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The Social Construction of Production: An Application of Economic Sociology

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The present article represents an attempt at analyzing the social construction of production activities under a market economy. For that purpose, attempts are made to identify some social forces underlying and determining these activities. Such forces are exemplified in the exogenous, especially institutional, political and cultural, conditioning of capitalist production. The article also reviews relevant evidence to empirically evaluate the premise of the social construction of production. The article's purpose is to contribute toward the growing literature in the social construction of economic, including managerial, behavior.

The purported contribution of this paper is acknowledging the social character of production and related activities, as well as continuing a line of cognate research within economic sociology. The paper's key assumption is the social, including institutional, cultural and historical, construction of production, particularly its market-based types. The purpose of this paper is to show that market-based and (superficially) gain-seeking production, just as distribution, exchange and consumption, is a dependent variable of certain social conditions rather than being a natural universal.

With that purpose in mind, the paper proceeds in the following way. The first section sets the stage for the analysis of production processes by reconsidering the neoclassical production function within economics. The second section outlines and contrasts pluralist (socio-economic) and single-cause (purely economic) approaches to production and related phenomena. In the third section the pluralist approach is put in work by redefining production and identifying nonproductive gain-seeking methods. The approach is subject to tentative empirical evaluation in the fourth section by adducing the pertinent evidence with bearing on production and related economic processes. A concluding section discusses some theoretical and methodological implications of the preceding.

THE NEOCLASSICAL PRODUCTION FUNCTION REVISITED

In the neoclassical production function, $Y = f(K, L)$ —as anticipated by marginalists like Wicksell (1954) and formulated by Cobb and Douglas

1. However, Weitzman (1996: 208) argues that the expansionary power of a combinatoric growth process tends to overwhelm the «potential diminishing returns of a neoclassical production function.»

in the late 1920s—output or product (Y) is a homogeneous (degree one) function of two productive factors or inputs, namely capital (K) and labor (L), whose shares are assumed constant (Cobb and Douglas, 1928; Klump and De La Grandville, 2000). This is simply a «standard, neoclassical, constant-returns-to-scale aggregate production function», though with a potential for diminishing returns¹ (Weitzman, 1996: 207) suggested by the principle of diminishing marginal productivity. Thus, the Cobb-Douglas function specifies the relations of output to these two inputs by estimating coefficients of elasticity (percentage changes) of production with respect to labor (0.3) and capital (0.7), respectively. In particular, the Cobb-Douglas capital coefficient of output elasticity (0.7) is seen as a main variable in the production function, though in the Schumpeterian model (Schumpeter, 1939) this coefficient is lower (e.g., 0.5-0.6) than its estimates under the «maintained hypothesis of neoclassical theory» (Howitt, 2000: 830).

A generalization of the Cobb-Douglas is the Solow (1957: 312) production function aiming at «offering a bit of variety» by introducing technological progress with an exponential rate over long periods without changes in labor and capital. However, this generalization still envisions the possibility of ever-increasing per capita output, even with no technical progress, but due to increases in capital, with a threshold saving rate assumed to generate investments large enough for this output to grow forever (Klump and De La Grandville, 2000). Another generalization is the KLEM production function (Klein, 1983), $Y = f(K, L, E, M)$, which links output with, alongside capital and labor, other inputs like energy (E) and materials (M) (thus reflecting the impact of the oil crisis in the early 1970s).

The common thread of these formulations of the neoclassical production function is viewing the latter as a technical construction (Williamson, 1998). The underlying premise is that some combination of inputs generates a definite level of output in a mechanical, almost automatic manner, just as combining chemical elements produces a composite in a technological process. On this account, it looks like a chemical or technological formula saying that to obtain a given composite or output requires mixing in definite proportions certain doses of elements or inputs. No wonder, these proportions are called «technical coefficients» of production or of elasticity of substitution of productive factors, and the ratio of inputs to output the «marginal rate of transformation» in a technological sense. Such a production function thus evinces a mechanical and technological bias, a characteristic common for neoclassical economics in its effort to model itself after physics and mechanics.

An alternative path from economic sociology is treating the production function as consisting of a complex social process rather than a chemical-like or technological one. This treatment presupposes «recognizing that the agents in the economy are human» (Thaler, 1991: xxi), that economic processes involve relations between humans rather than between inputs, outputs and other quantities. Notably, it describes managers, entrepreneurs and producers as «human decision-makers [having] very human limitations [and dealing with a] very complex and

demanding world» (Thaler, 1991: 22). Hence, production becomes a domain of social action, a set of relations between such human agents as different from those between technological elements (inputs) and composites (output). However, humans participate in production as well as other economic processes as social creatures rather than as “natural” persons or asocial creatures in the image of Robinson Crusoe (DiMaggio, 1994).

However, to say that production is a social process done by human beings is not enough to counter the technical conception of it. A more effective counter-argument would be that, like the economy overall, production is a matter in managerial coordination and social organization, and thus, as J. S. Mill put it long ago, “human institution”. This makes an organizational or institutional perspective on production a meaningful and legitimate endeavor. According to this perspective, producer (and other) firms are social organizations and institutions, including governance structures, not technological production functions, thus organizational rather than technical constructions² (Williamson, 1998: 75-77). Further, technical production functions are rooted in certain institutional orders that are contingent on the conditions of the social environment, as stressed by institutional economics.

For the sake of treating production as a matter in social action and organization, an additional useful organizational perspective can be X-efficiency and related theories emphasizing governance aspects in economic organizations. X-efficiency theory notes that standard microeconomics cannot cope with the sub-optimal allocation of managers as an important type of inefficiency or distortion in production while centering on relative price and quantity distortions or allocative inefficiency (Leibenstein, 1966). Since managerial actors determine both their own productivity and that of all cooperating units in an organization, the actual loss caused by such a misallocation of resources can be substantial, even larger than that due to price/quantity distortions. However, standard microeconomics precludes examining this problem by assuming that firms are entities making automatic optimal-input decisions apart from those, often sub-optimal, of its managers as human decision makers, which is an obvious contradiction and thus cannot be coped with. Alternatively, X-efficiency—i.e. an undefined type—is generally associated with effective managerial decision-making and thus the behavior of human actors in production by contrast to allocative efficiency which mainstream economics attributes to the reallocation of resources (e.g., eliminating monopoly and tariffs). The specific determinants and forms of X-efficiency include intra-plant motivational, external motivational and non-market input efficiencies. Obviously, motivation or incentive is a major though not the only factor and component of X-efficiency thus understood. For example, in organizations in which motivation is weak, management is likely to allow a considerable slack in its operation and not seek cost-improving methods, though X-efficiency theory depends in no way on the assumption of cost-minimization and profit maximization by all firms³.

That X-efficiency is a matter of managerial and thus human motivation and conduct in production is indicated by the «simple fact» that indi-

2. In this connection, Williamson (1998:75-77) makes a suggestion for treating firms as governance structures rather than production functions, the first being organizational constructions, and the second technical constructions as conceived in conventional microeconomic theory.

3. According to Leibenstein and Maital (1992: 433), the «site of the battleground between opponents of X-efficiency and its adherents has often been the concept of maximization: whether individuals and firms always maximize utility or profit. X-efficiency is based on (...) the max/non-max postulate, which allows for, but never precludes, maximizing behavior.»

4. In formal terms, a measure of X-inefficiency is the magnitude of the nonnoise component of the error term in the econometric estimation of production functions (Leibenstein and Maital, 1992)

viduals and organizations do not work as hard as they are expected to do by received theory (Leibenstein, 1966: 407). Hence, if X-efficiency is reportedly much more significant than its allocative form, this implies that production is more of a problem of human coordination and social organization than of a mechanical combination of inputs into outputs or an automatic allocation of resources by an invisible hand. Thus, improvements in X-efficiency are found to be a more important factor of increased production than those in allocative efficiency. In a recent empirical estimation, amounts gained by increasing allocative efficiency are trivial in contrast to those from decreasing X-inefficiency as frequently significant (Leibenstein and Maital, 1992). Hence, X-(in)efficiency and thus the human managerial element is far from being a random component but a determinative factor in production and other activities in organizations⁴.

