are free to define away the crucial distinction between both forms of economic organization by their peculiar terminology. The costs of this procedure are, however, an inadequate understanding of the firm as a social institution. This is a high price to pay for a doubtful abstraction.

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[48]) This was a striking experience at an economic seminar in Switzerland where Serge--Christoph Kolm (1975) presented a paper on the gift — return gift relation. Allmost all participants largely independent from their political preferences were inclined to redefine the gift relationship in the way indicated above. The main objection against this procedure is the fact that not the expectations about the exchange value of the return gift are the leading force in this relation but the donators' idea about the use-value of the gift for the other party.

[49]) Alchian and Demsetz (1972), 777.

[50]) This viewpoint leads to an understanding of the *functional* aspects of hierarchy in the sense of a gradated system of responsabilities and competence; see my forthcoming paper on the effects of uncertainty on the internal structure of the firm.

[51]) Williamson (1971), 112. — For an interesting discussion of some similarities see Hirschman (1970) who analyzes the effects of exit, voice and loyalty as responses to decline in firms, organizations and states.

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