

THE INDUSTRIAL COMMONS AND OTHER WORKPLACE REGIMES

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Mainstream economics views the workplace from the perspective of property rights, maximum efficiency, and profit maximization. Economic resources are depicted as human and nonhuman and both are represented as instrumentalities. To the extent that "person" has any relevancy, it is in terms of the long-standing fiction that the corporation is a "legal person".

Management and control of the workplace turn on the question Who owns the firm? In the extreme, owner control of the workplace is absolute, even when the day-to-day management is handed over to professionals. From the conventional-economics perspective, the workplace is envisioned implicitly as enclosed space. Since there are no living, breathing, existential actualities in that space, only economic agents, there is no human material need and therefore no requirement to take that need into account.

If human material need actually is admitted as, for example, in a discussion of human poverty, conventional economics addresses it through the "invisible-hand" argument. Thus, there is no requirement to become personally responsible either as an individual or through a private or public group for another person's unmet material need.

Social economics, while affirming the problem of unmet human material need and the inadequacy of the "invisible-hand" solution, does not provide a single paradigm as to how the workplace is to be reconstructed in order to meet that need. Walter Adams (1982), for example, defines the problem in terms of "a new paradigm which recognizes the dominant role of the giant corporation, the giant trade union, the giant state in the social decision making process" -- and the ways in which the first two protect themselves from the forces of Schumpeterian creative destruction by building private shelters and use the third to build public shelters for the same purpose. William Dugger (1985, 1989) defines the problem similarly, but Dugger's giantism encompasses the corporation only.

Government has many shortcomings, to be sure, but it is not the primary source of our economic ills. The source lies elsewhere: in the world of the giant, conglomerate corporation (Dugger 1985).

The values corrupting us are products of corporate hegemony, not of welfare statism (Dugger 1989).

Social economists Severyn Bruyn (1984, 1991) and David Ellerman (1986, 1987) are more focused on the workplace. Bruyn has fixed his research on worker self-management but several years ago was not convinced that managing the workplace in that fashion is key to solving the problems of the economic order. Bruyn's research ranges well beyond the United States and therefore his conclusions do not necessarily apply across the board to the United States. Even so, Bruyn (1984)

appears to support industrial democracy: "Based on self-managing principles, studies may show how to structure companies in *the private sector* to operate in *the public interest*" (emphasis in the original).

Of late, Bruyn seems to be more optimistic about the positive effects from self-management.

Firms moving toward higher levels of self-management have the potential to be more productive and efficient, to reduce absenteeism and labor turnover, to curb the extent of tardiness and sickness among employees, and to reduce pilferage. Further, they provide the best structure for employees to develop a sense of purpose and meaningfulness in their work, and have the potential to save money and increase efficiency by reducing the corporate costs of middle management, and the multiple costs of bureaucracy. Finally, the evidence suggests that self-managed firms may lead to fewer social problems locally and a consequent lessening of the financial burden on government and ultimately the taxpayer (Bruyn 1991).

For Ellerman, the question is not Who owns the firm? It is, instead, Who can claim the whole product of the workplace? Ownership of the means of production or ownership of the firm does not determine who is entitled to appropriate the whole product because capital goods can be hired by laborⁱ just as labor is hired by capital owners. Ellerman denies that there is a property right such as owning the firm which decides the matter. Appropriation of the whole product is determined instead by the direction of the hiring contract. If the capital-owning corporation hires labor, the corporation is the firm and the whole product belongs to the corporation. If labor hires capital goods, labor is the firm and it is labor who can claim the whole product, even when the capitalists retain ownership of the capital goods. Who it is that constitutes the firm is determined by the contract of hire and not by the ownership of property.

There are many ways to misinterpret this deceptively simple argument that there is no legal right of "ownership of the firm." ... The corporation is indeed owned by its shareholders, but there is no legal necessity for the corporation to be the "firm," to be the legal party undertaking production using the corporation's assets. If the corporation's assets are hired out instead of labor being hired in, then the identity of the "firm" changes hands -- but with no corporate shares being bought or sold. Hence the "Rulership" or direct control rights over the human activity of production using the corporate assets was not a part of the property rights attached to corporate shares. In that sense, the ownership of the corporation does not include an so-called "ownership of the firm" (Ellerman 1986).

