

**The State and the Labor Process: Regulatory Means and Normative Framing in
the Diffusion of Managerial Models**

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The State and the Labor Process: Regulatory Means and Normative Framing in the Diffusion of Managerial Models

This study introduces interest and agency to the theory of the state in organization research, where the state is often viewed as a disembodied source of legal constraints. We examine the autonomy of state actors to shape the labor process and their capacity to use both regulative means and normative cultural frames in doing so. Analyzing qualitative and quantitative data from Palestine/Israel during the years 1940-1960, we study the diffusion of Joint Productivity Councils that use scientific management (Scientific JPCs). We assess explanations for the diffusion of managerial models offered by theories of state autonomy, efficiency, labor control and professionalization. We demonstrate that the only necessary condition for the diffusion of Scientific JPCs lies in the actions of state leaders. By using regulations directed at the national and firm levels and by framing productivity as a precondition for national survival, they promoted the implementation of a managerial model to which initially all relevant groups, labor, capital and industrial engineers, objected. For researchers of organizations and of the labor process, we provide a fuller picture of the role of the state, the macro-politics of work and cultural framing in the diffusion of organizational innovation.

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The role of the state in shaping organizations can no longer be dismissed. We cannot understand the development of large corporations (Roy, 1997), internal labor markets (Baron, Dobbin, and Jennings, 1986) or the international diffusion of management models (Guillén, 1994) without examining the state. Still, the mechanisms by which states affect organizations remain narrowly defined. The state is usually viewed as a legal arena, which constraints or enhances other social actors (employers, workers, professional groups) as they engage in power struggles or framing contests.

In this paper, we enrich the conceptualization of the state in organization theory by exploring how the interests and agency of state actors can affect organizational change. We examine the embedded autonomy of state leaders (Evans, 1995) to promote a managerial innovation and pursue their interest in the labor process. We explore state officials' use of public policy and normative frames to advance a controversial managerial model.

To support our argument, we study the diffusion of Joint Productivity Councils (JPCs) in Palestine/Israeli industry between 1940 and 1960. JPCs brought together representatives of workers and management in each plant to discuss ways to improve production. These councils embodied two main features of the labor process devised to extract more labor from workers: the scientific redesign of work and the implementation of a piece rate wage system. These councils were part of a larger impetus, led by the political elite, to rationalize production and achieve the national economic goals of placating industrial relations, increasing exports and reducing

inflation (Shalev, 1992). Early attempts to establish JPCs during the 1940s largely failed, owing to fierce opposition from both workers and employers. In the early 1950s, their diffusion accelerated and they became widespread. And while in the 1940s, JPCs were little more than a few forums for discussing group pay incentives, during the 1950s a scientific version of JPCs diffused whereby council members – workers and managers – were to endorse industrial engineering principles of time-and-motion studies and individual wage incentives tied to productivity. These councils were largely effective in increasing productivity in the firms that adopted them, and perhaps more important, JPCs were the main vehicle through which the piece rate system and principles of scientific management were institutionalized in Israeli plants (Tabb, Ami, and Shaal, 1961: 267, 320; Tabb and Goldfarb, 1970: 92)

Using qualitative and quantitative historical data, we compare two periods in the institutionalization of JPCs: the failed attempt to implement JPCs in industry in the 1940s, and the rapid diffusion of Scientific JPCs in the 1950s. We assess explanations for the diffusion of managerial innovation offered by theories of state autonomy, efficiency, labor control and professionalization. We find that the only necessary explanation for the diffusion of JPCs lies in the actions of the state leaders, who in the second period stepped in to bridge the gap between labor and capital and promote Scientific JPCs. By using regulative means at the national and the firm levels and by framing productivity as a precondition for national survival, they promoted the implementation of a managerial model to which initially all relevant groups, labor, capital and industrial engineers, objected.

Our research moves organizational theory beyond treating the state as a disembodied exogenous factor. For researchers of organizations and of the labor process, we provide a fuller picture of the role of the state, the macro-politics of work and cultural framing in the diffusion of organizational innovation. This is an especially important agenda for organization studies given the rise in tripartite agreements between labor, management and the state during the 1990s in Europe and elsewhere (Katz, Lee, and Lee, 2004) and findings by political sociologists about the effect of autonomous states on industrial transformations (Evans, 1995; Weiss, 1998).

The paper proceeds as follows. We review the literature on the state and organizational innovation and introduce a theory of the embedded autonomy of state officials' whose interest in the labor process affects the managerial field. Moving to discuss the means by which state actors affect organizations, we propose that beyond administrative measures, state leaders' use of normative frames needs to be explicitly integrated into studies of the state and organizational change. After presenting alternative theories and the data and method, we turn to the findings section. We show qualitatively and quantitatively that the state was crucial in promoting a managerial innovation between these two periods and that alternative theories are insufficient to explain their widespread adoption.

INTEREST AND AGENCY IN THE ROLE OF THE STATE

That the state shapes organizations is hardly controversial. But the theory of the state in organizational studies remains thin, with no explicit conception of interest and agency, two elements that are often lacking in institutional theory more broadly

(DiMaggio, 1988; Fligstein, 2001; Campbell, 2004; Dobbin, 2005). Organizational studies usually portray the state as an agent-less source of legal constraints or opportunities over which other groups struggle (Edelman, 1990; Dobbin, 1992; Strang and Bradburn, 1993; Ingram and Inman, 1996; Stevenson and Greenberg, 2000; Schneiberg and Bartley, 2001; Ingram and Rao, 2004). Others see the state as a cultural outlet, passively reflecting national traditions (Dobbin, 1993) or the cultural norms of the world society (Meyer, et al., 1997).

In the mid-1980s, political sociologists began to work out the theoretical leap currently required from organization researchers when they began examining whether “the state” can be an autonomous actor that pursues its own agenda in industrial transformation, independently of other social actors (Trimberger, 1978; Krasner, 1984; Evans, Rueschemeyer, and Skocpol, 1985; Skocpol, 1985; Prechel, 1990). Evans (1995) introduced the term, “embedded autonomy,” arguing that in autonomous states, leaders’ and bureaucrats’ ties to society are not necessarily a source of dependence; but can provide “sources of intelligence and the ability to rely on decentralized private implementation” of state actors’ goals (Evans, 1995: 12). When autonomous state actors have ties to both labor and capital, they can pursue their goals in the economy by mediating, and shaping, a corporatist bargain between labor and capital (Evans, 1995: 242; Shalev, 1992; Weiss, 1998). Such corporatist agreements have gained new prominence in the 1990s (Katz, Lee, and Lee, 2004), rendering the study of their implications for organizational change and of the state’s interests in the politics of work all the more vital.

The State, Organizational Change and the Politics of Work

Researchers of the labor process are concerned with “the task of extracting labor from workers” (Edwards, 1979: 13). Studies in this tradition focus mainly on the plant-level division of labor, job design, deskilling (Braverman, 1974; Marglin, 1974), bureaucratization (Edwards, 1979; Clawson, 1980) and strategies of labor resistance (Burawoy, 1979; Biernacki, 1995). The two managerial models constituting Joint Productivity Councils, scientific management principles and worker participation, have been studied extensively for their implications for the labor process (Braverman, 1974; Edwards, 1979; Clawson, 1980; Fantasia, Clawson, and Graham, 1988; Barley and Kunda, 1992; Shenhav, 1995; Taplin, 1995; Ezzamel and Willmott, 1998; Sewell, 1998; Warhurst, 1998; Smith, 2001; Vallas, 2003). A smaller stream of research points to state policy (Burawoy, 1985) and corporatism (Cameron, 1978; Katzenstein, 1984) as macro factors affecting the labor process (Strinati, 1990; Hancke, 1993). Explicit research on the labor process has largely faded from American organization studies, and its macro facet, looking at the role of the state and the politics of work in shaping organizational change, has been all but absent from research on organizations.