As hinted above, the neoclassical production function assumes that the relations between inputs and outputs are fully determinate to the effect of the former having a fixed specification and yielding a fixed performance, just as those between chemical elements and composites in a technological process. Presumably, certain technical coefficients of production indicating the ratio or elasticity of substitution between capital and labor will generate determinate quantities of output as indicated by the marginal rate of transformation of the former into the latter, by analogy to transforming definite chemical elements into a composite. However, X-efficiency theory argues that the relationship between inputs and outputs in the process of production is not determinate in a technological sense. Thus, contrary to the conventional assumption, inputs can have a fixed technical coefficient or specification and yields a variable rather than fixed output or performance, as well as both variable specification and performance, as shown by many labor services. And X-inefficiency relates to the possibility for obtaining variable rather than fixed output and performance from given units of inputs. The main reasons for this in-determinacy lie in, first, contract incompleteness, second, the non-market character of some factors of production, third, lack of complete specification or knowledge of the production function, and, fourth, competing firms' tendency to tacit cooperation as well as imitation with respect to technique due to interdependence and uncertainty. For instance, labor contracts are often incomplete or implicit, as a large part in them is left to customs, authority and motivational techniques available to management, even to individual discretion and judgment. Also, the production function is not always fully specified and known, given the lack of accurate knowledge or predictions of what will happen in the case of changes in the technical coefficients or input ratios. Additionally, some important production factors are often not marketed or, if they are, not equally accessible to all potential buyers, a case in point being management knowledge. As a result, «it is one thing to purchase or hire inputs in a given combination; it is something else to get a predetermined output out of them» (Leibenstein, 1966: 408). Formally, this points to the impertinence of deterministic situations and the importance of «stochastic elements inherent in production and other economic activities» (Rosen, 1997: 195). Substan-

tively, it implies that production outcomes are far from being determined by strictly market transactions or purely technological processes. In sum, X-efficiency theory suggests rejection of the neoclassical production function as a technical construction. In positive terms, it conceives production and related economic processes as a problem in social organization and managerial coordination, and to that extent of human action.

Presented below are additional related arguments for such a conception and, alternatively, against the neoclassical production function as a technical construction. Somewhat ironically, one line of such arguments originates from some variations of neoclassical economics, and implicitly refutes its production function on explicit economic, and implicit social, grounds as opposed to technological considerations. For illustration, Schumpeter (1939: 189-190) states that rational production in a market economy never rests on «exclusively technological considerations» insofar as productive factors are in limited quantities in society, and thus the socio-economic dimension is «always necessary for the guidance of production». Further, he emphasizes that the latter dimension tends to be primary to the former in most cases in the market economy, observing that the life of the means of production such as machines or buildings «is not purely a technological but an economic variable». The above statements thus point to the inadequacy of the notion of a production function as a technical construction, as well as to the adoption of an alternative concept of production as a socio-economic process with its own rationale beyond, even opposed to, technological considerations.

Less importantly for our purpose, Schumpeter (1939) also implies that the neoclassical production function might not be fully consistent with the actual occurrence of business cycles and other economic fluctuations (e.g., seasonal trends). As regards the relations between the technical dimension of production and business cycles, he observes that the average lifetime of a machine is usually longer than any such (medium-run) cycle. In turn, he holds that obsolete machinery is not typically replaced in prosperity but rather recession or depression, as their intense competition forces organizations to install the newest disposable types. One might argue that if the production function were an invariable technical construction with fixed input and output specifications, it would not be subject to such cyclical replacements of the former and the fluctuations in the latter, except for those coming from natural phenomena. But these latter are of reportedly secondary importance in business cycles. As some economists suggest, one can hardly argue today in light of the historical experience that business cycles are outcomes of physical and other mysterious processes (e.g., sun spots) rather than of social-economic changes (Eichenbaum, 1997). However, it can also be argued that there can be technological elements and processes in production that are overwhelmed by larger business cycles within the economy. To the extent, the neoclassical production function as a technological construction would not be necessarily incompatible with economic fluctuations.

5. This single-cause approach to production can be illustrated by $y = \alpha + \beta x + \varepsilon$, where y is vector of modes of production behaviors and processes, x is the vector of market variables, including *within* interaction terms: x_1x_2, x_2x_3, \dots , α is a vector of intercepts or constants, β a vector of coefficients showing the influence of x , including *within* interaction effects of the particular components of x , on y , and ε is a vector of residual terms pertaining to other, nonmarket or social variables virtually "presumed dead", i.e., insignificant, unobservable or non-identifiable.

6. Analogously, such a pluralist ontology of production can be represented by: $y = \alpha + \beta x + \beta z + \beta w + \varepsilon$, where y is a vector of modes of production behaviors and processes, x and z are vectors of rational and non-rational explanatory variables, respectively, w is a vector of interaction terms representing the interactions between elements of x and z , α is a vector of constants, $\beta x + \beta z$ are vectors of coefficients, including interaction effects from *within* each vector for x and z , respectively, βw is a vector of regression coefficients expressing the interaction effects of the *combined* components of both x and z on y , and ε a vector of residuals entailing nonsocial, e.g., physical or psychological, variables. In formal terms, in addition to the vector of noneconomic variables z , a multivariate, sociological perspective on production includes interaction terms within this vector, e.g., $z_1z_2, z_2z_3, z_1z_3, \dots$, as well as interaction terms combining components of both matrices, such as $z_1z_1, x_2z_2, x_1z_3, \dots$, in addition to the interaction terms within matrix x . Via decomposition of vector z into z_2-z_4 , and omitting interaction terms, one gets:

$y = \alpha + \beta_1 X + \beta_2 Z_2 + \beta_3 Z_3 + \beta_4 Z_4 + \varepsilon$, where X stands for gain or gain and related rational-economic variables, the impact of which on production epitomizes the neoclassical hypothesis. Z_2 represents social interaction variables, such as interpersonal ties and networks, in production, reflecting the Pareto-Simmel-Simon sociopsychological hypothesis. Z_3 means social-cultural variables, such as rules, institutions, values, and symbols (including status), as assumed by the Durkheim-Weblen-Polanyi normative-institutional hypothesis of production. Z_4 signifies variables like power and domination within the Marx-Myrdal-Weber socio-political hypothesis of production (Weber, 1933; Myrdal, 1953; Marx, 1967).

To summarize the discussion thus far, an alternative perspective views production at both firm and economy-wide levels as a matter in human action and coordination and thus of social organization and institutions. The argument for an organizational or institutional alternative rests on the fact that production functions are admittedly grounded in social organizations and institutions, such as firms as decision-making units, accounting standards, even the «political sphere» (Samuelson 1983: 7, 117).

PLURALIST AND SINGLE-FACTOR APPROACHES TO PRODUCTION

The ensuing outlines a pluralist approach to production and related economic processes, which is compared and contrast with its alternatives. The pluralist approach originates in the frame of reference of economic sociology as an interdisciplinary discipline understood as a sociological perspective on economic phenomena, including production (Smelser and Swedberg, 1994: 3). Specifically, it applies such sociological perspectives as networks, groups, social structures or institutions, social controls, cultural context, and the like. In particular, it identifies and emphasizes the institutional factors of economic behavior. Generally, economic sociology centers on what Weber (1933) calls "sociological categories of economic action" or "sociological relationships in the economic sphere" composed of the «production, distribution, exchange, and consumption of scarce goods and services» (Smelser and Swedberg, 1994: 3).

