Experimental Regionalism

and the Dilemmas of Regional Economic Policy

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An earlier version of this paper was presented to the June 1995 OECD international seminar in Paris on Local Systems of Small Firms and Job Creation. Although it does not address contrasts in the corporate governance systems of the major industrial countries directly, it does present in compact form a view of differences in the Japanese, German and Italian, and US production systems as these came into competition in the 1980s, and an argument for why the Japanese variant not only won out, but is being adopted by the other competitors. In my presentation to the conference I will try to explain why this victory is the beginning, not the end, of the story about changes in corporate governance. In particular, I will argue that the form of decentralization pioneered by the Japanese is outstripping the governance capacities of their institutions, and that others, although able to adopt much of Japanese practice within the scaffolding of their current corporate institutions, are just discovering themselves that they cannot monitor by the old means the new production methods that they are introducing. In my presentation, therefore, I will speculate on the architecture of a governance system that does do the job.

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1. Surprising Successes and Chastening Surprises

Economic actors today in firms and in the public authorities shaping economic policy are buffeted by contrasting sensations of surprising possibility and paralyzing impotence. Surprising possibility is revealed in the success of many types of firms--large and small, in the service sector and manufacturing--whose decentralized organization deviates from the model of the large, vertically integrated industrial corporation that defined efficiency from the late 19th century through the mid 1970s. Small-firm examples include entrepreneurial startups financed by venture capital in the computer, telecommunications, software, and biotechnology industries, as well as clusters (or networks or districts) of specialized craft producers, each expert in a particular aspect of design or manufacture and cooperating, in various combinations, to produce high-quality goods in "traditional" sectors such as garments, textiles, footwear, machine tools, or ceramics. Large firm examples are the German corporation, which in effect houses many of the district specialists under one institutional roof, and the Japanese keiretsu, which combines whole firms and their main suppliers into diversified corporate groups whose parts are linked by financial cross holdings on the one hand, and rich flows of information about current and prospective projects on the other.

But there is a chastening surprise within the surprise. It is that successful as these new forms of industrial organization are, none is so successful as to master the current economic turbulence without substantial adjustment of its fundamental features: The restructuring in progress of relations between small- and medium-sized suppliers of components in industrial districts and their large-firm customers in Italy and Germany are obvious examples, but Japanese firms, we will see, are having troubles of their own. Robust as they have proved as a group in comparison to the mass production corporations, the varieties of flexible producers have characteristic fragilities that disqualify each as an unqualified model for the others, or for firms building themselves from scratch.
These developments have been paralleled by profound but equally inconclusive changes in government practices aimed at encouraging economic adjustment and growth. The thrust of these changes has been to shift from national policies designed to stimulate growth by regulating aggregate levels of demand to regional policies designed to assist the economic actors in adopting those flexible forms of organization which seem a precondition for survival in fragmented and turbulent markets. Sometimes this regionalization has been encouraged by the growth of institutions indigenous to industrial districts: publicly or cooperatively owned research laboratories or market monitoring agencies, for example, that provide services that small- and medium-sized firms cannot provide themselves. Sometimes the development has resulted from the efforts of local government to create conditions favorable to entrepreneurial startups, as through the foundation of science parks, venture-capital funds, or university-firm technology transfer centers. At all events, regionalization has been encouraged by the urgent desire of higher level governments—the federal government in the US, the European Community and in turn its member states—to escape responsibility for outcomes they regard as beyond their control by delegating decision-making authority to lower-level jurisdictions.

Here too, the results of change are ambiguous. It is widely felt that state intervention in the economy can only be effective if it is guided and coordinated by local knowledge. Some of the institutions associated with the industrial districts and a few aimed at the formation of vanguard firms have undoubtedly succeeded. But their successes, like the successes of the various types of firms themselves, have proven, we shall see, unexpectedly vulnerable to the very economic turbulence they were meant to domesticate. Thus, the new economic policies appear even less likely to be consolidated into a new model of public intervention than the variants of the new economy they supposedly encouraged.

The cumulative result is that the exhilaration that comes as old constraints are lifted is undercut by the sense that promising novel arrangements may prove unreliable, and that public action often seems no better at stabilizing the new economic world, whatever it is, than at defending the old. No wonder, then, that the drive to regionalize economic policy looks as much like the yearning to create autarkic stability in hard times as an expression of confidence in the power of regions to assist their economies in succeeding in world markets.

No wonder too that faced with this situation, both academic observers and the politicians and administrators responsible for economic policy oscillate between the celebration of fads and the despairing conclusion that the
turbulence of our times admits of neither general conclusions nor effective public remediation. Academics waver between declaring the latest surprising economic success to be the exemplar of the robust firm of the future, and modestly trying to advance understanding by creating ever more complex typologies that relate the proliferation of economic organizations--*keiretsu*, districts--to the kinds of environments in which they thrive. Politicians waver between sincere efforts to adapt the best of what seems to be working elsewhere to local conditions and an unspoken cynicism about the possibilities of economic policy in which programs become little more than stage props for electoral campaigns.

Rather than add energy to this oscillation by trying to move the pendulum of debate to one side or the other, I want instead to propose a generalizing synthesis of what has been learned from both the surprising economic successes and the chastening surprises, and to suggest how these generalizations lead to a reconsideration not of the advisability of regionalizing economic policy, but of the way such regionalization is organized. The argument proceeds in three successively more controversial steps.

The first is to define the common elements in the new economic forms that distinguish them from the old model corporation and to explain how, despite their differences, the former could all outperform the latter. The focus here is retrospective: I want to show that it was by relaxing the centralizing constraint of old that the new forms as a class could become more adaptive.

The second step is to look forward and, tacking against the prevailing winds of political and intellectual skepticism, to extract a general lesson about the principles of coordination of the flexible economy from the successes and failures of the new forms. It is that forms of coordination, derived from Japanese experience, that encourage deliberate, experimental revision of the definition and distribution of tasks within and among economic institutions outperform those, based on notions of craft or entrepreneurship, that pursue the reintegration of conception and execution of tasks within a division of labor assumed to be natural and beyond reflection. This system of coordination I will call learning by monitoring because of the way it links evaluation of performance to reassessment of goals. The further claim is that disavowal of the old system does not lead automatically to discovery and practical mastery of this experimentalism. If some forms of decentralized coordination prove more adaptive than others, then less adaptive ones will do better than the old system but will have trouble competing with superior variants of the new.

Reviewing these experiences, we can begin to make general sense of the
checkered fate of the surprising successes while orienting discussion of the general requirements for competitive success in the current environment.