Capital goods and natural resources cannot be legally responsible for the used-up inputs and for the produced outputs because neither factor is capable of acting. Labor alone is responsible in this sense because only human beings are capable of transforming resources into goods and services. Thus, labor alone "should have the legal liability for the used-up inputs and the legal ownership of the produced outputs" (Ellerman 1987).

Further, according to Ellerman, the employment contract is a form of slavery because by removing labor's responsibility for the fruits of the workplace the contract legally transforms labor from person to non-person or thing. Such a contract *per se* is fraudulent and invalid because persons cannot be transformed into instrumentalities and employees therefore cannot legally transfer responsibility to employers.

The employee is in fact not a conduit of responsibility; the employee inexorably remains a de facto responsible person. The employees, together with any working managers/employers, are de facto co-responsible for the results of their action (Ellerman 1987).

In what follows a somewhat different question is raised, that is How does human material need intersect with the ownership, control, and management of the workplace? In addressing this question, it is instructive to view the workplace as if it were simply a valuable natural resource which, following Bromley (1992), initially can be classified as private property, state property, common property, and open-access or no one's property.

As to the industrial order, however, there appear to be seven rather than four types which, also following Bromley (1992), are called herein "regimes" to underscore that all seven are human developments reflecting different social values, organizing principles, and ideologies. "Regime" has more appeal than "paradigm" because "paradigm" suggests a *single* model that represents a permanent, clear-cut, and irreversible break from the past whereas "regime" implies *several* human structures which may co-exist in the same socio-economic order.

The balance of this essay is organized into two main parts. The first describes each one of the seven workplace regimes in which human material need is more salient than property rights, personal rights or organizational types such as the sole proprietorship, the partnership, or the corporation. The second describes the attributes or characteristics of the industrial commons, drawing upon Oakerson's (1992) framework for analyzing the natural-resource commons. Some concluding remarks follow.

WORKPLACE REGIMES

There are two components to human material need: physical need and the need for work as such. The latter embraces both the need to belong and the need for self-expression. The former includes any good or service that is a requirement for human existence and for daily functioning, while a want is a good or service that is desired for some other reason. Need and want are dealt with differently in the seven workplace regimes briefly described below.

Private-Individual Regime.

Under this regime, economic resources are owned, controlled, and managed by private individuals primarily for the purpose of satisfying the self-determined wants of the owners and meeting their self-determined need. The benefits that are produced by these resources are claimed by the owners as a property right. The wants and need of others such as workers, suppliers, customers are admitted not as ends in themselves but as means toward furthering the want satisfaction and need fulfillment of the owners.

In the extreme, this regime is similar to the slave-state regime (see below) in that humans are reduced to mere instrumentalities. However, the human carnage is much greater in the slave-state regime because of the state's far greater powers of oppression. The private-individual regime is a reflection of the strict individuality of human nature and is based primarily on the foundation of individualism, with its accentuation of self-interest. Further, the pursuit of self-interest also serves the common good through the "invisible hand" of the market.

Economic affairs are organized almost entirely on the actuating principle of competition. Other regimes, with their different views on ideology and social values, may be tolerated.

Democratic-State Regime.

Economic resources are owned, controlled, and managed by the state to meet the need of private individuals that they are unable to meet at all by themselves or meet sufficiently without some help. The amount of need to be met by the state is determined by democratic processes, guided by the principle of subsidiarity and the primacy of the individual whom the state was established to protect and assist.

This regime perceives human nature in terms of a duality -- individual being and social being. It rests chiefly on the foundation of a communitarian ideology such as humanism.

Economic activity is energized by all three organizing principles -- competition, cooperation, and intervention -- but the way they are blended differs from one time to the next and from one state to another. Other regimes likely are accepted.

Dominant-State Regime.

In this regime, economic resources are owned, controlled, and managed entirely by the state to meet the need of private individuals as determined by the state, guided by the social value of equality and the greater wisdom of the ruling elite. This regime visualizes humans as social beings only and is based on a collectivist ideology such as communism. In the extreme, affairs in the economic order

are ordered entirely by the limiting principle of intervention.