To be sure, the state features in many studies that implicitly address the labor process. For example, institutionalists point to the key role of the American state in the diffusion of labor control personnel systems during WWII (Jacoby, 1985; Baron, Dobbin, and Jennings, 1986) and after the 1964 Civil Rights Act (Edelman, 1990; Edelman, 1992; Dobbin, 1993; Sutton, et al., 1994; Dobbin and Sutton, 1998. For review see Edelman and Suchman, 1997). Others show how property rights and

antitrust law affect organizational structures (North, 1990; Campbell, Hollingsworth, and Lindberg, 1991; Roy, 1997; Dobbin and Dowd, 2000). Comparative researchers show how corporatist alliances shape managerial models. For example, Guillén (1994) finds that state collaboration with labor unions was necessary for the adoption of scientific managerial models in Germany, Britain and Spain (see also Guillén, 2001). And in his research on the diffusion of worker participation models, Cole (1985; 1989) finds that the labor union in Sweden pushed for state legislation to overcome management's objection to team work in organizations (see also Tomlinson, 1996).

Taken together, this research indicates that states intervene in the diffusion of managerial models that shape the labor process either through regulations or corporatists agreements. But these studies include no explicit theory of the state. This oversight compromises our understanding of the types of industrial and organizational changes the state will promote (Ingram and Simons, 2000).

In the analysis below we show that in the Israeli case, state leaders, seeking to achieve economic and political stability, military strength and immigration absorption, were interested in increasing productivity, quelling labor strife and avoiding wage increases. The managerial innovation they sponsored, Joint Productivity Councils that collaborate with industrial engineers, embodied these goals. But neither labor nor capital were full partners. Workers feared JPCs would replace collective bargaining (see also Cole, 1985), while employers objected to workers' participation and in many cases to giving industrial engineers a foothold in their plants (see also Shenhav, 1999). To

achieve their goals in the labor process, state officials used the state's administrative and cultural capacities, transforming an initial rejection into broad diffusion.

The State, Organizational Change and Normative Framing

Organization theorists and political sociologists have focused on the regulative and financial capacities of the state as it shapes the economy and organizations. Israeli state leaders used such capacities to promote JPCs. They sponsored a national corporatist agreement on JPCs, provided tax reductions to workers in adopting plants and gave priority in raw material allotment to their employers. Another channel through which state leaders sought to legitimize JPCs was by promoting a cultural frame that equated productivity and JPCs with a well-entrenched public sentiment, namely the survival of the new Jewish nation.

The role of cultural framing in shaping innovations has not escaped researchers of organizations, who find that “practices that accord with cultural understandings of appropriate and effective action tend to diffuse more quickly than those that do not” (Strang and Soule, 1998: 278; Bendix, 1974; Tolbert and Zucker, 1983; Hirsch, 1986; Dobbin, 1993; Scott and Meyer, 1994; Zbaracki, 1998). But the state in such studies is usually viewed as agent-less, absorbing cultural norms from the world society (e.g. Meyer et al., 1997) or as passively reflecting national cultures (Whitley, 1992; Dobbin, 1994; but see Hamilton and Biggart, 1988; Ingram and Simons, 2000). Culture is often defined in cognitive terms as taken-for-granted schema, rather than as normative, value laden discursive frames produced and maintained by partisan agents seeking legitimacy (DiMaggio, 1988; Fligstein, 2001; Campbell, 2004; Dobbin, 2005).

We infuse agency into the analysis of the state and culture by exploring the cultural capacity of the state officials. This is the capacity to produce and disseminate normative cultural frames that provide keys for the definition of reality (Goffman, 1974: 119) and prescriptions for economic behavior for all parties involved: in this case, workers, managers, employers and state politicians themselves (DiMaggio, 1997; Dobbin, 2004).

Disseminating a discourse that frames an issue in nationalistic terms is a quintessential manifestation of the cultural capacity of the state. Nationalism consists of a collective normative claim that “obligations to nations should supersede other obligations” (Tilly, 1999: 416). The nationalistic framing of the labor process has not been unique to Israel. During the Second World War, President Wilson marshaled national sentiments in referring to efficiency as “the supreme test of the nation” (Haber, 1964: 118). And facing a labor shortage in 1941, the American government launched the Rosie the Riveter campaign, convincing women that it was their patriotic duty to enter the workforce despite countervailing norms and lower pay. Similar normative discourses have existed in other countries, such as Germany (Nolan, 1994), France (Boltanski, 1990; Djelic, 1998) and England (Tomlinson, 1996).

As we show below, Israeli state leaders used public media and initiated public rituals to propagate a normative cultural frame equating productivity in general, and Scientific JPCs in particular, with the survival of the Jewish people (see also Frenkel, 2005). We show that this rhetoric was a key player in constructing the context within which the managerial change flourished during the 1950s. It was widespread, endorsed

by all opposing parties involved in the labor process and became integrated into the formulation of economic policy.

Alternative Explanations for the Diffusion of Managerial Models

In addition to the role of the state, we assess three alternative explanations for the diffusion of managerial models. Efficiency theory suggests that the level of industrial development affects managerial innovation. This perspective views managerial models as reflecting rational progress towards greater efficiency (Chandler, 1977). Social control theories look at labor militancy as a motivation for employers to adopt technocratic solutions, such as scientific management and joint consultation (Edwards, 1979; Barley and Kunda, 1992; Shenhav, 1995). Militancy can be reflected in strikes, though unions may show strength without striking. Finally, institutionalization theorists look at professionals as carriers of managerial change (DiMaggio and Powell, 1983; Fligstein, 1990; Guillén, 1994; Djelic, 1998), consistent with the new class thesis that identifies technocrats and experts as the new agents of economic order replacing private owners (Szelenyi and Martin, 1988; Boltanski, 1990). While we cannot fully rule out the validity of these alternative explanations, we show that none is sufficient to explain the diffusion of JPCs. Our archival research and comparative analyses explore the crucial role of the state in bringing about this change.

DATA AND METHODOLOGY

We conduct a comparative analysis between the period when JPCs were rejected and the period when Scientific JPCs diffused widely.

Comparative Method

We use historical data in a macro-causal analysis (Skocpol and Somers, 1980). This type of analysis selects aspects of the historical cases in order to “set up approximations to controlled comparisons... in relation to a particular explanatory problem” (Skocpol and Somers, 1980: 182). We compare two consecutive decades: 1940-1948, where the colonial British regime was in place and 1949-1959, the first decade of national sovereignty. Although the first JPC was established in 1945, the first period in our analysis begins in 1940 in order to make sure that the measures of independent variables precede the measurement of the outcome variable. The unique condition of transition to national sovereignty in 1948 and the quasi-experimental comparative design permits a systematic analysis of the effects of the state, net of factors suggested by efficiency, control and professionalization explanations. Variables whose values remain similar across periods may have affected the proliferation of JPCs, but they do not provide the sufficient conditions for this outcome. Our comparison shows that the state was the only variable that significantly changed between the periods, suggesting its role was a necessary condition for changes in the outcome variable.

Based on a similar analytic logic, we present a supplemental international comparison of indicators of the three alternative explanations for managerial innovation in Palestine in the 1940s (the period of no adoption of scientific JPCs) and in the periods when scientific managerial methods were adopted in U.S., Germany and England. If indicators of other theories are similar across countries, this will strengthen

our conclusion that other theories are insufficient as explanations for the development of scientific management.

Archival Data and Measures

The study is based primarily on first-hand archival data, compiled from the Lavon Labor Movement Archive (LLMA), the Israeli State Archive (ISA), and the archive of the Institute for Manufacturing and Labor Productivity (IMLP). The historical materials include reports and minutes from political parties', workers', engineers', employers' and JPCs' meetings; firms' internal productivity reports; documented correspondence between officials, bureaucrats, politicians, the industrialists association and engineers; daily newspaper reports, and publications issued by industrial engineers and their associations.