The final step is to suggest that a principal task of regionalized economic policy should be to assist firms in adopting current practices to the effective forms of decentralized coordination, and that the organizations created for that purpose should themselves be decentralized and coordinated according to these very same general principles. This experimentalism can intensify and render more intimate the exchanges among firms, training and other public-sector institutions, and communities in ways that transform each yet do not give rise to the corporatist self-dealing that usually results when insiders close ranks to solve their problems. Indeed, in connecting the reorganization of firms directly to the reorganization of training and even a redefinition of skill, such a system of experimentalism is the best current hope for simultaneously expanding both the pool of robust jobs and the circle of persons able to fill them, and for doing so in a way that allows the citizens concerned to call the participating institutions to account. The precondition for such a step in the European Community, I will argue, is to recognize that most of the regional economic institutions in Europe--and especially those whose performance inspired much of the current debate about the regionalization of economic policy--are so tied to craft or artisanal forms of production that they are for the moment unable to help firms adopt learning-by-monitoring forms of coordination. They will have to be reformed themselves in the very process of assisting in the reform of others. If it is true, as I believe, that the possibilities for encouraging growth by traditional macroeconomic means are limited, and if local knowledge can indeed play a role in the structural adjustment necessary for economic growth and a return of full employment, then regional experimentalism will play an important part in overcoming the crisis of regional institutions that currently accompanies and echoes the confusion in the firms it is meant to address.

2. Backing into the Future

The common feature of the surprising successes that distinguishes them from the old model is the integration of conception and execution in production, or--what amounts to the same thing--decentralization of authority in the design and production of goods and services. Each activity is housed in a (semi-) autonomous unit. Autonomy allows the units to reduce the costs of solving problems in its area of specializing for any one client by accumulating experience is solving related ones for others, thus achieving economies of scope. The shifting patterns of collaboration which result thicken local ties
among firms, creating the mutual dependencies that suggest a regionalization of production.

The well known master principle of the old, Taylorist, system, in contrast, was economies of scale. Efficiency was achieved by having a superintendent with comprehensive knowledge of market possibilities and production techniques design the product and subdivide its production into highly specialized and therefore highly productive tasks, many of which could ultimately be rendered simple enough to automate completely. The separation of conception and execution and the centralization of the format at the top of a corporate hierarchy were the immediate results.

The costs of design and its translation into detailed jobs and specialized machines could be amortized as long as the production runs were enormous. As markets became more turbulent and the combination of fluctuations in the level of demand and changes in technology shortened product life cycles, those costs became oppressively burdensome.

Here is where the new forms of economic organization came into their own. Each in its way lowered the costs of adjustment to volatile conditions by allowing re-integration of conception and execution with its attendant decentralization. The high-tech entrepreneur is a conspicuous example: He or she develops a product, identifies a need that potential customers typically cannot specify with accuracy, builds a prototype of a device to meet it, and starts production in a garage. The craft worker characteristic of large and small German firms operates in an analogous but much more circumscribed way: Craft skill is the ability to combine theoretical and practical knowledge of a related body of tools, materials, and techniques to solve complex, often incompletely specified tasks with only indicative instructions. Craft workers, in other words, can define their own tasks, given general indications of the desired outcome; and firms that can depend on such capacities can substantially reduce the need for centralized specification of the details of the product and the procedures for producing it. The division of labor in the small Italian firm of the industrial districts can be considered a combination of both these types: The owner-operator typically has the mixture of practical and theoretical knowledge of a specific area that is typical of the craft worker, yet has acquired these informally, without serving the apprenticeship typical of the German prototype and without, therefore, acquiring the narrow sense of precisely defined craft community that distinguishes the latter. Conversely, the entrepreneurialism of the Italian small-firm owner is more connected to activity within a certain branch of industry than that of his or her (American) high-tech counterpart, and
regarded correspondingly less as a vocation for problem-solving or limit breaking. Hence the centrality of the artisan owner in the Italian districts, more free ranging and entrepreneurial than the craft worker but more self consciously rooted in the particulars of place and practice than the US entrepreneur (Pyke and others 1990; Pyke and Sengenberger 1992). The operation of these principles produces the familiar districts, networks, clusters or milieus of mutually dependent, specialized firms and workers, all defining their distinctiveness in relation to a common pool of knowledge, experience, and institutions.

The Japanese method of reintegrating conception and execution is something else again. The basic unit is the work group, not the individual. Group members are presented with precise goals, including targets for improving the performance of the goods or services they produce and the efficiency of their techniques for providing them. The group then decides how to arrange tasks, assigns members to a program of rotating among those tasks, and then at intervals, in the light of experience, reevaluates the arrangement, including relations to other groups providing inputs or using the output. In effect, then, the group in turn defines a division of labor for itself and tests its utility in practice. Groups of this sort can form either the sub-units of large firms or the founding core of independent suppliers. Notice that the members of the group appear curiously unskilled from a German perspective because they do not have the thorough knowledge of particular, technically defined areas characteristic of craft workers (Kern and Sabel 1994; Koike 1988; Koike and Inoki 1990). Their knowledge is instead more contextual, blending attention to technical detail, features of the group and its members, and the organizations to which these are connected as changing understanding of the tasks at hand and effective means of prosecuting them suggest. Notice too, to complete the contrast, that the definition of the group and its tasks is so closely tied to its relations with other groups that it lacks to all appearances the autonomy of the Italian artisan firm, let alone the US high-tech startup. The ties among firms and individuals or groups this Japanese system produces are no less local than those of craft or artisanal areas; but the system as a whole produces, perhaps, less localism if only because the its definition of tasks is always in relation to continually shifting goals rather than a body of experience or expert knowledge that can easily be seen as rooted in or defining the historical identity of the locale of production itself.

For much of the last decade, these differences in the form of decentralization appeared negligible. The new types of firms plainly outperformed traditional organizations, but given the differences in the product and geographic markets
in which they operated, it was difficult to compare the successes to one another. Two complementary arguments, moreover, seemed to minimize the potential significance of the differences so much as to make the comparisons of secondary importance. The first, typologizing view held that the differences reflected the particularities of different markets: "Japanese" decentralization was adapted to achieving process improvements in high-volume, mature industries; US to breakthroughs in high technology; Italian to advances in light industry subject to fashion; and so on. The second, generalizing view associated with Michael Piore and myself (Piore and Sabel 1984), among many others, was that all the new forms were alike in inverting central premises of mass production: instead of producing standard goods with product-specific or dedicated resources, they produce differentiated goods with general purpose resources. This interpretation was agnostic as to whether the differences among the firms represented adaptation to particular environments or rather the historical legacies of particular national economic experiences with no connection to the development potential of the post-Taylorist firm.