Production problems arise because this regime rejects competition on ideological grounds and redefines cooperation to mean subordinating the individual to the state. Other regimes, with their different ideological and social-value emphases, are not tolerated.

Slave-State Regime.

Economic resources are owned, controlled, and managed entirely by the state for the state's own purposes. Human beings as workers are treated no differently than nonhuman economic resources. Humans are recognized neither as individual beings nor as social beings. Rather, they are reduced to mere instrumentalities by means of a slave ideology such as racism.

The need of the slaves is met typically at a level below subsistence. Wants are dismissed as wasteful and irrelevant. The good of the state, which may be represented in such propagandistic words as the "fatherland", is installed as the dominant social value but never is determined by democratic processes. A ruling elite, instead, makes this determination, at times substituting their own individual good for the good of the state.

Economic activity is organized by the coercive power of the state. As with the dominant-state regime, production problems develop for the same reason: without competition and authentic cooperation, there is no actuating or energizing principle, other than the brute force of the state, organizing economic matters. Other regimes are not tolerated and routinely are destroyed.

Private-Commons Regime.

Economic resources are owned by private individuals but are controlled and managed in common to satisfy the wants and to meet the need of private-individual workers and owners which they, all alone, are not able to satisfy/meet at all or satisfy/meet adequately under other workplace regimes. The amount of need to be met in common is determined by the workers and the owners through an agreement whereby the property rights of the owners are subordinated to the need of both parties.

Other implicated parties such as customers and suppliers are accepted more so as ends in themselves than as instrumentalities for the wants satisfaction and need fulfillment of the workers and the owners. The need of customers and suppliers is incorporated in the concerns of the workers and owners if for no other reason than the financial viability of the business enterprise depends critically on meeting their need.

This regime affirms the duality of human nature and rests mainly on a communitarian ideology such as personalism. Economic affairs are organized chiefly by a blending of the actuating principles of cooperation and competition. Other regimes, however, are permitted. One major risk in this regime is the corruption of cooperation into collusion which transforms it into a private-individual regime with potential for disregarding human need.

Worker-Owner Commons Regime.

Economic resources are owned, controlled, and managed in common to satisfy the wants and to meet the need of individual worker-owners which they, all alone, are not able to satisfy/meet adequately under other regimes. The amount of need to be met in common is determined by the worker-owners. As with the private-commons regime, customers and suppliers are acknowledged more for themselves than as instrumentalities and their need is addressed for the same reason: the financial viability of the enterprise depends on meeting their need too.

This regime is based principally on a communitarian ideology such as humanism or personalism and the duality of human nature. Both cooperation and competition are used to energize economic life. Other regimes, with their different views of reality, are permitted. As with the private-commons regime, there is a risk that cooperation will be corrupted into collusion with the same negative consequences.

Due to the dominant role of the corporation in the U.S. economy, some mention of this organizational type in the context of the various workplace regimes is in order here. The private corporation can function within the worker-owner commons regime, the private-commons regime, or the private-individual regime. Much depends on whose material need is addressed and whose is excluded. To illustrate, a private corporation founded, owned, managed, controlled by an extremely individualistic, self-centered person who uses others for personal gain would be classified under the private-individual regime. The same business could be re-classified as an industrial commons through, say, a profound change of heart on the part of this person or by a change in the ownership, management, and control of the business which could occur with the death of the founder.

The public corporation can function under either type of commons regime. However, due to the separation of ownership and control, it cannot function under the private-individual regime. More is said about the public corporation in the following sub-section on the open-access regime.

Open-Access Regime.

Whether ownership is in private hands or the hands of the state, economic resources are controlled and managed by no one. There are no effective limits that self-serving users respect in utilizing these

resources. As a consequence and in spite of the "invisible hand" of the market, natural resources are squandered. In the case of the natural-resource commons, this lack of restraint leads to what some refer to as the "tragedy of the commons". By its very nature as a publicly-traded business enterprise, the public corporation may be forcibly dismantled as a commons by outside interests and reconstructed by them into open-access. To illustrate, institutional investors who demand short-term financial performance at the expense of long-term development and corporate raiders are capable of precipitating the same type of tragedy in the industrial order when they disregard the limits on appropriation that hold the public corporation together. "Taking the corporation private" effectively closes access to some of the abusers.

