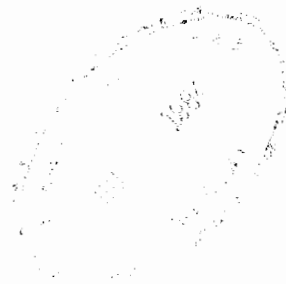




Competing Paradigms in Industrial Relations

Roy J. Adams

McMaster University
Faculty of Business



**INNIS LIBRARY
NON-CIRCULATING**

Published in Industrial Relations
(Laval) vol. 38, No. 3, 1983,
pp. 508-529.

Hamilton, Ontario, Canada
April, 1981

Working Paper Series 190

Innis

HB

74.5

.R47

no.190

c.1

Competing Paradigms in
Industrial Relations

by

Roy J. Adams

April, 1982

During the past several decades industrial relations has become a well established field of inquiry. Scholarly industrial relations journals are published in several countries; there are industrial relations associations and there are centers and institutes which engage in research and train future practitioners and researchers. Despite the stature which the field has achieved, many essential issues regarding its nature and purpose continue to be controversial. Indeed, there has emerged no universally accepted definition of the term industrial relations. As Geare notes, "almost everyone knows what the term means - at least to his own satisfaction. The problem is that different views on the actual meaning rarely coincide" (Geare, 1977, p. 274).

Numerous efforts have been made to define and provide direction to the field by integrating "the disparate strands of thinking and research now roughly juxtaposed under the banner of industrial relations" (Somers, 1969, p. 39). In his book Industrial Relations Systems, John Dunlop nominated "the rules of work" as the central focus of industrial relations. Dunlop's proposal was taken up in Britain by Flanders, Clegg and Bain who defined industrial relations as the study of job regulation. Margerison suggested that "industrial conflict" be considered the central concept. Derber, while recognizing other approaches, argued for "industrial democracy." Kingsley Laffer proposed "bargaining relationships" and Gerald Somers made a case for the more inclusive concept of "exchange relations" (Dunlop, 1958; Flanders, 1965; Bain and Clegg, 1974; Margerison, 1969; Derber, 1969; Laffer, 1974, Somers, 1969).

All of these proposals have won some adherents but none has been universally accepted. Despite several decades on conceptual work the quest for integration has not been successful. In this essay we shall attempt to demonstrate that the failure of integration is the result of the underlying

conceptual structure of the field. Integrationists have implicitly assumed that industrial relations has a natural unity or conceptual core capable of being identified by careful reflection. We argue instead that the broad field of industrial relations is composed of several "schools" or research traditions each of which has its own conceptual framework.¹ When viewing the empirical world members of the different schools neither look at nor see precisely the same things. The schools address different problems and they assess experience against different normative standards. To use Thomas Kuhn's term, each school has created a "paradigm" which competes for the allegiance of the industrial relations community (Kuhn, 1962). Because they are conceptually and normatively incompatible the paradigms have withstood attempts at integration. Two basic conclusions are drawn from the analysis. First, research, teaching and debate in the industrial relations community would be better served by the conscious realization and acceptance of competing paradigms rather than by continued attempts to integrate incompatible traditions. Second, adherence to the industrial relations systems paradigm is probably the most viable strategic option for those concerned with the advancement of a coherent and independent industrial relations research tradition.

Uses of the Term Industrial Relations

Before proceeding further it is essential to provide a definition of industrial relations. Most definitions of any field are subjective and prescriptive. They reflect the biases and personal understandings of the writer. A field may also be defined objectively against a public standard. Thus, in seeking a definition for the field of psychology Marx and Hillix

¹The contradictory nature of many IR concepts has recently been noted by Derber (1982).

(1963) concluded that subjective, prescriptive definitions were inherently inadequate. They argued that "it will hardly advance psychology (or any other science) to be prescriptive and say 'As a psychologist you shall study only _____'" (p. 33). They suggested the following criterion for identifying the nature of psychology: "Let the man who calls himself a psychologist study whatever he pleases; we shall best discover what psychology is by seeing what he studies" (p. 32). By analogy it would seem appropriate to define the empirical universe of industrial relations as comprehending all of those issues addressed in industrial relations journals and in the proceedings of meetings of industrial relations associations. A predominant concern of all such journals and associations is union-management relations. Indeed many users seem to consider union-management relations and industrial relations to be synonymous (e.g., Miner and Miner, 1977). However, in industrial relations publications one may also find articles on a wide diversity of subjects including wage and price controls, social legislation, occupational health and safety, industrial training, equal employment opportunity, labor market problems, personnel policies and practices and many other work related issues. When considered objectively the empirical universe of industrial relations would seem to include "all aspects of the employment relationship."²

The term industrial relations is also used to refer to the field of study which addresses the phenomena included in the first use of the word. To some this field is a "crossroads where a number of disciplines meet" (Dunlop, 1958, p. 6). This perspective is exemplified by the billing given to the British Journal of Industrial Relations:

"A Journal of Research and Analysis covering every aspect of Industrial Relations: Industrial Sociology, Industrial Psychology, Labour Economics, Labor Law, Manpower Planning, Personnel Policy, Systems of

²The journal Industrial Relations publishes articles on "all aspects of the employment relationships."

Remuneration, Collective Bargaining, Organizational Theory, Conflict Theory, Institutional Studies, Government Policies, Work Behavior, Industrial Relations Theory."

The U.S.-based Industrial Relations Research Association has also adopted this approach. The association "was designed to bring together in useful exchange, persons from various disciplines and practitioner groups, who have a common professional interest in the interrelated parts of the industrial relations field" (Lester, 1977, p. 3). Included within the academic membership are economists, sociologists, law scholars, psychologists, political scientists, labor historians, and business administration teachers. Among the practitioners are personnel and labor relations specialists, government officials, trade unionists, lawyers, consultants, arbitrators and mediators. The association also includes a group of academics who identify their field specifically as industrial relations. This group apparently does not identify with any of the traditional disciplines. Many of its members have been trained specifically in industrial relations programs and have no established discipline with which to relate.

Thus, as a field of inquiry industrial relations has a dual personality. To those whose allegiance is owed primarily to one of the established disciplines IR is a crossroads where scholars from several disciplines meet to exchange views on various aspects of the employment relationship. On the other hand, to those trained specifically to be industrial relationsists the field may be viewed as independent and distinguishable from other social science disciplines. In short as a field of inquiry industrial relations may be viewed as both a multidisciplinary crossroads and as a discipline in the process of becoming. It is probably fair to say that the quest for intergration, definition, conceptualization, normative standards and research focus has been of most concern to the independent disciplinarians rather than to the multidisciplinarians.

The Schools

To the student of employment relations in search of guidance regarding research strategy four dominant research traditions or schools are available. They are identified here as the labor market school, the management school, the political school and the institutional school. The paradigms of the first three are fairly well developed and there is a considerable degree of conceptual unity in the work produced by members of each. The paradigm of the institutional school is, however, less mature and its members have suffered from a persistent identity crisis.