The outcome variable, the diffusion of Joint Productivity Councils, is measured by the number of JPCs adopted every year between 1945 and 1955. These data were compiled from diverse reports of the National Productivity Council. Some JPCs remained decoupled from formal structures, especially in plants when labor resistance was strong. In these cases, workers generally refused to forego the collective "automatic" premium in lieu of scientifically-based pay incentives. Our outcome variable counts only those councils that were actively operating, according to these reports. We also distinguish between JPCs that cooperated with industrial engineers and agreed to individual wage incentives versus those that did not. Data were not available for all years, and missing data were not imputed. One caveat of the data is that our time series of the number of JPCs ends in 1955 due to limited archival

resources. However, as we show below, JPCs' diffusion up to 1955 was rapid enough, more rapid than the parallel growth in industrial employment, to substantiate the claim that their growth in the second period was significantly different from the first period.

Quantitative measures for the explanatory variables were compiled from secondary sources and state statistics collected by the British Government and the Israeli Central Bureau of Statistics. Our research focuses solely on Jewish industry in Palestine and afterwards in Israel. The best source of data on Jewish industry in Palestine was assembled by Metzger (1998), who merged and adjusted several sources of pre-state statistics to compile longitudinal series. Because of limited availability of data, there is some asymmetry in time series data between the two periods. The notes to Table 3 detail the years of data available for each variable. For the period prior to 1948 (pre-sovereignty period) we have mainly data for the earlier years, while for the post-sovereignty we have data mainly for the later years. We believe that these missing data do not compromise our claim that the two periods were similar in terms of the control variables that might have led to the introduction of JPCs. Because the interrupted time series would tend to exaggerate differences between the two periods (as there are more data points at the beginning of the early period and the end of the later period), our data arguably provide a conservative estimation of the similarities between them. The absence of significant differences between the two periods, then, would likely be even more robust with continuous data.

Below are the data sources for each variable (see also notes to Table 3):

Efficiency theory.— We use several indicators of industrial development: The Proportion of the Workforce Employed in the Industrial Sector and Growth in the Net Product of Manufacturing are measured with data adapted from Metzger (1998) for the pre-state period and from the Statistical Abstract of Israel. Data on Number of Plants in three labor intensive manufacturing industries (textile, leather and steel) were obtained from Avitsur's (1989) study of Israeli industry. Finally, data on Average Plant Size was calculated from Nathan's (Nathan, Gass, and Creamer, 1946) study of Palestine Industry, the Statistical Abstract of Israel (Central Bureau of Statistics, 1956) and the Industry and Crafts Surveys (Central Bureau of Statistics, 1964).

Labor control.— We use two indicators of labor strength, strikes and union size. For strikes we use three measures: Average Days per Strike, The Annual Number of Strike Days and the Percent of Strikers from Total Labor Force adapted from Tabb et al. (1961). Data on percent union membership from total FTP are adapted from Metzger (1998: 219) and Tabb et al. (1961).

Professionalization.— Data on the Number of Engineering Graduates were compiled from the Israeli Institute of Technology's (Technion) records. We also collected archival data on the presence of Engineers' Professional Associations, an Institute for Standardization and Organized Lobbying of Engineers' in Industry.

Data for the cross-national analysis are taken from Guillén (1994: 308-310).

FINDINGS

We proceed by describing the outcome variable: the spread of JPCs in Israeli industry over the two periods. We then examine the role of the state in the two periods and end with evaluating alternative theories.

Outcome Variable: Joint Productivity Councils

Figure 1 presents the growth in the number of JPCs in years for which data are available between 1945 and 1955. From 1945-1948 (the first period of attempts to establish JPCs), there was almost no change in their prevalence. A fast diffusion of JPCs occurred only in the second period (1949-1955).

Figure 1 About Here

The growth in the number of JPCs in the 1950s exceeded the growth in manufacturing employment in general and in plants with more than 50 workers, where JPCs became mandatory in 1952. Between 1952 and 1955, manufacturing employment grew by 170% (from 53,552 to 92,859) and in plants with more than 50 employees by less than 150% (from 25,375 to 37,285). In the same period, the number of JPCs grew by almost 210%, from 67 to 139. In these years JPCs were mainly implemented in manufacturing plants, from steel to textile and leather.

The differences between the implementation of JPCs in the two periods were not only quantitative but also substantive. Table 1 summarizes the features of JPCs in each period. First, early JPC deliberations did not involve industrial engineers. Rather, JPC members (managers and workers) debated amongst themselves about quotas and

methods that would “enable workers to perform tasks with no disruptions.”¹ In one plant, for example, JPC workers and managers continuously negotiated the daily quota of shoes.² Beginning in 1949, industrial engineers were gradually incorporated into the labor process and became an integral part of JPCs’ activities to form ‘scientific JPCs’. While no productivity council worked with industrial engineers prior to 1949, by 1953 nearly 50% of the councils relied on the work of industrial engineers. This portion rose to 88% of the councils in 1955.

Table 1 About Here

The incorporation of industrial engineers was accompanied by a change in the type of wage incentives. Early JPCs established collective wage incentives, sometimes called ‘automatic premiums’. In the second period the incentive structure changed, and by 1953 two-thirds of the councils agreed on individual wage incentives (Globerzon, 1955). Reports published by the Institute of Manufacturing and Labor Productivity (IMLP) indicate that through “organizational and technical arrangements” and individual wage incentives, industrial engineers “re-designed the work process so to increase productivity, on average, by up to 50%.”³ For example, such re-designing was manifested in changing the job description of the doorman in a leather factory: instead of simply watching the door, the doorman’s work was extended to include

¹ Report from a JPC meeting in Vulkan, No Date. LLMA/250-27-5-83.

² Report from a JPC meeting, 2/25/1953 LLMA/250-27-5-224.

³ Report by Engineer Itzhak Ben-Tov, August 1953 LLMA/250-778.

finishing work on products.⁴ In this factory, industrial engineers reported increases in production by 129% to 150% in various jobs. Another Scientific JPC reported that over a five month period workers saved 2482.3 working days.⁵ While such reports may overlook reduced productivity in plants where workers' resistance to these changes was high, observers of the period, including international consultants and researchers that came to Israel in the early 1950s, agree that for the most part Scientific JPCs were effective in increasing productivity in the factories that adopted them (Sha'ari, 1955; Sobel, 1959; Tabb, Ami, and Shaal, 1961; Tabb and Goldfarb, 1970).

Finally, while in the first period employers were not required to establish JPCs, during the second period, a national accord was reached in 1952 between the state, the Industrialists Association (IA) and the General Federation of Workers (GFW), which mandated the institution of these committees in plants with more than 50 employees. It is notable that the diffusion of JPCs went beyond the scope of this mandate. The steep rise in the diffusion of JPCs began before 1952 and, while the mandate pertained only to plants with more than 50 workers, reports indicate that up to one quarter of the JPCs were adopted in smaller plants.

Managerial Innovation, the State and the Labor Process

We now turn to discuss attempts to establish JPCs in each period. During the first period, up to 1948, Jewish industry was under the rule of the British Mandate in

⁴ Report from a JPC meeting, 2/25/1953 LLMA/250-27-5-224.

⁵ Report from a JPC meeting, 7/3/1950. LLMA/250-27-5-84.

Palestine. In the second period, it was under the rule of the newborn nation-state of Israel.

Attempts to establish JPCs in the 1940s.— There were ardent attempts to implement JPCs in the 1940s, primarily by leaders of the General Federation of Workers (GFW, also known as the Histadrut). The GFW included a labor union, but it also owned factories that grew dramatically during WWII. This federation was governed since the early 1930s by the democratically-elected centrist labor party, Mapai. GFW leaders held symbiotic relations with the Zionist leadership. Despite their intellectual roots in Marxism, they traditionally prioritized national interests over workers' interests and embraced American scientific methods for increasing productivity (Troen, 1994; Frenkel, Shenhav, and Herzog, 1997).

