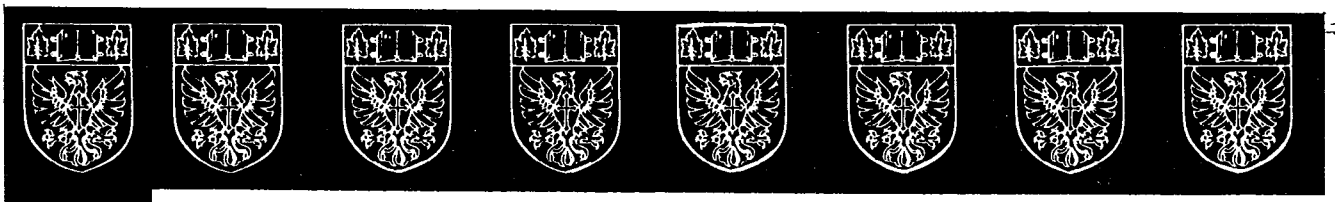


Management of Human Resources and Productivity

by
HARISH C. JAIN
Personnel and Industrial Relations Area

Faculty of Business
McMASTER UNIVERSTY
Hamilton, Ontario

Research and Working Paper
Series No. 160
February 1980

Management of Human

Resources and Productivity

By

Harish C. Jain
McMaster University

This study has been supported in part by the Centre for the Study of Inflation and Productivity affiliated with the Economic Council of Canada.

Management of Human Resources and Productivity

By Harish C. Jain

McMaster University

In most enterprises, management of human resources falls within the purview of the personnel and industrial relations (P & I R) departments.[1] The P & I R function provides for effective utilization of human resources to achieve enterprise objectives (e.g. survival and growth) and employee satisfaction and development. Effective managers must include the P & I R function in their strategic decisions if they and the organization are to survive and prosper; the managers are responsible for the effective utilization of all resources such as money, equipment, and materials, including the people resource.

P & I R activities are carried out by P & I R specialists and include collective bargaining, collective agreement administration, recruitment, selection, compensation and incentive programs, health and safety, job analysis and evaluation, training and development etc. As Glueck (1978) has pointed out, these activities are essential to the achievement of the enterprise's objectives. They provide the necessary human resources, develop and maintain these resources to optimize present and future economic potential; anticipate, prevent and solve employment problems; and develop, maintain a quality of

---

[1] According to French, personnel departments, containing more than one full-time employee, begin to appear when companies reach a size of two hundred or more employees, and sometimes earlier, Wendell French, The Personnel Management Process: Human Resources Administration, 3rd edition, Boston: Houghton Mifflin, 1974, p. 704.

worklife to make employment a desirable personal and social situation. According to Glueck (1978), these are crucial variables in determining whether the organization is effective, moderately effective or very effective.

Effective management of human resources, therefore, is positively related to the productivity and growth of an enterprise. A model, illustrating these hypothesized relationships is given below in Figure 1.

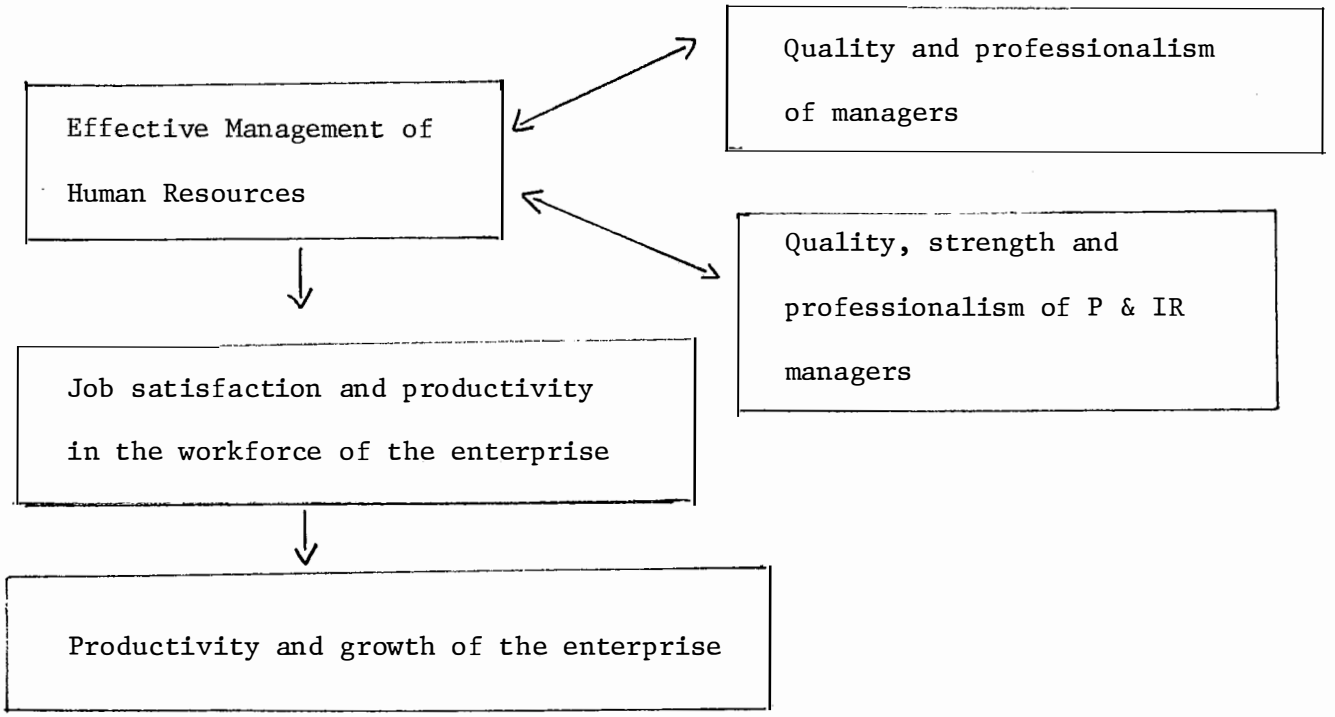
As Figure 1 shows, the quality and professionalism of managers and quality, strength and professionalism of P & I R staff and the P & I R function in an enterprise contribute to the effective management of human resources. The latter results in the job satisfaction and productivity in the workforce[2] of the enterprise which in turn is related to the productivity and growth of the enterprise. These relationships are not causal but correlational.[3]