The four traditions are not rigidly bounded and, indeed, some scholars move back and forth between them with considerable facility. Nevertheless, they are sufficiently different from each other to warrant the designation "school." It is not possible in this paper to provide a comprehensive review of the research and thought of the four schools. Instead our objective is simply to point out the major conceptual, theoretical and normative aspects of each.

The Labor Market School

The labor market tradition may trace its heritage to Adam Smith. For the most part, members of this school have been trained as economists and they identify strongly with the discipline of economics. Drawing on the theoretical structure of economic science, the labor marketers conceive of labor and management largely as abstractions rather than as complex institutions.³ As Kenneth Boulding has noted, "the focus of interest of

³The terms labor market school and labor marketer are used to refer to those who apply the conceptual and normative framework of neo-classical economics to labor management relations. This is a narrower focus than labor economics which in practice subsumes much of the institutional literature and has developed theories which are not derivative from the neo-classical framework. Thus, writers often equivocate the terms labor economics and industrial relations. (See, e.g., Dunlop, 1977).

economics as a separate discipline is not men but commodities" (Boulding, 1950, p. 53). Individual workers are seen to exchange with individual enterprises labor for compensation. Both labor and management attempt to maximize economic utility. In theory labor markets are self-regulating. The abstract forces of supply and demand determine wages and labor supply. Empirical deviations from theoretical expectations are typically considered to be market "distortions." The normative orientation of this school revolves around the efficiency of labor markets which may be related back to the overall efficiency of the economy.

This conceptual and normative orientation has produced a great deal of research and theory. It has also had a significant impact on public policy. In some respects, however, its theoretical structure has proven to be an inadequate guide to the empirical world. In particular the labor marketers have not been able to effectively reconcile their atomistic conceptual imagery with the observed collective behavior of workers. For example, attempts to depict unions as economic utility maximizing agencies have proven fruitless (Ross, 1958). "Markets" have been identified which deviate greatly from theoretical expectations. During the 1940's, for example, research in the U.S. found cases where wage rates and labor supply were determined by "institutional rules" rather than market forces. Within such "markets", Kerr wrote, "Formal rules, consciously selected, supplant informal practices determined by market conditions" (Kerr, 1950, p. 73).

The discovery of such anomalies as well as the rise of other schools which conceived of labor and management as competent actors rather than as vehicles for the transmission of market forces led to splits within the ranks of the labor marketers. Some began to associate themselves more closely with other students of labor whatever their backgrounds. Others continued their strong attachment to economics and limited themselves to labor phenomena which

could be effectively addressed by economic science (Straus and Feuille, 1978). Still others compromised by utilizing economic concepts to the extent practicable and by reverting to descriptive pragmatism where economic theory failed. Books produced by this latter group carried titles like Labor Economics and Labor Relations and Labor: Institutions and Economics (Reynolds, 1974; Kuhn, 1967).

For all of those trained within the labor economics tradition, disciplinary imagery continued to be influential. The persistent use of the term "market" to apply to situations quite removed from the usual understanding of the term is indicative. For example, the 1960's saw Doeringer and Piore carrying forward Kerr's earlier research by applying the term "internal labor market" to the movement within the firm of people from job to job within and between job hierarchies (Doeringer and Piore, 1971). Only by stretching the imagination to its limits could one perceive this conger of administered policies and practices as a relationship between commodities (see Hyman and Brough, 1975).

The Political School

A second school of employment relations students has diverse origins but owes most of its conceptual orientation to Karl Marx. This school granted the existence of capitalist "markets" but it conceived of the labor-management relationship not as one between impersonal demanders and suppliers of labor and income but rather as one between social classes. It considered the labor-management relationship to be fundamentally a political one.

In this conception the capitalist class subsumed not only management but also the state. Workers offered their labor on the market not as free agents but as subjugated human beings politically compelled by a class in power to sell their labor at prices well below its intrinsic worth in order to meet basic physiological needs.

This school asked questions quite different from those of the labor marketers. Its "normal science", to use Kuhn's terminology, consisted of efforts to determine how the capitalist class managed to maintain its power and how labor reacted to capitalist tactics (see, e.g., Hyman, 1975; Clarke and Clements, 1977). The macro theoretical structure of the school suggested that labor would eventually arise and overthrow its capitalist exploiters. A good deal of Marxist research consisted of identifying signs of "class consciousness," a necessary condition for the revolution. Rather than economic efficiency the critical normative concern of members of the political school was their conception of social justice.

The theoretical structure of Marxism suggested that industrial conflict would grow to a crescendo culminating in revolution in the most advanced industrial society. Many developments in the real world, however, apparently deviated from theoretical predictions. Conflict did not expand monotonically with advancing industrialism (Kerr, et al., 1964). The first major working class revolution took place in the industrially backward nation of Russia. These anomalies, like those in labor economics, required the elaboration of theory and produced scepticism within the industrial relations community.

Because of the inadequacies of the radical Marxist tradition a sub-school developed which held that social justice could be achieved by evolution rather than revolution. This sub-school focused its efforts on identifying the particular political alignments necessary for the achievement of social justice within the context of liberal democratic society. Its research consisted largely of evaluating the impact of specific policies against the yardstick of social justice and of recommending alternative policies. The work of the Fabian society in Britain epitomized the approach.

The political school has been very influential in Britain and Europe. In North America, on the other hand, while many sociologists and political

scientists adhere to this tradition, for the most part they have not associated themselves with the field of industrial relations (Hyman, 1982). Moreover, most of those who consider IR to be their specific field have rejected the class conflict imagery of labor-management relations. In recent years, however, a group of scholars who identify their field as "labor studies" has emerged. It shares with the radical and reform contingents of the political school the normative focus on social justice (Dwyer, et al., 1977).

The Management School

Early in the 20th century a third school arose quite apart from the labor market and the political schools of thought. The "father" of this school was Frederick Taylor who began his career as a management practitioner. From practical experience Taylor regarded management as a conscious agent capable of taking and implementing decisions. It was neither a passive vehicle through which market forces had their lawlike effect, nor was it a segment of a social class whose behavior was determined by the Marxian laws of social history. Taylor assumed management to have considerable policy discretion in dealing with its workers. By making this assumption members of the management school addressed a range of problems, developed theories and reached conclusions essentially inimical to both the labor market and political streams of thought.

Taylor was not interested in explaining management behavior. Instead he set out to identify strategies management could adopt in order to maximize labor productivity. Through scientific methods, Taylor claimed, one could identify the "one best way" of managing workers (Taylor, 1947).