During the 1940s, GFW leaders sought to establish JPCs. Abba Hushi, a prominent figure in the GFW leadership, couched these councils in scientific terms in a speech to workers in 1945:

“The area of re-structuring of work and making sure the right man stands in the right place has been developing in the world. An entire scientific field has been established. This country has not yet mobilized science for industry but we need to do so, and this is only one of the roles of the productivity councils that we will have to establish very soon.”⁶

⁶ GFW council meeting in Haifa, 6/27/1945. LLMA/250-27-5-42.

In 1945, the GFW founded a Central Productivity Council common to the GFW and the Industrialists Association (Kantur, 1977: 175), as well as industry-specific JPCs and the first plant-level JPC in a GFW-owned steel plant.

The GFW's push for JPCs in the 1940s was part of a larger strategy to appease internal discontent with the GFW leadership and mounting labor strife that threatened labor leaders' authority in negotiations with employers (Shalev, 1992). JPCs were to promote a class compromise by linking wage increases to higher productivity. For example, in the midst of collective bargaining in the strike-ridden steel industry, the GFW offered to establish an industry-wide Joint Productivity Council (Mishmar, September 21st, 1945). The opening remark of Chairman David Ben-Gurion in the 6th meeting of the GFW national assembly in 1945 illustrates this agenda: "only by increasing labor productivity we will prevail" (General Federation of Workers, 1945). Unlike their leaders, grassroots workers objected to JPCs, arguing that these councils would extract more labor from them without adequate remuneration, and weaken their position in wage negotiations⁷. On their end, employers objected to workers' participation.

The British semi-colonial state did not attempt to promote the labor process through technocratic solutions. Although the colonial state laid an elaborate system of modern bureaucratic governance and economic infrastructure (Metzer, 1998; Gross, 1999; Shamir, 2000), the British government saw in Palestine a market for goods from the Empire and was not interested in local productivity increases (Gross, 1999: 174;

⁷ Minutes of a GFW council meeting in Haifa, 6/27/1945. LLMA/250-27-5-42.

Shalev, 1992: 146). The colonial regime did not develop labor and industrial policy, instead using military force to quell labor unrest. Even during WWII, which had a significant effect on the local economy and on the interest of the British Mandate in the labor process, the colonial government did not mount efforts to promote managerial innovations. Rather, local British officials pursued “industrial peace” by tying wage increases to the standard of living index (Nathan, Gass, and Creamer, 1946: 237; Gross, 1985; see also Mitchell, 1988).

Without the support of a powerful institutional actor that could bridge the gap between workers and employers, implementing scientific management techniques and attaching wages to productivity, even under the framework of joint consultation, was not a viable historical option for GFW leaders. The class compromise they promoted in 1945 instead was Joint Productivity Councils that established collective productivity pay and remained narrow in scope. In terms of the labor process, these councils were the first step in institutionalizing a discourse on productivity. As one observer noted insightfully, “introducing a discourse on productivity was more important than productivity itself” (Sha’ari, 1955). Similarly, Boltanski concluded when studying the French productivity drive: “Importing social technology had priority over transferring material technology” (Boltanski, 1990: 345).

In the second period, an active state headed by former GFW Chair, David Ben-Gurion, stepped in to bridge the gap between labor and capital and advance the rapid and widespread adoption of Scientific JPCs.

The Israeli state.— The transition to sovereignty in 1948 entailed exposure to the global trade economy and costly national projects such as absorbing massive immigration and building military strength. This led to high inflation and a scarcity of foreign currency, raw materials for production and basic consumption goods (Gross, 1999: 325). At the same time, labor strikes threatened to weaken the labor party, Mapai, now the party in power in the new government.

Israeli state leaders, many of whom were previously GFW leaders, were interested in increasing productivity and appeasing labor unrest as solutions to these state-building challenges and saw in Scientific JPCs the means for achieving these goals (Frenkel, 2005). Scientific managerial techniques and national productivity drives were also part of the institutionalized repertoire of solutions to economic challenges in the “world society” (Meyer, et al., 1997) at that time, largely due to the U.S.’s relentless campaign under the Marshall Plan (Carew, 1987; Djelic, 1998), whose influence spilled over to Israel after sovereignty (Troen, 1994; Urofsky, 1995).

Neither capitalists nor workers and engineers were partners to state leaders’ goals to implement scientific JPCs in industry. The interests of the state in the labor process only partially overlapped with those of industrialists. While industrialists were certainly concerned over labor strife, productivity increases were not their top priority. Their profits were guaranteed due to state subsidies and protection of local industry (Gross, 1999), and they were disinclined towards organizational innovations (Sobel, 1959; Tabb, Ami, and Shaal, 1961). Employers were unwilling to submit to joint consultation with workers, seeing these councils as “an area for workers to request

improvements and to challenge management authority.”⁸ And many employers hesitated to relinquish authority to professional managers, among them industrial engineers, and allow “a stranger to call the shots in their plants” (Hamiphah 1953; Tabb, Amy, and Shaal, 1961; Sobel, 1959; Sha’ari 1955; see Shenhav, 1999 for the same objections in the U.S.). The Industrialists Association objected to JPCs from 1945 until 1952, when the government threatened to pass a law mandating these councils and a tripartite pact mandating JPCs was signed.

Scientific JPCs were not popular among grassroots workers as well. Workers in factories saw these councils as sweatshop methods. As one dock worker put it, “if we want to increase productivity we have to make sure that it will not come at the expense of increasing our sweat.”⁹ However, given their symbiotic relations with state leaders, the GFW leaders joined in embracing the idea of scientific JPCs and announced in 1949 a formal policy of promoting JPCs in all its plants. Finally, industrial engineers also resisted joint consultation with workers and managers, claiming that their scientific research could not be subject to negotiation.

The same political leaders that did not succeed in promoting JPCs in the face of similar objections in their capacity as GFW leaders during the 1940s were successful in doing so as state leaders. The repertoire of state capacity to bridge the gap between employers and workers and promote scientific JPCs included offering administrative as well as moral incentives. In the following we examine the use of these means.

⁸ Report by a GFW representative. August 27th, 1950, LLMA/250-27-5-84.

⁹ Memorandum, August 2nd, 1953, LLMA//250-778.

Administrative Capacity: The Corporatist Pact and Monetary Incentives

State leaders used macro and micro channels of public policy to promote a managerial innovation that institutionalized the labor process. At the national level, a tripartite corporatist agreement mandating wage freezes was signed in 1949, and a pact mandating the establishments of JPCs in factories with more than 50 workers was signed in 1952. These agreements were part of the labor process as they established the context in which plant-level labor conflicts took place (Burawoy, 1985). It was now a matter of national policy that wage increases would not be provided outside the productivity framework and that Scientific JPCs were to be established.

Achieving the union's agreement to withdraw wage demands was easier than achieving employers' consent to Scientific JPCs. State officials negotiated with the Industrialists Association for two and a half years to sign the pact. In January 1952, the Minister of Labor, Golda Meirson (Meir), declared the government's intention to pass a law that would mandate Scientific JPCs. In May 1952, before the law was passed, the Industrialists Association signed the desired agreement and the proposed law was put on hold (see Tomlinson, 1996 for a similar dynamic in England). The new agreement reflected employers' gains in these negotiations: it did not include a commitment for investment in new manufacturing equipment, which union leaders sought to achieve, and it prohibited JPC members from sharing information with the GFW.

State leaders also devised joint institutions for industrialists, the GFW and the state for promoting the implementation of scientific management and JPCs. Prominent among these was the Institute for Manufacturing and Labor Productivity (IMLP),

which was directed by a joint committee of the state, labor and industrialists and which sponsored educational activities and efficiency studies since 1949 (Frenkel 2005).

IMLP engineers helped to monitor Scientific JPCs in plants and determine eligibility for benefits as discussed below.