Hence, a pluralist sociological approach treats production as a social phenomenon existing and operating within the setting of society, not just as a market process. Such an approach focuses on the multiplicity of social variables in production and emphasizes its social, including institutional, logic and arrangement. By contrast, the pure economic approach to production is premised on a doubtful single-cause conception by virtue of its inclusion of only one class of variables⁵, excluding other categories, or reducing them to this class or relegating them to a residual term. Admittedly, such approaches can be theoretically dubious in the face of the empirical multiplicity of social systems in the «real world» (Arrow, 1997: 765). This is especially so insofar as they exclude pre-market or extra-economic factors as explanatory variables in production though these can be relevant as well (Sachs and Warner, 1997). The above applies to any single-factorial approaches to production, as they represent a monistic causal epistemology that fails to do justice to an inherently pluralist ontology⁶.

At this juncture, however, one should recognize that many (though not all) economists resorting to single-cause approaches really do not want to describe and explain reality as much as to offer a normative theory of economic behavior. Most economists rarely make or observe the distinction between normative or prescriptive and descriptive or positive models of production and other economic phenomena (Thaler, 1991: 3). As hinted, the neoclassical production function appears as a

normative prescription or technological recipe of what should be done (e.g., obtain fixed output from inputs with a fixed specification) rather than a description of what is or may be actually happening (e.g., variable output resulting from inputs of fixed or variable specifications). Overall, many mainstream economists proceed on the “as if” assumption, substitute value judgments for factual statements, and sacrifice realism and complexity to parsimonious clean modeling and simplicity, though some less orthodox (e.g., Hirschman, 1984) make a case for complicating economic discourse, and against parsimony. By contrast, economic sociologists try to describe and explain variation in production and the economy overall, and thus in order to adequately specify their models they are logically predisposed to incorporate non-economic variables, though this applies less to rational choice theorists. As a result, economic sociology models of production and related phenomena tend to be pluralistic and multi-layered (Hodgson, 1998), thus less parsimonious and clean than those of economists. As some analysts (Hirsch, Michaels and Friedman, 1987) put it, the difference between contemporary sociologists and pure economists is one between dirty hands and clean models.

More specific to our concern, the difference between economic and sociological approaches can be tentatively illustrated on the case of the production residual. In particular, the growth residual in the aggregate neoclassical production function far from representing unexplained variation might be an important explanatory variable in a sociological approach. The reported (Griliches, 1996: 1327) high value of the residual presumably indicating such unexplained variance in the production function indicates such a possibility (see **Table 1**).

Reportedly, «only a small proportion» of GNP increase is explained by input increases in labor and capital, as the «unexplained residual» accounts for about 50-80% of production growth in developed countries (Leibenstein, 1966: 404). Therefore, «everyone is aware that the lion’s share of growth is accounted for by the residual as that part of the rate of growth in output not explained by rates of growth of inputs in a standard, neoclassical aggregate production function» (Weitzman,

Table 1. Estimates of the Residual in the Neoclassical Production Function for the U.S.

Period	Total economy	
	in output	in output per man
1870-1914	27	100
1904-1937	na [†]	median 89
1869-1938	37	na
1869-1928	31	88
1870-1950	na	92
1899-1948	na	87
1869-1878 to 1944-53	48	86
1909-1949	52	88

Source: based on Griliches (1996: 1327). † na = not available

1996: 207). Economists have traditionally viewed such an index of unexplained variation in the production function as a measure of their «ignorance» (Griliches, 1996: 1324), with the all-important residual becoming a mystery variable. In formal terms, this points to the inadequacies of standard econometric models to explain production and productivity. Admittedly, economists' resort to the residual as an explanatory variable of the variation in the production function is a «powerful indictment of the limitations of the neoclassical framework» (Dougherty and Jorgenson, 1996: 29). Thus, the reported «lopsided importance [of the residual] should be sobering, if not discouraging, to students of economic growth» (Griliches, 1996: 1324).

The question can arise as to what the black box of the residual comprises or represents. One answer is that the residual encompasses a range of such non-input production factors as technological change and knowledge, education of the labor force, etc., as well as motivational or incentive X-efficiency elements (Leibenstein, 1966). In this view, manifestations of the residual include cost reduction in the production of existing products without inventions, the introduction of innovations in production processes and of new commodities or quality improvements in consumer goods and inputs. Specifically, cost reductions are attributed to improvements in X-efficiency and regarded as an important component of the observed residual in production. In turn, new technical and other knowledge is seen as part of the residual but in the form of dissemination rather than invention of such knowledge. So are the responses by firms to competitive and other economic pressures. Formally, econometric (regression) analyses decompose the production residual into unobservable or random and inefficiency or systematic components, including a measure of X-inefficiency as the value of the extra-noise element of the error term (Leibenstein and Maital, 1992).

Other similar answers interpret the residual in terms of a measure of technological change (Greenwood, Hercowitz, and Krussel, 1997), of technology-generated productivity (Dougherty and Jorgenson, 1996), or of technical knowledge (Weitzman, 1996). As regards the latter, for example, some economists remark that the «unopened black box [of the residual contains the] production function for new knowledge, [with the latter seen as a] exogenously determined function [of research efforts in the] spirit of a conventional relation between inputs and outputs» (Weitzman, 1996: 210). Since the residual represents previously untried combinations of existing technical and other ideas assumed to grow more rapidly than any other elements of the economy, it makes production a combinatoric process offsetting the potential for diminishing returns in the neoclassical function. Hence, the residual is taken to be determined by the amount and productivity of the resources allocated to creating useful new ideas as additions to the existing stock of technical knowledge.

However, such purely economic-technological identifications and interpretations of the residual are only partly useful for a social approach to production seeking to identify non-economic and non-technical factors as well. Further, some economists have misgivings about such pro-

ductivity and technology interpretations of the residual. First, disturbing factors, such as imperfect competition, overhead costs, unmeasured variation in factor utilization, operate to make the residual less than a good measure of productivity growth (Rotemberg and Woodford, 1996). Second, other analysts doubt the technological interpretation of the residual as reflecting stochastic movements in the aggregate production technology, and instead point to variable capital utilization and labor hoarding as the cause of these movements, viz. external-shock propagation (Burnside and Eichenbaum, 1996). In addition, those interpretations of the residual in terms of technical knowledge (Weitzman, 1996) need to take into account the fact that the latter is a particular facet of social knowledge, namely a category that is socially created, diffused and reproduced. Only in the sense of socially held technical knowledge can one say that the latter is a «main determinant of economic activity in every economy» (Arrow, 1994: 6). Thus understood, technical knowledge and other information can contribute, in part, toward opening the back box of the production residual. Admittedly, technical knowledge, just as information overall, is an «especially significant case of an irreducibly social category» (Arrow, 1994: 1) in the economy. If this is true, then the residual cum technical knowledge becomes such a social category as well, which adumbrates or allows the possibility for an alternative sociological explanation and interpretation outlined next. However, a coherent and elaborate sociological explanation of the production residual is undeveloped, virtually absent, in the literature. In light of this, only broad outlines of and general suggestions for such an explanation can be offered at this juncture.

An obvious broad way to go is to associate, as the general working hypothesis, the residual not only with productivity and technology, including technical knowledge, but also with extra-economic variables in the process of production. In this hypothesis, such an unexplained index of variation in production can also reflect certain social factors, ranging from politics to institutions to culture, overlooked or minimized by the purely economic approach. A specific variation of this hypothesis is, for example, the impact of political variables like public capital on micro and macro (state-level) Cobb-Douglas production functions (Garcia-Mila, McGuire, and Porter, 1996). Admittedly, lacking a comprehensive set of social variables models of production, including growth, are «plagued by left-out-variable errors of great importance» (Sachs and Warner, 1997: 186). Methodologically, this procedure commits the misspecification or omission of important explanatory variables in production.

