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1. Descriptions and redescrptions

To describe a thing is to attribute to it properties by means of some conceptual framework. (This is why we often can, besides "description", talk about "conceptualization".) One and the same thing can be given many descriptions, both within one framework and within alternative frameworks. An important case is the one where we have phenomenological or common sense descriptions and scientific descriptions of the same objects. Here it is fruitful to talk about the latter as redescrptions of the objects, because scientific descriptions are intended to replace common sense descriptions as more adequate for some purposes. Something described as water is redescrbed as H_2O molecules, temperature is redescrbed as mean kinetic energy, smoking as reception of carcinogens, and so on. Especially in social sciences it is easy to find alternative theoretical redescrptions offered as replacements of common sense descriptions. So we have, for instance, profit redescrbed as surplus value and also as compensation for risk-bearing, and business firms redescrbed as passively but rationally reacting profit maximizers without inner structure and also as Institutional forms of a self-processing value, i.e. of capital as a social relation.

Phenomenological or common sense descriptions emerge from or reflect the point of view of everyday practical life. Usually these descriptions are sufficient for the purposes of daily practice. But they do not suffice for explanatory purposes. This is why science seeks theories to redescrbe the objects of those descriptions in order to explain their behaviour under phenomenological descriptions. Theories and theoretical concepts which are not reducible to an observational language are the vehicles of redescription. This means that those objects as objects of theoretical redescrptions are not observable as such. Things as redescrbed - e.g., firms as point-like rational maximizers - cannot be observed. From the point of view of common sense and everyday practice - e.g., from the point of view of agents of business management - this makes the real existence of the objects of redescrptions suspect. Theoretical redescrptions of business firms attribute to firms properties which

For a realist theoretician belief in existence, is closely tied to explanatory power. Unobservable entities can be conjectured to exist if their postulation enables us to explain phenomena in the required non-positivist sense. For the scientific realist redescription is a form of (or a principal ingredient in) scientific explanation. For a realist explaining a phenomenon entails saying what it is. Things behave as they do because they are what they are. Water behaves as it does because it consists of H_2O molecules. And what things really are can only be described by means of scientific theories. (On redescription as explanation, see e.g. Sellars 1967, Atonson 1984, Mäki 1985.) So if firms basically are what neoclassical theory says they are, this theory should succeed in explaining the major observable features and behaviour of firms and their relations.

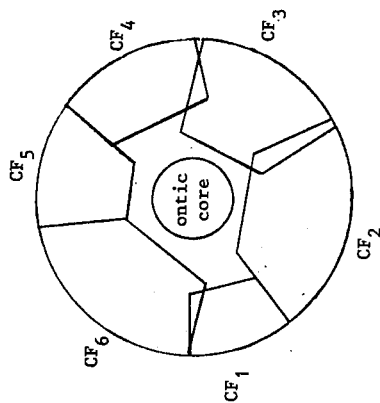
One interesting implication of the realist solution to the problem of the existence of the referents of theoretical redescrptions should be made clear. It has an encouraging effect on the practising economist: business firms should be investigated even as objects of redescrptions in order to improve these redescrptions (in the sense of increasing their truthlikeness). This is contrary to the consequences of the assumptive-fictionalist strategy, the basic idea of which is to make assumptions about the characteristics of firms in order to improve the systematizing power of the theory. Assumptions in this sense do not result from specific investigations on business firms and thus easily lead to suspicions about the reality of firms as so postulated.

4. Plurality of theories

There is an interesting fact which cannot be avoided when discussing problems of redescrbing business firms: the plurality of theories and approaches some of which, at least, are incompatible with each other. We have a variety of aims assumed to motivate business behaviour. We have decision-theoretic and game-theoretic, psychological and anti-psychological approaches. We have organizational, managerial, behavioural, biological and anthropological theories. We have the neoclassical theory trying to discover - according to a realist interpretation - the nature of the firm within a single firm, and various institutionalist and Marxian theories trying to discover it in wider social structures. (For an account of some aspects of this variety, see e.g. McGuire 1964.) This plurality certainly poses a problem for research, but how should one

proceed when trying to solve it?