At the factory level, the state provided administrative incentives using tax policy and allotment of raw material. In 1952, the Finance Minister, Eliezer Kaplan, began providing income tax breaks for workers in factories that used scientific methods in managing production, and the GFW announced union membership tax breaks. A joint committee of state, IMLP, GFW and Industrialist Association representatives was established to advise the Income Tax Commissioner to aim the provision of state tax breaks at factories with scientific JPCs (General Federation of Workers, 1952). Table 2 presents data obtained for 1952 and 1953, showing that the tax policy significantly favored firms using Scientific JPCs over those using any other scientific managerial model. Of those factories that were approved for tax breaks in these two years, 79 percent had Scientific JPCs; among those factories that were not approved, only 15 percent used Scientific JPCs (Pearson Chi-sq(1)=25.8476; $p < 0.001$).

Table 2 About Here

At the same time, the government passed a regulation that gave priority in the allotment of raw materials to employers who proved that they had made efforts to increase productivity (Frenkel 2005: 282). This policy grew out of the dense social web in the local industry. When representatives of the GFW visited plants, employers mentioned scarcity of raw material as a reason why they did not implement JPCs.

GFW representatives related this information to the Minister of Finance, who in turn advocated the policy in the government¹⁰.

Cultural Capacity: Productivity, Nationalism and Normative Frames

As figure 1 shows the diffusion of JPCs peaked following the introduction of policy initiatives to promote these councils in 1952. But these policies alone cannot explain the diffusion of JPCs. The spike in the diffusion in JPCs began before the pact was signed. And while the 1952 pact covered employers with more than 50 workers, in 1953, 25 percent of the establishments with JPCs were smaller than this. This suggests that administrative incentives were not the only channel through which state actors advanced JPCs.

In addition to using public policy, Israeli state leaders actively promoted a frame for understanding JPCs that provided a common language for capital, labor, and engineers. Capitalizing on public sentiment, efficiency, work redesign, piece rate systems and JPCs were portrayed as preconditions for national survival and the prevention of another holocaust (see also Frenkel, 2005). In the context of a newly gained sovereignty preceded by the Second World War and the 1948 war, these concepts were heavily loaded with moral import. The productivity discourse they propagated was normative and moral: it provided clear precepts for action by demarcating good (productivity, Scientific JPCs, national survival) from bad (labor strife, wage demands, resistance to JPCs, second holocaust).

¹⁰ For example, a meeting between JPC members, Uri Heller and Ministry of Treasury Kaplan on April 5th, 1950. LLMA/250-27-5-83.

Taken together, we argue that (1) the discourse on productivity as a national goal was pervasive and preceded the rapid diffusion of Scientific JPCs; (2) different actors involved in the labor process (capitalists, workers, engineers and state officials) endorsed this discourse; and (3) it was reflected in economic policy. Our conception of the role of normative framing is rooted in institutional theory. The discourse provided a prescription for legitimate action for organizations, employers, workers and engineers. Any alternative meant going against the grain (Perrow, 1986). For example, when a representative of grassroots workers criticized JPCs as undermining the class struggle, he was accused of “politicizing” the discussion: “Some won’t give up the clash between classes, even if it means that there will be no Jewish industry at all”¹¹.

In countless ways, political leaders spread the gospel of productivity, incentive pay and their moral value. Starting in 1950, the state sponsored a series of rituals, including annual national Scientific JPC conferences, annual efficiency prizes for plants with Scientific JPCs and ‘productivity missions’ of JPC members to the U.S. and Europe. As was the case in other manifestations of a national productivity discourse, these events embodied and amplified the normative frame (Haber, 1964; Boltanski, 1990; Djelic, 1998) and provided stages for high-ranking state officials to relay the moral links between productivity and national survival, defining low productivity as “treason” (Davar, September 3rd, 1949). For example, in a conference greeting a returning JPC productivity mission, the Supply Minister, Dov Yosef, emphasized the moral responsibility of workers:

¹¹ Minutes from a GFW council meeting in Haifa LLMA/250-27-5-42.

“The secret of industry lies in the laborer. I know there is also management and other factors, but their importance is nothing compared to the laborers’... we may stand one day in front of a holocaust... and we have to fight the great economic battle to secure the destiny of our country” (Davar, July 25th, 1950).

This statement places a heavy duty on workers, namely saving the Jewish people from another holocaust. Prime Minister Ben-Gurion established a clear connection between national survival and workers’ productivity:

“Our economic future, as well as our political goals and our military destiny are all dependent upon the organization of work and work itself.”¹²

Clearly, then, as Treasury Minister, Eliezer Kaplan stated,

“Workers have no moral right to request wage increases without providing productivity increases in return” (Davar, July 25th, 1950).

In 1952, during the third national Scientific JPC conference, the Minister of Labor, Golda Meirson (Meir), portrayed the role of laborers in national survival:

“It is the duty of our army of laborers to protect our state’s economic security just as it is the duty of the Israeli Defense Forces to protect our military security” (Davar, December 25th, 1952).

Three years later, in 1955, Prime Minister Moshe Sharet used a similar tone in the fourth annual conference of Scientific JPCs:

“The whole nation stands on two fronts, the settlement front and the production front...” (Hamiphah, April 1955).

¹² Newspaper clip from July 1950. With no additional detail. LLMA/250-27-5-84.

To get a broader picture of the extent of the national productivity discourse and its fluctuations between 1940 and 1960, we examined the daily newspaper Ha'aretz, the local equivalence of the New York Times in terms of orientation and circulation. We sampled issues to cover every third day, where the first day was randomly chosen for each year. We coded items if one of the following concepts appeared in the heading or sub-heading of the news pages: labor productivity, efficiency, production, norms and premiums. Among those, items were coded for including nationalistic and moral justifications. We calculated the annual volume (number of square inches) of items published in relation to moral values in each sampled issue as a percentage of the general size of the newspaper's space.

The results, presented in Figure 2, show that the normative discourse did not emerge out of nowhere in 1949. It existed throughout the 1940s with different degrees of salience.

Figure 2 About Here

The peak in 1942 probably reflects the war effort, but this did not have much effect on local managerial innovations, supporting our argument about the importance of state intervention. The discourse then sharply declined until it started to increase steadily around 1948 (the year of British de-colonization) and reached two peaks, one in 1950, which most likely reflects the effect of state sovereignty and the nationalistic discourse on productivity that preceded the adoption of JPCs; and the other in 1953, which probably reflects a surge in the discourse that accompanied the national pact on the

adoption of JPCs in 1952. These trends suggest that the productivity discourse preceded the implementation of JPCs and accompanied the process throughout.

Social actors embracing the state's discourse.— The normative frame that accompanied JPCs was shared, and reinforced by union leaders, JPC members, employers and engineers alike; it provided a common language and prescription for legitimate action, regardless of other disagreements among them.

For union leaders, the national importance of productivity served to justify wage freezes. As Aaron Becker, Chair of the GFW Labor Union, stated in 1949:

“Increasing productivity is a must for our economy... but it is also needed for increasing the workers’ wages... Workers cannot seriously expect wage increases without productivity increases” (Kantur, 1977: 166).

The moral value of JPCs is explicated in a publication by the GFW:

“Waste is sin and we cannot imagine how much our society has sinned in this area... we need to embed this in each worker... Joint Productivity Councils have helped us save dozens of thousands of workdays. What a treasure it is. This is our nation’s wealth. These are valuable resources for each worker, for the economy, the nation and all of humanity.”¹³

It was not only labor leaders that espoused the discourse, but workers too.

More than once did JPC members invoke the nationalistic discourse in their meetings.

“Joint Productivity Councils have no mandatory power but they have a moral validity,”

¹³ Pamphlet distributed by the GFW council, 8/27/1950. LLMA/250-27-5-84.

said a workers' representative in a JPC meeting in a steel factory.¹⁴ This is not to say that objections to JPCs ceased to exist. But the wide embrace of the normative framing suggests that its precepts were accepted and reinforced, at least as a source of legitimacy.

