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THE ITALIAN
ALTERNATIVE:
FLEXIBLE ORGANIZATION
AND SOCIAL
MANAGEMENT

I: EMPIRICAL STUDIES

Guest Editor
GIORGIO INZERILLI

INTERNATIONAL STUDIES OF MANAGEMENT & ORGANIZATION

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FLEXIBLE ORGANIZATION AND SOCIAL MANAGEMENT**

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**THE ITALIAN ALTERNATIVE:
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II. THEORETICAL ANALYSES**

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MARIE-FRANÇOISE RAVEYRE AND JEAN SAGLIO

Localized Industrial Systems: Elements for a Sociological Analysis of Industrial Groups of SMEs¹

The great wave of growth and industrialization that France witnessed until the mid-1970s was, to a large extent, based on the growth of the large companies. Concentration, mergers, and multinationalization were the key words of corporate strategy. Today, in France as in the other industrialized countries, the share of those large firms in industrial employment shows a definite tendency to decrease. In the whole of the Rhone-Alps region, growth in industrial employment in the large national and transnational corporations has been negative over the last ten years or so. By contrast, the general situation of the small and medium-sized enterprises (SMEs) seems more favorable, at least in terms of employment. In the decreasing total of industrial jobs, their share has shown substantial growth.¹

A large part of the growing attention observers are paying to the functioning of this type of enterprise undoubtedly stems from this phenomenon. In the sociology of labor and professional relations, as well as in industrial economy, the models developed over a long period of time were essentially based on the observation of large companies. Today, their inappropriateness for the analysis of the functioning of SMEs reveals itself even more sharply. Size cannot be taken as an indicator of the intensity of phenomena, while functioning remains analogous: in other words, SMEs cannot be considered as small large companies.

The different bases of analysis of small and large firms

A key difference between small and large enterprises has to do with the relationship between the organization and its environment. What characterizes the large

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firm is its ability to dominate its environment and to include, as part of the management of the organization, the management of its strategic environmental relationships, such as market relations, acquisition of capital resources, management of employee relations, and of the relations with the government and the sources of scientific and technical knowledge.

In all these respects, the situation of small firms cannot be considered as the simple homothetic reduction of that of large firms. In managing environmental relationships, small firms are involved in a system of complex relations that include other small firms, external production partners, and groups including different firms. These complex systems of relations involve sets of actors that cannot be compared to a single production organization. Thus understanding the environmental relations of small firms requires analysis of these systems of firms.

We will use the example of the plastics industry in Oyonnax to show the importance of considering these "localized industrial systems" for the analysis of the relationships among these firms, their place in the labor market, and their management of technological innovation.

An ancient industrial system

The agglomeration of Oyonnax, which today has a little under 30,000 inhabitants, can be considered an industrial region of mono-activity. In the 1950s and 1960s, the city prided itself on being the plastics capital of Europe. However, the industrialization of this high valley in the southern Jura dates back to the time before the discovery of modern plastic materials.²

To give an account of the changes that have affected the industry of Oyonnax from the late 1930s onward, it is necessary to analyze several discontinuities that appeared in the social model in the period between the two world wars.

According to Oyonnaxians telling their own history, the main technological innovation came about already in 1936:

Léon Verchère, of old Oyonnaxian family, had gone to the Munich exhibition. Upon his return to the city, in a pub, he said that he had seen a press that could inject a new material: "trolleytul." He knew where to buy that material that would finally permit to work with a press. "There are loads of money to be made: no more sanders, no more corrugators, no more cutters, and no more turners; I need money." The money came in the person of Hannibal Zanco, an Italian who had come to France as a construction worker, and who had started his own business as a plasterer in the rue Anatole France. Together, they founded a new company: Injecta Plastic. After them, everybody went into plastics. Goujon and Cretin, small mechanical companies, manufactured the presses, and Rhône Poulenc produced an injectable acetate. Thanks to this innovation, Oyonnax industry had taken a new turn and had been launched in the injection of plastic materials.³

From a strictly "technical" point of view, it is necessary to observe that such an innovation does not strongly upset the way of thinking and the technical reasoning systems of the local craftsmen and industrialists. For a long time, they had been trying to inject the plastic materials available to them, but the injection pressure necessary for horn definitely seemed prohibitively high. As far as celluloid was concerned, in spite of numerous attempts, nobody had managed to avoid the explosion of this nitro-cellulose during the pressurized heating process. The problem seemed to be of a chemical nature, and therefore outside the local competence.