A possible analytical framework for sociologically approaching and interpreting the production residual at the micro-level of organization is what Schumpeter (1939) calls the «sociology of enterprise» as an inquiry into the social conditions of entrepreneurship. Moreover, in his view the sociology of enterprise probes much further than the conditions producing and shaping, favoring or inhibit entrepreneurial activity and into the structure and the very foundations of capitalist society. Both in a narrow and a broader sense, the sociology of enterprise would represent an alternative to the neoclassical conception and

function of production. In a narrow sense, it incorporates entrepreneurship as an additional explanatory factor of productive activities, thus of the production residual, at organizational level, a variable in turn absent from the standard neoclassical function based on capital and labor inputs. In a broader sense, the sociology of enterprise takes into account what the neoclassical function consistently excludes or neglects, viz. the structure and the very foundations of capitalist society as an over-arching social factor of production in a market economy. In other words, the sociology of business firms is premised on the social construction of economic organization (Kristensen, 1999). Hence, the suggestion that we should look beyond the realm of abstracted economic processes to explain why these are subject to variation and diversity, viz. why the nature of business firms differs and why markets (or formations of firms) are organized differently across societies and history (Kristensen, 1999). In turn this comparative-historical approach implies a diachronic position on economic processes as an alternative to the synchronic view of the economy presently dominating mainstream microeconomics (Piore, 1996).

Some concrete alternative explanations, e.g., trade policy and competitiveness, strategic management⁷, etc. might be useful to understanding economic sociology's approach described above. For instance, social institutions as well as policies (e.g., trade and tariff policy) can, and reportedly do, greatly affect domestic market structure and international competitiveness⁸ (Porter, 1984). Relatedly, different industrial cultures (or industrial systems) are observed to have effects on the degree of international economic openness and so on the thickness of the domestic market (McLaren, 2000). Specifically, great international openness as grounded on a certain industrial culture tends to thicken the market by fostering less vertically integrated (leaner) firms, which generates gains from trade different from those assumed by the received theory. For instance, Japan-USA institutional-cultural differences lead to those along a large number of dimensions in management, viz. internal and external firm structure, the extent and style of outsourcing (McLaren, 2000).

Another similar example concerns the role of relative bargaining power in international trade. As analysts argue (McLaren, 1997), bilateral trade negotiations based on different countries' relative bargaining power can have strategic disadvantages for a small country like Canada vs. the USA, which while are not recognized in trade theory are harmful on balance. Moreover, the very anticipation of such trade negotiations negatively impacts a small country's bargaining power (in equilibrium). Alternatively, a small country such as Canada could enhance its social welfare by pre-committing never to negotiate on free trade with a large and would-be dominating country like the USA; and if this is impossible, the second-best option is to use protection to decrease dependence on trade with the latter. Since the loss of national bargaining power reportedly impinges on all facets of the relations between these countries, then the trade-off implies that the small country must pay a price in sovereignty for the benefits of free trade (McLaren, 1997).

7. Hemmasi, Graf, and Kellogg (1990) observe that strategic management scholars posit conditional relationships between firms, with industry competitive environment as a contingency variable, a proxy for product life cycle, required capital investment, types of production technologies, long-term profit prospects, etc., which are assumed to affect strategic decisions and the intensity of competition in an industry.

8. Porter (1984) analyzes the role of tariff policies in a small open spatial economy such as Canada. Assuming increasing returns to scale in the production technology of the manufacturing sector as well as transportation costs, he present examples showing that imposition of import tariffs on this sector can improve social welfare, though this creates a monopoly position in the protected industry for some firm and its production are higher than those of foreign firms.

The preceding hints at the possibility of a sociological interpretation of the production residual at the macro-level of society. Specifically, a possible path toward such a sociological interpretation is linking a country's economic development to its institutional and policy arrangements as well as its ideology and culture, including work ethic⁹, as presumably residual factors. As some studies find, the «imitation of the evolution in advanced countries appears in combination with different, indigenously determined elements [which] is particularly true of the institutional instruments used and even more so of ideologies» (Gerschekron, 1992: 127). To be sure, this linkage should be done with precaution, as it is «dangerous to attribute to institutions or other factors, whatever residual cannot be otherwise explained» (Fortin and Lemieux, 1997: 77). On the balance, assuming institutional and other social structuration in production as a working hypothesis still may be preferable to treating the residual as a mystery variable, at least within economic sociology or institutional economics. At the minimum, this assumption can help illuminate, as Parsons (1937) put it, some dark spots in the production residual.

Relatedly, as institutional economists suggest (Coase, 1998; Williamson, 1998), social institutions impact production as well as transaction costs. Admittedly, just as production costs, the latter or the costs of exchange «depend on the institutions of a country: its legal system, its political system, its social system, its educational system, its culture, etc.» (Coase, 1998: 73). In particular, there is the «influence of the laws, of the social system, and of the culture» on information costs as a major component of transaction cost (Coase, 1998: 73). Consequently, the firm is suggested to be reconceptualized as a governance structure, so an institutional or organizational construction, rather than as a mere production function, i.e., a technical construction (Williamson, 1998: 75-77). Admittedly, technological economies of scale and related technical or physical aspects in no way exhaust possibilities, since organizational efficiencies also exist attributable to the alignment of governance structures. Notably, cultural beliefs embedded in existing social institutions admittedly direct the process of organizational innovation and adoption (Greif, 1998: 82).

Moreover, some economists imply that the residual at a macro-level might be dominated by institutional and related components not included in the standard aggregate production (Cobb-Douglas or Solow) function. Admittedly, the most important explanation of variations in production or income between societies is the difference in their institutions and thus social norms (as well as policies), not those in endowments of any of the standard productive factors nor differential access to technology (Olson, 1996: 3). This observation suggests, first, that the standard production function premised on two or three production factors (the third is land) generates a large unexplained variance or residual, second, that technology and related factors cannot explain this variance. Third and most important, it implies that, instead, institutional arrangements as underscored by certain social rules constitute such an explanatory variable. Namely, if different institutions and social norms are observed to be the most important explanation of the varia-

9. A seminal work on this matter is Weber's (1933) *Protestant Ethic and the Spirit of Capitalism*. However, as a referee commented, the connection between the two has no direct bearing on the production residual, though it may motivate a sociological or culturalist interpretation of it.

tion in the aggregate production function across countries, yet excluded from this function on methodological or conceptual grounds, then they can be plausibly interpreted as the main, though not the only, component of the residual. If so, then the preceding epitomizes the consequences of differing social institutions and norms on the size and characteristics of the production residual. Moreover, it suggests that generally social institutions «govern the performance of an economy» (Coase, 1998: 73). To that extent, this provides important elements for a sociological explanation and interpretation of the residual in particular and of production in general, with the above qualifications. At such, it represents a preliminary step toward identifying particular institutional arrangements, socio-cultural conditions or policies that could explain changes in production and thus the residual in the neoclassical function.

APPLICATIONS OF THE SOCIOLOGICAL APPROACH TO PRODUCTION

GENERAL CONSIDERATIONS

10. In Parsons' (1947: 53) specification, Weber's economic sociology explores the «specific connexion of economic rationality with settled routine conditions [particularly] the peculiar connexion between institutional patterns, backed by moral sentiments, and the "self-interest"». In a recent exposition of Weberian economic sociology, Swedberg (1998: 217, note 17) characterizes Parsons' (1947) as being the most important commentary in this respect, viz. on Weber's analysis of Sociological Categories of Economic Action (a chapter of *Economy and Society* [1968]).

11. Some neoclassical economists like Knight (1958: 18-19) observed that in retrospect the Historical economic school «has broadened out, particularly in Germany, under such leaders as Max Weber and Weber Sombart into what is often called sociological economics, a position also well presented in France», viz. Durkheimian-type economic sociology (*sociologie économique*).

What follows is an application of Weberian economic sociology¹⁰ or sociological economics¹¹ to the analysis of production for gain or profit seeking. In his view, gain seeking is an activity oriented to opportunities for seeking new powers of control over goods. Gain seeking is economic if oriented to acquisition by peaceful methods or the exploitation of market situations, and, conversely, extra-economic if it uses different means, including force and violence (as discussed below). In particular, production for gain is oriented to market situations in the aim at increasing what Weber (1933) calls control over goods, especially productive factors, rather than simply securing means for consumption. What is distinctive of this framework for analyzing production is not its definition of the latter, but its focus on the cultural and motivational importance (Martinelli and Smelser, 1990: 9-10) of this and related phenomena dealt with by pure economics as well. As hinted, this involves treating production for gain from the stance of the sociological categories of the economy. The ontological rationale for such methodological treatment lies in that production and other (rational) economic activity is to an important degree, as Weber (1933) put it, determined by non-economic events and actions.