Employers, too, called upon national ideology as a common framework. For example, in a JPC meeting, the chief manager of a plant for producing electricity wires invoked cooperative and nationalistic rhetoric:

“Each worker has to contribute his share to our task. Otherwise we will fail...

This is not a matter of class struggle; this is a matter of a survival struggle for all of us.”¹⁵

Pinhas Ledrer, a manager in Koor, asked workers to take responsibility and “contribute to the survival of our national economy,”¹⁶ and the liberal newspaper *Haboker* used patriotic language calling for “increases in productivity as part of the war to conquer new markets abroad” (*Haboker*, July 19th, 1950).

This embrace of the nationalistic framing was facilitated by the dense social ties between the actors involved. There were strong personal and ideological ties between state and GFW leaders. Also, many private employers belonged to the same social circles as the political elite. And managers of both private and GFW-owned plants were members of the same professional associations and often held formal and

¹⁴ Minutes from JPC meeting in Vulcan, 22/12/1945. LLMA/250-27-5-83.

¹⁵ January 10, 1950, LLMA//250-25-5-83 (emphasis in original).

¹⁶ In *Workers Bulletin*, LLMA/250-27-5-83.

informal tripartite discussions with state and labor leaders (Sobel, 1959: 204; Tabb, Ami, and Shaal, 1961).

Another telling indication of the power of the normative frame is the fact that industrial engineers embraced it. Many engineers refused at first to cooperate with JPCs, seeking to protect their scientific studies from JPCs' scrutiny.¹⁷ In turn, GFW representatives pressed factory owners not to permit engineers on their grounds unless a scientific JPC was present and called upon workers not to abide by engineers' research if there was no JPC involved (Heller, 1955).¹⁸ Industrial engineers gradually joined the bandwagon, cooperated with JPCs and endorsed the dominant normative frame as a source of legitimacy. For example, one leader of the engineers' professional community consented:

“In general the relationship [between industrial engineers, workers and employers] should be based on collaboration for the benefit of the public and the state.... The State of Israel will be the first to enjoy the fruits of our cooperation” (Hamiphal, October-November 1953).

The GFW employed industrial engineers, and these ties facilitated the communication of the two communities. For example, engineer Jacob Sanglaria, employed by the

¹⁷ A letter from Engineer Tedi Winshel to Uri Heller, June 4th 1952, LLMA//250-27-4-778.

¹⁸ A letter from June 9th 1954, from GFW to Engineer Litovski, LLMA//250-779; a letter to the management of Hamegafer, January 12th 1953. LLMA//250-779.

GFW, wrote an article about JPCs in the journal of the Institute for Manufacturing and Labor Productivity:

“Industrial engineering is merely a means to an end. We should not treat the piece rate system as a goal at the expense of our real goal of developing our national economy” (Hamiphal, September 1957).

Moral discourse registered in public policy.— Beyond evidence of the wide embrace of the nationalistic frame, probably the best illustration of the institutionalization of a normative discourse on productivity is the fact that it was incorporated into public policymaking (see also Frenkel 2005). Collective bargaining negotiations were imbued with nationalistic rhetoric, framing labor concessions in terms of “the supreme goal of building our country” (General Federation of Workers, 1949: 396). The government’s wage freeze and economic policy in 1952 was deemed necessary “to strengthen our national standing in the challenge of independence” (Kantur 1977), while the tax breaks were presented in moral terms as “healing the rotten habits of our industry” (Hamiphal, August-September 1953). The establishment of the Institute for Manufacturing and Labor Productivity was presented as a way to achieve the national goals of “increasing the competitiveness of our economy, absorbing immigration and insuring our standard of living” (Davar, Septemeber 27th 1949).

Perhaps most telling are the fingerprints of the nationalistic frame in the national agreement on the establishment of JPCs signed in 1952. The agreement opens by stating common national goals:

“In order to guarantee cooperation between workers and management in finding ways and means for industrial development as an integral part of developing the national economy, for increasing production and export, for increasing the capacity to absorb massive immigration, for increasing efficiency and workers’ productivity, for determining piece rates and for lowering product prices...”¹⁹

The text blends national goals, developing the national economy and absorbing massive [Jewish] immigration, together with managerial, labor process goals, such as increasing workers’ productivity and establishing a piece-rate system.

We have shown that union leaders, JPC participants, employers and engineers embraced the official state rhetoric of nation-building that justified scientific JPCs and that this framing was registered in public policy. Whether or not the frames were taken-for-granted we cannot say, but their wide spread and powerful moral valence rendered resistance costly. The adoption of JPCs, as institutionalists argue, became a matter of organizational legitimacy.

Comparison of Alternative Explanations

Our analysis thus far showed that the state had a key role in the implementation of JPCs. In the following, we present the comparative analyses assessing alternative explanations.

¹⁹ National agreement on the establishment of JPCs. No date. LLMA/250-25-5-83.

We start with a comparison of the two periods in which there were institutionalized attempts to establish JPCs in industry, 1940-1949 and 1949-1959, using measures of three theories on the spread of managerial models: efficiency, labor control and professionalization. Lack of significant differences between the two periods does not mean a variable did not affect the diffusion of Scientific JPCs, only that it did not provide a sufficient condition. Our comparison is not designed to rule out the effects of economic and social factors other than the state, but rather to find out whether the state had an effect independent of these variables. Table 3 presents comparative measures during the 1940s and the 1950s.

Table 3 About Here

Efficiency theory.-- Panel A of Table 3 indicates that levels of industrial development were similar in both periods, thus suggesting that it cannot provide a sufficient explanation of why JPCs spread in the 1950s rather than in the 1940s. It is evident that industrial employment was lower in the second period, as was the growth in the net manufacturing product. The number of factories in the textile, leather and steel industries was larger during the 1950s, yet their growth within each period was comparable during the 1940s and the 1950s (203% versus 158% respectively, Avitsur, 1989). The average plant size remained small in both periods, at 16 employees, with 41 percent of all employees working in plants with more than 50 employees in both 1942 and 1956. All in all, there seem to be no major differences in industrial development measures between the two periods.

Labor control.-- Both periods were marked by turbulent labor relations and large labor organization. As Panel B of Table 3 shows, both periods had turbulent labor relations though strikes were slightly more severe in the first period and unionization was slightly higher in the second period. We have shown that in both periods there were attempts to reduce labor strife with JPC. Whereas these results do not rule out a possible effect of labor control, the similarity across periods suggest that this was not a sufficient explanation for the spread of JPCs.

Professionalization.-- Based on qualitative archival data, Panel C of Table 3 suggests that in both periods industrial engineers were high priests of scientific management. In both periods, local certifying institutions trained industrial engineers. The number of engineering graduates was higher in the second period. But as Frenkel has shown, this should be interpreted as an outcome of the state's efforts to promote industrial engineering and a response to international pressure to professionalize management (De Vries, 1997; Frenkel, Shenhav, and Herzog, 1997). In both periods, engineers were organized in professional associations, operated an Institute for Standardization and campaigned for the incorporation of engineering as a means for industrial development and the appeasement of labor upheavals (Mishmar, May 6th 1945; Davar, February 15th 1945; Tabb et al., 1961).

The above comparison suggests that the proliferation of JPCs in Israeli industry was not simply a function of industrial development, turbulent labor relations or the professionalization of industrial engineers alone. These factors certainly played an important role in motivating and shaping the new managerial model. But their salient

presence in the first period, when no managerial change occurred, indicates that these were not sufficient factors. An additional factor had to come into play. We have shown that in the second period, the state overcame the objections of employers, labor and engineers to promote the spread of JPCs.