There are alternative ways of handling the problem. First, it is possible to take the theories and approaches as **competitive**, so that they exclude each other. One theory is the best or truest (though it may well be that we do not yet know which one), others can be refuted. The second possibility is to take them as **complementary**, not substituting but complementing each other. They are separate theories that can be used for different purposes or ways of answering different sets of questions about the same object. Each of them has its own legitimate function. The third and the most difficult solution is the attempt to **connect** the theories into a whole, to synthesize them into a total framework. This is how we could have them all (or at least a large number of them), not as separate theories, but as aspects of a synthetic framework. How could this challenge be met? Let me illustrate my idea with a figure.



The circle represents the business firm. $CF_1 - CF_6$ are six conceptual frameworks or conceptualizations of the firm, each of them stemming from a different angle or viewpoint. Taken as such there are no necessary interconnections between the frameworks though there may be some overlap. Let us suppose that none of them has reached the inherent nature or, as I would like to denote it, the **ontic core** of the business firm. Now the task is to find such an ontic core by means of an ontologically deeper description CF_n . This deeper conceptualization redescrbes the variety of phenomena, facts and objects described by $CF_1 - CF_6$ by showing that those facts and features are, in fact, forms or manifestations of the ontic core, thus explaining them. This is how $CF_1 - CF_6$ and their objects which in the beginning looked separate and independent become internally connected. The background presumption behind this strategy is the belief that

seem to be incompatible with those attributed to them by common sense descriptions.

One response to this situation is to deny the existence of theoretical objects. This is the empiricist solution. Another response is to permit the real existence of those unobservables if their postulation increases our explanatory power. This is the scientific realist solution. Let me discuss these two solutions in more detail.

2. Theoretical firms as fictions

Traditional neoclassical microeconomics redescribes business firms as rational and fully informed calculators and profit maximizers without an internal structure, connected to each other with the external ties of price mechanism in perfect competition. According to this description, firms have only one goal, namely maximum profits. But they do not try to reach this goal by means of strategic manoeuvres but just by reacting passively to external stimuli which consist of changes in price information. Now it seems obvious that one can never observe a firm of this kind. This gives the empiricist sufficient grounds for denying the real existence of neoclassical business firms.

Fritz Machlup is an example of a sophisticated empiricist with respect to the ontology of firms. He regards the firm of neoclassical microeconomics as a "heuristic fiction", a "mental construct" which exists only in the economist's mind, not in economic reality. It serves as an intervening variable connecting two data of observation. The first data consist of changes in situational factors (costs, incomes, prices, technology), the second consist of "decisions" on qualities and prices of the firm's products. According to Machlup's interpretation, the purpose of neoclassical theory is not to explain the behaviour of firms but the behaviour of market entities or of the economic system as a whole. So this theory does not serve as a program for research on firms at all. For these purposes we need other concepts of the firm, provided, for example, by behavioural, managerial and organizational theories. It is interesting that in Machlup's view firms as described by these theories do exist in reality. They are no longer fictions (see Machlup 1963 and 1967).

There is one crucial premise in Machlup's thinking concerning the concept of

existence: To exist is to exist as an observable thing or event. So while Machlup is an empiricist with respect to reality, he is bound to adopt fictionalism and instrumentalism with respect to the neoclassical concept of the firm.

A final comment on Machlup's view is in order. Because he takes neoclassical business firms as fictions, the theory pertaining to those fictions should not be taken as a **literal description** of anything. We require of descriptions that they be true or false (or approximately so). But the neoclassical concept of the firm is for Machlup only an auxiliary construct which does not have such semantic properties. Thus, under the instrumentalist interpretation, we cannot, in a literal sense, talk of a "redescription" of business firms. "Conceptualization" or other, semantically more neutral, notions are preferable.