The dominant social value in the open-access regime is unbounded freedom which serves only individual self-interest and in that regard it is akin to the private-individual regime. Cutthroat competition actuates economic affairs. At times, collusion is used to organize economic affairs but collusive agreements tend to dissolve due to the additional benefits available to the self-serving individual member who breaks the agreement.

Libertarianism is the central ideology. In the extreme, this regime reduces to anarchy as would happen, for instance, at a high-use public airport without air traffic controllers. Other regimes cannot exist under anarchy; neither can the open-access regime.

ATTRIBUTES THAT MAKE AN INDUSTRIAL WORKPLACE A COMMONS

Oakerson (1992) argues that there are eight specific attributes of the natural-resource commons: jointness, exclusion, indivisibility, operational rules, conditions of collective choice, external arrangements, reciprocity, and outcomes. It is our argument that, with certain modifications, those eight specific attributes also characterize particular industrial workplaces which, as a consequence, can be thought of as industrial commons. As pointed out in the last section, there are two commons regimes in the industrial order: the private-commons and the worker-owner commons. In what follows, there is no need to differentiate further between these two types.

Oakerson's descriptors for the eight specific characteristics of the natural-resource commons have been modified to apply to the industrial commons. We refer to them below as: joint use, limited access, optimal scale, workplace rules, collective internal control, external control of decisionmaking, cooperative spirit, and central purpose. Each is addressed in turn. Much of what follows derives from several years experience participating in on-site assessments of more than 40 companies in Louisiana for their quality- and productivity-improvement efforts or for their innovational activities in the product market.

Joint Use.

"Jointness" was introduced to describe the special case of a pure public good in order to differentiate it from a private good. In the case of a pure public good, one individual's use does not subtract from the use of others, whereas with a private good use by one person shuts off use by anyone else (Oakerson 1992).

In the case of the natural-resource commons, jointness does not denote complete nonsubtractibility because clearly the bounty of nature is not a pure public good: what one individual uses is unavailable to others. Jointness in the natural-resource commons means that some *limits* must be established *to align use* with nature's bounty in order to keep the commons from being stripped bare. Jointness means that in the natural-resource commons use by various individuals must be constrained by the natural replenishment or maintenance of the resource (Oakerson 1992). In the natural-resource commons, jointness really means non-depletion rather than non-subtractibility.

In an industrial workplace joint use means that some limit on human beings using other humans has been established in order to maintain the "fertility" of the industrial commons. In other words, one person is able to derive benefits from the workplace without taking those benefits away from others in zero-sum fashion. Joint use can be promoted in the industrial commons by positive-sum practices such as gain-sharing and other productivity-grounded compensation methods which do for the delicate human ecology of the industrial workplace what conservation practices do for the fragile eco-system of the natural-resource commons. Indeed, such practices are commonplace in the industrial workplace where currently they are referred to as "win-win" routines.

Just as non-depletion is a necessary condition for the natural-resource commons to continue to yield its bounty year after year, joint use is a necessary (but not sufficient) condition for an industrial workplace to function effectively as an industrial commons. In an economic order where individual freedom is highly valued, including the freedom to leave one job for another, where production processes are quite complicated calling for many different skills, and where economies of scale are an essential part of doing business, we suggest that firms which understand and practice joint use are more likely than other firms to survive financially in the long run.

Limited Access.

The second attribute of the natural-resource commons -- exclusion -- also relates to the difference between a public good and a private good and for that reason is akin to the first attribute. In the case of a private good, potential buyers are excluded for using the product or service unless they have paid for it. With a public good, exclusion is not possible.

Exclusion is the opposite of open access and given the potentially devastating effects of open access the natural-resource commons typically has an access-control problem. With jointness, limits are imposed on use itself; with exclusion, limits are placed on the number of users. Exclusion can be implemented by denying access either (1) to selected individuals whether they are members of the immediate community or not or (2) to everyone who is not a member of the immediate community. The number of users can be increased as the natural bounty of the commons permits (Oakerson 1992).