From the moment the new raw material was available and other materials appeared on the market, those who went into the new technology were numerous. The slowest to adapt, without a doubt, were the manufacturers of spectacle frames, who for a long time preserved the traditional technical system and the system for the division of work and the tasks related to it.⁴ During a relatively long period, therefore, the innovation was considered to be the common patrimony of the Oyonnaxians. Each contributed to it by tinkering with his press, by modifying the injection tubes, by improving the cooling of molds, by automating the control mechanisms of the production cycle. But, just as fast, these improvements were imitated, emulated, and transformed by others.

An innovation like this profoundly unsettles the organization of work in the companies and the distribution of qualifications and classifications. New crafts that were in strong demand and for which many workers were educated made their appearance—injectors and molders, molding mechanics who made the matrices, adjusters, and machine operators. Others, by contrast, tended to disappear—cutters, sanders, corrugators, simili-layers, carvers, etc. However, the traditional system of job shops and of tariff negotiations would last for a good 15 years more.

Studies of the modification of the system of industrial relations that took place in the years 1952–53 reveal that a wholly different factor, a more directly institutional and political one, was its cause more than the strictly technological factor. The communist mayor, René Nicot, vigorously denounced the German–Russian agreement in 1939, and this internationalist standpoint led him to resign from the PCF with great noise. After the liberation, some militants from outside were sent to Oyonnax to reestablish order in the local section, and in the CGT [communisted] union. An internal battle in the union followed, in which the traditional Oyonnaxian militants were accused of class collaboration because of their practice of tariff negotiations. The newcomers gradually stamped out this practice, and recommended a union organization that was more narrowly attached to the situation of the wage earners in larger-sized companies. The 1952 strikes that were organized by the injector-casters made it possible for them to win an important wage battle, and to reinforce the abandonment of the traditional negotiation practices.

It was from this period onward (and the result of this conflict) that the

Oyonnaxian companies really started losing their specific previous characteristics. With the "plastic boom," which started in the second half of the 1950s, the size of the companies started to increase, and the division of labor deepened.

Immigrant workers have always been especially numerous in this city of rapid growth. But their status was to undergo considerable change. The Italians who immigrated between the two world wars integrated themselves relatively easily, founding artisanal firms in the construction sector, and later on switching to the creation of plastic processing firms, like Hannibal Zanco, Salvy, and Pontaroli. The immigrants of the period of the plastic boom would continue to work in the repetitive operations of the injection-related jobs. Their proportion of the registrations in the chamber of labor as craftsmen was very low and limited to the less noble tasks; in particular, they were almost absent from the creation of artisanal firms with molding-casting mechanics.

It is also from this period that the development of the standardization-sophistication movement of injection machines stems. Design and modification of injection presses became the prerogative of specialized firms. Admittedly, some of them remained local, and the leading French producer of injection presses (presently affiliated with the Pont-à-Mousson group) was a firm from Oyonnax. Its integration in the local setting provides the producer with valuable information on the behavior of the plastic material produced by its presses, and on the characteristics of the material produced by competing firms. However, the client relationships that he maintains in this way do not have the same content as the relations the first producers had with their first clients during the war and up to the 1950s.

The historical and economic importance of what happened in the period from 1936 to 1955 in Oyonnax is far from negligible. Nowadays, plastic processing is fairly well spread over the French territory as a whole, but the city of Oyonnax certainly was its cradle. It was the start-up of this branch of French industry that happened then, and some of its present characteristics probably find their roots there. This is the case especially for its independence from chemical producers, the lower interest with respect to technical plastics and more sophisticated materials, and also for the economic structure of the industry, its explosion into numerous middle-sized units, the low number of engineers, etc.

The economic relations among firms: competition and cooperation

The similarity of both manufactured products and production installations, and even the analysis of the division of the market among the different firms, cannot serve to identify the real competition practices. Competition is, first of all, a set of practices considered to be legitimate, and it does not work out in the same way with a local firm as with a firm far away, on the other side of France, or with those who do not belong to the same informal network. These practices, by the way, may vary in time and geographically.

Although directly competing on the market for finished products, the Oyonnaxian craftsmen and industrialists have upheld traditions of collective mutual help in case of difficulties or need over a long time. Faced with the severe recession caused by the whims of women's fashion, the municipality intervened directly in the middle of the 19th century to provide work for the unemployed by having urban construction works executed, notably the construction of the church. The mutualistic movement is powerful, often working through groups of ideological or political nature.