3. Coordinating Decentralization: Learning by Monitoring

But recent developments demonstrate that these arguments and the initial experience of equivalent performance notwithstanding, under conditions of increasing economic volatility and ever more rapid technological change, the form in which decentralization is coordinated does make a difference--and one that extends across the most different markets. On the one side, the craft and entrepreneurial models have run into difficulties which reveal systematic limits to their capacity to coordinate decentralization. On the other, institutions derived from Japanese experience show systematically how to overcome those limits using a general principle of coordination whose successful application owes nothing to features peculiar to or distinctive of Japanese society. I will say a word about the discovery of self-limiting features of craft and entrepreneurial models the better to underscore the defining features of the alternative class of solution.

Craft and entrepreneurial coordination prove self limiting because in different ways they obstruct the flow of the local knowledge whose generation they encouraged. Thus the acquisition of craft skill goes hand in hand with the generation of hierarchies and jurisdictional distinctions that hamper cooperation among craft workers (Kern and Sabel 1994). Just as apprentices learn from masters, so supervision of work and responsibility for the solution of the most complex tasks is reserved for those with the most skill. Skilled supervisors frequently reject solutions proposed by teams of less experienced craft persons
as an insolent usurpation of their authority. Similarly, mastery of one craft—precision mechanics, for example—results in such confidence in problem-solving that one naturally attempts to solve problems arising at the boundary between one's own specialty and the next—say, electronics. When specialists on both sides of a craft boundary claim to be able to generalize their skills across the borderland, the result is a horizontal conflict analogous to the vertical clash between superiors and subordinates in the same specialty. So severe are these problems that newly established subsidiaries of German firms operating in North or South America, or even in the former East Germany, frequently train workers directly in project teams rather than having them pass through and acquire the conflictual dispositions associated with apprenticeship.

The self-limitations of the entrepreneurial and artisan models are manifest less in open conflict than in a wariness about discussion of processes and products that amounts at the limit to information hoarding. Economic autonomy in both cases is conceived as depending on safeguarding a throve of "proprietary" knowledge: the austicities or craft secrets of production in the case of the artisan firm, patentable or potentially patentable knowledge in the case of the startup. As it is never clear just which remark spills the beans to a knowledgeable interlocutor, it is better to say too little than too much. As the pace of innovation increases and collaboration becomes more intimate, however, discussion of choices affecting both parties becomes more and more dependent on precise characterization of both activities and developments. Such characterization appears suspiciously invasive to artisans and entrepreneurs. At worst they worry about abetting their own expropriation. At best they are concerned lest the formalization of procedures that makes them more intelligible to outsiders also entrenches current practices, and so undermines the flexibility crucial to their success by . Italian suppliers currently struggling to meet the demands of large customers worry revealingly, for example, that formalization will transform them from supple artisans to rigid "industrial" firms whose clumsiness opened the door to their own earlier agile success (Franchi 1995). Progress thus seems to require a self-defeating self-denial.

The advantages of the Japanese-derived system of coordination stand out clearly against the backdrop of these difficulties. The distinguishing feature of the system from this point of view is precisely that it makes no fixed assumption about the responsibilities of its constituent units, the boundaries between them, or their relation to outside collaborators. In highly stylized form, the starting point of the organization is a provisional definition of a goal—to build, say, a product with characteristics at least as good as the best variant of
its type currently available--and a provisional division of the collaborators into working groups of the type described earlier, each responsible for refining the definition of its own goal and the methods of achieving it. Each group, furthermore, has the right to buy inputs--components, production equipment, or even designs for plant layouts--if it is dissatisfied with the products or services on offer from internal units. Starting from a given point, then, each work group proposes and experimentally demonstrates the advantages of modifications both of the part for which it is responsible, and its own organization in relation to adjacent groups'. Changes in the parts of both product and organization then reshape the whole, and vice versa. Thus the motor unit may propose a modification in the initial design that leads to a reconceptualization of the transmission and, in the next product generation, the suspension; all these changes may provoke re-examination of the motor and the car design itself. Similarly, constant reconnection of the work groups to each other transforms the organization by changing the composition of the ensemble of collaborators and their relation to each other. The cumulative effect is that the production system as a whole oscillates between determining a division of labor for itself and reconsidering that determination in the light of execution.

The linchpins of this system are a principle of coordinating the decentralized parts that does not entrench the boundaries between them, and a method of rewarding effort that provides incentives for individuals and work groups to participate in such coordination. Coordination is by a form of disciplined goal setting that links discussion of actual performance by the cooperating parties--monitoring--to discussion of how to improve operations given that performance--learning--that I refer to as learning by monitoring (Sabel 1994). Just-in-time production, where parts are produced one at a time as needed, is an extreme example: A defect introduced at one work station literally stops the flow of production, so discussion of improving the production setup by identifying and eliminating the disruption becomes a precondition for continuing production at all. Strictly analogous disciplines allow for groups to set goals and metrics for assessing progress in achieving them in relation to design (value-added engineering) or production projects (statistical process controls, single-minute exchange of dies, or poke yoka, or mistake proofing) undertaken jointly with other groups, and then jointly to revise both goals and metrics as the progress advances (Nishiguchi 1994; Smitka 1991).

To participate in such collaboration, individuals and groups must be assured, on the one hand, that the resulting flows of information will not be used to their disadvantage. Otherwise, they will obstruct such flows. On the other, they must be assured that extraordinary efforts at problem solving will be rewarded;
otherwise, they have no incentive to exceed the ordinary. In the Japanese system, "lifetime" employment (defined as ending for practical purposes at age 55) and long-term, renewable contracts are the means for meeting the first conditions for, respectively, employees and subcontractors who meet expectations of acceptable performance. Promotion to higher-level tasks--coordinating the problem-solving of one or more work groups, coordinating the efforts of lower tiers of (sub-) subcontractors for suppliers--is the reward for superior performance (Koike 1988). Promotions are awarded by what Aoki calls a "ranking hierarchy," whose purpose is precisely to identify the individuals and groups best able to change the organization (Aoki 1988).

Contrast this system of decentralized coordination by learning by monitoring with the craft model on the one hand, and coordination by hierarchy, contract, or relational contract on the other. The craft division of labor (and its less formalized artisanal and entrepreneurial consanguines) produces cohesion by making units mutually dependent: Each must rely on the skills of the others to complement its own efforts. But the price of this mutual reliance is potentially disruptive uncertainty about where to draw the line between zones of complementary responsibility. In learning by monitoring, individuals and groups are connected to one another precisely through continuous discussion of the boundaries among them, and progress in the measure by which they improve the distribution of responsibility.