The problem set identified by Taylor had been essentially ignored by both the labor marketers and the political theorists. The former assumed that competitive market forces would compel management to manage workers in the

"one best way." The latter assumed that the will to power and privilege would have the same effect. Oddly, Taylor's image of the worker was essentially identical to the imagery of the labor marketers. Taylor's worker was an "economic man", par excellence, who could be induced to do precisely what management wanted him to do with appropriate economic incentives. This school of thought soon attracted a wide following. Normal science became of matter of identifying ways in which management could elicit high labor productivity (Baritz, 1960; Kochan, 1980).

The economic man imagery inherent in management theory endured only until the 1930's and the Hawthorne experiments of Elton Mayo and his colleagues. In these experiments Mayo "discovered" a behaviorally complex worker with diverse motivations (Mayo, 1933, 1949). Mayo's worker might react favorably to economic incentives or he might reject them by informally restricting group output. Moreover, he could be induced to produce at higher levels not only with economic incentives but also with social and psychological incentives. The discovery was not a setback for members of the management school. It merely opened up a new frontier for research. Job satisfaction began to compete with labor productivity as a focus for research. For the most part, however, job satisfaction was regarded as an intermediate variable which could, in appropriate circumstances, contribute to productivity.

Like the labor market and the political school, the management theorists have developed a rich body of research and theory which is summarized in textbooks on personnel management, industrial psychology and organizational behavior. Guided by a conceptual framework with the complex worker at its core, this school has focused most of its efforts on relations between labor and management at the level of the enterprise. With labor productivity as its normative anchor it has largely ignored trade unionism, collective bargaining and government policies. Similar to the labor marketers, writers of personnel

textbooks have reverted to descriptive pragmatism when discussing these phenomena. Over time this stream spawned a number of sub-schools known variously as organizational behavior, organizational theory, and organizational development.

The management school and the labor market school represent two solitudes within the ranks of industrial relations. The management school has discarded the assumption of the "economic man" as well as the behavioral implications of the assumption. For their part the labor marketers equally ignore the theory and research of the management school. One cannot simultaneously employ the conceptual imagery of the behaviorally complex worker and that of the "economic man." Choosing the former necessarily requires denying assumptions essential to the latter. The political school, however, has been more attentive to management theory. It considers it to be an integral part of the ideological and strategical underpinnings of the capitalist class (Braverman, 1975, Hyman, 1975).

The Institutional School

The last major school of employment relations students is characterized more by the lack of unity and research orientation than by the existence of it. Nevertheless, an interest in the institutions of industrial relations (trade unions and collective bargaining in particular) is a common thread holding the group together.

The most essential early paradigmatic work in this tradition was carried out by J.R. Commons and his associates in the U.S. and by Sidney and Beatrice Webb in Great Britain. Commons had been trained as an economist but early on he discarded the mainline imagery of both the labor market and the political school. Instead of undifferentiated buyers and sellers reacting to market forces or social classes driven by deterministic laws of history, Commons and his associates conceived of labor-management relations as relations between

pragmatic institutions. Their approach was largely inductive rather than deductive. They were fact gatherers in search of theory rather than theorists in search of facts which would support and flesh out their preconceptions (Commons, 1934; Dorfman, 1949, 1963).

The Webbs in Great Britain were both historians and social reformers. They wrote the classic work on the History of Trade Unionism (1896) and they explored in depth the functions of unions in society in their Industrial Democracy (1902). As theorists the Webbs should most appropriately be placed in the political school. They were stalwart members of the Fabian Society which believed in and worked for social justice through political reform. However, the empirical work of the Webbs on the evolution and strategy of trade unions is an essential element of the institutional tradition.

The initial focus of institutional research was on the impact of capitalism on workers and on the response (and particularly the collective response) of workers to capitalism (Kerr and Siegel, 1955). Because members of this school typically have proceeded from fact to judgment rather than the reverse institutionalists have sometimes been disparagingly referred to as "fact-grubbers" rather than theorists (Jackson, 1977, p. 12). However, there is nothing inherently a-theoretical about the institutionalist approach and indeed the most widely held explanations of the development and nature of unions and collective bargaining are attributable to them.

Early members of the school believed strongly in the social desirability of "industrial democracy" by which they meant the representation of the organized interests of the workers (Leiserson, 1973). Industrial democracy, however, did not become a normative focus for this school in the same sense as market efficiency, labor productivity and social justice had become normative foci for members of the other schools. The institutionalists argued that industrial democracy (particularly in the form of collective bargaining)

either added to or was consistent with the normative goals of the other traditions. They typically accepted the desirability of some combination of the other goals but argued that no combination was acceptable if achieved at the expense of industrial democracy. These arguments took various forms. Against the political school institutionalists argued that unions and collective bargaining were vehicles of social justice of importance equal to or greater than political revolution or reform (Perlman, 1973). Against the management school they argued that there were plural interests in the work place whose legitimate expression was necessary to check the arbitrary exercise of managerial authority (Barbash, 1964; Fox, 1966). Against the labor marketers they argued that collective bargaining was not necessarily a detriment to market efficiency and could even positively influence economic operations in certain circumstances (Freeman and Medoff, 1977). In short, instead of developing a positive theory of collective action, the institutionalists major efforts were directed towards revealing the inadequacies of various aspects of the competing schools and towards the defense of pragmatic trade unionism.

IR Systems Theory: An Alternative Paradigm

By the 1940s in the U.S. the increasing anomalies arising from the traditions of the various schools led to the creation of the Industrial Relations Research Association as well as several industrial relations centers. One of the major tasks of the centers was to train "interdisciplinary professionals" by "offering core courses in labor-management relations, labor economics, labor law and legislation and personnel management" (Kochan, 1980, p. 13). An implicit assumption of this approach was that these new scholars would be able to integrate research and theory from the various traditions into a meaningful and consistent conceptual whole.

That objective, however, was not readily achieved. Confronted with competing (and at many points antagonistic) paradigms there was a strong tendency for the "interdisciplinary professionals" to forego theory-building and to engage in what Derber called "following the headlines" (Derber, 1967). Pragmatic research was carried out on whatever issues appeared to be important at the moment. As U.S. policy shifted away from concern with collective bargaining to manpower policy and human rights at work many IR scholars shifted their research in parallel fashion. When public employees began to engage in collective bargaining industrial relations research in this area expanded accordingly (Strauss and Feuille, 1978). Theory which appeared to be appropriate to the task at hand was borrowed from several disciplines but there were few instances of effective theoretical integration. Facts continued to pile up but theory lagged behind. Referring to the situation in the mid-1960's Kochan wrote "two decades after the initial call for development of interdisciplinary research and teaching programs, industrial relations still lacked a coherent framework for guiding research and thinking, policy analysis, or practical problem solving" (Kochan, 1980, p. 18).

Despite the widely held belief in the desirability of synthesis among those who considered their specific field to be industrial relations, textbooks on "industrial relations" invariably focused on unions, collective bargaining and other aspects of institutional interaction between labor, management and the state. No book appeared in which the author attempted a general synthesis of research and theory regarding the full range of approaches to the study of labor and management.