The industrial workplace is a commons in the sense that access is limited by the hiring process and by the terminating process. As with the natural-resource commons, more (fewer) persons may be employed as the profitability of the firm rises (falls). Historically there have been many instances in which access to the industrial workplace has been limited arbitrarily according to a person's sex, nationality, race, religion, disability, and so forth. Equal opportunity and affirmative action are attempts to eliminate certain arbitrary methods of implementing limited access.ⁱⁱ

Optimal Scale.

A third attribute of the natural-resource commons is indivisibility which means that the commons is of such physical dimensions that it cannot be divided among private property holders without impairing its bounty either by permanently impeding some of the forces of nature or by installing management systems that because of the reduced scale of operations are redundant and wasteful. Oakerson (1992) allows that, while there may be some ambiguity as to the precise physical boundaries that define a natural resource as indivisible, there is no ambiguity as to central role of boundaries in defining a natural-resource commons.

What we call "optimal scale" in the industrial order is the equivalent of indivisibility in the natural order. Optimal scale refers to a scope of operations such that any scaling down or scaling up renders the enterprise less productive. Optimal scale means operating with a plant size that achieves the lowest unit cost.

Conventional economics asserts that in the long run the forces of competition inexorably sweep the firm along toward its optimal scale. That being the case, the more competitive the marketplace is for a given enterprise, the more efficient becomes its workplace and the more likely it is to be classifiable as an industrial commons.

However, if one is inclined toward a Schumpeterian perspective, the "perennial gale of creative destruction" blows across the industrial commons with effects similar to a tornado roaring across the natural-resource commons. Optimal size, in other words, is highly problematical in the industrial

order because of the rapid and continuous change taking place in products, services, resources, processes, markets, and structures for organizing work. We suggest, therefore, that at any point in time relatively few firms achieve optimal scale and therefore *actually are* an industrial commons. Nevertheless, with the passage of time, many firms reasonably are moving toward optimal scale and in that sense *are becoming* an industrial commons.

Workplace Rules.

Oakerson (1992) refers to the fourth attribute of the natural-resource commons as "operational rules" by which he means the specific limits put in place to protect the commons from overuse. In this regard, less subtractive uses are preferred to others that are more subtractive; compatible uses are favored over conflicting uses. In the natural-resource commons, specific limits relate to duration and type of use, along with the amount that can be appropriated under different uses.

Workplace rules do for the industrial workplace what operational rules do for the natural-resource commons. By stipulating how the work is to be done, work rules help limit the extent to which one person, particularly one who is strong, is able to use another, especially one who is weak, for personal gain.

Examples of such rules abound. For instance, on a unionized construction workplace, there are detailed rules governing which trade is to perform which tasks such as the installation of aluminum studs and how many persons are to be used in handling certain materials such as plastic pipe versus cast iron pipe. For commercial airline crews, there are specifics governing the use of alcohol before reporting to work and mandating both the maximum number of hours of continuous work and the minimum number of hours of rest between work assignments.

To the extent that such rules contribute toward the efficiency of the work force and the orderliness of the workplace, the industrial workplace is truly a commons. To the extent that work is created artificially by means of so-called make-work rules or "featherbedding" practices or that authentic rules are routinely violated, the industrial workplace is not a commons. The key difference is whether the work is consistently rationalized or not. If it is, the workplace is a commons.

Collective Internal Control.

The next attribute which Oakerson (1992) identifies with the natural-resource commons is what he calls "conditions of collective choice". This attribute means that choices as to how the natural-resource commons is to be used are made by persons acting not as atomistic individuals but as members of the collective.

Collective choice is governed by four main considerations: (1) the ability of the individual user to accommodate self-interest to the interest of the other users; (2) the remedies available to the individual user who is harmed by the actions of other users; (3) the willingness of the individual user to adapt his/her behavior to the collective decision; and (4) the opportunity for the individual user to stymie collective decision-making by means of a veto. These considerations raise a host of questions including the following. Is coordination voluntary or is it achieved through regulatory authority? What is the relationship between use rights and ownership? In what forum can disputes be settled and on what legal grounds? (Oakerson 1992)

In the industrial workplace, the first consideration addresses the extent to which a person is able to accommodate his/her individuality and sociality. Some of this is determined by the management's ability to identify and hire the kind of person who is able to fit into the company culture and to alter the culture in order to convince and help their individual employees to come together as a group or team. Some of this is determined by the individual and depends greatly on the life experiences of that individual. Some of this may be driven by market forces that bring the management and the employees to a realization that the survival of the company depends on each individual's ability to take into account the concerns of others. One general method currently in use in the industrial workplace to accomplish this purpose is the practice of seeing a fellow employee as a customer.

