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Local Cultures and International Influences among an Italian Group of Management Practitioners after the Second World War

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This essay analyzes the creation and evolution of an informal network of managers, engineers, and technicians that influenced the modernization of management practice and culture in Italy between the late 1940s and the 1960s. One level of analysis deals directly with practices; the second describes the channels and the forms through which business knowledge spread during the postwar decades. On the first level, I analyze the re-engineering processes in two leading Italian light manufacturing industries, Olivetti and Necchi, explaining their characteristic technological and institutional circumstances and the ways in which they attempted to adapt earlier versions of scientific management learned in the interwar period to new economic and technological conditions. On the second level, I trace the creation of a network for diffusing this information via published journals and public seminars and through foreign connections originating primarily in the institutions linked to the U.S. Technical Assistance and Productivity Program. My work allows us to identify the carriers of Americanization and, moreover, to understand how they acted and whether or not they succeeded.

The aim of my dissertation is to analyze the creation and evolution of the network of managers, engineers, and technicians that played a leading role in innovating management culture in Italy between the late 1940s and the 1960s. The research follows on from my undergraduate thesis, which was a biography of Gino Martinoli, an Italian engineer who began his activities in 1924 working at Olivetti, the main Italian producer of typewriters.[1] Martinoli was chief engineer at Olivetti until the end of the Second World War. Then, during the second half of the 1940s

[1] For a brief summary of Martinoli's life and work, see Carlo D'Amicis and Mirella Fulvi, *Conversando con Gino Martinoli* (Milan, 1991).

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until 1956, he worked at Necchi, the largest Italian sewing machine company, where he led a complete re-engineering process.

Based on that study, developed primarily from documents in Martinoli's personal archive, I identified three crucial experiences in Martinoli's life: his work at Olivetti, his experiences at Necchi, and, from the end of the 1950s, his public role as a disseminator of management practices, carried out through two main channels: publications in business journals and the promotion of business education. These activities led Martinoli to propose plans to reform the entire national education system and to take an interest in the social sciences more generally.

These experiences had some common elements: all were attempts to create or promote more efficient and flexible business structures, and all were based on the assumption that a thorough reconsideration of the role of management and of the tasks of leadership was needed.

The goal of my current research project is to analyze more deeply some subjects that emerged from my previous work: the introduction of scientific management principles into Italy between the two world wars; the subsequent diffusion of productivity and "human relations" philosophy through the U.S. Technical Assistance and Productivity Program after the Second World War; and, finally, the rise, in the same period, of a new vision of economic and social development based on the belief that social progress and technological progress were tightly interrelated and that reformers, managers, and all those dealing with social change had to approach the social body scientifically to avoid the tensions inherent in economic development and technological transformations.

I am analyzing these subjects from a particular point of view: I am trying to trace, insofar as possible, the informal network of technicians and management practitioners with whom Martinoli collaborated, both during his work experiences and during his subsequent public activities. I am trying, moreover, to evaluate the balance between the local and international influences acting on these people. In this way it may be possible to develop a more profound understanding of the processes of the diffusion of managerial and organizational culture.

The dissertation will be divided into three parts: the first will deal with the years immediately after the Second World War and the first contacts among the members of Martinoli's network, principally through the institutions linked with postwar reconstruction; the second will be centered on practices, particularly on the Necchi case; and the third part will deal with the diffusion of business knowledge during the 1950s and the 1960s, mainly through business journals. Although only the first part of my research is finished, I will indicate some preliminary results for the other questions as well.

Immediately after the Second World War

In 1945 Martinoli became a member of the Consiglio Industriale Alta Italia (CIAI—the Northern Italy Industrial Council), and between 1946 and 1948, after having left Olivetti, Martinoli worked at the Istituto per la Ricostruzione Industriale (IRI—the Institute for Industrial Recovery), a public group that

conglomerated several firms belonging to different industrial sectors. In 1946 he was engaged in Milan as a commissary for IRI's manufacturing sector in the north of Italy, with responsibility for several firms, including important northern manufactories such as Alfa Romeo, Motomeccanica, Filotecnica Salmoiraghi and Sant'Eustachio. In this role, he was under the direction of both the central board of IRI in Rome and the CIAI—now the Sottocommissione Industria Alta Italia (SIAI—the Northern Italy Industrial Subcommission).[2] SIAI attempted to organize the whole Italian industrial recovery by devising import and distribution plans for raw materials and goods obtained via the United Nations Relief and Rehabilitation Administration.