The continuous discussion of boundaries and mutual obligations characteristic of learning by monitoring so transforms the setting of economic coordination that the normal instruments of governance--hierarchy, contract, and relational contracting--lose their purchase. Hierarchy presumes that one superintendent can direct the efforts of the others. It does not survive the passing of mass production. Contracts presume that each actor knows its own situation and capabilities well enough to perform its promises independently, without benefit of further exchanges with others engaged in complementary activities. They prove unwieldy in the regulation of long-term relations, as between mass-production firms and their suppliers, that are subject to such unforeseeable contingencies as sudden changes in prices of raw materials or changes in technology. Relational contracts go a step further. They acknowledge the impossibility of specifying all contingencies in complex joint efforts and provide rules for arbitrating disputes arising from conflicting interpretations of the agreement (Williamson 1986, pp. 104-105). But constant arbitration produces a web of precedents and rules that so bind adjudication of disputes that, in a turbulent world, it becomes impossible to resolve fundamental disputes without threatening the understandings that maintain peace among the
parties (Kolb 1983). In learning by monitoring, the gap between promise and performance is so reduced by the exchange of information that differences of perspective are detected before they harden into differences of interpretation and thence into disputes requiring arbitration. "Long term supply agreements" of the kind now proliferating through US industry, in fact, specify only the forms of information exchange and, unlike the relational contracts they succeed, create no separate machinery of dispute resolution.

Examples of the relevant types of information exchanges we present in exhibit I, which synthesizes provisions currently found in manufacturers supply agreements in 50 firms in the US state of Wisconsin:

**Exhibit 1**

**Long-term Supply Contract**

3. Supplier commits to

a. Deliver consistent quality parts which comply with Purchaser's specifications.

b. Work with purchaser to implement a just-in-time delivery program.

c. Work with purchaser on future development of prototype designs.

d. Actively pursue cost reductions.

e. Establish Statistical Operator Control Programs, Reduction of Inventory, Improvement of Delivery Performance, and Dedication of Capacity to Purchaser.

f. Hold pricing firm for the term of agreement except for metal market changes.

g. Absorb setup costs.

h. Provide Cost Breakdown Information.

4. Purchaser pledges to uphold and fortify supplier's desire for dedicating a work cell to purchaser's production.

5. The parties agree to work together to develop efficient packaging and transportation.
6. At specified times throughout each year supplier and purchaser will meet to review performance against stated objectives. Objectives will be revised or reconfirmed throughout the term of the agreement. The parties will openly share information about costs and savings incurred under this agreement and develop means for equitably sharing those savings."

from (Esser 1993, p. 53)

To avoid misunderstanding let me conclude this brief survey of the advantages and disadvantages of various forms of decentralized coordination by distinguishing Japanese production methods, and their limits, from the general mechanisms of learning-by-monitoring coordination which these Japanese developments inspire. In referring to both as the Japanese system, the discussion so far has at times suggested that the particular and general are one and the same. But they are not: Just as learning by monitoring is only one form of decentralized coordination, so the Japanese system is only one form of learning by monitoring; and whatever the advantages of that form as compared to craft or entrepreneurial methods, the Japanese system has distinctive limits of its own.

Many of those limits are rooted in historical features of the Japanese system, such as the keiretsu groupings, which are treated as creating natural boundaries or jurisdictions for economic activity and so are exempt from the self-critical boundary revision of the learning by monitoring. Thus as firms and their suppliers diversify into new markets they establish relations with customers and collaborators that cut across the boundaries separating keiretsu families and overburden the capacities for appraisal of even the most assiduous large-firm ranking hierarchies. But of course the more diffuse the relations among keiretsu members, and the less accurate they regard appraisals of their contributions to improvements, the less willing individuals, work groups, and member firms are to share the burdens of others for the good of the group. Hence financial and other ties among group members are being undone as operating units free themselves of what they increasingly perceive as historically imposed obligations in order to better respond to current exigencies. They do this however, without being able to specify in advance the organizational forms that will emerge as old ties are loosened. In this sense Japanese firms are no less at sea in the current world than competitors from other national economies; and the Japanese model is as instructive about the limits to flexibilities that it reveals as about the new possibilities of coordination that it demonstrates (Gao 1994; Ramseyer 1991).
But for purposes of the present argument this qualification is a side show. Most firms undoubtedly find the discovery that Japanese companies too are fallible reassuring, but the are too absorbed in drawing out the implications of the new form of decentralized co-ordination for their own operations to revel in Schadenfreude. Instead, regardless of size, sector of activity or geographic location, they are more and more likely to be participating in a world-wide effort at adjustment that is extending and developing the new principles of co-operation in the urgent determination to apply them. The diffusion of the new methods and its implications for the reconsideration of the regionalized economic policy are, in turn, the next topics.

4. The Diffusion of the New Industrial Disciplines: The End of the Old Dualisms?

There is circumstantial but powerful evidence for the massive diffusion of the new forms of co-ordination and the disciplines with which they are associated not just to the firms of the advanced economies, but to the apparently less dynamic backwaters of these same economies and further still to developing and former plan economies in zones as disparate as Latin America, India, Southeast and Northwest Asia, and Eastern Europe and the former Soviet Union. Taken together the evidence undermines the familiar distinction between dynamic core areas well advanced in the experimental deployment of the new flexible economies and peripheries competing by the old methods in the world or even domestic markets thanks only to extremely low wages. It discredits too the idea that the new methods can only be practiced by those possessed of a "Japanese" culture of mutual forbearance and reciprocity in business dealings; it casts doubt on the closely related proposition that successful adopting presupposes a kind of institutionalized sociability—sometimes called social capital (Putnam 1993)—dampens the temptation to take advantage of a partner's vulnerability surely as the restraints of Japanese culture allegedly do. What emerges in outline instead is the image of a single world economy in which all participants with any but the most local ambitions are obliged to master a common set of disciplines.

Of all the scattered pieces of evidence for the diffusion of the new methods in the core of the advanced countries I refer to only two. The first are the plans of the large firms undertaking substantial investments in the automobile, semiconductor, or chemical industries. Such plans now routinely contain detailed discussion of factory layouts, work organization and performance levels at the most competitive comparable plants world wide. This benchmarking amount to a survey of the best practices at the innovative
margin; and of the half dozen or so such plans I have seen in recent years, all assume work groups with substantial powers of self-determination as the basal unit of plant organization and charge supervisors with assisting these groups in organizing their internal deliberations and reflections with other teams (Company 1991a; Company 1991b).