3. Theoretical firms considered as realities

If we have any sympathy towards realist ontology, we can reject Machlup's empiricist premise and adopt a new one: To exist is to exist (at least) as the inherent nature of a thing. It is this nature, albeit unobservable, which is describable by means of a theory which, if successful, truly reveals that nature.

From this perspective it is rather the existence of firms as observed entities (or possibly as described by, for example, managerial, behavioural or organizational theories) that becomes suspect. Or, we might say that these empirical firms may exist only in a derivative sense. Firms may exist in a genuine sense only as objects of true theories of their nature. Various causal powers, capacities and dispositions of firms are based on their nature. These powers etc. are the causes of the major empirical features of firms, regularities in their behaviour, and so on.

The positions of practical businessmen and economic theoreticians may, in extreme cases, be diametrically opposed. For the businessman it may well be that only empirical firms exist, while the theoretician, if he is a realist, may think that it is primarily theoretical firms (firms redescribed by a true theory) that exist. So from the realist point of view there are no ontological or epistemological obstacles for neoclassical firms to exist. They do exist if the neoclassical theory truly describes the inherent nature of business firms.

deepness and wholeness go together.

A comment is in order. The crudeness and abstractness of the above idea should make it clear that there can be no *a priori* commitment to any conceptions of the specific nature of the ontic core. Whether it consists of a single mental property of human beings or of some technological facts or of some structural features of society (or perhaps of a combination of these) cannot be decided in advance. To find the correct conception is a central task of research. This is why, at this stage, it is problematic to make a final decision in favour of any of the existing theories as the CF_n or as a promising candidate for such a role. The only thing on which we can be relatively sure is the criterion of adequacy for a successful CF_n : it should be capable of creating a unity among different theories and phenomena.

5. Epistemic and ontic dynamics

Redescription is, essentially, a case of conceptual change. More specifically, when redescription occurs, one conceptual framework is replaced by another. Thus, redescription is a dynamical process, not a state of affairs, for example. It always involves, implicitly at least, a reference to an antecedent description and to a subsequent description, the latter following the former in time.

This processual feature of redescription could be characterized by the notion of "epistemic dynamics": an instance of growth of knowledge or understanding is present here. We can say that an explanation by a theory is better than an explanation by another theory if it provides an increase in the depth of understanding by which we mean that the ontology of the latter theory can be reconstructed as derivative in that of the former but not vice versa. In our language of redescription, the ontological commitments of the first theoretical description are replaced by those of the second theoretical descriptions: it is at least the objects and powers postulated by the latter which are real.

So the epistemic dynamics of successful redescriptions are accompanied with an increase in the ontological depth of our theories. It may be that epistemic dynamics are the only relevant dynamics. In this case it is only our concepts that change and our understanding that deepens. But sometimes there are essential processes of change in the world, too. Let us call this "ontic

dynamics". It is obvious that ontic dynamics are an essential feature of social and human realities.

In the absence of ontic dynamics the epistemic dynamics of a progressing science consist of, so to speak, drilling deeper and deeper into the object of that science, adopting new conceptual framework whenever new ontic layers of the object are revealed - or, more accurately, it is the case that those deeper layers are captured precisely by means of constructing new frameworks or redescriptions of the object. In this case there is no change in the object itself, its ontic nature remains permanent. Although I think we cannot accept it as a general rule that this makes the task of redescription easier than in the case of changing objects of inquiry, this idea comes easily to mind: change is a special case of complexity, and the more complicated an object is, the more difficult it is to investigate and understand.