The continuous pressures exerted by both the entrepreneurs' association, Confindustria, and by the trade unions frustrated the technocratic planning of the SIAI. Because of the difficult political situation and the social tensions of the postwar era, any reform plan or, indeed, any attempt to modify the industrial structure faced fierce opposition. Although Confindustria often used SIAI services, it accused the SIAI of an illiberal effort to direct the national economy and launched several public campaigns against SIAI activities. On the other side, the unions were afraid that decisions to close old and unproductive factories would increase unemployment rates.

All these obstacles, capped by the attempts of political forces, especially the Socialist Party and then the Christian Democrats, to co-opt the technician members of the SIAI, considered as representatives of the whole middle class, resulted in the scaling down the initial reform and planning goals that had been the commission's basis.[3]

In spite of this lack of success, the SIAI accomplished one important indirect goal: the studies, inquiries, and economic surveys it produced created an important basis of knowledge for all the practitioners who joined its sessions. Moreover, the creation of such commissions brought technicians, engineers, and managers from different situations with different experiences into contact and created the basis for further diffusion of business knowledge.

During the two years Martinoli spent in Milan, his main activity was trying to create, with other members of the IRI office in that city, a group dedicated to the study of the best methods to recover the productivity levels of the prewar

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[2] CIAI was the original name of SIAI: the name was changed in 1946, a few months after the Allied Military Government transferred the northern Italian provinces to the Italian government. On the activities of SIAI, see Giuseppe Maione, *Tecnocrati e mercanti: L'industria italiana tra dirigismo e concorrenza internazionale (1945-1950)* (Milan, 1986), and Luigi Ganapini, "I pianificatori liberisti," in *Gli anni della Costituente: Strategie dei governi e delle classi sociali*, ed. Luigi Ganapini et al. (Milan, 1983), 77-127. More generally, on the institutions linked with Italian postwar reconstruction, see: Mariuccia Salvati, *Stato e industria nella ricostruzione. Alle origini del potere democristiano, 1944-1949* (Milan, 1982) and Camillo Daneo, *La politica economica della ricostruzione, 1945-1949* (Turin, 1975).

[3] See Ganapini, "I pianificatori liberisti."

period and, toward that end, the best ways to reorganize the whole mechanical sector.

The office created for that purpose began a number of wider surveys of organizational practices, in particular of the practices directly linked to shop floor productivity—such as the piece-work systems adopted in Italy and abroad in the prewar period—in the belief that the war had destroyed not only physical production facilities but also managerial cultures. Martinoli and his colleagues were particularly interested in restoring the belief that management was a scientific practice, because in their opinion that was the only way to restore normal and democratic industrial relations, based on bargaining with the unions.

Determining what was scientific—for example, for the system of time measurement and the description of methods (both managerial tasks)—and what was the bargaining object—for example, the definition of piecework rates—was considered the best way to make the system acceptable to the workers. From this perspective, the method used was less important than the achievement of agreement between workers and management through the application of scientific principles. Taking, for example, the piecework system, the principal points of reference for Italy were the Bedaux system, which several Italian firms had adopted before its abolition in 1934[4], and the method adopted at Olivetti.[5]

The Bedaux system, in which tasks were divided into units of work and rest and assigned an optimal time for completion, had aroused widespread protest. But IRI's officers contended that the negative and anti-democratic reputation of the Bedaux method resulted more from the uses management had made of it than from its own characteristics. The Olivetti system, in contrast, tried to revalue the human factor. It was based on a form of bargaining that included an unusual mediation element. For each task the calculation of piecework times was made using a particular worker, called an "*allenatore*" (literally: trainer). This process provided a sort of living evidence of the scientific nature of the calculation itself, a living demonstration of the possibility of doing a certain job in a certain time. Two other characteristics of this method were the establishment of a so-called minimum time, on which, through the calculation of error coefficients, the "average time" was based and, as in other systems, the

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[4] About Italian labor organization between the two world wars, see Duccio Bigazzi, "Modelli e pratiche organizzative nell'industrializzazione italiana," *Storia d'Italia,* Annali no. 15 (Turin, 1999), 895-994, and Giulio Sapelli, *Organizzazione, lavoro e innovazione industriale nell'Italia tra le due guerre* (Turin, 1978); in particular, about the adoption of the Bedaux system, see Stefano Musso, *La gestione della forza lavoro sotto il fascismo. Razionalizzazione e contrattazione collettiva nell'industria metallurgica torinese (1910-1940)* (Milan, 1987).