As early as the 1950's, however, some scholars began to pursue a different direction. Their stated goal was general integration but what they actually produced was an alternative to the older paradigms. The seminal work along these lines was John Dunlop's book Industrial Relations Systems (1958).

During the 1950's the term industrial relations systems came into use to refer to patterns of labor-management-state relations in specific industries and countries. At first the term was used without "explicit or rigorous definition" but in 1958 Dunlop set out "to provide analytical meaning to the idea of an industrial relations system" (Dunlop, 1958, pp. 381, 3).

He argued that IR systems vary in scope from an enterprise to a sector or to a country as a whole. They are composed of three actors: workers and their organizations; managers and their organizations and government agencies concerned with the workplace and the work community. These actors interact to produce a network of "rules" which define their status and govern their conduct. The actors "are regarded as confronting an environmental context" which constrains and shapes their behavior. Industrial relations systems, he said, are held together by a common ideology. Dunlop proposed that the study of rules and rule-making regarding employment relations be regarded as the central focus for IR inquiry. He intended his framework to apply to all industrialized and industrializing countries. The study of IR systems, he argued, would provide "a genuine discipline" (Dunlop, 1958, p. 6).

Because he referred to his schema as a "general theory" Dunlop's effort has usually been interpreted as an attempt at comprehensive synthesis. We suggest, however, that his objective was implicitly less ambitious. He made no effort to include the research and theory of the management and political schools and he explicitly excluded labor economics. Instead of being seen as a general synthesis Dunlop's work is more accurately viewed as an attempt to provide a more coherent paradigmatic alternative to the other traditions.

Critics have subjected Dunlop's work to minute dissection and they have found in it many "obscurities, inadequacies and inconsistencies" (Walker, 1977, p. 312). For example, Dunlop's formulation has been criticized for being static rather than dynamic, and for emphasizing structure over process. It

has also been criticized for being socially conservative and thus contrary to the perspective of the political school and for failing to integrate the behavioral research produced by the management school (Wood, et al., 1975). If Dunlop's effort was, as we have suggested, to provide an alternative to the other schools rather than to integrate the various traditions then the latter criticisms miss the mark.

The impact of Dunlop's work on the field has been equivocal. Writing in Britain Jackson argued that it "has had a tremendous impact. It has dominated industrial relations research for the past decade and has been used by as a starting point by most influential commentators" (Jackson, 1977, p. 10). A U.S. commentator, however, says that "Dunlop's book was not ... well received by other academics. Critics saw it as a collection of concepts and a classification scheme but not a useful explanatory framework" (Kochan, 1980, pp. 15-16). Because of the inadequacies of Dunlop's book subsequent writers have refined, clarified and added to the systems framework.

Among the most useful additions have been those of Craig (1975), Geare (1977) and Kochan (1980). Whereas Dunlop made reference to the work of Parsons in developing his scheme, thereby creating a good deal of controversy (see, e.g., Poole, 1981), Craig derived his framework largely from the work of the political scientist Easton. Craig made several useful contributions. First he suggested that the environment of an IR system be considered to include the range of other social sub-systems including the ecological system, the economic system, the political system, the legal system and the social or cultural system. This was an advance over Dunlop who had noted only three environmental contexts: the technological, the market (and budgetary constraints to include the public sector) and the power context. Craig's second contribution was to make explicit three crucial attributes of the system actors: goals, values, and power. This addition supplied a dynamic

element to the model which was missing from Dunlop. Although Craig's discussion of goals, values and power was cursory it implied that in order for one to understand the behavior of IR actors one should have reference to their goals (what they were seeking to achieve in the system), their values (to what extent they valued one objective over another), and their power, (their ability to effectively pursue their goals). Implicitly if one had complete data on the goals, values, and power of the actors one could predict the outcome of any labor, management and state confrontation. In short one could explain industrial relations behavior by reference to goals, values and power.

A third contribution was the idea of a feedback loop. A good deal of IR research has been focused on the impact of labor-management relations on the wider society. Among the topics of concern have been the impact of employer-employee relations on productivity, inflation, income distribution and other issues of social consequence. Although Dunlop's model did not clearly encompass these issues that of Craig clearly did so.

In Industrial Relations Systems Dunlop stated that "The central task of a theory of industrial relations is to explain why particular rules are established in particular industrial relations systems and how and why they change in response to changes affecting the system" (Dunlop, 1958, pp. VIII-IX). This statement was problematic. Many industrial relationsists recognized that "rules" made manifest in collective agreements, laws, arbitration decisions, management policies, and custom and practice were a very important part of the empirical industrial relations universe. Researchers were, however, interested not only in the rules but also in substantive issues such as wages, benefits and job security which the rules were designed to regulate. In his model Craig suggested that the output of an industrial relations system be considered terms and conditions of employment rather than rules. Geare integrated the two conceptions. He reconstructed

the systems model so that it included both rules and substantive issues which he conceived of as specific actor objectives. Rules, he argued, could be interpreted "as an intermediate step between the interaction of the actors and their objectives" (Geare, 1977, p. 283). They are not an objective (or dependent variable) in themselves as implied by Dunlop, but rather are a means to various ends. Walker had noted that the Dunlop model provided no rationale for the engagement by actors in rule-making (Walker, 1977). In Geare's revised model the actors engaged in rule-making as a means in pursuit of their substantive objectives.

A basic flaw with Dunlop's model was its failure to provide a basis whereby one system could be normatively evaluated against any other system. One of the main reasons why the other IR traditions had achieved unity of purpose in pursuit of knowledge was the ability of members to normatively assess the performance of their units of analysis. The labor marketers could employ the efficiency yardstick when comparing labor markets; the management theorists could assess enterprise and individual performance in regard to labor productivity and the political theorists could compare the real world against their ideal world on the criterion of social justice.

By suggesting that the actors created rule-making machinery in pursuit of their goals, Geare had implicitly found a way of incorporating performance criteria into the systems framework. It was left to Kochan, however, to fully develop the idea. Although his reasoning was focused narrowly on the U.S. collective bargaining system it had much wider ramifications. He argued that "the impacts of the system on the goals of the parties and the public provide an important set of standards for evaluating its performance" (Kochan, 1980, p. 30). Kochan's solution to the normative dilemma was to simultaneously evaluate the impact of the system on the level of goal attainment achieved by labor, management and the public. "Perhaps the central feature distinguishing

industrial relations from other disciplines that touch on the study of employment relationships," he argued "is that its students and researchers cannot approach their work with some a priori bias towards the supremacy of the goals of one party in the system." Instead, "industrial relations theories, research, and policy prescriptions must be conscious of the relationships among the goals of workers, employers, and the larger society and seek ways of achieving a workable and equitable balance among these interests" (Kochan, 1980, p. 20). Although many IR scholars will surely dispute Kochan's claim that they are bound to work towards an "equitable balance," the idea of actor goal attainment would seem to provide a positive focus which the systems framework has long been lacking.