Cooperation is not only defensive. It is also oriented toward strategies of development and adaptation of the technical potential of local industries. Electrical equipment, a cooperation for the production of celluloid, and a vocational training school, are among the collectively realized projects resulting from these cooperation practices before World War I. Also, this cooperation allows for the diffusion of innovation. Technical information about new raw materials circulates rapidly. It can be observed that process innovation is implemented by local mechanics, who then turn into machine manufacturers and commercialize their product in the various workshops.

The current Oyonnaxian industry, dominated by the plastic processing sector, has a low degree of concentration. Not a single company employs over 1,000 workers. If one-third of the industry's employees are employed in firms of over 100 workers, a little over 40 percent are in companies of between 20 and 100 workers, while the rest work in smaller firms. Firms are independent of each other: they are owned, since the time of their foundation, in the large majority of cases, by individuals or families, and takeover by groups or individual firms outside the city occurs very rarely.

Savage but disciplined competition

The entrepreneurs define the competition among the different firms first of all in terms of pricing. The fight in this field can be particularly "savage." The Oyonnaxians of the end of the 1950s, who manufactured plastic trinkets and toys that were sold at fairs ("anything for 1 franc"), engaged in ferocious competition. Nevertheless, technological know-how spread easily among them. The molds came from the same molding mechanism, and, when the manufacturer craftsman went to pick up the piece he had ordered, he did not forget to take a look at the parts that had been prepared for his competitors. Economizing on raw materials was one of the preferred means of increasing margins. Indeed, it was the producer of the raw material, i.e., Rhône Poulenc, that for fear of seeing clients go elsewhere, put things straight by threatening to refuse to supply those who did not respect the quality standards.

Simultaneously, the Oyonnaxian bosses do not spontaneously define themselves as directly competing with each other. Each one presents himself as having a specific market niche and a range of specific products. In the same way,

specialized subcontractors (e.g., the molding mechanics) claim to have their own group of regular customers. There is a silent code of good mutual conduct. Everyone more or less respects the other's "territories," even to the point of giving him information.⁵ A subcontracting industrialist explained in the following way how he sometimes refuses certain requests:

Everyone tries to retain his market and his customers. We all undergo the work jolts at the same time. Just the other day, when (X) came to see me to have me do a certain job, I phoned the colleague with whom he usually does business. I asked him: "Why doesn't X go to you anymore?" In fact, it concerned a client who posed serious technical problems, and I got to know it in that way.

There is, however, a tacit and nevertheless commonly admitted limit to these kinds of practices. He who does not "hold his niche," and whose position vis-à-vis the non-Oyonnaxian outside is getting weaker, runs the risk of soon seeing other local companies enter it. Production techniques do not really form a sufficiently high entry barrier.⁶ They are very much alike, and innovations are hardly really kept a secret. In most cases, the entrepreneurs interviewed judged patenting useless, because it does not offer effective protection.⁷

Resorting to subcontracting follows this system of competitive practices. Among these small and medium-sized firms, subcontracting has always been a well-established practice. On the one hand, there is specialized subcontracting, or having others execute special operations: the fabrication of molds, the preparation of materials, certain specific decoration and painting jobs, etc. On the other hand, we see subcontracting of capacity, which supports a network of *façonniers* (jobbers), the existence of which allows a quick response to market fluctuations. In this field also, commonly accepted rules that dictate behavior and that model relations exist.⁸ With the specialized subcontractors, we often observe customary relations, founded on ancient personal relationships.⁹ With the capacity subcontractors, the rules are perhaps more subtle and mixed. On the one hand, they allow the *façonniers* to have perspectives for the future in spite of their dependence. On the other hand, there is distrust, which prohibits a firm from dealing with a subcontractor who can be a potential competitor because of his size or his mastery of the production process as a whole.

The economic relations among firms, therefore, appear as a set of positions,¹⁰ roles, and norms that cannot be explained only by the nature of the production processes or by the type of products and markets. The ensemble of these economic relations serves to modulate the effects of competition, and to organize confrontations and conflicts. The respective positions are not permanently fixed in a stable and formal way. But their relative stability precludes the consideration of the market forces as the only determining factor. Analysis of the available elements leads to the consideration that the delineation of areas in which these

relations play is more restrictive than the definition of branches and sectors at the national level. Personal relations, local history, and traditions play a role that often is at least as important as the formal economic ties of capital ownership and association.