Like exchange, distribution and consumption, production for gain can be, in a Weberian framework, a traditional or conventional activity and thus non-rational in economic terms, as well as economically rational action in intentions and results. No doubt, production activities often strive for realizing profit opportunities or wealth acquisition. However, they also may, as Weber (1933) observes, oriented to aims of non-productive, including status, positional or luxurious consumption, and be irrational in this respect. A case in point is the behavior of what he calls monopolies of status groups (e.g., Medieval guilds) as functional equivalents of Veblen's (1908) leisure classes also defined by such (conspicuous) consumption. But even Weber's capitalistic monopolies

are not entirely immune to such tendencies toward unproductive non-rational consumption for which production is the means, as witnessed by the behavior of contemporary mutants of status groups and leisure classes. In Marx's (1967: 596) description, even modern monopoly capitalists have a «fellow feeling for his own Adam» to the point of treating capital accumulation as abstinence from pleasure or unproductive consumption rather than, as do their classical counterparts, looking on the latter as a sin against their function and as, in Senior's (1951: 58-59) words, «abstinence from accumulating». What he, apparently adumbrating Veblen, calls a conventional degree of prodigality represents an exhibition of wealth and thus a source of credit in society or social status. But the above two tendencies often clash with each other to the point of developing what Marx (1967: 598) describes as a «Faustian conflict between the passion for accumulation and the desire for enjoyment» in the breast of capitalist entrepreneurs («Two souls alas, do dwell within his breast; The one is ever parting from the other»). For Weber (1933), this conflict persists in modern, post-Protestant capitalism in which religious asceticism escaped, as he put it, from the "cage", though he usually attributes the desire for enjoyment to pre-capitalist status groups, and the passion for accumulation to capitalist classes.

Generally, Weber (1933) conceives production as a process underscored both by instrumental or formal and value or substantive rationality. Specifically, the instrumental or formal rationality of production and other economic action denotes the degree of quantitative speculation or accounting that is technically feasible and factually implemented. In this sense, production for gain represents what Weber (1933) calls instrumentally-rational action, and consequently managerial activity is characterized by rational orientation. By contrast, the value or substantive rationality of production represents the extent to which provision with valuable objects by economic action is made according to certain criteria of ultimate, including moral and religious, values. In this regard, production becomes value-rational action which is essentially irrational in economic or instrumental terms. Accordingly, production and related economic behavior can be not only rational but also economically nonproductive (Davidson and Ekelund, 1994) or non-rational, yet having some social justification. For example, Weber (1933) invokes the luxury industries in France and the rest of Europe in late feudalism and early capitalism, as an historical instance of the latter. In his historical description, luxury consumption was conducive to the development of economically irrational forms of production like small work shops in France and elsewhere in Europe during the period. This suggests that production itself may be non-rational in terms of its means and methods. One source of such irrational forms of production is its reliance on traditional, customary, conventional and similar rules and methods. For instance, Marshall observes the deep and controlling influence of traditions and conventions on production methods and on the character of producers, especially in the long run. In Weber's (1933) description, cases of traditional non-rational production include, alongside irrational luxury forms, producing goods that are

exchanged as gifts between friends, heroes, chiefs, and princes in pre-capitalist societies. Traditional, conventional and other economically non-rational conditions and methods of production are exemplified in those based on Polanyi's principles of reciprocity and redistribution as well as unproductive consumption or personal usage.

That production is characterized by an interpenetration of economic and extra-economic ends is indicated by that when producers, managers and other agents pursue material goals in their interactions with others, these are typically «combined with striving for sociability, approval, status and power as well» (Granovetter, 1992: 234). As regards the latter, for example, some mainstream economists admit that the «assumption that individuals pursue their own materialistic ends, which economists employ to explain individual behavior in the marketplace, pales in innocence alongside the actions those who seek political power have taken to achieve their ends» (Mueller, 1996: 346). Particularly, researchers (McClelland and Burnham, 1995) find that power is the great motivator in managerial and related economic behavior. Further, they observe that in motivational terms successful managers (especially) in large centralized organizations have a greater need for power defined as a concern for influencing people than a need for achievement though the latter is more prominent in their decentralized counterparts.

In turn, they cast doubt on Weber's (and other writers') association of managerial achievement motivation with the Protestant ethic of hard work. In their view, almost the precise opposite is true to the effect that managers and others with a high need for achievement seek to reduce their work by becoming more efficient, i.e., by obtaining the same result with less effort or in less time (McClelland and Burnham, 1995). In this sense, the Protestant and any ethic of hard work, perhaps counter-intuitively, falls short of complete efficiency and rationality. This seems in part ironic given the much-celebrated impact of Protestant doctrines on the spirit and practice of modern capitalism at least since Weber (1933). However, recent studies (Collins, 1997) suggest that Protestantism was not the only factor in the historical emergence and expansion of capitalist production. In this view, such non-Protestant doctrines as Buddhism, especially its religious economy in the monasteries, played a significant historical role in the emergence as well as development of what is identified as the capitalist mode of production in Asia centuries ago. More frequently, researchers notice the strong effect of Confucianism on the nature and development of capitalist production in this region recently, with some attributing the rise of the East Asian economic tigers, including China, to this cultural pattern. For some of them, this East-Asian development model, just as that of Protestant Europe and America, re-actualizes the broader question as to «what extent the economic and sociocultural features are causally linked» (Berger and Hsiao, 1993: 5). In comparative terms, the observed economic effect of Buddhism and Confucianism in Asia appears as an analogue to the much-celebrated impact of Protestantism on Western Europe and North America¹².

12. A reviewer commented that the discussion of the Protestant work ethic is an historical relic because, first, there are a limited number of people in the world who could legitimately be described as being influenced by this branch of Christianity, and, second, it fails to account for such things as the success of the Pacific Rim, or of Ireland's recent economic boom. Yet, others like Berger (1991) insist on the major role of the Protestant work ethic or economic culture in the contemporary «capitalist revolution».

In any case, the observation that power or influence is perhaps the greatest motivator in managerial behavior implies that production and related activities are conditioned by extra-economic factors as well. Simply, managers and other economic actors engage in such processes activities not just for money (Frey, 1997). Thus, gain is not necessarily an end in itself (Danner, 1996: 57), but rather an efficient means to attaining other goals of non-economic character, letting gains be their own reward (Dore, 1992: 177). For example, observers note that in modern Japan patriotism virtually supplements profit seeking in the production and search for export markets (Dore, 1992: 170), which exemplifies the role of cultural values and norms¹³ in the economy. In this sense, production can be characterized as the process of extra-economic valuation and a mode of, as Parsons (1937) would put it, normative action.

The preceding suggests that production and other economic activity can exist even, as Schumpeter (1939) allows for, in the absence of rational motives or the presence of non-rational motivations. Thus seeking to meet the observed need for power and other non-economic motives rather than material gain in production is far from being irrational. In retrospect, though these motives «have largely been absent from economic thinking since Smith, it does not follow that their pursuit is nonrational» (Granovetter, 1992: 234).