As to the second consideration, the industrial workplace has available numerous internal systems, some formal, others informal, for addressing the problem of any harm that may befall one employee at the hands of another. To enumerate several: the suggestion box, the open-door policy of the chief executive, the town-hall meeting, the grievance process, the ombudsman.

The third consideration is closely related to the first in that any deficiency with regard to a person's ability to take into account the interests of others makes the task of adapting individual behavior to the collective decision more difficult. Opportunities for meaningful participation in the decision-making process by the individual, along with the information and the authority needed to act effectively, are key to bringing the need of the individual into congruence with the purposes of the group. The quality circle is one mechanism for achieving such congruence as is the regular meeting for an operating unit. Another is creating a teamwork environment by such outside activities as a company-sponsored picnic or softball team and company participation in, say, the local Christmas parade. Other techniques include issuing company uniforms and explicitly linking some rewards and recognition to group performance as opposed to individual performance.

The fourth consideration is a problem in virtually every workplace in that every employee has some opportunity to frustrate the will of the group either overtly or covertly. An openly hostile and

aggressive individual may be able to intimidate other members of the group to the point where they do not implement what has been decided collectively. A passive-aggressive person may be able to set in place barriers to the implementation process either stalling group action or completely frustrating it. The key question is not so much whether such a veto is available as whether the individual is willing to use it. Accordingly, the fourth consideration is an important matter largely to the extent that there is a failure to deal with the third consideration successfully.

Given the complexities involved in managing these four considerations effectively, it is problematical indeed as to whether a given industrial workplace, at any given time relative to the attribute of collective internal control, is actually classifiable as a commons. Only an on-site assessment would suffice to make the required determination. Additionally, a given workplace may at one time exhibit this attribute and at some other time may not, especially with different employees and senior managers.

External Control of Decision-making.

The sixth attribute that Oakerson (1992) associates with the natural-resource commons is "external arrangements" which refers to decision-making arrangements that are external to the commons. These arrangements may be constitutional, legislative, or bureaucratic, in that the natural-resource commons may require a change in the (state) constitution to permit it to exist, new legislation to let it operate, or the oversight of a rules-making bureaucracy in order to function on a day-to-day basis. Oakerson enumerates two other types of external arrangements -- one that is conflict resolving and the other is economic. By conflict resolving is meant third-party arrangements, such as courts of law, to resolve disputes between and among users. External arrangements in the economic order refer to the competitive forces of the marketplace that effectively set parameters within which the commons is required to operate in order to survive.

All five types of external arrangements apply in straight-forward manner to the industrial workplace. A start-up firm first must establish itself in the eyes of the law as a sole proprietorship, partnership, corporation, or not-for-profit organization. A vast, changing, and continuously growing set of local, state, and federal statutes, such as building codes, health and safety regulations, and wage and hours laws, provide direction to and set parameters for decision-making in the industrial workplace. Typically these statutes are backed by a bureaucratic enforcement arm. As to external control of decision-making in the area of conflict resolution, note the impact of such federal agencies as the Equal Employment Opportunity Commission and the Federal Mediation and Conciliation Service. The role of competition in organizing the industrial workplace is so well known and documented that no further elaboration is required here.

Cooperative Spirit.

"Patterns of interaction" is the term Oakerson (1992) gives to the seventh attribute of the natural-resource commons. By it he means the patterns regarding the choices made by the individual members of a group. These patterns develop in the context of the physical characteristics of the commons and of the relevant technology along with decision-making arrangements available to determine how the commons is to be used.

In a natural-resource commons, individual restraint is necessary to preserve nature's bounty. In an ordinary exchange between an individual buyer and an individual seller, the burdens and the benefits for both parties generally occur simultaneously with the actual exchange itself in quid pro quo fashion. In other words, for the burden assumed by each party a direct benefit is returned by the other party. This quid-pro-quo reinforcement of reciprocity is absent in a natural-resource commons in that the burden of restraint practiced by the individual user supplies benefits to other users with no immediate benefit returned to that individual user who, in turn, derives benefits at some later date from the burden of the restraint practiced by the other users.