Implications for Industrial Relations Research Strategy

The above analysis suggests that the industrial relationsist has a choice of strategies in approaching the empirical IR universe. (S)He may address the world from the perspective of any of the traditional schools or from the newer systems perspective. The traditional schools have provided important insights into employment relations and no doubt will continue to generate additional useful knowledge in future. From the perspective of the industrial relationsist, however, all of the historical traditions suffer from conceptual, normative or strategical flaws which preclude their use as a unifying framework of inquiry. We suggest that the revised systems framework developed above provides the most viable present option. Over the past 20 years the systems framework has moved beyond being a "collection of concepts" and many of its "obscurities, inadequacies and inconsistencies" have been clarified and corrected. In its present state of development it suggests that the main task of industrial relations is to identify and describe the structure and process of relations between labor (in either its individual or collective aspect), management and the state in different enterprises,

industries and countries and to evaluate the performance of those structures and processes in terms of the degree of goal attainment achieved by the actors. This agenda is large enough to comprehend the full range of relations between labor, management and the state. Several textbooks already utilize the systems framework to organize and summarize research and theory (see, e.g., Clegg, 1972; Kochan, 1980, Beal and Begin, 1982; Anderson and Gunderson, 1982). Invariably, however, these books focus upon union-management relations. Thus, it is important to stress that the systems framework does not necessarily presume the existence of unions and collective bargaining (see e.g., Cox, 1971). It may be employed, for example, to investigate the nexus of interaction between labor in its individual aspect, management and the state in regard to such issues as human rights at work, occupational health and safety, employment policy and job design. Whereas reference to unions is apparently essential to institutional research it is not basic to systems research.

It is also important to stress that the systems framework is not a unifying paradigm. It does not comprehend and subsume the existing traditions. Instead it offers to the student of employment relations an alternative to those traditions. Thus, where labor marketers consider wages to be primarily the result of market forces with institutional arrangements as a constraint, a systems theorist would see wages as the result of conscious decisions taken by competent actors within the flexible constraints of market forces. Where the management theorists evaluate behavior against enterprise and human performance, the systems theorist would be equally concerned with the impact of employment decision-making on the well-being of the individual and of society as a whole. Where the Marxist sees class conflict and exploitation as inevitable and pervasive the systems theorist would see considerable evidence of cooperation as well as conflict.

In his recent book Collective Bargaining and Industrial Relations (1980) Kochan also addressed the question of IR research strategy. To a degree the approach outlined here is an expansion of the systems framework utilized by Kochan. In some respects the two strategies differ.

First, Kochan argued that a concern with public policy was essential to industrial relations. It is certainly true that industrial relationsists in the U.S. historically have been concerned with and involved in policy issues. However, one can see no convincing reason why some industrial relationsists should not pursue basic knowledge about employment relations regardless of its likely effect on policy. Concern with policy relevance may have been a defining characteristic of U.S. industrial relations in the past but there is no apparent reason why there must be universal adherence to the principle in order for industrial relations to develop a coherent research tradition.

Second, Kochan reiterated the desirability of continuing the long quest for integration of economic, behavioral and institutional research although he generally disregarded Marxist research (Hyman, 1982). Clearly IR scholars will continue to acquire insights into labor, management and state relations as a result of research carried out by members of the established traditions and those insights must be absorbed in order to arrive at a fuller understanding of employment relations. However, a major purpose of this essay has been to demonstrate the futility of continuing the quest for conceptual integration. Experience suggests that coherent research traditions, whatever their limitations, make more progress in pursuit of knowledge than do ad hoc efforts to knit together bits and pieces of antagonistic paradigms.

Third, Kochan prescribes the acceptance of inherent conflict between the interests of employees and employers. This theme has been prevalent in the institutional tradition. However, one can see no reason for maintaining it as an essential, a priori premise. It would be more consistent with the broad

traditions of western inquiry to require empirical verification of the universal conflict hypothesis. Our minds should not be closed to the theoretical possibility that some nexus of labor, management and state relations could be based on pure cooperation (see, e.g., Cummings, 1982).

Fourth, Kochan prescribes that industrial relations should rely primarily upon the research methods of empirical data collection and quantitative analysis. Such a strategy is necessary, he suggests, in order to move industrial relations back into the "mainstream of social science." Since quantification is fashionable in U.S. social science circles Kochan's prescription is, no doubt, good advice to young scholars seeking fame and glory. As a strategic approach to understanding the universe of industrial relations it is of doubtful validity. In certain circumstances and for certain problems empiricism and quantification are useful and necessary. Universally applied, however, the strategy has the effect of placing the method before the problem and thereby of disregarding potentially interesting problems because they do not readily lend themselves to such methods. During the past two decades much of the most exciting and innovative industrial relations research has been carried out in Great Britain, largely without recourse to such rigid methods.

The question of IR research strategy also was addressed recently in an article by Strauss and Feuille (1978). They argued that the study of the employment relationship was "intellectually meaningless" and proposed that industrial relationsists confine their attention to collective bargaining. We suggest that collective bargaining is an area too small to form the basis of an independent research tradition. The experience of the past thirty years in the U.S. certainly supports this proposition. The problems inherent in the approach become apparent when one turns one's attention to countries other than the U.S. The industrial relationsist who confined himself to collective

bargaining would have missed the most important European developments of the past several decades such as the acquisition by worker representatives of seats on boards of directors and of the making of national socio-economic policy by tripartite mechanisms. Collective bargaining must of necessity be an essential concern of industrial relationsists and no doubt the predominant concern of some, but focusing exclusively on collective bargaining is a poor strategy for industrial relations research.⁴

Concluding Remarks

The fundamental task of any field of inquiry is to pursue understanding, prediction, explanation and control in regard to some universe of phenomena. In industrial relations this pursuit has been hindered by the failure of the community to achieve a common perception of its nature and purpose. We have, in this essay, attempted to view the field objectively and in doing so arrived at two initial conclusions. First, the empirical universe of industrial relations would seem to consist of all aspects of the employment relationship. Second, in pursuit of knowledge about employment relations the community has evolved a two-fold structure. On the one hand industrial relations is a broad field composed of contributors from many academic disciplines. In this aspect it is not simply "interdisciplinary" but rather is organized into schools each of which has developed its own concepts, theories and normative standards. Each of these schools has attracted scholars from more than one discipline. Thus, the political school is composed of sociologists, political scientists, economists, and "interdisciplinary professionals." Working within the management tradition there are psychologists, sociologists, and interdiscipli-

⁴Comments in a more recent publication suggest that Professor Strauss has changed his position on this issue. He criticizes Kochan for not including more material on equal employment, minority and women's rights in his book Industrial Relations and Collective Bargaining (Strauss, 1982, p. 96).

nary professionals trained in both industrial relations programs and in graduate business programs. Within the institutional tradition one finds law scholars, sociologists, historians, economists alienated from classical and neo-classical economic theory as well as interdisciplinarians. Although the labor market tradition is primarily the province of labor economists one also finds some interdisciplinary professionals working within its confines. The field is not simply interdisciplinary; it is instead interdisciplinary within a broader multi-scholastic framework.