No doubt, one counter-argument can be that it is irrelevant why people want to accumulate wealth, as long as they want to. Simply observing that there are more ultimate ends behind the apparent motives for gain or wealth does not mount a serious attack on the economic model. This much can be admitted as valid. Still, such observations of multiple layers of motives or means-end chains have at least the merit of pointing to the plurality and complexity of motivation in production and the economy, thus contributing to complicating economic discourse and against parsimony (Hirschman, 1984). A probably more compelling argument is that the motive for gain and wealth is a definite social and historical construct. For in other places and times, such as what Weber (1933) calls status, pre-capitalist societies, other variables, besides monetary gain, determine or signal one's worthiness or holiness. In particular, the profit motive represents, to paraphrase Parsons (1937), an institutionalized motivation at the level of social systems or structures and an internalized inducement at that of individual actors or personalities. In consequence, production for gain becomes a phase of institutional behavior within a certain social system, culture and historical time such as modern capitalism. This suggests that gain and other motives that drive production are subject to a process of social formation, including institutional structuration and cultural construction. The process thus links these motives with institutional, cultural and other social-structural factors that are operative in production and pertinent for explaining economic behaviors and outcomes. In this regard, motivations for production and other economic activity manifest themselves as institutional-structural effects¹⁴. Hence, whether gain and/or other variables will motivate production and other economic behavior is a function of institutional, structural, cultural and

13. According to Bourdieu (1988: 19-22), the intrinsic motivation hypothesis applies to normative-institutional compliance in that economic agents «show pure disinterested respect» for social norms and institutions irrespective of the direct profits from it. Simply, people follow norms not only for material gain and other extrinsic incentives as pure economists often impute.

14. I thank a referee for this insight, namely that institutional-structural effects on production look like motives.

other social variables. As such, like other preferences, motives for production become variables or phenomena to be explained in social and historical terms rather than constants or parameters to be taken as given. The same can be said of production activities and outcomes. For instance, capitalist production, including its industrial-technological components, rather than being a universal was socially and historically specific, as it «occurred in Western Europe [a fact] ignored in standard theory» (Findlay, 1996: 50).

To summarize, production can be oriented to realizing gain as an extrinsic incentive and represent instrumental action expressing formal economic rationality. However, it may also be induced by intrinsic motivation, including absolute or transcendental values, to which gain serves as a means or intermediate goal.

PRODUCTION FOR GAIN AND NONPRODUCTIVE METHODS OF ACQUISITION

Historically, according to Weber (1933) and most economists, there have been two general methods of gain-seeking: productive and its non-productive alternatives. Gain-seeking or wealth accumulation is economic if it involves acquisition by peaceful methods, viz. what Weber (1933) calls exploitation of market opportunities. A case in point is market-based production or appropriation of goods via free, economically rational exchange. Alternative non-productive methods are exemplified by gain seeking or wealth accumulation by violence, force, and the like. In the view of Weber (1933), acquisition by force proceeds according to its particular laws, and differs from that oriented to gains from exchange and production. Cases in point are what he calls robber or politically oriented capitalism, with its non-productive or extra-economic means of gain-seeking, as opposed to modern capitalism resorting to production and related methods. Specifically, for Weber (1933: 1118) the «structure and spirit of robber capitalism differs radically from rational management of an ordinary capitalist large-scale enterprise and is most similar to same old-age phenomena: the huge rapacious enterprises and occasional trade with its mixture of piracy and slave hunting».

Though this statement posits a radical separation between these two modes of gain seeking, they are to be regarded in ideal-typical or analytical terms. Thereby, rational management of a capitalist enterprise or acquisition by production and robber capitalism or acquisition by force become pure ideal types, abstractions, or analytical constructs. This holds true insofar as the two forms of acquisition are often intertwined, in various proportions, with each other in traditional and contemporary societies. In this regard, the difference between robber capitalism and rational capitalist enterprise appears less radical than suggested, a matter of degree rather than substance. Further, the distinction is apt to overlook the role of force, violence, and related factors like domination and conflict in acquisition by production and exchange, or rational capitalist enterprise. The latter is far from ruling out, as Weber (1933) implies, what he attributes to robber capitalism, viz. predatory, colonial and fiscal profits from domination by force or a position of power sustained by a political authority.

A societal case in point is what Marx (1967) and others identify as monopoly capitalism or imperialism, including its contemporary variations, as the mature or late stage of a capitalist economy. This case based on, as Habermas (1975: 33) put it, an «oligopolistic market structure» entails some combination of acquisition by production and acquisition by force rather than only the former. Generally, it is characterized by an admixture of, in Weber's (1933: 942-943) terms, «domination by virtue of a constellation of interests» or economic power and «domination by virtue of authority» or political power. In turn, both types of domination can rest on, *inter alia*, force, which suggests that the latter, especially the threat of its use, is not necessarily ruled out even in acquisition by production or market transactions. Obvious instances include some monopolistic practices by large corporations in the USA, as witnessed by the frequent resort to force, threats, intimidation, extortion, and related means by the proverbial American robber barons and their modern proxies. Thus, «histories of the origins of the great fortunes in the USA [and elsewhere] reveal the extent to which the rivals engage in extra-market activities to eliminate their competitors» (Shaffer, 1996: 640). Generally, changes in market variables like relative prices by redistributing income (i.e., losses to some and gains to others) often induce those «adversely affected to resort to extra-market measures, including force, to redress their grievances» (Shaffer, 1996: 640). And those victorious, be they social groups or countries, in the past struggles (alongside their heirs) tend to use their «spoils to enhance their incomes and then used this income to acquire additional assets, with corresponding distribution effects» (Shaffer, 1996: 640).

No wonder, by virtue of the use or threat of force such practices often look like mafia-type activities. In particular, the element of force has been paradigmatic for capital-labor relations in modern American capitalism, affecting their respective positions in the system of production and thus their distributive shares or incomes. A case in point is the historical and still persisting use of force or its threat by America's large corporations to avert, counteract or eliminate the labor movement as well as the latter's countervailing recourse to similar means. On the global scale, war or threat of force in international relations is a frequent instrument of acquisition in late capitalism, ranging from British colonialism in the 19th century to German expansionism prior to the two world wars to the American "empire of liberty" since WWII and especially the 1990s. Moreover, war may be not exogenous (as most economists think), but endogenous to the market economy since violent conflicts can arise from changes in the distribution of income, technological changes and rent-seeking activity (Shaffer, 1996). In short, the market can be a cause of war, not just a force for peace. Thus, «many of the past threats which exploded into military confrontations were nurtured by the marketing efforts of rent-seekers» (Shaffer, 1996: 643). A case in point is the American military-industrial complex with its «marketing as a form of rent-seeking that attempts to influence political preference functions to increase the demand for public goods [weapons] provided by private firms» (Shaffer, 1996: 641). In another increasingly prominent tendency, the «potential for large gains and

15. Shaffer (1996: 639) objects that the «positive sum game of the sub-optimal state is thus transformed into the zero sum game of the optimal one. [Then] players, motivated by self-interests, will resort to extra-market activities, including force, to enhance their incomes. Ironically, the very success of the voluntary market allocation mechanism in maximizing welfare may spell its doom».

losses is a potential motivation for private firms to use, or push governments to use, extra-market means to secure control of oil supplies» (Shaffer, 1996: 640). Again an obvious exemplar is the US government's proclivity to engage in wars for oil (e.g., the Gulf war) or use other extra-market means to control its supply (mainly) to the benefits of its large corporations.

On this account, production in a market economy is not always defined by a disjunction between the two types of gain seeking, as most economists optimistically think, but by their conjunction, though in varying ratios dependent on the social framework and historical stage. In general, it suggests that the present distribution of assets both within and across countries «did not come only through voluntary market transactions [as] past seizures provide a historical precedent and a possible justification for future seizures, which could lead to conflict» (Shaffer, 1996: 640).