The second piece of evidence concerns the increasing insistence by large firms that all their suppliers, regardless of size, be certified by third party registrars as being sufficiently self-reflective about their organization and procedures that they can engage in detailed discussions with outsiders about opportune modifications. Firms seeking to collaborate with suppliers in the design and continuing improvement of, say, components that neither can define precisely by itself need to know at a minimum whether a potential partner understands the initial request made of it, can translate that request into a production plan, and then detect and correct shortfalls in execution. These are precisely the capacities required for certification under the ISO 9000 series of standards maintained by the International Organization for Standardization in Geneva (Clements 1993; Peach 1992); and both the demand by the large US automakers that their suppliers meet a jointly agreed variant of these standards and also the customers' willingness to accept certification by any one of their number as valid in dealings with the others are signs, I think, that demonstrable mastery of the new disciplines of co-ordination has become the lingua franca of discussion of projects among advanced firms, and as such a precondition for business in that sector of the economy (GM 1994).

The evidence for the accelerating use of the new methods in developing countries is contained in a recent series of research reports that document the rapid spread these of flexible technologies and use of them at efficiency levels at or above advanced-country standards. A careful survey of the introduction of computer-controlled metal-cutting equipment in, among other countries, India, Brazil, Mexico, and Turkey (Alam 1994; Ansal 1994; de Quadros Carvalho 1994; Dominguez and Brown 1994) found rates of diffusion of the new equipment to be orders of magnitude higher than those observed only a few years earlier; and the new users required no more time for changing the tolling on the machinery to accommodate a new product--a good proxy for a plant's level of mastery of the new disciplines--than more experienced competitors in the advanced countries. The most recent general work on production organization in the developing economies captures this movement nicely in its title: "Easternisation" (Kaplinsky 1994).
Case studies confirm and deepen those impressions. A report on a Mexican automobile assembly plant, the subsidiary of a US-Japanese joint venture, describes an experimental system of team work and job rotation so effective at encouraging acquisition of skill and the resolution of problems by production workers that the plant matches the quality levels of the best performers in the parent corporations without the need for a distant cadre of craftworkers specialized in set-up or maintenance (Shaiken 1990). A case study of the Malaysian textile industry reveals a breathtakingly rapid shift to extremely sophisticated production technology as labor markets tighten and recent-vintage Japanese equipment comes onto the second-hand market (Rasiah 1993). What gives these reports particular weight is the authors' surprise, verging on amazement, at their own findings. The author of the automobile study is a former skilled tradesman with long experience in the US auto industry. The idea that production workers--in Mexico--can learn to do almost all the tradesmen's work without benefit of apprenticeship plainly intrigues and disconcerts him. The author the Malaysian textile industry study was not searching for rapid productivity gains. Rather, he was drawn to the case by the puzzling finding that wages in that industry were rising rapidly despite a political regime inimical to unions and dedicated more generally to keeping wages low to safeguard competitiveness. In social science, as in science in general, unexpected findings have the truest ring.

The evidence for the diffusion of the new methods into the low-wage peripheries of the advanced countries is much less abundant and more anecdotal. In large part the absence of information reflects widespread preconceptions: low-wage jobs in food processing, light manufacturing or back-office financial services are simply assumed to be menial. They are typically studied in connection with assessments of the labor market possibilities of low-income groups lacking formal training, and with no regard for changes in the organization of work. When "hamburger flipping" becomes synonymous with unskilled work, it is, at most, important to know who does the flipping, not how.

But there are signs that forms of decentralized coordination being established in the core of the economy are reshaping production in the periphery as well. To stay in business even the smallest machine shops have to adopt the work-group based project management systems used by their large customers. (Precision Machining, various numbers) Retailers in industries as varied as garments and food processing are insisting that their suppliers respond quickly to changes in market conditions and provide products of consistent quality for sale just in time. This means that even industries such as poultry processing, whose
onerous working conditions makes them a last, desperate refuge in the labor market, have begun to adopt the kind of process control and continuous improvement and certification requirements typical of, say, the automobile industry (interviews with poultry producers in the Delmarva Peninsula, Delaware, May, 1994). There are first indications of similar trends even the US fast-food industry. Recall, too, that the learning-by-monitoring purchasing agreement reported in exhibit one synthesizes the experience of 50 Wisconsin manufacturing firms and thus, roughly speaking, of the solid middle, not the vanguard of US industry.

All this is not to say, of course, that there are no menial jobs. There certainly are, particularly in the personal-services sector of the US economy, where many circumstances encourage even households with modest incomes to contract out cleaning, cooking, repair and child-care tasks to low-wage workers. But the time has come to begin asking how much supra-local economic activity, regardless of wage rate, will continue to be organized on mass-production lines even in the backwaters of the advanced countries?

All of the changes--in the core and peripheries of the advanced countries and in the developing economies--are, for good measure, mutually re-enforcing. Large firms experimenting with the new methods often prefer to escape the constraints and habits of their home markets; so they establish subsidiaries to test new arrangements in other advanced economies or in expanding markets in developing countries. At the same time they put pressure their suppliers worldwide to adopt the new disciplines, often regardless of whether they have already done so themselves. All of this puts "peripheral" area under substantial pressure to adopt learning-by-monitoring co-ordination while opening access, at least for a time, to the resources and markets that make it possible and worthwhile to do so. Successes such as the US-Japanese automobile subsidiary in Mexico put pressure for further changes on the established facilities and their suppliers. For instance, I have visited German plants where charts of defect rates for particular processes were displayed next to equivalent data for a Brazilian subsidiary--whose results, using team production methods, were an order of magnitude better although it was using capital equipment scrapped by the German facility.

That diffusion of the new methods is self-sustaining and no longer depends on direct Japanese influence is beyond doubt (Nishiguchi 1994; Sako 1992). In general the Japanese managers and observers appear so absorbed in registering and even grading the extent to which foreigners are able to reproduce the precise features of their original production system in subsidiaries abroad that
they may be inattentive to profusion of experimental applications, some perhaps with novel sequels, that their example has inspired (contrast (Abo 1994) with (Greif 1991 (1989)) and (Merli 1991)). There are even major economies, such as Brazil, where Japanese firms are no longer among the most avid and audacious exponents of the application and further development of the system they pioneered (Fleury and others 1994). By itself the spread of learning-by-monitoring institutions to areas that, however characterized, are as culturally distinct as the US and India or Brazil is enough to put paid to the idea that the Japanese production system is so much an artifact of Japanese society and the unspoken alignment of individual and group interests often taken to be its defining feature as to be practicable only in Japan or the corporate exclaves it creates (Dore 1983). The same evidence also weighs heavily against the related idea that intimate economic collaboration is possible only in societies that can draw on a patrimony of social capital in the form of institutions such as voluntary associations or churches that serve as so many schools for trust and cooperation. Indeed, the spread of the new methods suggests turning this last argument on its head: By linking learning to monitoring the new institutions allow initially wary partners to begin cooperating in ways which may eventually so align their understandings of the world and so their mutual interests that they come to trust each other in ways not contemplated at the start (Sabel 1994). Recent, detailed Japanese business history of, for example, the emergence of the subcontracting system at Toyota expressly dismisses cultural explanations in favor of the self-reinforcing effects of institutions as described here (Wada 1991).[1]