[5] See Cesare Musatti, "Studio sui tempi di cottimo in un'azienda metalmeccanica," in *Psicologi in Fabbrica: La psicologia del lavoro negli stabilimenti Olivetti*, ed. Cesare Musatti et al. (Turin, 1980); Luigi Vercellone, "Studio delle lavorazioni e determinazione dei tempi," *Tecnica e organizzazione* 1 (March 1937): 24-31, and Fulgido Pomella, "Studio dei tempi e determinazione dei cottimi," *Tecnica e organizzazione* 1 (July 1937): 25-31.

progressive slow down of incentives with the increase of worker's fatigue to prevent the worker from suffering excessive stress.

These two systems, with others less widespread in the Italian context, were at the basis of the project aimed to increase productivity.[6] The result was the proposal of a hybrid method that included some characteristics of the Olivetti one, but omitting its main peculiarity, the use of the *allenatore*, considered too pragmatic a tool to resolve conflicts. The proposed system, however, kept the calculation of the combination minimum time/average time and the decrease of incentives related to the excessive increase of strain.[7]

Unfortunately, there is no evidence in IRI's archive of the implementation of this system in factories, so it is not possible to analyze the way practical problems were resolved or whether the system was in fact adopted. The only thing we can stress is that the subsequent reorganization of Necchi, where Martinoli started working in 1948, began from the conclusion of the IRI's study group.

A few other points should be emphasized. First, IRI's piece-work study led to a second implicit conclusion: low productivity rates and high production costs resulted not only from the lack of scientific method in calculating piece work and in designing job methods, but also from a more severe problem: the lack of formalized organizational principles and practices. This happened not only at the shop floor level, but also at the managerial level in regard to the coordination of functions, planning production and sales, and accounting and budgetary control.

Aware of this managerial backwardness, Martinoli and the others proposed the creation of a new office for the reorganization of IRI's light manufacturing firms.[8] The IRI's Mechanical Sector Organization Office (the name proposed), would have assisted the boards of individual enterprises in studying their organizational problems and managerial failures and would have suggested solutions to increase productivity and set up more efficient organizational structures. The Office would initially focus its activity on the production sector, because it was the more urgent problem after the war's devastation, but subsequently it would consider managerial problems in a broader perspective.

This staff service was never created. Martinoli's decision to leave IRI for his new appointment at Necchi probably was caused by the inactivity of IRI's

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[6] See Gino Martinoli to Silvio Leonardi, 8 Oct. 1946, s2.10-f19.3.15—"Corrispondenza dell'ing. Silvio Leonardi", IRI Historical Archive, Rome; the letter has an attachment listing works on time and methods study. Among the foreign titles were Frank Gilbreth and Lillian Gilbreth, *Applied Motion Study* (New York, 1917); Dwight Merrick, *Time Studies as a Basis For Rate Setting* (New York, 1919) and Harold B. Maynard and John L. Stegemerten, *Operation Analysis* (New York, 1939).

[7] See Silvio Leonardi to Ing. Cesati, 6 Nov. 1946, s2.10-f19.3.15—"Corrispondenza dell'ing. Silvio Leonardi," and Gino Martinoli to Direzione Generale IRI, 1 Jan. 1947, s2.13-f8.2—"Ing. Martinoli . Varie," both in IRI Historical Archive.

[8] See "Istituzione di un Ufficio Organizzazione Aziende Meccaniche IRI," Jan. 1947, s2.10-f28.3-P13, IRI Historical Archive.

central board on the crucial problem of organization.[9] But what is important here is the decisive appearance of the problem of organization in Italian managerial debate.

It was a point that had been discussed in previous years, particularly at Olivetti, but after the Second World War a wider portion of Italian management began to consider the problem, not only from a technical point of view but also from the broader perspective of general management.[10] This outlook remained characteristic of the attempts to spread, promote, and improve management knowledge in the following two decades. Considering the absence in that period of other carriers of institutionalized management knowledge, at least at the cultural level, these attempts should not be undervalued.

It is also important to stress the composition of the proposed Mechanical Sector Organization Office. The few members suggested were a sort of exemplification of the main components that later constituted the group my research tries to trace.