The local employers' associations frequently play an important role at this level. Their effectiveness and vitality are often based on the fact that they institutionalize pre-existing networks of knowledge. Their importance, notably in the regulation of subcontracting, is undeniable. Admittedly, the pre-war cartels and formal pricing and quota agreements that allowed all to survive and the best-performing companies to reap profits have disappeared. But the fact remains that 70 percent of the heads of companies employing over 50 workers deem it useful to conclude agreements with their competitors, and that three out of seven of them feel that this is one of the tasks of the employers' organizations. Furthermore, the employers' associations are also one of the vehicles for the diffusion of technical and economic information. It should be noted, by the way, that the reliability of the information they collect and distribute varies, and depends on the type of competition-cooperation that exists among firms. Where the membership fees for employers' organizations are based upon the production figures of the member companies, and one knows the high degree of evasion of payment, one is led to have one's doubts about the reliability of the statistics they produce! Finally, at the technical and technological level, the employers' organizations often maintain relations with technical centers (if they exist) and with the institutes for vocational training of workers.

Since the competitive strategy of a firm is often based, at least in part, on technological innovation, it is necessary to take into account these systems of economic relations among firms in order to understand the strategic significance of technological choices. There are cases when the company will try to keep its secret as long as possible. In this way, the PSA (Peugeot S.A.) group withheld as long as possible from its factories the installation of the injection press equipped with the ZMC system for the fabrication of the hatchback for the BX, to prevent the information being spread. By contrast, there are other cases where the company will give considerable publicity to its research and development efforts before they have even really yielded any results.

A specific industrial relations system (IRS)

So far we have shown that, in considering the economic relations among competing firms, it is possible to go beyond the simple analysis of their competitive situation and to consider instead their complex system of competition and cooperation, a historically constituted "social construct" of norms and rules of behavior. In the field of industrial relations, the same conclusion holds. Admittedly, the Oyonnax industry is not autonomous. It is part of a national system of industrial relations, itself segmented according to the economic branches, where negotiation

of collective agreements usually takes place. Because of this situation, the autonomy of a local system of industrial relations can only be very relative.

Nevertheless, even in the most classical definitions of the field, its object is not limited to the elaboration of the formal legal regulations that govern the wage relations. For there also are more informal rules and customs, knowledge of which is necessary to understand these very wage relations.¹¹ It therefore seldom happens that the management of employment is settled in national negotiations. This can be seen in the case of the civil service and the procedures related to it, but in France this still is a minority situation. So, many conflicts, whether open or latent, first of all have a local cause, before being the product of industrial relations at the national level.

Since it is the scene of administration of social statutes and remuneration policies, the industrial relations system is closely related to local social stratification. This is even more true in a medium- or small-sized town where "everybody knows everybody." One's position in the work system and one's social status in the town are strongly correlated, and Oyonnax is a good example of this. To the extent that it is also where the administration of legal qualifications and the pertaining remunerations takes place, the IRS is also closely connected to the strategies of competition and cooperation among firms. Because of these two factors, it is also related to the local political system, in that it allows the definition of solidarities and conflicts, and the emergence of social leaders. Viewed this way, the analysis of the industrial relations system, therefore, is one of the keys to understanding the establishment and the functioning of "local" social units.

Rather than tracing back in detail the entire history of this local system, we shall here attempt to illustrate, on the basis of some key moments in its history, the functioning of its different parts.

Piece-rate negotiations, basis of the traditional equilibrium

Until World War II, the local social system proved to be of remarkable stability in its principal components. Based on an ancient anti-clerical tradition that was more or less tainted with anarchism, associationism developed rapidly in Oyonnax and gave birth to mutualistic organizations and to *Bourse du Travail* ("Labor Exchange") type unionization. The majority of leading local citizens, whether of employee or craftsman status, or whether coming from the union movement, adhered to this trend. Many of the members of the municipal council at the beginning of this century can be found among the founding members of the cooperative "l'Oyonnaxienne," a company for the production of celluloid. René Nicot, mayor between the two wars, was a union leader who took the strike movement to this same company just before the start of World War I.

The main role of industrial relations is, as we have seen, the negotiation of tariffs. This form of regulation allows harmonization of the competitive conditions among companies, whatever their size. Furthermore, it can easily be inte-

grated in a social system where mobility is important. Between the piece-rate worker in a workshop, the *façonnier* (jobber) who subrents space in someone else's building, the small craftsman with his own workshop, and the small industrialist who recruits partners with skilled backgrounds like his own, the differences in social status are minimal every time.¹² In the same way, the seat of the union was also the place to elaborate the tactics for piece-rate negotiations with the employers' representatives, and the place where craftsmen and *façonniers* got their information on the market situation and order possibilities.