The general picture is thus of an urgent, borderless yet purposeful testing of new ways. Large firms and small, regardless of their original model of coordination, are changing their internal organization as they re-adjust relations to one another. The distinction between center and periphery blurs; at times they even seem to change place. Yet amidst all the change there is a sense of consolidation: not of growing uniformity, but of mutual intelligibility, as the new disciplines create a credible, common language for mutual evaluation and cooperation. While there is no generally accepted model of the optimal organizational design, there is rapidly spreading agreement as to the techniques suited for testing and improving the design of organizations, and agreement too that mastery of these techniques itself require organizational adjustment.

But by itself this global consolidation is insufficient to make adjustment self-effectuating in any particular locale. In theory firms should adopt efficiency-improving changes immediately to protect their competitive position or increase profits. But reorganization produces local winners and losers, and
potential losers may try to block change that improves the prospects of others if it damages their own; or they may simply try to pass on the costs of changes, holding themselves harmless but imposing ruinous burdens on partners. Thus managers in large firms may try to block delegation of responsibility to work groups for fear of jeopardizing their own position or that of their units; or they may simply force suppliers to adjust, cost what it may, so that they and their units do not have to. Similar fights can occur in smaller firms, too; and they may prefer to search out new, protected markets where they can survive as long as possible by the old ways.

Firms caught in such conflicts often have nowhere to turn for help. Trade associations that might provide advice in restructuring have often become so absorbed in lobbying for tax, tariff and regulatory changes at the national level that they are unequipped for the task. Large firms might help orchestrate reorganization. But, for the reasons just mentioned, they are just as likely to be paralyzed by their own problems or tempted to pass their burdens to others even as they "help." Small firms are rightfully wary of offers of assistance from that quarter. Even the advice of consultants is of dubious value, as many of those selling it gained their decisive experience of industry building or maintaining the old system, not constructing alternatives to it.

These are just the circumstances where public authorities can make an important, perhaps decisive, difference, if ever they can. Suppose that a substantial but indeterminate obstacle to restructuring results from uncertainty about sequences of reform likely to be effective under local conditions. The erratic measures and periodic efforts at intimidation that result when some firms toy with reforms they fear makes many others cautious; general timidity increases the chances that bolder, more self-confident competitors will steal the march on the local economy. A public entity that did no more than enable actors to draw lessons from common local experiences, or to assess the significance of outside developments for their purposes would provide a double encouragement to restructuring: first, by making it easier for firms directly involved in these discussions, together with their suppliers and customers, to begin reform, and then again by providing more and more varied models of the locally workable adjustment that encourage action outside the ambit of the immediate discussion. The more rapid and extensive the restructuring in turn, the easier it becomes to define the new combinations of skills required for local industry, to adjust training institutions accordingly, and so to expand the circle of employment.
From the analysis of economic reorganization so far it follows that, at the least, regionalized economic policy should be systematically encouraging the articulation and diffusion of such knowledge, and learning from its experience how to do this better all the time. If will come as no surprise that it does not. In the last section I want to say briefly why not, and how things might be reorganized to make the plainly useful practically possible

5. Regionalized Economic Policy as Experimental Regionalism

To see why the existing institutions for regional economic development do not systematically pursue this task it is only necessary to look briefly at what they in fact do. The lessons of that experience in turn provide the starting point and the frame for a program of reform that directs regional economic policy to the central problems of adjustment while endowing it with the organizational suppleness and capacity for learning that the new disciplines of decentralized co-ordination make possible.

The current activities of most of the current regional economic agencies typically grew out of early local successes with a particular type of decentralization or an effort to instigate developments like one or another of them. Thus the dominant institutions of the Italian industrial districts today are the artisans' confederations and para-public agencies provide, as they already did in the 1970s and 80s, accounting, marketing, credit guarantee or other services to small firms. The dominant regional institutions in the German industrial districts, as in the last decades, are those linked to the Fachhochschulen, or polytechnics and providing information about new equipment and processes to their graduates in craft firms. Everywhere, it seems, in the US and European Community there are science parks and venture capital funds inspired by the success of US high-tech entrepreneurs with ties to universities. It is even possible to find simulacra of all these institutions cheek-by-jowl in one locale: Old Industrial regions such as the Ruhr or the are around Pittsburgh, for example, have sought solutions from all quarters, borrowing ideas and institutions from the Italians, the Americans, or the Schwabians of Baden-Württemberg in their efforts to demonstrate some control of events.

But as the preceding discussion showed, the craft, artisanal, and entrepreneurial forms of decentralization have all encountered problems of their own; and in the event the institutions that served them well as they made hay from the troubles of mass production now have their own troubles providing assistance in the adjustment to learning-by-monitoring co-ordination. The reason is simply that the institutions all presumed well functioning firms as their interlocutors:
artisans or craft persons with intimate knowledge of the organization of production in their own areas, or entrepreneurs with original ideas and well formed business plans. The task of the institutions, on that assumption, was to provide factors of production--skilled labor, market information, or patient capital--on terms that small, growing firms, with all their vulnerabilities, could afford. But when the very organization of the firms, and hence their ability to make efficient use of the factors of production available, was called in question, the established regional institutions were at a loss. For in accepting the old division of responsibility between themselves and the firms these institutions came to regard it almost as an unseemly violation of economic privacy to concern themselves with the deep assumptions shaping the internal operations of their constituents; and the latter certainly did not encourage greater intimacy. Hence, as in the firms themselves, discussion of the boundary-revising disciplines between firms and institutions has been obstructed by--what else?--existing boundaries between them. At the limit the subtleties of these boundaries--the precise range of services offered and the way they are provided--become part of the politically tinged self-characterization of each region with respect to others of its kind, and therefore all the less accessible to discussion and reflection.