We now turn to our second, cross-national, comparison. Table 4 compares indicators of industrial development in Palestine in the 1940s with those from the U.S., Germany, U.K. and Spain in the periods when scientific management techniques were first implemented in each of these countries respectively (Data are from Guillén, 1994: 308-310). The data in Table 4 show that indicators of industrial development, labor relations and management professionalization in Palestine in the 1940s were similar to those in other countries, at the time when scientific management was adopted there. The fact that change did not occur in Palestine the 1940s suggests that an additional factor was missing. For example, in 1945 industrial employment in pre-state Israel was 34% of total employment, compared with a range between 26% and 52% in the U.S., Germany, the U.K. and Spain in the periods when they adopted scientific management. Also comparable is the GDP cumulative growth rate, days lost in strikes and the percent of workers in administrative occupations. In contrast to other countries, there is virtually no record of modern managerial practices during the 1940s in Palestine (for an early exception see Frenkel, Shenhav, and Herzog, 1997).

Table 4 About Here

Finally, there are two remaining methodological concerns. First, the pattern of diffusion of Scientific JPCs may be due to a lagged effect of the control variables. We

are reassured that this is not the case because a time-lag dynamic would have been reflected in one of two ways: some indication of a linear progression and an internal consistency in the content of the diffused model. Both are absent in this case. First, as Figure 1 has shown, the diffusion of JPCs was not linear. It remained relatively unchanged from first inception in 1945 until 1950, and experienced a rapid and abrupt increase thereafter. We have also shown that this increase was larger than the growth in industrial employment, indicating again a rapid diffusion. Second, we have shown in Table 1 that the substance of JPCs changed between inception and implementation.

Second, it is possible that the adoption of scientific JPCs is due to some unobserved heterogeneity. For example, we have argued that WWII did not have an effect on the diffusion of managerial models. This is apparent in the lack of implementation during the war years. However it is plausible that the war stimulated unobserved changes, such as cultural shifts among employees or new engineering know-how. In the present case, we would expect unobserved heterogeneity to act very much like a lagged effect of the control variables, and so we rule out this problem on similar grounds. Further, we are quite confident that the role of the state in the diffusion of Scientific JPCs cannot be reduced to missing variables: our comparative methodology, the pattern of the diffusion of scientific JPCs across the two periods, and our analysis of the state's cultural and administrative capacities all indicate that it was not until an active state stepped in that the managerial innovation took place.

CONCLUSION

Our study offers a new set of variables for the analysis of the state's role in organizational innovations. We examine state officials' autonomy to participate in shaping the labor process and their use of both administrative and cultural means. In so doing, we introduce interest and agency to a body of research where a view of the state as a disembodied source of legal constraints often reigns.

We show that the diffusion of scientific management in Israel was advanced by state officials who sought a solution to turbulent labor relations and an economic recession, and who embraced the gospel of industrial engineering popularized by international experts at that time. State actors launched a two-pronged campaign that shaped the context in which both workers and employers in factories deliberated the adoption of Scientific JPCs. Political leaders used the state regulative capacity to sponsor tripartite agreements on wage freezes and JPCs and to offer tax and raw material benefits to adopting plants. They used the state's cultural capacity to popularize a normative frame constructing productivity as a moral virtue and a precondition for national survival. We show that this normative discourse preceded the adoption of Scientific JPCs, provided a rationale for public policy on JPCs and was widely embraced, creating a common language among opposing parties and offering a recipe for legitimate action.

Our analysis is not designed to determine which means, administrative or cultural, were more effective in mobilizing workers, employers and engineers to abide by JPCs. Our view is that both play complementary roles in shaping the diffusion of a

managerial model. Organizational theorists, such as Perrow (1986) and Barley and Kunda (1992), have argued that rational and normative managerial ideologies are present side by side in organizations. The same logic could be applied to the state.

Our findings emphasize the need to reconnect industrial relations and organizational studies at the nexus of the state and organizational innovation, where their disjuncture is most acute. We have ample evidence from that states have a role in shaping the labor process. But only rarely do organization researchers consider the contribution of state actors' interest and agency to the variation in organizational forms across polities (Hamilton and Biggart, 1988; Roy, 1997; Ingram and Simons, 2000). Drawing on research on corporatism in the 1990s in eight countries, Lee, Lee and Katz (2004: 219) conclude that one of the key determinants of the use of tripartite pacts is the political choice of governmental actors. The political agenda of state leaders should thus join the list of factors affecting cross-national trends in organizational forms, beyond the unique conditions of local economies and institutions (e.g. Guillén, 2001).

This does not mean that state officials always act autonomously, but only that they have the potential to do so. The relative autonomy of state actors is variable and their impact in any historical moment should be considered empirically rather than assumed. In our case, examining their interest and agency proved important. Other theories of the state would fail to explain the state's intervention in the diffusion of Scientific JPCs in our case. Neo-Marxists, for one, might explain the state's actions in terms of employers' interest in appeasing labor strife without providing wage increases. But this conclusion would overlook significant historical variation. As we have shown,

employers objected to Scientific JPCs and did not fully buy into scientific management. Employers disinclination toward managerial innovations, even if they promise higher profits is not unique to the Israeli case. Similar patterns were seen also in the United States (Shenhav, 1999). Alternatively, Scientific JPCs could be seen as representing the unique character of the Jewish Israeli society at the time. In this pluralist model, the state-led campaign would reflect workers' fight to transform an American management model (scientific management) into a collectivist one. Although this version of events dominates the historiography of the period (Galín and Harel, 1978) the historical record shows that grassroots workers objected to JPCs even when they did not incorporate principles of scientific management. Workers on the shop floor did not view these councils as loci for workers' participation but rather as a threat to their control over the work process (Cole, 1985; Greiner and Raymond, 1991).

Our findings also contribute to studies of the labor process. While labor process researchers have viewed the state as reflecting capital's needs, we explore the effect of the state independent of the interests of capital. And whereas most studies in this tradition focus on plant-level dynamics, we examine the effect of macro level institutional mechanisms on plant level labor process.

Finally, this study enriches the conception of the state's cultural capacity in organizational research. Most organizational sociologists have yet to make the connection between the ability of state officials to advance normative frames and to promote the diffusion of managerial models. Analyzing state actors' cultural capacity to disseminate normative frames about managerial models promises to correct a common

myopia in organization research, where observations at the organizational level are detached from their origin in the wider social context. That employers attempt to win the hearts and minds of workers using normative discourses is well documented in organization research (Barley and Kunda, 1992). Less common in organization research is the study of such normative discourses at the national level. This is in stark contrast to ample evidence from historical studies on national discourses on productivity (Haber, 1964; Shenhav, 1995; Nolan, 1994; Carew, 1987; Djelic, 1998).

One contemporary example is the managerial discourse on diversity in the U.S., which frames “diversity management” as a rational business strategy that increases competitiveness. The historical origin of the diversity discourse in the national context of the Civil Rights Act and Affirmative Action edicts of the 1960s are edited out of the popular discourse (Kelly and Dobbin, 1998). And instead of historically disadvantaged groups, the term, “diversity,” now often refers to depoliticized concepts such as diversity of dress styles (Edelman, Fuller, and Mara-Drita, 2001).

Careful examination of classical managerial ideologies show that they started as nation-wide movements that blended with managerial practices brewing at the shop level (Bendix, 1974; Barley and Kunda, 1992; Guillén, 1994; Shenhav, 1999). Most models were developed in the wider society before they became recipes and a-historical managerial toolkits. Similarly, our historical analysis traces the origins of Scientific JPCs beyond the logic of a rational business strategy and beyond the logic of a unique social legacy. Rather, this managerial innovation was proposed, promoted and adopted in the context of class conflict and state building.