---

[2]Based on an extensive survey of the literature, Katzell & Yankelovich (1975) have pointed out that achieving the dual objective of job satisfaction and productivity "is far more difficult and complex than improving job attitudes alone without respect to productivity or vice versa; the two outcomes can be successfully linked if a number of conditions are met; and that the task of affecting these outcomes is primarily managerial in character, more particularly the management of human resources...It means that the specific task of mobilizing human resources to maximize quality of working life (or job satisfaction) and economic performance at the same time is largely a matter of sound managerial practices, many of which lie within the current state of the art, if employed correctly..." See Raymond A. Katzell and Daniel Yankelovich & others, Work, Productivity, and Job Satisfaction: An Evaluation of Policy-Related Research, New York: New York University, January 1975, pp. 23-24.

[3]This is because capital equipment, new technology and marketing strategy may be equally important in determining levels of productivity.

FIGURE 1


Quality and professionalism of managers
Effective Management of Human Resources
Quality, strength and professionalism of P & IR managers
Job satisfaction and productivity in the workforce of the enterprise
Productivity and growth of the enterprise

A brief review of the pertinent literature will be provided in order to illustrate the variables underlying Figure 1.

Quality and Professionalism of Managers

In a comparison of managerial recruitment and promotion patterns and economic performance between the United States and Canada, Daly (1979) found that Canadian managerial practices and economic performance lag behind developments in the United States.[4] For instance, by 1970, almost two-thirds of the managerial group in the United States had a university degree. The proportion of management with a university degree in Canada, however, was less than 25 percent in 1971, (well below 63 percent in the United States in a comparable year), and about what had been achieved in the United States during the 1940's. Daly goes on to show that promotion to senior positions in Canada emphasized seniority and experience with the organization rather than formal training and initiative of younger managers that was emphasized in the United States. As a result, Daly suggests those who move into senior management levels in Canada move into positions of middle and senior management later in their working lives than in the United States. In addition, the proportion of the Canadian elite that come from the upper class was even higher in the early 1970's than two decades earlier, and this was more pronounced for younger than older managers.

---

[4] In economic performance, for example, Daly points out that levels of output per man hour in Canadian manufacturing in 1977 and 1978 compared to what they had been in the United States about a decade and half ago, and that, the diffusion of new technology was somewhat slower in Canada as well. See, D. J. Daly, "Canadian Management: Past Recruitment Policies and Future Needs", revised draft, September, 1979.

He concludes that the low proportion of Canadian managers with relevant university training reflected company selection and promotion patterns and not just the composition and availability of persons with relevant education and experience.

While it may not be possible to show a causal connection between Canadian economic performance,[5] diffusion rate of new technology, and the quality of managers, it is, nonetheless, possible that faster promotion of young people into middle and senior managerial positions and more priority on managerial education and training can be helpful in achieving efficiency, competitiveness and adaptability through faster adoption of new technology and narrowing the gap between current and best practices.

In addition to managers, effective management of human resources is also significantly affected by the strength, quality and professionalism of P & I R managers and administrators.