A perverse result of this understanding of the division of labor is that in times of crisis the most responsive of the traditional service agencies can actually aggravate the firms' confusion by helping to entrench the partial and contradictory strategies that companies adopt to stay afloat. Thus in the early 1990s firms in Baden-Württemberg began to adopt "lean" production methods (as the original Japanese system, in the form canonized by Toyota is commonly called in Germany [Womak 1990]); and the Steinbeis foundation, which coordinates provision of consulting services in connection with polytechnics in that Land, began to organize provision of new services in quality assurance and logistics, and to contemplate serving groups of firms with similar needs rather than individual companies as in the past. But before either the firms or the foundation could fully reorient themselves, markets improved; and many companies abandoned internal reorganization, preferring instead to meet demand by subcontracting production to facilities in Eastern Europe (themselves rapidly qualifying under the new standards). The foundation is now called on to assist in the organization of subcontracting. This it does despite the conviction of thoughtful officials that outsourcing can only succeed in the long run if design and production have been reintegrated in ways that would make much of the current subcontracting unnecessary. At worst they fear that they will have helped the firms go far enough down the path of internal reform to see the costs but not the benefits and restructuring, while also
abetting the creation of new ties and the destruction of old ones that may further deter efforts in that direction. But so long as the foundation balks at instigating discussion of strategic possibilities out of the conviction that firms already know their strategies, the officials keep such reservations to themselves.

The larger problems of which such perversities are an expression have not, of course, escaped the attention of the local and regional actors. Their response, particularly in the German and Italian regions whose success inspired much of the original discussion of the promise of regionalism, has been less to reform existing institutions than to make gestures at creating new ones to address fundamental problems of strategic orientation brought to light by the current difficulties. Hence the profusion of regional round tables, customer-supplier conferences, and even local summit meetings between unions and firms to discuss how to stabilize the environment to further restructuring (Kern 1994). Whether these discussions mark a new beginning or an aimless huddling of elites is an open question, especially since the summits and round tables have not, so far, been connected to serious discussion of reform of the established service providers (discussions with officials of the Steinbeis Stiftung, Stuttgart, June, 1994, and of the enti bilaterale in Toscany, Emilia Romagna, and the Venice Region, March, 1994). US experience, of which I will say a word in a moment, is different because US firms, with their long history of centralization, faced adjustment difficulties earlier, in direct competition with Japan and without the distraction of the false dawn of the craft model, and because, relatedly, district institutions and their like were not deeply rooted there. But the European Community is in the paradoxical situation of embracing the regionalization of economic policy on the Community level even as many leading regions are organizing discussion of the critical shortcoming, not to say crisis, of their own regional policies.

An optimist would say, naturally, that such a moment of common indecision and uncertainty is precisely the time to remix the cards. A realist, however optimistic, would add that such moments are unlikely to last for long, and if they pass away through inaction only a miracle can save the regenerative and adaptive possibilities they contain from the cynicism and recklessness with which desperate societies discard or remake immobilized institutions. It is in that realistically optimistic spirit of encouragement and urgency that I commend consideration of a plan of regional experimentalism that applies to the reform of regionalized economic policy making the substantive and organizational lessons that firms are drawing from learning-by-monitoring (Sabel forthcoming, 1995).
The first, organizational lesson is that successful innovations in the regional parts should be coordinated to reshape the architecture of the whole, and vice versa. This means that the role of central authorities—the European Community or the federal government in the US—would be in many ways more limited than in the past, but more active than much of the current de facto decentralization of decision-making authority to regions would allow. The central government in such a system superintends discussion of incremental institutional adjustment without determining its outcome. The legislature is limited to setting general goals for a sphere of public action and providing moneys through a central agency to encourage regions to consolidate going programs in that area and experiment with the provision of new services according to their intimate knowledge of local circumstances, and in association with their users and partner institutions. But the agency is not a supine observer of the experiments it fosters. Rather it obliges the entities thus formed to agree on institutional means for defining and continually revising with those users and partners the measures by which their performance in core matters will be judged. This discipline ensures that the results of diverse experiments are publicized, rewarded, and penalized in a way that ignorance, habit, respect for local decorum, and fear of local oligarchs might obstruct. It makes the local actors accountable locally because the goals they chose and their success in prosecuting them can be compared with the aims and progress of others in similar situations. It also makes the regions as a group accountable to the general public for the use they make of public moneys because the legislature can use the same comparisons to assess progress towards its initial, broadly specified end.

The substantive lesson is necessarily provisional, given that the aim of regional experimentalism is to create an organization capable of re-evaluating and revising its substantive purposes. It is simply that firms and the institutions and associations with which they are allied in the public and private sectors can no longer take the efficacy of any feature of their internal organization and their relations to others for granted; that none of these actors is capable of such self-scrutiny in isolation; and that public authorities can help organize discussion of what to change and in what order. In short, a central task of the experimental regionalism is to help the regional economic actors master the new disciplines of decentralized coordination which inform the policy of experimentalism itself. One of the great advantages of such a policy, of course, is that if this definition of the central tasks of economic assistance is wide of the mark, experimentalist institutions will find out and adjust means and ends accordingly.
To envisage how the assessment required for goal setting in such a system might work think of the regions as engaged in a form of collaborative production: Each deploys a constellation of institutions to supply a complex economic-development service composed of discrete types of projects. Each region operates in a distinct economic environment with a distinct institutional endowments. The crucial assumption of regionalism--and of the decentralization in firms as well--is that the local actors are best placed to assess their particularity and hence what they can learn from comparing their experience with that Acting under the aegis of the central authority, the regions themselves would therefore organize two kinds of systemic comparisons of their economic policies. The first would be concerned with particular programs--how best to organize similar projects aimed at, say, assisting firms to meet new certification requirements or vocational schools to teach problem-solving in teams. The second kind of comparison would go to the architecture of regional economic policy as whole--whether it is addressed to the right problems and actors, and whether he organizations it deploys are cooperating effectively given the agreed ends. Any region could thus be compared to others of its kind with regard to the suitability of its strategy; and so situated, each could compare the performance of its own service providers to the performance of like service providers in other regions.

These comparison require, on the one side, characterizing various ways of providing service and the amounts provided, and, on the other, characterizing outcomes with regard to their propensity for self-reinforcement. In the case of programs aimed, for example, at diffusing the new disciplines characterization of the service provided might begin by distinguishing cases were advice is provided to individual firms from those were it is provided groups of firms, in one or more industries, facing similar problems. If the former, then is the project supervised by public-sector staff, or primarily by private consultants? If the latter, then is moderation by public-sector field agents by private-sector network brokers specializing in such tasks? What counts as the "time" spent by the relevant parties in all these variants? Given such distinctions it becomes in turn possible to establish measure of which sequences of projects prove self-perpetuating, which self-blocking.