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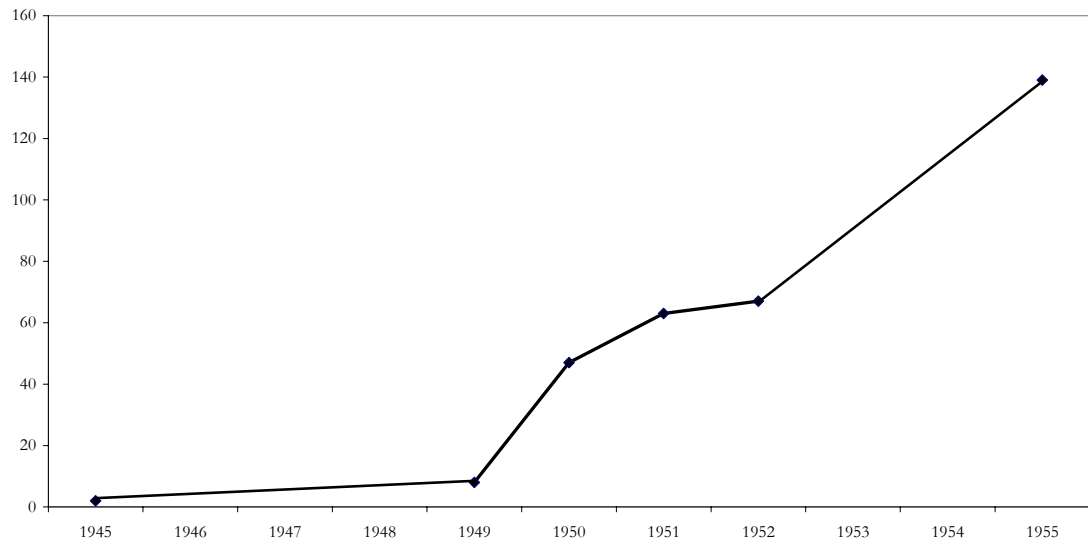
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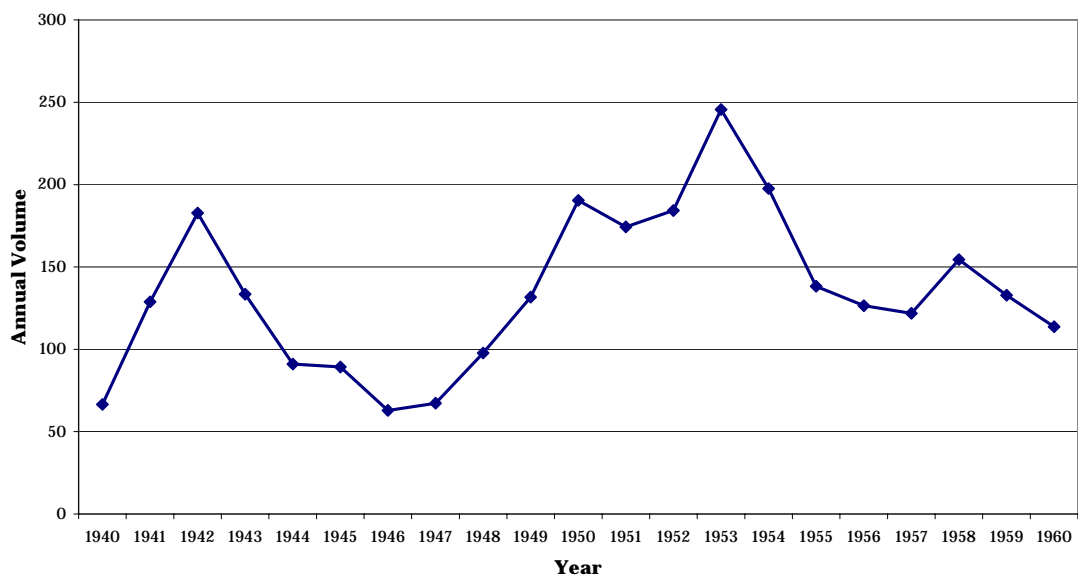
FIGURES AND TABLES:

Figure 1: Number of Joint Productivity Councils in Industry, 1945-1955



Source: The Israeli National Productivity Council, the Lavon Labor Movement Archive.

Figure 2: National Productivity Discourse 1940-1960



Source: Ha'aretz daily newspaper.

Table 1: Features of JPCs versus Scientific JPCs.

	JPCs (1940s)	Scientific JPCs (1950s)
% JPC with Industrial Engineers	0	88%
Productivity Bonuses	Collective Bonuses	Individual Bonuses
Corporatist Agreement	No	Yes

Source: The Israeli National Productivity Council, LLMA/250-72-3-158

Table 2: Tax Cuts Approval Rates, 1952-1953.

	TAX CUTS		
	Rejected	Confirmed	Total
Scientific JPC present	4 (15%)	33 (79%)	37
No Scientific JPC	22 (85%)	9 (21%)	31
	26 (100%)	42 (100%)	68

Data source: Hamifal, April 1956.

Table 3: Industrial Development, Labor Relations and Level of Professionalization in Palestine and Israel, in the 1940s and 1950s.

	1940s	1950s
<u>Part A: Industrial Development Indicators:</u>		
Industrial employment ¹	34%	22%
Growth in product in manufacturing ²	360%	230%
Plants in the textile industry ³	404	559
Plants in leather industry ³	124	196
Plants in steel industry ³	1155	1441
Average plant size ⁴	16	16
Percent working in plants larger than 50 workers ⁵	41%	46%
<u>Part B: Labor Relations Indicators:</u>		
Days per strike ⁶	12.28	10.8
Working days lost per employed ⁶	0.5	0.14
Percent strikers from total LFP ⁶	6.6%	4%
Union membership from total LFP ⁷	49%	56%
<u>Part C: Engineering Indicators:⁸</u>		
Certifying professional institutions	yes	yes
Number of engineering graduates	660	940
Active professional associations	yes	yes
Engineers lobbying for using their methods in industry	yes	yes
Institute for Standardization	yes	yes
Scientific management used in industry	yes (rarely)	yes

Notes:

¹ 1940s data pertain to 1945. Source: Metzger, 1998: 219, 240, Table A.5 and Table A.20, 1950s data represent the mean value for 1950, 1952, 1955-1958. Source: Central Bureau of Statistics, 1956: 186.

² 1940s data are for the years 1941-1947. Source: Metzger, 1998: 240, Table A.20. 1950s data are for the years 1950, 1955-1958. Source: Tabb, Ami, and Shaal, 1961: 60, Table 16.

³ Data for the second decade are for 1960. Source: Avitzur, 1989.

⁴ 1940s data are for 1939 and 1942. Source: Central Bureau of Statistics, 1956, Part A, 6, 79.; 1950s data are for 1952, 1955, 1956, 1958, 1959. Source: Central Bureau of Statistics, 1964: 174, 272, 312, 330.

⁵ 1940s data are based on 1937. Source: Nathan, Gass, and Creamer, 1946: 223. For 1950 data see note 4.

⁶ Period averages based on annual data. Tabb, Ami, and Shaal, 1961: 222, 224, Tables 25 and 26.

⁷ 1940s data pertain to 1945. Source: Metzger 1998: 219, Table A.5, and Tabb, Ami, and Shaal, 1961: 102, Table 20; For the 1950s, mean value is based on annual data 1950-1959. Source: Tabb, Ami, and Shaal, 1961: 38, 102, Table 10 and Table 20.

⁸ Archival sources. See text for a detailed discussion.

Table 4: Comparative Indicators of Industrial Development, Labor Relations and Management Professionalization in Israel during the 1940s and in Selected Countries at the Respective Periods of Adoption of Scientific Management.

	Pre-state Israel 1940-1949	U.S. 1920-1929	Germany 1920-1929	U.K. 1950-1959	Spain 1950-1959
Industrial employment	34%•	29%*	41%*	52%†	27%†
GDP cumulative growth rate	400%	360%	420%	230%	380%
Working days lost in strikes per worker	0.5	n/a	0.48	0.13	n/a
Percent administrative workers of all workers	14%	18%*	13%*	21%†	9.5%†

Sources: For Pre-State Israel: Metzger, 1998 Tables A5, A20 Tabb et al., 1961, Tables 25, 26 ; For other countries: Guillen 1994, pp.308-310.

Notes: Data for the United Kingdom and Spain are only available for the decade after the adoption of Scientific Management.

• Data for 1945; * Data for 1929; † Data for 1950.