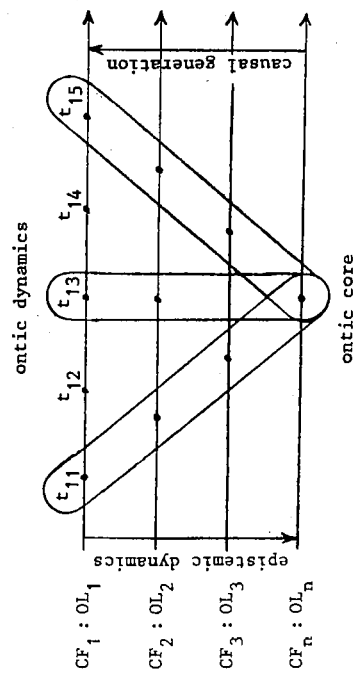
Perhaps this is why much of economics can be seen to proceed as if there were no ontic dynamics making its objects more complicated. Traditional neoclassical microeconomics is a good example. Business firms as rational calculators and profit maximizers without an internal structure, connected to each other with the external ties of price mechanism in perfect competition - here we seem to have a paradigmatic case of historically frozen objects with no ontic dynamics in the world of business firms and competition.

Keeping in mind what I have said earlier, this kind of a freezing method makes it tempting to conclude that the resulting conceptual construct is only a fiction, having no referents in reality. But the case is not that simple. This can be seen by adding the temporal dimension to my earlier discussion on the inherent nature or ontic core and its manifestations. Now the question looks like this: When business firms change in history - as they certainly do -, what is it that changes? Is it the ontic core of business firms, or only their empirical forms of various kinds? And what effects should these changes have on theories of the firm?

This way of formulating the questions presupposes, first, a sort of ontological stratification of the world of business firms into levels of varying depth, and second, a differentiation of the rhythm of ontic dynamics on those levels of business reality. This implies that in a sense there is no uniform historical time applying to every level of reality. We might put it that time goes "more slowly" on some levels and "more quickly" on others; changes on all the ontic levels do

not take place with equal tempo. Now it may well be conjectured that it is the ontic nature of business firms which is the most stable and its empirical forms which are relatively more variable. But, as before, we must notice that this cannot be decided in advance - it is the task of research to settle the question. (For example, we might be predisposed to think that the ontic core of business firms is not hidden in any psychological or sociopsychological facts, but, at the same time, these facts might indicate a remarkable degree of permanence.)

However, for the sake of simplicity, let me assume that ontic depth and temporal permanence increase hand in hand. I shall try to illustrate what I have in mind by means of the following figure.



$CF_1 - CF_n$ are descriptions of the levels of business reality $OL_1 - OL_n$ with increasing ontic depth. A move from CF_1 to CF_n is a case of epistemic dynamics. Let us suppose that the ontic core, on OL_n , does not change at all during the absolute time period considered in the figure. But the nearer we come to the phenomenal surface, the more rapid is the rhythm of change generated by ontic dynamics. If our descriptions are restricted to the surface level, we are forced to refute or modify them every time a substantial change on that level occurs. This is the case of epistemic dynamics without the dimension of ontic depth. We have only a sequence of descriptions $CF_{11} - CF_{15}$, none of them having the power to explain the changes. Only by constructing deeper descriptions, ultimately CF_n , can we try to explain observed changes and find internal connections between the objects of subsequent empirical descriptions.

The task of CF_n is to show that the object of research, e.g. the business firm, has an inherent nature giving rise to certain capacities or causal powers to

generate or even necessitate certain changes in the empirical forms of the inherent nature. So the changes on other levels are at least partly due to dynamic forces on OL_n (other levels may have causal powers of their own, the functioning of which, however, causally depend on those on OL_n). And as each of the consecutive observed configurations of phenomena can be redescribed as an empirical manifestation or form of one and the same ontic core, CF_n creates internal connections between them.

The above account makes it understandable that a candidate for the role of CF_n remains relatively stable in spite of remarkable changes in the observable features of the object of study. From this perspective there is, in principle, nothing objectionable in the neoclassical theory of the firm. The freezing method of theory formation which treats one or more strata of the object as stable is justified if, as a matter of fact, there is such a stability in reality. One essential criterion of assessment of a candidate for such a theory would obviously be the following: the theory, in order to be adequate as CF_n , should be able to redescribe the different empirical configurations and their changes as manifestations of the causally powerful ontic core of the object under study. Whether the neoclassical theory of the firm - or, for that matter, any other contemporary theory - fulfils this criterion is far from clear.

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