The emphasis in the architectural comparisons of regional economic policy would be, in contrast, on characterization and evaluation of various patterns of cooperation among agencies providing services to firms and such related institutions as technical and vocational schools, applied research institutes, trade associations, and banks. In the best case, such relations create a flow of information and resources that increases the chances for success of established
projects and creates possibilities for new ones that could not otherwise be undertaken; in the worst, those relations, or their absence hamstring operations at every turn.

Recent US experience is illustrative of possibilities here. As I suggested a moment ago, US firms began to restructure well before Western European ones; and for that reason regional authorities have acquired considerable experience in connecting projects and programs concerned with various aspects of adjustment into effective ensembles. For example, some industrial-extension services (operated by states alone or jointly with the federal government) have formed co-op programs with state engineering schools in which students practice what they learn of the new disciplines by participating in projects which actually apply them in firms. Ideally, these projects create better organizations in the firms, more effective curricula in the technical schools, better project-selection mechanisms at the field offices of the industrial extension programs, and enduring ties among firms, schools, and extension services—as well as jobs for the students. Similarly, extension services are beginning to participate in projects that link reform of vocational training to reorganization in firms. Vocational schools are discovering that the master skill they can impart to their students is the ability to work effectively in project groups collaborating with other project groups; and that the way to acquire this skill is through participation in projects whose purpose is actually to make something. Organizing such projects, however, requires breaking with the traditional disciplinary organization of the school, and inducing the teachers themselves to form project groups that define and guide the student projects. Firms, for their part, are discovering the need for employees at all levels who can assume the "managerial" responsibility for continuous reorganization supposed in the new work settings. Here, too, schools, firms, and extension services can ideally improve their respective organizations through collaboration. Presumably banks learning to value projects that can be collateralized by traditional means could also gain through co-operation with regional institutions and firms, and vice versa. Taken together these relations would amount to a practical map of the regions' strategies of coordinating and encouraging economic development in their home territories in relation to their project activities.

Evaluating these relations requires characterizing different general types of cooperation (the equivalent of different project types), the different ways regional governance structures mesh with the corresponding structures in coordinate institutions (the equivalent of the different ways the same type of project service can be provided), and then defining measures of the
effectiveness of the cooperative efforts under supervision. In the case of the relation among schools, extension services, and firms, for example, one outcome measure might register the flow of persons from one institution to institution, another the flows of equipment from firms to training programs they seek to support, or diffusion of equipment from demonstration projects in extension services and schools to firms with whom they are working. Yet another might capture the number of cooperative projects of various types--plant layouts, curricular reform, programs for youngsters apprenticing in project groups--adjusted for their degree of complexity. Comparison among regions would show whether, for example, cooperation of a certain type was more effective or not if the institutional partners have seats on one another's governing boards, establish distinct budgets for joint working groups, create procedures for seconding employees of one to the other, and so on. Taken together, such assessments would indicate the goodness of fit between a regional cooperation strategy and the activities of the cooperating partners and so make possible application of lessons learned in one broad sphere of activity and geographic setting to others.

Notice that in proceeding this way "assessment" shifts from a review of local or regional subordinates' performance by national or supra-national superiors to a (disciplined) discussion of whether each part of the organization is doing its part to advance the purposes of the whole. In effect each level and component of the complex of economic-policy making institutions becomes accountable to the others and to its own immediate public. Projects or programs that show badly in comparisons can be bluntly criticized by the constituents they are meant to assist and the regional and supra-regional governments that support them. But regions that do badly in comparisons can be criticized just as bluntly by program managers, their constituents, and, of course, the citizens of the region. Both kinds of comparisons will allow excluded groups to criticize the self dealing of corporatist interests if their arrangements are in fact obstructive. Finally, if the regions as a group fail to agree on any common measures of performance, or fail to make a compelling demonstration of progress by the measures they have agreed, then the central government and its constituency will have the cards to call the bluff of ineffective regionalized economic policy.

By now it should be clear why many actors will appreciate the potential virtues of such an experimentalist program yet not rush to embrace it. As in the firms, the attraction of improvement is always balanced by considerations of personal or institutional self interest. Radical decentralization by learning-by-monitoring methods is radical precisely because it maintains the accountability of the parts to the whole without allowing determination in advance of the eventual
distribution of authority and responsibility. It is as threatening in its way to the central instances who have to cede control as it is to local elites who might be confident of gaining it in the case of wildcat devolution of authority. If the experience of the firms is any guide, it is a measure of last resort.

My hunch and hope is that public authorities in their current consternation follow suit and resort to it. The US experience to which I referred has spurred an extensive debate about the importance of performance measurement as an instrument of decentralized coordination that can be taken as a step in this direction. Another may be the recent experience of a "new" European regionalization as exemplified by the British Training and Employment Councils and the Dutch regional development plans. These are less tied to the craft institutions of the districts and anchored, it seems, in forms of deliberate and measured goal setting of the sort under discussion here. In addition, it may be that the European Community's system of setting technical norms, which has begun to influence the articulation of worker health and safety regulation as well, may have already anticipated developments and created models of decomposing complex policy questions into smaller, locally accessible but nonetheless coordinated tasks (Eichener 1993). Paradoxically, the best way to find out is to begin organizing just the system of experimental regionalism proposed here.

But time is short. The surprising successes and chastening surprises of the last years have humbled us all. If we cannot confidently propose definitive answers to the great questions of economic change that confront us, we must at least be certain that we are fearless as individuals and institutions in learning and applying the lessons of our successes and failures. A citizenry rightfully alarmed at the confusion and hesitation of those who act in its name expect nothing less. Imagine their outrage if they discover that "regionalization" and "decentralization" turn out to be subterfuges by which the authorities and the elites evade their responsibilities?

**Footnotes**

[1] "Monteverde and Teece, studying the levels of vertical integration (internal production) in General Motors and Ford, have come up with an interesting suggestion: that one reason for a high percentage of internal production of parts is an institutional step to reduce exposure to opportunistic exploitation by
suppliers. They go on to surmise that such opportunism is not found in Japan because of the close cooperative relationships between assemblers and suppliers. As this study of Toyota, which is reputed to be the assembler with the closest cooperative relationships with its suppliers, has shown, these close cooperative relationships were realized under a system of evaluations of supplies by Toyota, which stimulated a competitive spirit among suppliers. It is not that Toyota was not liable to opportunistic exploitation, but that close cooperative relationships in themselves contain the means for preventing the occurrence of opportunism. The evaluation system brought into the close cooperative relationships is the important factor that raised the percentage of Toyota's reliance on external production and that brought about the tiered inter-firm relationships. Kazuo Wada, "The Development of Tiered Inter-firm Relationships in the Automobile Industry: A Case Study of Toyota Motor Corporation," in *Japanese Yearbook on Business History*, 1991, 23-47.

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