In turn, the aforesaid casts doubt on the tendency for most economists since Smith to dissociate acquisition by force from the free market economy seen as inherently peaceful and civilizing (Hirschman, 1977). They view trade in freely competitive markets as the best example of the market as a force for peace reaching a Pareto optimum¹⁵ (Shaffer, 1996: 639). For instance, reminiscent of Weber's (1933) distinction between robber and bourgeois capitalism Schumpeter (1939) dissociates imperialism based on acquisition by force from the latter, but associates it with pre-capitalist societies, as does Keynes (1972) albeit more implicitly. This dissociation flies in the face of a history/reality, e.g., the British East India Company's subjugation of India, WWI and II, etc., that points instead to more complex, if not opposite, relations between acquisition by force and modern capitalism. Overall, «these interactions between the economic and political variables can have many ramifications [as] rivalry among large firms can exacerbate tensions among governments» (Shaffer, 1996: 640). Historically, this decoupling of force as well as power, domination and conflict from the market system had the function of providing a political argument and thus ideological legitimation for modern capitalism against its alternatives (Hirschman, 1977). No wonder, acquisition by force is a particularly weak aspect of seemingly value-free economic analysis, an aspect reflecting what critiques calls the nirvana (or static optimality) approach premised on the ideas of equilibrium, free competition, harmony of interests, universal consensus, peace and justice, and the like. However, given the observed presence and salience of this and related variables in production and the economy overall, this might be a dubious approach that is missing an important aspect of economic and social life.

THE EMPIRICAL SIGNIFICANCE OF THE SOCIOLOGICAL FRAMEWORK FOR ANALYZING PRODUCTION

This section tentatively estimates the empirical significance of the sociological framework for analyzing production. Generally, many

empirical and historical studies find significant effects of a plurality of social variables on production as well as markets and the economy as a whole. In particular, these variables include power, institutions and culture. For instance, in light of the role of these variables in comparative economic behavior some analysts describe economic organizations as institutional and cultural arrangements permeated by power relations. Specifically, they are depicted as «arenas within which some things will tend to “hang together” and be adopted by power-players as a bundle, while other forms of combination may be far less likely to occur as a coherent package» (Clegg, 1994: 44). Hence, since power, institutions and organizations are seen as culturally irremediable, it is suggested that the theory of business organization and management «must always be a power as well as institutional and cultural theory» (Clegg, 1994: 45). In this regard, such a theory admittedly becomes some sort of political statement, and, as stated, to «pretend otherwise would be either naive or duplicitous» (Clegg, Hardy, and Nord, 1996: 8).

The implied rationale is that business organizations just as markets are underscored by political variables to the point of becoming, to paraphrase some neoclassical economists (Robertson, 1952; Coase, 1988), islands of conscious power in the sea of spontaneous productive cooperation. In other words, a political approach is premised on the view of organizations and markets as politics, as the latter operate during various stages of market or organizational development, viz. formation, stability, and transformation (Fligstein, 2001). In particular, this approach posits that organizations and markets are intimately linked with states or governments. Notably, recent research finds that state structures or bureaucracies (captured in the “Weberianness scale”) significantly influence economic growth and investment levels in most developing countries (Evans and Rauch, 1999). Overall, according to the new paradigm of economic sociology or political economy, the principal function of the state is the reconstruction of markets, and expressed in its role in control of productive assets, the structure of recurring resource allocation, means of payment, and managing international boundaries (Block, 1994).

Empirical research emphasizes the role of political and institutional variables relative to individual utility maximization in the historical organization and development of production in market economies¹⁶ such as England and Japan. Specifically, class divisions and power struggles among groups for control over production and markets, rather than individual utility optimization, are the decisive variable in economic development in these societies (Lie, 1992). Other studies present similar findings about the development of the organization of production in Japan, Korea, and Taiwan, suggesting that non-economic forces, above all authority relations, primarily determine this process. Arguably, profit and efficiency arguments are too narrow to explain production and organizational forms by comparison to power explanation with its «historical and structural adequacy» (Hamilton and Biggart, 1988: 52). The inference is that the principal variables

16. As a referee remarked, «there is always the issue that neo-classical economic models only seek to explain market behavior, thus citing examples from other social systems that may be less capitalist and more statist (e.g., Britain, Sweden, Japan) is not a fair comparison». These comparisons mostly refer to the formative or liberal stages of the development of capitalist production in these societies, with Britain as the first capitalist or industrial nation (Crafts 1998). Also, the present differences between these and more capitalist/less statist societies seem more in degree than substance; for example, even the American economy can hardly be described as pure capitalism.

in explaining the organization of production might not be economic but institutional and political, namely patterns of authority relations in society. For instance, a study reports the significant impact of social institutions or institutional logics on the rise of the automobile industries in South Korea, Taiwan, Spain and Argentina, thus corroborating an institutional perspective on economic development (Biggart and Guillén, 1999). Institutional and other social variables have historically been prominent in production and other economic processes even in the first industrial nation or capitalist economy, England, since the Industrial Revolution (Crafts, 1998). As historical studies suggest, a better understanding of these processes requires taking into account the role of institutional arrangements and policy choices in total factor productivity, and thus England's social capacity, including outstanding learning capabilities, for the growth of production (Crafts, 1996).

In institutional terms, the economic transformation in Eastern Europe since the 1990s is perhaps reminiscent of the industrial revolution in England and other Western countries. To paraphrase Marx (1967), by virtue of their common or similar institutional factors, both appear as specific cases of the capitalist primitive accumulation though in different societies and at different times. To take one example, a recent study (Spenner, Olga, Thore, Land, and Jones, 1998) of the economic transformation in East Europe's post-socialist economies reports that their findings support neo-institutional perspectives of organizational sociology over neoclassical economic interpretations. Specifically, it finds that the strongest signal in the data on firm production and market activities is path dependence in organizational performance, which favors neo-institutional explanations. In light of such findings, some writers (e.g., Fligstein, 1996) suggest that economic sociology is the proper framework for approaching production, market and other processes in these societies. So do by implication heterodox economists (e.g., Stanfield, 1999), who deploring the analyses and recommendations (e.g., shock market therapy) of what they call amateur institutional [i.e., neoclassical] economists propose as an alternative institutionalism in the classical tradition of Durkheim (1933) and Veblen (1908). Similarly, economic sociologists (Stinchcombe, 1997) praise the virtues of old institutionalism versus its new versions and imply that the former is a better framework for analyzing the transformation of productive organization in these societies.

Also, empirical studies of factor markets emphasize their social construction by contrast to the purely economic determination. Proposing a sociological model of labor markets that focuses on their organizational constraints and institutional embeddedness, a study reports that the findings do not support the economic assumptions of perfect competition, equilibrium, profit maximization, etc. (Sakamoto and Chen, 1991). Other research suggests that labor markets are not only or mainly direct reflections of capital resources and constraints (Hodson and Kaufman, 1982). Rather, they are autonomous structures of labor resources and liabilities as determined not just by free competition but also by the constraints of power. This signifies that by virtue of emphasizing

ing a single aspect of the functioning of labor and other input markets, economic models are incomplete neglecting social relations, the interactional character of power in particular. In this regard, production and other economic activities manifest themselves as socially and culturally constrained. A case in point is the observed tendency for the rhetoric of disputes over earnings to be stated in judgments of fairness indicating that moral dimensions figure prominently in income distribution thus affecting production itself (Smith, 1990). Even leading contemporary economists observe and emphasize the salience of fairness considerations in labor markets, which are on this account characterized as social institutions (Arrow, 1998). In passing, these findings contradict the underlying non-fairness assumption of mainstream economics, which reflects a «resistance to explanation of economic actions in moral terms [even though this is] not logically required» (Thaler, 1991: 221). Assuming that producers and other agents seek to maximize their profit or utility regardless of any ethical considerations of fair play, this is essentially a hypothesis of Machiavellian-style self-seeking with guile. The non-fairness hypothesis thus postulates profit optimization by any means on the part of agents construed as relentlessly egoistic monads (Frank, 1996) reminiscent of Robinson Crusoe (Conlisk, 1996).

An overall finding of sociological research on production is that social structure is a key variable in explaining the motivation and behavior of producer organizations (Burt, 1988). In particular, price and power, or market and hierarchical methods, are observed to operate in various combinations in both intra- and inter-organizational transactions (Eccles and White, 1988). This contradicts the economic position that regards them as operating in isolation, and thus as mutually exclusive and socially disembedded procedures. While market and authority are usually deemed alternative social mechanisms for the organization of production or resource allocation, actual (inter- or intra-firm) transactions can combine both. The utilization of multiple methods in a single organization signifies that the total network of internal production and other transactions is a «complex web of varying degrees of market and hierarchical mechanisms» (Eccles and White, 1988: S48).