From a second perspective industrial relations is an independent field of inquiry on a par with the other social sciences. Many of those who consider IR to be their primary field apparently view it in this way. Recognizing that the pursuit of knowledge is usually most effective when organized into a coherent and unified research tradition many industrial relationsists have attempted to integrate the separate schools. They have not been successful because of the contradictory and antagonistic nature of the concepts, theories and normative standards of the various research traditions.

The failure of integration raises the question of appropriate strategy for the future. We have argued that adherence to the modified systems paradigm is the most viable alternative. It is broad enough to capture most of the concerns of students of employment relations yet conceptually and normatively specific enough to generate a coherent research tradition. It should not be seen as a unifying paradigm but rather as a separate and distinct approach to industrial relations. It should not be judged by its ability to incorporate the concepts and theories of other traditions but rather by its capacity to produce understanding, explanation, prediction and control when applied to the empirical universe of employment relations.

Finally there are implications in the analysis for the teaching of industrial relations. Institutes and centers which grant degrees in

industrial relations implicitly promise to provide coherent programs of study. However, because the field is characterized by major conceptual, theoretical and normative inconsistencies that promise cannot be fulfilled. No doubt generations of students have emerged from such programs more conceptually confused than enlightened. Certainly industrial relations students should be exposed to all of the traditions but they should also be made aware that there is no overarching framework capable of subsuming and uniting the separate schools. Industrial relations is not an internally self-consistent field of study. It is instead a confederacy of competing paradigms.

References

- Anderson, John and Morley Gunderson, eds., Union-Management Relations in Canada. Don Mills, Ont.: Addison-Wesley, 1982.
- Bain, George Sayers and H.A. Clegg. "A Strategy for Industrial Relations Research in Great Britain," British Journal of Industrial Relations XII (March, 1974), pp. 91-113.
- Barbash, Jack. "The Elements of Industrial Relations," British Journal of Industrial Relations II (July, 1964), pp. 67-78.
- Baritz, L. The Servants of Power. Middletown, Conn.: Wesleyan University Press, 1960.
- Beal, Edwin F. and James P. Begin. The Practice of Collective Bargaining. Homewood, Ill.: Irwin, 1982.
- Boulding, Kenneth. "Collective Bargaining and Fiscal Policy," Proceedings of the Industrial Relations Research Association. Champaign, Ill.: IRRRA, 1950, pp.
- Braverman, Harry. Labor and Monopoly Capital. New York: Monthly University Press, 1975.
- Clarke, Tom and Laurie Clements, eds., Trade Unions Under Capitalism. London: Fontana, 1977.
- Clegg, H.A. The System of Industrial Relations in Great Britain. Oxford, Basil Blackwell, 1972.
- Commons, John R. Institutional Economics: Its Place in Political Economy. New York: Macmillan, 1934.
- Cox, Robert W. "Approaches to a Futurology of Industrial Relations," International Institute of Labour Studies Bulletin (1971), pp. 139-164.
- Craig, Alton W.J. "A Framework for the Analysis of Industrial Relations Systems." In B. Barrett, et al., eds., Industrial Relations and the Wider Society. London: Collier Macmillan, 1975, pp. 8-26.
- Cummings, L.L. "Comment on Collective Bargaining and Industrial Relations by Thomas A. Kochan," Industrial Relations XXI (Winter, 1982), pp. 79-83.
- Dunlop, John T. Industrial Relations Systems. Hold, Rinehart and Winston, 1958.
- Dunlop, John T. "Policy Decisions and Research in Economics and Industrial Relations," Industrial and Labor Relations Review, XXX (April, 1977), pp. 275-82.
- Derber, Milton. "Industrial Democracy as an Organizing Concept for a Theory of Industrial Relations." In Gerald Somers, ed., Essays in Industrial Relations Theory. Ames, Iowa: Iowa State University Press, 1969.

- Derber, Milton. "Comment on Collective Bargaining and Industrial Relations by Thomas A. Kochan," Industrial Relations, XXI (Winter, 1982), pp. 84-91.
- Doeringer, Peter B. and Michael J. Piore. Internal Labor Markets and Manpower Analysis. Lexington, MA: Heath, 1971.
- Dorfman, Joseph. The Economic Mind in American Civilization. New York: The Viking Press, 1949.
- Dorfman, Joseph et al. Institutional Economics: Veblen, Commons and Mitchell Reconsidered. Berkeley, CA: University of California Press, 1963.
- Dwyer, Richard E. Miles E. Galvin and Simeon Larson. "Labor Studies: In Quest of Industrial Justice," Labor Studies Journal II (Fall, 1977), pp. 95-131.
- Flanders, Allan. Industrial Relations: What is Wrong With the System? London: Faber, 1965.
- Fox, Alan. Industrial Sociology and Industrial Relations. London: HMSO, 1966.
- Freeman, Richard B. and James L. Medoff. "Two Faces of Unionism," The Public Interest (Fall, 1977), pp. 69-93.
- Geare, A.J. "The Field of Study of Industrial Relations," Journal of Industrial Relations XVII (September, 1977), pp. 274-285.
- Gordon, Michael E. and Robert E. Burt. "A History of Industrial Psychology's Relationships with American Unions: Lessons from the Past and Directions for the Future," International Review of Applied Psychology XXX (1981), pp. 137-156.
- Hyman, Richard and Ian Brough. Social Values and Industrial Relations. Oxford: Basil Blackwell, 1975.
- Hyman, Richard. Industrial Relations, A Marxist Introduction. London: Macmillan, 1975.
- Hyman, Richard. "Comment on Collective Bargaining and Industrial Relations by Thomas A. Kochan," Industrial Relations XXI (Winter, 1982), pp. 100-113.
- Jackson, Michael P. Industrial Relations, A Text Book. London: Croom Helm, 1977.
- Kerr, Clark. "Labor Markets: Their Character and Consequences." Proceedings of the Industrial Relations Research Association. Champaign, Ill.: IRRA, 1950.
- Kerr, Clark, F. Harbison, J. Dunlop and C. Myers. Industrialism and Industrial Man. New York: Oxford University Press, 1964.
- Kerr, Clark, and Abraham Siegel. "The Structuring of the Labor Forces in Industrial Society: New Dimensions and New Questions," Industrial and Labor Relations Review VIII (January, 1955), pp. 151-168.