From that time, the presence of many foreigners in the city and in the industry¹³ did not break this local conflictual unity. Certainly, in the field of urbanization, they fulfilled a special function by constructing "pioneer frontiers" that moved the city limits and showed its development. Within the industry, many of these "pioneers" found themselves equally integrated in the upward mobility movement. They became entrepreneurs, looking for development opportunities, as did the Oyonnaxians of old family. This can be seen very clearly in the case of the Italian Hannibal Zanco, who, with an Oyonnaxian of old local family, became co-founder of the first company to use injection presses. We nevertheless have to remark that, even in that era, foreigners seem less present in the related sectors of mechanics and machine manufacturing, which was almost monopolized by "pure" Oyonnaxians and a few families that had come from the neighboring plateau of Retord at the turn of the century.

The dynamic stability of this system is even more remarkable, because at various occasions it was confronted with important transformations. In the area of production techniques, it went from the processing of wood and horn, via celluloid, to that of rhodoid and acetate derivatives. In the more economic field, it had to face strong market fluctuations, especially during World War I and during the 1930s. But perhaps we should reverse the proposition, and state that it is exactly because the system is flexible and allows for mobility that it encourages the development of innovations and permits the adaptation of the Oyonnaxian community to changing and difficult external conditions.

The importance of this local system for the administration of industrial relations and the involvement of different authorities in it was demonstrated by the behavior of the new authorities at the time of the liberation of the city by the forces of the Resistance. One of the very first measures they took was to call a meeting of the representatives of industrialists and workers to determine the new norms for work and salaries. Very rapidly, they also worked out other measures of the same order, and notably limited registration with the chamber of crafts; only those who had been deported or had gone into the Resistance could obtain a license.

Conflicts and changes in the early 1950s

As we have seen, the major change in the local industrial relations system happened at the beginning of the 1950s, and was a consequence of a change in

strategy of the local majority union. From the *Bourse du Travail* ("Labor Exchange"), the union became a more "modern" organism of demand and protest. The repercussions and developments related to this change were numerous. Concerning social structure, we can trace back to this period the reinforcement of social stratification and the decrease in mobility. The new industrial system was in effect founded on a larger social distance between bosses and workers. The new waves of immigrants who increased the population of the city during the "plastic boom" remained confined to inferior status and roles. They were operators that local unions were having a hard time taking charge of, at least until 1968. Gradually, the French workers abandoned the work stations on injection presses, and specialized in more "noble" tasks, especially those in the maintenance and design of machines and molds.

Possibilities for social mobility appeared to be in decline. Various indicators confirm this. In the first place, a stratification parallel to the path of creation of new business can be observed. Native Oyonnaxians founded artisanal firms in the metallurgical sector that were dependent on the spectacle manufacturing industry. The French born outside the Oyonnax canton continued to found companies in the plastic-processing sector proper. Finally, those born outside of France rarely created their own enterprises, and if they did so, it was in marginal sectors such as decoration or assembly of various products (artificial flowers, toys, etc.). Second, there also was a certain stabilization of positions. Of course, the particularly lively growth of the sector in general was translated into vigorous growth for many establishments. Nevertheless, the majority of those who are of considerable size today (in relative regional value), are companies whose foundation preceded this period of the early 1950s. Thus, it was as if the conflict had, in a way, frozen the individual positions, placing industrialists on one side and workers on the other, and reserving a special place for the qualified French workers.

The connection with the local political system

The local political disagreements stemmed from this "new social fact." At the level of the local elections, the 1950s were a period of reranking. Challenging René Nicot,¹⁴ who had denounced the German-Russian pact and resigned from the PCF, the extreme left set itself apart from the traditional local left, and reconstituted itself around the French workers, often members of the CGT, while progressively integrating the ever-growing number of civil servants. Once allied to the new socialist party, the communists won the municipal elections of 1977, and their leaders came from these new ranks. The moderate left (the refuge of craftsmen and traditional workers) did not succeed in renewing itself after the disappearance of René Nicot. Beyond the leadership conflicts that were tearing it apart, it felt stuck between its traditional solidarity with an extreme left that did not cease to foulmouth it, and the appearance of administrators and leading

citizens from the strongly growing ranks of the new industrialists. The latter, regrouped on a list that was headed by a leading citizen of the center-right wing, directed the municipality during three consecutive mandates, until 1977. In 18 years, these representatives of liberal capitalism administered urban growth in bouts of big interventions, all the while demonstrating a relative disinterest toward purely industrial actions. The return of the left to the mayor's position, from 1977 to 1983, certainly was related to local demographic evolutions, but it was also due to the fact that at that time it was the only party to propose an industrial project in a city worried about the consequences of the crisis.¹⁵ If it was swept away in 1983, it was because, facing it, new leading right-wing citizens had appeared, who often were commercial managers of modernized enterprises, gathering the votes of those worried by governmental economic policies.