In managing the natural-resource commons, the challenge is to eliminate the "free-rider" -- the user who receives benefits without assuming the burdens of using the commons -- because such users plunder and ultimately destroy the commons. Concealment, deceit, intimidation, threats, and violence are symptomatic of a breakdown of reciprocity in the natural-resource commons (Oakerson 1992).

In the industrial workplace, "cooperative spirit" is more descriptive of the required pattern of interaction between and among individuals than is "reciprocity". Cooperative spirit means a disposition on the part of the individual to undertake certain tasks through collective action because the task cannot be completed at all or as well through individual action alone. As with the natural-resource commons, restraint is a requirement because unrestrained competition depletes the bounty of the industrial commons.

The operative social value that enables the cooperative spirit to flourish in the industrial workplace is teamwork. However, too much cooperation and too little competition dampens the creativity and entrepreneurship of the individual, robbing the firm of its edge in the marketplace. Too little cooperation and too much competition, on the other hand, expose the commons to the excesses of the "free-rider", robbing it of some of its bounty. For workplace supervisors, the especially difficult task is blending the cooperative spirit and the competitive spirit, both of which energize the work process, in ways that are mutually reinforcing rather than mutually debilitating.

One method to accomplish this blending in the manufacturing workplace is to organize all of the assembly and sub-assembly work around both (1) teams whose members must cooperate in order to finish the work successfully and (2) two or more assembly lines that are encouraged to compete with one another to determine which is performing the best work with the least waste of resources. Another is to deliberately organize work and structure worker compensation so that two regular paychecks are issued. One is based on individual contribution as measured, for instance, by number of hours worked by the individual employee. The other is based on collective contribution as measured, for example, by decline in unit cost of the finished product.

Central Purpose.

Oakerson (1992) refers to the eighth and last attribute of the natural-resource commons as "outcomes" by which he means "physical outcomes subject to human evaluation". He affirms that the study of outcomes is value-laden and that efficiency and equity, most commonly, are the proper evaluative criteria.

In the natural-resource commons, Oakerson defines efficiency in terms of overall rate of use. Inefficient use of the commons may take one of two chief forms: overutilization (an open commons) and underutilization (a closed commons). He defines equity in terms of distributive justice: Are individuals getting a fair return on their contribution? Inequity, he argues, undermines reciprocity which in turn leads to inefficient use of the commons. Pareto-optimality is recommended as the appropriate way to operationalize both the concept of efficiency and the concept of equity.

To a large extent, the central purpose of the industrial commons is no different than what Oakerson has proposed for the natural-resource commons, although our language differs: to meet human physical need, satisfy human physical want, and meet the need for work as such. Meeting human physical need and satisfying human physical want are embraced by Oakerson's efficiency plus equity under conditions of Pareto optimality.

However, meeting the need for work as such, that is the need to belong and the need for self-expression, is not contained within Oakerson's description of this attribute of the commons. In conventional economics with its deep foundations in positivism, need is an alien concept because it is value-laden and embracing it suggests that economics truly is a normative discipline. Thus, any topic such as poverty, which to even the introductory student clearly pertains to consumption, is discussed independently of consumer behavior. In addition, there is virtually no examination of the need for work as such even though, in the commons especially, the need to belong is self-evident.

The problem lies within conventional economics itself. Mainstream economists have contrived a view of humans -- want-satisfying, utility-maximizing, privacy-protecting, commodity-acquiring -- to reinforce their claim that economics is a positive discipline which by virtue of its greater rigor, they assert, is superior to normative economics. Perhaps this heavy-handed bias within conventional economics accounts for why Oakerson does not include the need to belong as one of the central purposes of the commons.

CONCLUDING REMARKS

Viewing the workplace as a collection of inert physical assets which under private ownership are held for the purpose of maximizing the rate of return to the owners is a perspective on the workplace that is most popular among mainstream economists. This view asserts that property rights are dominant.