Martinoli and one of his collaborators, Giulio Borrello, both coming from Olivetti, represent the technocratic component of the network: engineers, technicians, or managers, often coming from Olivetti or IPSOA, the business school founded by Olivetti and Fiat in 1952. They had great confidence in the scientific method, which they believed could fill the managerial gap that was afflicting Italy and contributing to its economic and technological backwardness.

Another component consists of minority members of the Left Wing, represented by the engineer Silvio Leonardi, who, often in contrast to the official political direction, avoided ideological statements and in the 1950s proposed a reinterpretation of the Italian transformation based on an understanding of its peculiar context.[11] On the basis of this reinterpretation, he proposed an alliance between workers and technicians, considered the "productive" components of the firm. He saw management and business knowledge as types of Marxist "productive forces" and, consequently, an element that should not be rejected by workers. Moreover, the adoption of modern managerial and production techniques was for Leonardi the only way to move toward economic and social progress. He therefore believed that the unions had to deal with the transformations those techniques implied, had to understand their nature, and had to learn to negotiate over them.[12]

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[9] Martinoli often complained about the conduct of IRI's central board, which often focused on preserving political balances to the detriment of the efficiency of enterprises. See, for example, Gino Martinoli to Enrico Basola, 7 March 1947, s2.13-f8.3—"Corrispondenza con IRI Roma. Semipersonale ing. Martinoli," IRI Historical Archive.

[10] See Giulio Sapelli, "Gli 'organizzatori della produzione' tra strutture d'impresa e modelli culturali," *Storia d'Italia,* Annali no. 4 (Turin, 1981), 589-696.

[11] For the biography of Leonardi, see Silvio Leonardi, *Appunti sulla crisi del movimento comunista: Un abbozzo di interpretazione* (Milan, 1991).

[12] See Silvio Leonardi, *Progresso tecnico e rapporti di lavoro* (Turin, 1957).

Finally, we have elements from the Left Catholic wing, embodied here by Giorgio Ceriani Sebregondi.[13] He was not a technician, and after the IRI experience he devoted himself entirely to social research. For his vision of sociology as an applied science and as a practice consistent with development, and for his idea of development itself, which he viewed as a process promoted by a self-aware social body, we can put him in the group with Martinoli and Leonardi.[14]

The common element that linked these three heterogeneous components together was the strong belief that social development was determined by economic progress and technological innovation and that these transformations had to be governed by a trained ruling class, skilled in both technical and human sciences. They shared the opinion that the only way to avoid social distortions was to make the entire social body aware of the interrelations existing among the three elements: economic progress, technological innovation, and managerial leadership.

At a company level this meant improving the qualifications and culture of both management and workers and establishing a dialogue with unions free from ideological constraints. In this context, a meaningful step, in the following years, would be the rejection of naïve, ideological, and paternalistic interpretations of the "human relations" message.[15] At a more general level, it produced a commitment to spread business culture through journals and business schools and the attempt to circulate a vision of social development respectful of the human and social implications of technological and economic progress.

The Necchi Case

In 1948, Martinoli began working at Vittorio Necchi, a medium-size light manufacturing industry that was the main Italian producer of sewing machines. In those years there were about ten Italian sewing machine producers, all located in northern Italy, near Milan; they were small-size industries, except two of them: a Singer Sewing Machine plant in Monza and the Necchi plant in Pavia.[16]

When Martinoli was hired at Necchi, the company was expanding its markets in Europe and also in the United States through a vendor established in New York. Consequently, Necchi needed to increase its production and to enhance the quality of its products. This basically meant increasing productivity, standardization, and the efficiency of production processes and implementing

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[13] For the biography of Giorgio Ceriani Sebregondi, see Carlo Felice Casula, *Credere nello sviluppo sociale: La lezione intellettuale di Giorgio Ceriani Sebregondi* (Rome, 1991).
[14] See Giorgio Ceriani Sebregondi, *Sullo sviluppo della società italiana* (Turin, 1965).
[15] On the general paternalistic adoption of "human relations" in Italy, see Bigazzi, "Modelli e pratiche organizzative nell'industrializzazione italiana," and Luigi Guiotto, "Produttività Ideologia Human relations: Linee di lettura," *Classe* 13 (Dec. 1982): 273-308.
[16] See Stanislaw H. Wellisz, "Studies in the Italian Light Mechanical Industry: II. The Sewing Machine Industry," *Rivista internazionale di scienze economiche e commerciali* 12 (1957): 1161-82.

new organizational forms, but also required enhancing product designs, sales techniques, and marketing. Most of these tasks fell to Martinoli, who became chief engineer in Pavia, probably through the connections established with Necchi's chief executive during the period Martinoli spent as a commissary of SIAI.