An element of economic strategies

But, in the field of industrial relations, strategies also get expression inside the profession itself, through the economic strategies of competing groups of companies. Negotiating collective agreements can thus become an important stake in the conflicts between rival employers' groups. During the "plastics boom," the relative value of Oyonnaxian wages, which had risen steeply immediately after the strikes of 1952–53, decreased rapidly, at least for the hourly wages of the molders (press workers). More than the hourly wage proper, it was the possibility to "do lots of hours" that attracted immigrant workers to Oyonnax; "work schedule at your discretion" was posted in many job offers of the period.

Such competition was hard to counter for the non-Oyonnaxian plastics processors, many of whom hired female personnel to work on the presses and encountered more resistance to long hours and to neglecting certain regulations. Further, the appearance of injection screws forced them to invest in the renewal of the machine park. The reaction of the non-Oyonnaxian entrepreneurs, therefore, consisted of opening negotiations for a new collective agreement, by announcing to their union counterparts that they would rapidly seek to obtain extension of the signed agreements. The same scenario was repeated toward the end of the 1970s, for the negotiation of the reduction of working hours. The non-Oyonnaxian entrepreneurs would at the time agree to sign a wage indexation clause that was based upon the wage in use well before the opening of negotiations. The impact on the Oyonnaxian firms, which still had lengthy work schedules, could not be compared with that on the non-Oyonnaxians, where schedules had frequently come down to 40 hours a week.

Faced with such constraints, it seldom occurs that the director of a single SME can put into place effective response strategies. Particularly in the field of employment policy, factors external to the company are often almost as important as internal tactics and decisions. Thus, we have seen that the massive in-

crease in the use of dequalified immigrant workers between 1955 and 1975 was a collective strategy of the Oyonnaxian plastic processors. The urban growth and public utility policies of the municipality at that time were perfectly coherent with this strategy.

Over the last several years, however, it has become less and less likely that this solution will enable the city to assure the growth of companies and their competitiveness in comparison to the low-cost labor countries and to their better-equipped competitors. This is due to technological changes and the introduction of numerically controlled machines, on one hand, and to the outcome of industrial negotiations at the national level on the other. "Even if you do overtime all the time, you can't make the salary you used to, with an old machine," say the weary old craftsmen of Oyonnax. The hiring of plastics technicians and engineers thus becomes a necessity. Sure, the ancient vocational school, having become a national technical school, is one of the few places in France that provides such an education. Nevertheless, the number of graduates from this school hired by local companies is very low. The demands in salary, career opportunities, and responsibilities of these workers in fact impose an important transformation on the companies' internal organization of work and power. A good number of the largest firms are today engaging in such changes, and the transformation of the traditional SARLs (limited liability companies) into SAs (incorporated companies) indicates this. Furthermore, the integration of these workers and their families in the social setting of Oyonnax poses cultural and housing problems, for which an appeal for action to the local public authorities is necessary.

Such an evolution cannot but contribute in its turn to the transformation of the industrial relations system. Companies that resort to the employment of such technicians and specialists are not only the largest ones. They are also, and significantly, those where the relations with the local union have reached the highest degree of institutionalization, where there are union representatives within the company, and where the workers' representative bodies function in a classical way.

Oyonnax as a local industrial system

Through the set of commercial and financial relations that the medium-sized companies of a specific branch and region maintain with each other, they are part of a system of specific practices. It defines the norms of both their competition and cooperation (i.e., subcontracting), of their degree of dependence, and of the division of markets. In the same way, one can distinguish in the set of industrial relations the existence of formal agreements and informal rules that deal with the characteristics of employment, vocational training, the remuneration of the work organization, and of matters of technical or hierarchical legitimacy.