Similarly, other researchers suggest that a political-cultural rather than an economic model satisfactorily accounts for the patterns of a firm's productive and market activities. Whereas the latter is capable of defining strategies and choices after the fact, the former examines the impact of competing conceptions of control on productive efficiency. Specifically, the organizational embeddedness of production rather than ownership or financial resources acts as a «more important cause of actions of firms than anything else» (Fligstein and Brantley, 1992: 303-304). In this connection, some empirical studies analyze the sources and consequences of social embeddedness for the economic performance of organizations and find significant network effects (Uzzi, 1996). As reported, social embeddedness is an exchange system with unique opportunities in relation to markets such that organizations organized in networks display higher survival chances than those maintaining arm's-length market relationships,

17. The concept of social network has become from a «metaphor to describe patterns of informal ties within organizations, to a portrait of how the environments of organizations are constructed, to a formal research tool for analyzing power and autonomy» (Powell and Smith-Doerr, 1994: 369).

18. As reported, linking social and production relations facilitates cooperation in production for the following reasons: 1/ because of available social capital (defined as the slack of enforcement power present in social relations) that can discipline behavior in production; 2/ because of the substitution of payoffs from social and production relations (thus social capital being produced endogenously by the linking); 3/ because the linking engenders trust transfers; and 4/ because it reveals information about actor's situation (Spagnolo, 1999: 1-3).

though these positive effects reach a threshold. For example, embeddedness in the making of financial capital is reportedly prominent in the sense that personal relations and networks are beneficial to organizations seeking financing, with those embedding transactions with lenders in social attachments obtaining lower interest rates on loans (Uzzi, 1999). These findings exemplify the presence and salience of social networks in the operation of organizations, markets, and the economy overall¹⁷. Notably, certain networks between organizations are also observed in the realm of production. A study identifies the following types of networks of production (Powell and Smith-Doerr, 1994): regional (e.g., manufacturing in Italy, Silicon Valley, etc.), research and development, business groups (e.g., Japanese keiretsu), and strategic alliances (e.g., joint ventures). In addition, research reports significant effects of social relations and networks on productive cooperation within economic and other organizations. Reportedly, linking production and such relations, such as by employing people from the same social networks (e.g., the same community), or by creating opportunities for social interaction among employees tend to facilitate cooperation in production¹⁸ (Spagnolo, 1999: 3).

Sociological studies of production in a market economy indicate that capital or money is not just an economic variable, but a social category affected by cultural and institutional factors (Zelizer, 1996). They highlight the limits of a utilitarian or economic conception of productive capital and market money, concluding that these, while partly autonomous, are interdependent with historical systems of cultural meanings and structures of social relations. Relatedly, other studies show that the socio-cultural, especially symbolic, dimensions of accounting as calculation in terms of money are salient in the development of capitalist production (Carruthers and Espeland, 1991). Reportedly, capital accounting dealing with production variables, e.g., cost and revenue accounts, is largely a rhetoric device dressed in a vocabulary of rationality rather than an embodiment or instrument of the latter. Accounts are more relevant as ex-post justifications or rationalizations of past decisions than as tools for rational decision-making about production activities, which signifies that accounting plays a crucial rhetorical role in legitimating capitalism. In consequence, rationality as linked with capital accounting has become a compelling institutionalized creation myth for organizational decisions.

Many empirical studies as well as theoretical analyses challenge the conventional treatment of production and other markets as economic mechanisms. The common thread of these studies and analyses is the social concept of a market (Arrow, 1994), especially the view of markets as social structures (Swedberg, 1994). Most importantly to our concern, they suggest that production or producer markets are complex social categories rather than economic mechanisms. Specifically, as economic sociologists (White, 1981) observe, production markets are social structures or induced role structures, where individual producers seek to reproduce their set of action by monitoring each other's actions. As such, a production market constitutes an act

that is “got together” by a set of producers compatibly arrayed along certain dimensions (e.g., the quality of production as perceived by their consumers).

In particular, some studies (Podolny, 1993) identify the properties of production markets as status orders. As such, these markets appear as entities that are socially constructed and sustained, i.e., defined in terms of the perceptions of producers as market participants. Thus production markets involve producers that are differentiated or stratified in terms of their status, prestige or reputation usually (but not invariably) linked with the perceived properties of their products (e.g., brand names). Such status differentiation does not seem to be limited to, though being most transparent and prevalent in, markets for luxuries (e.g., luxury cars, etc.). Further, observations and studies suggest that status or reputation in production (and consumption) markets is not only a means to realize material gains, but an end in itself in relation to which these are an intermediate goal or instrument. Admittedly, while in existing economic theory, wealth is valuable only for its implied consumption rewards, in reality producers and other actors acquire it for its resulting social status as well (Bakshi and Chen, 1996). Moreover, this study observes that social status is a major explanatory variable in the operation of some types of market (e.g., stock-markets) and price formation (share prices) that are directly or indirectly related to production. In a similar vein, others find that economic agents often act prompted by the desire to attain social status by signaling wealth through conspicuous consumption (Bagwell and Bernheim, 1996). By directly affecting consumption, concerns for status thereby indirectly but significantly impact production. In historical terms, such an impact of status concerns on production has been persistent and prominent. Reportedly, material wealth as well as religion, education, entertainment and personal display often represent status goods, as they become visible emblems of group membership and individual ranking, thus stimulating material production (Collins, 1990).

This suggests that material production (particularly) in a market economy is affected and characterized by different levels of stratification as well as subject to tendencies toward stabilization or expansion and fluctuations or crises. Production markets represents realms of social stratification and differentiation in that they reportedly always have some tendency toward unequal exchanges and economic inequality (Collins, 1990). For instance, successful political-alliance making or military expansion tends to stimulate lower-level production markets. Historically, production markets as social structures display a tendency toward expansion and stabilization. On the other hand, stratifying and related tendencies within (especially) superordinate production markets at their most politicized pole lead to periodic or cyclical crises in market systems. These tendencies thus exemplify effects of what Schumpeter (1939) called, in reference to the Depression of the 1930s, sociological reasons on fluctuations or cycles in production. As he observed, during the Depression sociological factors or non-economic causes played a dominant

part in its drama. More particularly, in Keynes' (1972) depiction of this event, such causes were largely institutional and political, as he pointed to the economically irrational behavior of the policy makers, viz. the central banks, including the U.S. Federal Reserve Board. This indicates that the turning point, upward or downward, of a cycle in production is often caused by exogenous social, including political, factors, just as, relatedly, relative prices can be, in Keynes's (1972: 173) words, «knocked about by the most fleeting influences of politics and sentiment».

CONCLUDING COMMENTS

The paper has presented outlines of a sociological perspective on production that is carried out along the lines of empirical economic sociology. The main assumption has been the social construction of economic production, particularly its market-based variations. Market-based production, like distribution, exchange and consumption, is a social construct contingent on definite institutional arrangements and historical conditions rather than being a cultural universal. Thereby the paper's aim has been to contribute to the growing literature in the social construction of economic activities, including production and management.

The epistemological rationale for such endeavors has been a complex ontology of production and related economic activities. Specifically, the rationale has been derived from the observed reality or possibility that gain, profit and related economic elements in production often turn out to be immediate and the most transparent expressions of other extra-economic variables. These have ranged from power as to status, sociality, fairness, religious values, traditions, emotions, etc., as the great motivators of managerial or productive activities, as documented by a stream of empirical-historical research reviewed here. For that reason, similar to arguing price determination by means of supply and demand, to argue that production is driven by gain is merely to restate rather than solve the problem insofar as the challenge is to identify the underlying forces operating in the process. At least some of these deeper forces have been detected to exist and operate in the exogenous determination of capitalist production by various social, including institutional, political and cultural, conditions.

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