Another view of the workplace is a collection of inert physical assets which, ownership notwithstanding, are under total control of the workers who by virtue of their labor are entitled to appropriate the whole product. This position argues that property rights are subordinate to personal rights. It has little following in economics.

A third perspective is to view the workplace as a set of resources which, as with a natural-resource commons, yield more or less product (bounty) depending on how skillfully the organizing principles of competition and cooperation are blended. Here, the general purpose is not to maximize profits but to meet human material need and to satisfy human wants. Just as sustainability is a necessary condition for a viable natural-resource commons, profitability is necessary in a functioning industrial commons. In this perspective, property rights and personal rights are subordinate to human material need and wants.

The need/want perspective allows us to factor into our economics a more complete definition of human nature than one finds in conventional economics: clearly, want satisfaction and profit maximization are not the entire story. Further, and perhaps more importantly, it allows us insights into recent economic and financial phenomena which otherwise might not occur to us.

For example, systematic initiatives to raise productivity and to enhance quality by installing programs that make explicit use of the organizing principle of cooperation then may be seen as efforts to raise the bounty of the workplace and in so doing change it in the direction of or further develop it as an industrial commons. Leveraged buyouts and hostile takeovers may be seen as attempts to render the workplace into an open-access regime which too often lead in like fashion to

the "tragedy of the commons". Money managers with large institutional funds to invest and with very short time horizons may be seen in the same light as leveraged buyouts and hostile takeovers. "Taking a corporation private" then is an attempt to close the commons to external control that otherwise might strip the commons bare. Innovation in the industrial order is the equivalent of a new use for the natural-resource commons. Both put at risk the capacity of the commons to meet human material need and to satisfy human wants.

Mainstream economics glosses over unmet human material need especially as regards to how resources are (re-)allocated in a market economy. The conventional wisdom is that resources are (re-)allocated by means of price signals. A deeper probing of the (re-)allocation process reveals that it is unmet human material need in addition to relative prices that (re-)allocate economic resources. Thus the dilemma as to how to meet human material need in a market economy.

The reconstruction of the modern workplace is better represented as an attempt to deal with the problem of unmet human material need in an environment which in practice is competitive more so than cooperative and preoccupied with self to the neglect of others. The key to changing the argument from one of property rights or personal rights to one of need is to see that rights derive from need and that rights are means to accomplishing the end of meeting human material need. As with the pre-industrial agricultural commons which was characterized by a "hierarchy of rights, one above another" (Bloch 1966), the modern workplace is a hierarchy of rights deriving from the need of various human beings who use the workplace to meet that need.

This reconstruction means a balance must be struck between competition and cooperation as organizing principles and more fundamentally between individual freedom and community, the social values underpinning competition and cooperation respectively. As stated previously, too little cooperation and too much competition, expose the commons to the excess of the "free-rider", robbing it of some of its bounty. Moreover, too much cooperation and too little competition dampen the creativity and entrepreneurship of the individual, robbing the firm of its edge in the marketplace. More and more U.S. enterprises, it seems, are discovering that functioning in effect as an industrial commons is one way to remain operational in a global economy where order, stability, security, and tranquility are greatly esteemed but only intermittently attained.

ENDNOTES

i. Ellerman (1987) defines labor as "the humans involved in production" and "the people working in an enterprise". Thus, he includes all employees, whether white collar or blue-collar.

ii. Critics have branded affirmative action as another form of limited access that is instituted arbitrarily. Both advocates of affirmative action and its critics are wrong in the sense that both assess it globally, the one judging it universally good and the other judging it universally bad. A proper assessment is done only on a case by case basis through the application of the principle of the double effect.

To illustrate, the principle of the double effect applies whenever an affirmative-action hiring decision has two effects, one that is morally good -- hiring a person who is a member of some group that has experienced discrimination in the past -- and one that is morally bad -- passing over an equally-qualified or even better-qualified person (or persons) who is not a member of that group. Accordingly, the decision to hire is ethically correct provided (1) the good effect is greater than the bad effect; (2) the bad effect is not willfully intended; and (3) the good effect does not follow from the bad effect but both effects proceed directly from the hiring decision. In terms of the fourth requirement of the principle of the double effect -- the action itself cannot be morally bad, lest the end be taken to justify the means -- the hiring decision clearly passes ethical scrutiny.

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