This part of the research is still in progress, so I can state just a few preliminary results.

First, we can divide Necchi's re-engineering process into two sequential periods. In the first two or three years, Martinoli and the group of technicians who arrived at Necchi with him focused their efforts on increasing the general levels of production. They changed the plant's layout, abandoning the old factory building spread out on more than one floor for a new one organized horizontally. They purchased new machinery, using European Recovery Program aid to import more advanced machine tools from the United States. Finally, they increased the work force. Pavia was surrounded by an agricultural area containing a large supply of low-cost labor, so it was not difficult to find new workers. Some problems occurred in getting the newly hired workers used to the job conditions, because the majority of them had never entered an industrial plant before. On the other hand, their lack of unionization represented a big advantage for management.

During the first few years, Necchi expanded continually, both in the Italian market and abroad, necessitating a further production increase. Management this time decided to focus on productivity enhancement and redesigned the entire plant along a new mechanized assembly line, using several mechanical and compressed air conveyors, arranging all the machine tools on the basis of work flow, and introducing the first transfer machines.

Two programs adopted in this context were Methods Time Measurement (MTM) and Training Within Industry (TWI). The first was used to determine the best arrangement of the machinery, to calculate labor times, and to establish labor methods and consequently flows of materials and workers. TWI was used for training the middle and lower management in the new systems they would have to adopt. At the same time Necchi's entire functional structure was redesigned, especially those areas involving the production level.

It is possible to make some preliminary observations about this re-engineering process. First, it was a process of selective adaptation of managerial techniques that required a huge effort.[17] Although the result was successful, some engineers collaborating with Martinoli in Pavia remembered the difficulties they

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[17] On the transfer of managerial practices after the Second World War, see Jonathan Zeitlin and Gary Herrigel, eds., *Americanization and Its Limits: Reworking US Technology and Management in Post-War Europe and Japan* (New York, 2000); Matthias Kipping and Ove Bjarnar, eds., *The Americanization of European Business: The Marshall Plan and the Transfer of US Management Models* (London, 1998); Marie Laure Djelic, *Exporting the American Model: The Postwar Transformation of European Business* (New York, 1998), and Mauro F. Guillén, *Models of Management: Work, Authority, and Organization in a Comparative Perspective* (Chicago, 1994).

faced in applying the new methods. There was, for example, a great failure in the first attempt to organize production on the basis of MTM, caused mainly by an incorrect interpretation of *Methods-Time Measurement*,[18] the book by Harold Maynard, Gustave Stegemerten, and John Schwab that explained the MTM system as developed at Westinghouse Electric Corporation.

Necchi management succeeded in solving the problems of adopting the new system by sending some technicians to the United States to study the application of MTM directly, taking advantage of the U.S. Technical Assistance and Productivity Program.[19] When the technicians came back, brief conferences were arranged involving all members of middle and lower management to acquaint them with the new "language" imposed by MTM. Then, using TWI, long courses were planned for all the technical personnel involved in implementing the new system.

Although the U.S. Technical Assistance and Productivity Program did not always reach its targets, one of its main positive effects was in enabling small and medium-sized companies to establish foreign connections. This was a very important factor in the dissemination of business culture, because small companies could not rely on their own communication channels as the larger ones could.

Martinoli also played another role at Necchi. In 1951 he was appointed to the Commissione Indagini e Studi sull'Industria Meccanica (CISIM), a technical commission created within the technical aid mission of the Italian government to study mechanical industries. CISIM connected Italian practitioners with a team of experts from the Stanford Research Institute. The commission produced large surveys on the mechanical sector that made clear the limits of the firms considered and that were a continuation of the work begun by Martinoli and his collaborators during their years at IRI.[20] The commission was especially important for Necchi because a member of the Stanford Research Institute became its consultant during the transformation of its production system.

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[18] Harold B. Maynard, Gustave J. Stegemerten, and John L. Schwab, *Methods-Time Measurement* (New York, 1948).