- Kochan, Thomas A. Collective Bargaining and Industrial Relations. Homewood, Ill.: Irwin, 1980.
- Kuhn, Thomas. The Structure of Scientific Revolutions. Chicago: University of Chicago Press, 1962.
- Kuhn, Alfred. Labor: Institutions and Economics. New York: Harcourt, Brace and World, 1967.
- Laffer, Kingsley. "Is Industrial Relations an Academic Discipline?" Journal of Industrial Relations XVI (March, 1974), pp. 62-73.
- Leiserson, William M. "Employment Management Employee Representation and Industrial Democracy." In A. Nash and J.B. Miner, eds., Personnel and Labor Relations, an Evolutionary approach. New York: Macmillan, 1973.
- Lester, Richard. "Report of the Comprehensive Review Committee of the Industrial Relations Research Association." mimeo. IRRR, 1977.
- Margerison, C.J. "What Do We Mean by Industrial Relations? A Behavioural Science Approach," British Journal of Industrial Relations VIII (July, 1969), pp. 273-286.
- Mayo, Elton. The Human Problems of Industrial Civilization. London: Macmillan, 1933.
- Mayo, Elton. The Social Problems of Industrial Civilization. London: Routledge and Kegan Paul, 1949.
- Marx, Melvin H. and William A. Hillix. Systems and Theories in Psychology. New York: McGraw-Hill, 1963.
- Miner, J. and Miner M. Personnel and Industrial Relations. New York: Macmillan, 1977.
- Perlman, Selig. A Theory of the Labor Movement. New York: Augustus M. Kelley, 1973.
- Poole, Michael. Theories of Trade Unionism: A Sociology of Industrial Relations. London: Routledge and Kegan Paul, 1981.
- Reynolds, Lloyd G. Labor Economics and Labor Relations. Englewood Cliffs, New Jersey: Prentice-Hall, 1974.
- Roethlisberger, F.J. and W.J. Dickson. Management and the Worker. Cambridge: Harvard University Press, 1949.
- Ross, Arthur. Trade Union Wage Policy. Berkeley: University of California Press, 1958.
- Somers, Gerald. "Bargaining Power and Industrial Relations Theory." In Gerald Somers, ed., Essays in Industrial Relations Theory. Ames, Iowa: Iowa State University Press, 1969.

- Strauss, George. "Comment on Collective Bargaining and Industrial Relations by Thomas A. Kochan," Industrial Relations XXI (Winter, 1982), pp. 95-99.
- Strauss, George and Peter Feuille. "IR Research: A Critical Analysis," Industrial Relations XVII (October, 1978), pp. 259-277.
- Taylor, F.W. Scientific Management. New York: Harper and Row, 1947.
- Walker, Kenneth F. "Towards Useful Theorizing About Industrial Relations," British Journal of Industrial Relations XV (November, 1977), pp. 307-316.
- Webb, Sidney and Beatrice Webb. A History of Trade Unionism. London: Longmans, 1896.
- Webb, Sidney and Beatrice Webb. Industrial Democracy. London: Longmans, 1902.
- Wood, S.J., A. Wagner, C.G.A. Armstrong, J.F.B. Goddman and J.E. Davies. "The Industrial Relations System Concept as a Basis for Theory in Industrial Relations," British Journal of Industrial Relations XIII (November, 1975), pp. 291-333.

Faculty of Business
McMaster University

WORKING PAPER SERIES

101. Torrance, George W., "A Generalized Cost-effectiveness Model for the Evaluation of Health Programs," November, 1970.
102. Isbester, A. Fraser and Sandra C. Castle, "Teachers and Collective Bargaining in Ontario: A Means to What End?" November, 1971.
103. Thomas, Arthur L., "Transfer Prices of the Multinational Firm: When Will They be Arbitrary?" (Reprinted from: Abacus, Vol. 7, No. 1, June, 1971).
104. Szendrovits, Andrew Z., "An Economic Production Quantity Model with Holding Time and Costs of Work-in-process Inventory," March, 1974.
111. Basu, S., "Investment Performance of Common Stocks in Relation to their Price-earnings Ratios: A Text of the Efficient Market Hypothesis," March, 1975.
112. Truscott, William G., "Some Dynamic Extensions of a Discrete Location-Allocation Problem," March, 1976.
113. Basu, S. and J.R. Hanna, "Accounting for Changes in the General Purchasing Power of Money: The Impact on Financial Statements of Canadian Corporations for the Period 1967-74," April 1976. (Reprinted from Cost and Management, January-February, 1976).
114. Deal, K.R., "Verification of the Theoretical Consistency of a Differential Game in Advertising," March, 1976.
- 114a. Deal, K.R., "Optimizing Advertising Expenditures in a Dynamic Duopoly," March, 1976.
115. Adams, Roy J., "The Canada-United States Labour Link Under Stress," [1976].
116. Thomas, Arthur L., "The Extended Approach to Joint-Cost Allocation: Relaxation of Simplifying Assumptions," June, 1976.
117. Adams, Roy J. and C.H. Rummel, "Worker's Participation in Management in West Germany: Impact on the Work, the Enterprise and the Trade Unions," September, 1976.
118. Szendrovits, Andrew Z., "A Comment on 'Optimal and System Myopic Policies for Multi-echelon Production/Inventory Assembly Systems'," [1976].
119. Meadows, Ian S.G., "Organic Structure and Innovation in Small Work Groups," October, 1976.

120. Basu, S., "The Effect of Earnings Yield on Assessments of the Association Between Annual Accounting Income Numbers and Security Prices," October, 1976.
121. Agarwal, Naresh C., "Labour Supply Behaviour of Married Women - A Model with Permanent and Transitory Variables," October, 1976.
122. Meadows, Ian S.G., "Organic Structure, Satisfaction and Personality," October, 1976.
123. Banting, Peter M., "Customer Service in Industrial Marketing: A Comparative Study," October, 1976. (Reprinted from: European Journal of Marketing, Vol. 10, No. 3, Summer, 1976).
124. Aivazian, V., "On the Comparative-Statics of Asset Demand," August, 1976.
125. Aivazian, V., "Contamination by Risk Reconsidered," October, 1976.
126. Szendrovits, Andrew Z. and George O. Wesolowsky, "Variation in Optimizing Serial Multi-State Production/Inventory Systems, March, 1977.
127. Agarwal, Naresh C., "Size-Structure Relationship: A Further Elaboration," March, 1977.
128. Jain, Harish C., "Minority Workers, the Structure of Labour Markets and Anti-Discrimination Legislation," March, 1977.
129. Adams, Roy J., "Employer Solidarity," March, 1977.
130. Gould, Lawrence I. and Stanley N. Laiken, "The Effect of Income Taxation and Investment Priorities: The RRSP," March, 1977.
131. Callen, Jeffrey L., "Financial Cost Allocations: A Game-Theoretic Approach," March, 1977.
132. Jain, Harish C., "Race and Sex Discrimination Legislation in North America and Britain: Some Lessons for Canada," May, 1977.
133. Hayashi, Kichiro. "Corporate Planning Practices in Japanese Multinationals." Accepted for publication in the Academy of Management Journal in 1978.
134. Jain, Harish C., Neil Hood and Steve Young, "Cross-Cultural Aspects of Personnel Policies in Multi-Nationals: A Case Study of Chrysler UK", June, 1977.
135. Aivazian, V. and J.L. Callen, "Investment, Market Structure and the Cost of Capital", July, 1977.