Among other things, the existence of these normative systems allows a better definition of the borders between the different industrial sectors and regions con-

cerned. To stay with the example of Oyonnax, these systems make it possible to incorporate those companies that may not seem to belong to the plastics processing industry according to the classical economic classification. The Oyonnax setting also contains molding mechanics who come from the precision mechanics sector, machine manufacturers, cardboard manufacturers, and even an iron mongery, the roles of which in the functioning and dynamic of the total should not be underestimated. This process allows one to fix the geographical borders of the "local" system that is constituted in this way. A workshop started in Bourg by an Oyonnax company is clearly a strategy of "delocalization"; the environment, industrial relations, and employment systems there are, in effect, very different.

Other data and other dimensions of analysis can complete the characterization of these local industrial systems. We have seen several times the importance of the role of relations with the public powers (and notably with the local institutions, municipality, and district) in the functioning of the Oyonnaxian system. The integration and administration of the local administrative political system,¹⁶ therefore, is one of the stakes of the local industrial system. In the history of Oyonnax, urban policy-making, and the naming of the persons in charge, is an element that really has to be added to the understanding of the description of general coherence in the system's functioning. The socialist and centrist craftsmen of the 1950s, who elaborated a project of important urban expansion without executing it, were succeeded for an 18-year period (from 1959 to 1977) by the head of a cardboard manufacturing company, the industrial activity of which was closely tied to the plastic industry. His municipal action focused on the administration of the growth of worker employment. In response to the crisis that affected local industry, the left-wing list that promoted a new cultural and industrial project won the 1977 elections. The new policy consisted of constructing the basis for the reception of plastics technicians and engineers. In 1983, a new right-wing team was elected on a program of opposition to the centralist policy of the national government, and of recrimination against the costs of the cultural initiatives of the preceding administration. In this confrontation, the candidates from the left came predominantly from the ranks of the civil service, and their opponents were largely managers or technicians from private enterprise. But the principal debate, and the essential stake in the battle, remained the methods of municipal action in local industrial matters.

The character of technological innovation management is also influenced by the functioning of the local industrial system. In fact, it is at this level that one can grasp the social significance of different technological strategies of the various actors. Particularly, one can understand the connection between the diffusion of technical information and the preservation of "tricks" of production. The following dialogue with the head of a local company may illustrate this:

— You said that all of you knew each other, but you were still all competitors at the same time?

- In Oyonnax, competition is a big word, it has never existed.
- What do you mean?
- We have always been of service to each other.
- Do you always know everything the others do?
- Less now, since some ten years ago, things have changed. But, some fifteen years ago, there wasn't a secret for anyone.
- But didn't you steal each other's markets?
- Yes, of course, but that was a kind of productivity.
- And competition really a matter of pricing.
- Right [. . .] everyone took care of himself.

In this way, the relations of competition and cooperation, industrial relations, the relations with public powers, and the management of innovation and techniques constitute the set of dimensions that shape a local industrial system.

To grasp its functioning, one has to take care not to isolate these dimensions from each other. On the contrary, what constitutes the unity of the system is the strategic system that ties together the relations on these different levels among the principal actors of the whole. Indeed, the strategies concerned are always complex and connect the dimensions to each other.

Unique example or archetype?

In this framework of analysis, the case of the Oyonnax industry has appeared as an archetype, in that the various definitions of the social groupings concerned are strongly congruent. This seems to be the case in other areas that are organized around single-activity industrial systems structured by SMEs. Such a scheme of analysis can nevertheless be used even in those cases where several types of industries exist locally.¹⁷ It can also be applied in the case of urban systems that are less restrictive than those of the average city.¹⁸ In those cases, the importance of the collective management of relations with the local public powers diminishes, and the industrial system more resembles a localized network of firms.

Conversely, when the size of the companies under consideration increases strongly, and, as a consequence, their number decreases, the local industrial system can be reduced to a single corporation. This quite often is the case in large companies that end up integrating into their own operations the management of industrial relations, employment, public relations, and of sciences and techniques. At the level of local analysis, we find the case of company towns, which have often been studied by historians. The effort we made aimed to go beyond such specific cases, in order to develop, through a broader definition of systems of social integration through work, an understanding of industrial dynamics that would not lead to the systematic elimination or underestimation of what goes on in small-scale organizations, organizations whose importance we recognize today, in terms of employment as well as in terms of technological change.

Notes

1. The research on Oyonnax presented here has been done in the framework of the Lyon Group of Industrial Sociology (GLYSI-CNRS), first for the ATP "Croissance Urbaine" (urban growth) of the CNRS (National Center for Scientific Research) (Bernard Ganne, Hughes Puel, and Jean Saglio), and later for its STS program (Jean Saglio, Marie-Françoise Raveyre, and Pierre Garrouste).