[19] On the U.S. Technical Assistance and Productivity Program, see Jacqueline McGlade, "Lo zio Sam ingegnere industriale: Il programma americano per la produttività e la ripresa economica dell'Europa occidentale (1948-1958)," *Studi storici* 37 (Jan.-March 1996), 9-40, and Jacqueline McGlade, "From Business Reform Programme to Production Drive: The Transformation of US Technical Assistance to Western Europe," in *The Americanization of European Business*, ed. Kipping and Bjarnar. On the U.S. Technical Assistance and Productivity Program in Italy, see Sergio Chillé, "Il 'Productivity and Technical Assistance Program' per l'economia italiana (1949-1954): accettazione e resistenze ai progetti statunitensi di rinnovamento del sistema produttivo nazionale," *Annali della Fondazione Giulio Pastore* 22 (1993): 102-20.

[20] See CISIM, *Problemi economici e industriali delle industrie meccaniche italiane* (Tivoli, Italy, 1952); CISIM, *Rilievi e proposte sulla industria meccanica italiana a cura del Sen. Ing. Prof. Guido Corbellini* (Tivoli, Italy, 1952), and CISIM, *L'industria meccanica italiana alla fine dell'anno 1951* (Tivoli, Italy, 1952).

More generally, the U.S. Technical Assistance and Productivity Program was both a vehicle of managerial knowledge and an instrument that put Italian practitioners in contact with American managers or with the American academy, creating the personal connections that were fundamental to the establishment of consulting relationships.[21]

Spreading Business Culture

In the third part of my research I will try to analyze the effects of these connections at a more general cultural level by studying two business journals of the period, *Tecnica e organizzazione* and *Rivista di organizzazione aziendale*, two hybrid publications.[22] They were not academic journals, because none of the members of the editorial staffs was an academic, a result of the general inattention of the Italian academy to management culture in that period. But they were not popular magazines, because they published specific technical articles and often received contributions from business school members targeted to practitioners and not to a broader reading public.

These two journals were the only Italian periodicals in the 1950s focused on organization. Some other publications such as *Produttività*, related to the Comitato Nazionale per la Produttività (CNP—National Productivity Council), or *Fattore Umano*, a monthly published by the Istituto per l'Addestramento Industriale[23] (IAI—Institute for Industrial Training), tried to circulate the new management practices associated with the drive to increase productivity. But *Produttività* focused mainly on the political and social problems related to the new systems; it was a journal more interested in propaganda than in a conscious diffusion of new management culture. *Fattore Umano* was designed to disseminate a specific technique, the TWI method.

Tecnica e organizzazione was linked directly with Olivetti. The members of the editorial staffs of the two journals overlapped considerably, and a lot of them came from IPSOA. Martinoli was the director of *Rivista di organizzazione aziendale* from its foundation in 1956 to the end of publication in 1975, and he was on the staff of *Tecnica e organizzazione* as well. The two periodicals tried to spread management culture focusing on the issues confronting general managers who had to deal with organizations in a changing institutional framework—the same goal pursued by the first Italian business schools.[24]

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[21] On the importance of personal relationships in consulting, see Matthias Kipping, "American Management Consulting Companies in Western Europe, 1920 to 1990: Products, Reputation and Relationship," *Business History Review* 73 (Summer 1999): 190-220, and, more generally, Matthias Kipping and Lars Engwall, eds., *Management Consulting: Emergence and Dynamics of a Knowledge Industry* (New York, 2002).

[22] The first was published from 1937 to 1958, the second from 1956 to 1975.

[23] IAI was an institute founded by some of the major Italian companies (Necchi, Edison, Pirelli, Falk, and Montecatini) in 1952 with the aim of spreading TWI.

[24] See Giuliana Gemelli, ed., *Scuole di management: Origini e primi sviluppi delle business schools in Italia* (Bologna, 1997).

I am trying to reconstruct, insofar as possible, the relations among the members of the editorial staffs of the two journals and between them and the people who contributed articles. Second, I am trying to create a sort of taxonomy of the subjects presented and to understand the relations between different schools of management and the topics of the articles.

Unfortunately, it will be difficult to establish the actual impact of these publications on Italian management culture because there is no evidence in the archives about the readers of the journals. The only documents that can provide some help in this context are a few surveys undertaken by the editorial staff of *Rivista di organizzazione aziendale*. Nevertheless, it is important to try to trace the network involved here and its cultural references, especially because of the absence of other carriers of business knowledge in Italy during the 1950s.[25]

[25] José Luis Alvarez identifies as secondary social diffusers of knowledge the professional groups, the academic community, and the intellectuals. See José Luis Alvarez, "The Sociological Tradition and the Spread and Institutionalization of Knowledge for Action," in *The Diffusion and Consumption of Business Knowledge*, ed. José Luis Alvarez (London, 1998).