136. Adams, R.J., "Canadian Industrial Relations and the German Example", October, 1977.
137. Callen, J.L., "Production, Efficiency and Welfare in the U.S. Natural Gas Transmission Industry", October, 1977.
138. Richardson, A.W. and Wesolowsky, G.O., "Cost-Volume-Profit Analysis and the Value of Information", November, 1977.
139. Jain, Harish C., "Labour Market Problems of Native People in Ontario", December, 1977.
140. Gordon, M.J. and L.I. Gould, "The Cost of Equity Capital: A Reconsideration", January, 1978.
141. Gordon, M.J. and L.I. Gould, "The Cost of Equity Capital with Personal Income Taxes and Flotation Costs", January, 1978.
142. Adams, R.J., "Dunlop After Two Decades: Systems Theory as a Framework For Organizing the Field of Industrial Relations", January, 1978.
143. Agarwal, N.C. and Jain, H.C., "Pay Discrimination Against Women in Canada: Issues and Policies", February, 1978.
144. Jain, H.C. and Sloane, P.J., "Race, Sex and Minority Group Discrimination Legislation in North America and Britain", March, 1978.
145. Agarwal, N.C., "A Labour Market Analysis of Executive Earnings", June, 1978.
146. Jain, H.C. and Young, A., "Racial Discrimination in the U.K. Labour Market: Theory and Evidence", June, 1978.
147. Yagil, J., "On Alternative Methods of Treating Risk," September, 1978.
148. Jain, H.C., "Attitudes toward Communication System: A Comparison of Anglophone and Francophone Hospital Employees," September, 1978.
149. Ross, R., "Marketing Through the Japanese Distribution System", November, 1978.
150. Gould, Lawrence I. and Stanley N. Laiken, "Dividends vs. Capital Gains Under Share Redemptions," December, 1978.
151. Gould, Lawrence I. and Stanley N. Laiken, "The Impact of General Averaging on Income Realization Decisions: A Caveat on Tax Deferral," December, 1978.
152. Jain, Harish C., Jacques Normand and Rabindra N. Kanungo, "Job Motivation of Canadian Anglophone and Francophone Hospital Employees, April, 1979.
153. Stidsen, Bent, "Communications Relations", April, 1979.
154. Szendrovits, A.Z. and Drezner, Zvi, "Optimizing N-Stage Production/ Inventory Systems by Transporting Different Numbers of Equal-Sized Batches at Various Stages", April, 1979.

155. Truscott, W.G., "Allocation Analysis of a Dynamic Distribution Problem", June, 1979.
156. Hanna, J.R., "Measuring Capital and Income", November, 1979.
157. Deal, K.R., "Numerical Solution and Multiple Scenario Investigation of Linear Quadratic Differential Games", November, 1979.
158. Hanna, J.R., "Professional Accounting Education in Canada: Problems and Prospects", November, 1979.
159. Adams, R.J., "Towards a More Competent Labor Force: A Training Levy Scheme for Canada", December, 1979.
160. Jain, H.C., "Management of Human Resources and Productivity", February, 1980.
161. Wensley, A., "The Efficiency of Canadian Foreign Exchange Markets", February, 1980.
162. Tihanyi, E., "The Market Valuation of Deferred Taxes", March, 1980.
163. Meadows, I.S., "Quality of Working Life: Progress, Problems and Prospects", March, 1980.
164. Szendrovits, A.Z., "The Effect of Numbers of Stages on Multi-Stage Production/Inventory Models - An Empirical Study", April, 1980.
165. Laiken, S.N., "Current Action to Lower Future Taxes: General Averaging and Anticipated Income Models", April, 1980.
166. Love, R.F., "Hull Properties in Location Problems", April, 1980.
167. Jain, H.C., "Disadvantaged Groups on the Labour Market", May, 1980.
168. Adams, R.J., "Training in Canadian Industry: Research Theory and Policy Implications", June, 1980.
169. Joyner, R.C., "Application of Process Theories to Teaching Unstructured Managerial Decision Making", August, 1980.
170. Love, R.F., "A Stopping Rule for Facilities Location Algorithms", September, 1980.
171. Abad, Prakash L., "An Optimal Control Approach to Marketing - Production Planning", October, 1980.
172. Abad, Prakash L., "Decentralized Planning With An Interdependent Marketing-Production System", October, 1980.
173. Adams, R.J., "Industrial Relations Systems in Europe and North America", October, 1980.

174. Gaa, James C., "The Role of Central Rulemaking In Corporate Financial Reporting", February, 1981.
175. Adams, Roy J., "A Theory of Employer Attitudes and Behaviour Towards Trade Unions In Western Europe and North America", February, 1981.
176. Love, Robert F. and Jsun Y. Wong, "A 0-1 Linear Program To Minimize Interaction Cost In Scheduling", May, 1981.
177. Jain, Harish, "Employment and Pay Discrimination in Canada: Theories, Evidence and Policies", June, 1981.
178. Basu, S., "Market Reaction to Accounting Policy Deliberation: The Inflation Accounting Case Revisited", June, 1981.
179. Basu, S., "Risk Information and Financial Lease Disclosures: Some Empirical Evidence", June, 1981.
180. Basu, S., "The Relationship between Earnings' Yield, Market Value and Return for NYSE Common Stocks: Further Evidence", September, 1981
181. Jain, H.C., "Race and Sex Discrimination in Employment in Canada: Theories, evidence and policies", July 1981.
182. Jain, H.C., "Cross Cultural Management of Human Resources and the Multinational Corporations", October 1981.
183. Meadows, Ian, "Work System Characteristics and Employee Responses: An Exploratory Study", October, 1981.
184. Svi Drezner, Szendrovits, Andrew Z., Wesolowsky, George O. "Multi-stage Production with Variable Lot Sizes and Transportation of Partial Lots", January, 1982.
185. Basu, S., "Residual Risk, Firm Size and Returns for NYSE Common Stocks: Some Empirical Evidence", February, 1982.
186. Jain, Harish C. and Muthuchidambram, S. "The Ontario Human Rights Code: An Analysis of the Public Policy Through Selected Cases of Discrimination In Employment", March, 1982.
187. Love Robert F., Dowling, Paul D., "Optimal Weighted l_p Norm Parameters For Facilities Layout Distance Characterizations",^p April, 1982.
188. Steiner, G., "Single Machine Scheduling with Precedence Constraints of Dimension 2", June, 1982.
189. Torrance, G.W. "Application Of Multi-Attribute Utility Theory To Measure Social Preferences For Health States", June, 1982.

Jnnis
REF
HB
74.5
. R47
NO. 190
C.1