2. For economic data on the past development, one can refer to R. Lebeau, *La vie rurale dans les montagnes du Jura méridional. Étude de géographie humaine*, Institut des études rhodaniennes, Lyon, 1955. The more political and historical data are presented in S. Barcellini, *Oyonnax, la cité du peigne. Histoire d'un boom économique*, DES, Lyon, June 1974.

3. We have reproduced here the history as told by Mr. Chevassus. More than its anecdotal and historical precision, which is impressive, the shape of the story itself is interesting, in that one often finds it with other sources. In a way, it is one of the "founding myths" of local industry.

4. But one also has to note that the development of this particular industry in Oyonnax was recent, since its introduction there also dates from the crisis of the 1930s.

5. Among the Oyonnaxian heads of companies interviewed during the investigations, 13 out of 20 confirmed that they had ceded markets to colleagues, and in 12 of the cases this concerned exclusively Oyonnaxian colleagues.

6. The production techniques, in the generic sense of the word, are indeed very closely related: extrusion, injection, and blasting. But every entrepreneur also has some trade secrets, some "tricks" that are a lot less easily communicated.

7. Few entrepreneurs affirmed having a patent policy, and companies that did not have one were among the more important ones most of the time. The others quite often explained their non-protection by international competition: during one interview, an entrepreneur showed us the pictures in a catalogue distributed by some southeast Asian companies. On some of them, the marks of origin belonging to his own company were clearly visible. Taking into account the delays necessary for the manufacturing of the molds and for commercial diffusion, he therefore estimated the time during which he was ahead on his foreign competition to have been reduced to about a month. Also, there was not a single patent that could really protect him (in this case, it concerned a subcontractor specialized in the spectacle industry).

8. From 1948 to 1957, in the handmade spectacle industry:

- With how many were you?
- There were six or seven of us, but there were a lot of jobbers. Oyonnax was full of small workshops.
- These jobbers, did you know them?
- They were my friends.

(excerpt/extract of an interview with an entrepreneur who nowadays employs some 20 workers).

9. Thus, it often happens, especially in small companies, that the boss refers to "his" mold during the interview.

10. "Positions" is used here in the sense that E. de Banville and B. Vennin gave to it in *Procès de production et changement social*, CRESAL report, CORDES, 1975.

11. We use here the classical definition of J. T. Dunlop, *Industrial Relations Systems*, Southern Illinois University Press, 1958. Such informal rules and customs are well anticipated in this classical definition, which includes an aspect of "ideology": "The ideology of a system of industrial relations is the set of common ideas, that defines the role and the place of the others (. . .). Every actor in an industrial relations system has, as one might

say, his own ideology, be it the employers, the workers, or the public institutions. In order to have a system, it is necessary that these ideologies are sufficiently compatible and coherent to produce a set of ideas that can attribute a socially useful role to each actor."

12. When reconstituting the history of the company he is directing today, such a head of a small local company uses the same word *piécard* to refer to both the external *façonniers* and to the blue-collar workers inside the organization in the 1950s.

— Who were the permanent employees in your shop?

— They were *piécards*, but they were not allowed to work for others, and the materials were mine. They were paid a piece rate, and work hour schedules were free.

13. On the history of foreign immigration to Oyonnax, cf. Barcellini, *Le logement des travailleurs immigrés: le cas d'Oyonnax*, DES de géographie, Lyon, 1976.

14. René Nicot died in 1950 after having recovered his mayor's chair. But even today, certain old militant communists still drop the accusation of that time—"the traitor Nicot"—during the interviews.

15. The preceding mayor, an industrialist and leading citizen of the center-right, did not put up his candidacy for the 1977 elections. Two competing lists split up the right-wing votes, and he himself, in an interview that appeared in a local newspaper, affirmed that he did not have a successor. Moreover, he did not hide the fact that he recognized the able administrative qualities of the communist leader of the left-wing list, who was already general counselor of the region.

16. We here refer to the definition given by P. Gremion, *Le pouvoir périphérique. Bureaucrates et notables dans le système politico-administratif français*, Éd. Seuil, 1974, even though, in this work, the system of "production" of social leaders is viewed from a slightly different angle.

17. Cf. the works of B. Ganne on Annonay, *op. cit.*

18. In the range of studies that have been done on "industrial relations and innovation of production in SMEs," we have applied the same scheme to the regional industry of medical materials, on the one hand, and to certain subsectors of the mechanical industry in the agglomeration of Lyon, on the other.