The Strength and Quality of P & I R staff in Canada: In a study (1975) based on the 1971 Census Kumar provides a labour market analysis of the P & I R staff in terms of their training, education, experience, authority and economic status in the Canadian

---

[5] The lack of causal connection between managerial characteristics and productivity is difficult to show because it is not easy to measure the essential characteristics and attributes of the manager, such as skills in organizing, planning and decision-making, or the ability to communicate, to be flexible, to deal with stress and uncertainty, to take risks and to lead. These managerial characteristics are not easily quantifiable, and therefore, do not fit neatly into cost-benefit analyses or other measures of productivity. See Max B. E. Clarkson, "Canadian Business Review", Spring, 1979.

industry. He found that: (a) the size and depth of the P & I R function was not adequate in relation to the task. For instance, the size of overall P & I R manpower (P & I R staff ratios), particularly the number of managers, was small; (b) a majority of the P & I R managers and administrators were in their early forties; (c) against the background of gowing professionalism and complexity in P & I R, the P & I R staff in Canada was under-educated and under-trained;[6] (d) P & I R managers occupied a low status in the management hierarchy, as reflected in their relative earnings; and (e) enterprises showed a lack of awareness about the significance of the P & I R functions. These findings and analyses are consistent with anecdotal evidence that in many companies in Canada, the responsibilities of P & I R departments have been confined to insignificant kinds of activities.

It seems clear that lack of professionalism and quality of managers has also affected the quality and professionalism of P & I R practitioners, and the strength of the P & I R function in Canada.

Kumar's conclusions (1975) concerning the strength of the P.& I R function have also been documented in other studies.

An intensive study of P & I R policies and practices in twenty large and medium-sized companies, for the Royal Commission on Corporate Concentration by Murray & Dimick (1976) found that policies on staffing were ad hoc in nature and were determined at lower organization levels. For example, forecasts of manpower needs and supplies were rarely part of the business plans of these organizations; training and

---

[6] In the United States, most P & I R managers have college degrees, in Canada, most do not. See, William F. Glueck, Personnel: A Diagnostic Approach, rivised edition, Dallas: Business Publications, 1978, p. 10.

development grew out of immediate problems and available solutions, rather than out of a strategic approach to the utilization of people, the developing of careers, or the careful analysis of job requirements. On the other hand, policies which dealt with compensation and related matters ranked high in both formulation and in the level at which the policy decisions were taken.

Another study (1979) of the contemporary personnel practices in 216 Canadian firms revealed that personnel departments tended to be less involved in primary decisions, even when the decision items are commonly believed to fall into personnel's area of control. For instance, the personnel departments rarely participated in decisions determining the type of wage incentive plans to be implemented, the actual coverage of such plans, or deviations from pay policies.[7]

A recent report (1979) of the Special Committee on the Review of Personnel Management and the Merit Principle in the federal public service found even more severe P & I R problems (relative to the problems of human resource management in the private sector in Canada). The Committee (1979, p. 5) found "(1) absence of a corporate management, hence of leadership; absence of any philosophy of management, a public service organization without a head; (2) excessive and

---

[7] In this study, both size and ownership differences, however, were found to have a significant impact on the level of influence-authority afforded personnel departments. Thus, the larger the firm (e.g., having more than 1,000 employees) the greater was the level of influence-authority. Also, personnel departments functioning within organizations with American parent companies were found to have higher levels of influence-authority than their counterparts in Canadian-owned firms. Despite these differences, the levels of the P & I R departments influence-authority varied from decision-area to decision area. See, Laird W. Mealie & Dennis Lee, "Contemporary Personnel Practices in Canadian Firms: An Empirical Evaluation", Relations Industrielles, (forthcoming).

inflexible regulation; slavish adhence to universally applied regulation in the name of merit at the expense of efficiency and effectiveness; (3) arising from (1), managers and supervisors who are poorly equipped to manage, no requirement that they undergo even minimally essential training, and low priority accorded training; (4) no accountability for effective personnel management."

Relative to the P & I R problems in the private and public sectors in Canada, a Conference Board survey (1977) of over 700 companies on the organization and management of P & I R function indicated that the corporate P & I R staff planned and controlled such key areas as (1) the overall staffing of the company, long and short term; (2) the overall effectiveness of the organization in terms of worker productivity, employee satisfaction, and the competitiveness of its incentive and reward systems; and (3) the overall effectiveness of the company's efforts to comply with the law, and to deal with government agencies, unions and public interest groups in personnel related matters. In addition, the survey (1977) found that top management had broadened their involvements in P & I R related policy planning and control activities; P & I R responsibilities took much more of the operating manager's time and energies than before. P & I R staffs had moved beyond their traditional service role to new planning, monitoring and evaluative roles, (1977, p. ix).

The title of Herbert E. Meyer's article in the Fortune magazine (1976) "personnel directors are the new corporate heroes," captures the current importance of personnel managers in at least

a small number of organizations in the United States. Meyer sees P & I R as expanding in both importance to the organization and becoming an increasingly attractive career path for upwardly mobile managers.

Thus, in at least the organizations surveyed by the Conference Board and the organizations cited by Meyer, P & I R function is being viewed as one that can make a positive contribution to the overall effectiveness and survival of the organization. P & I R officials in such organizations seem to be well trained, well rewarded, and make substantial inputs into important decisions of all types. It must be emphasized, however, that these organizations are small in number, (Foulkes & Morgan, 1977).

Evidence of the Ineffectiveness of P & I R Policies and Practices

As noted earlier, P & I R staff lack professionalism in Canada and have low status in the management hierarchy. It is not surprising to find that many employers lack formal P & I R policies and their P & I R practices are carried out in an extremely casual fashion. Dimick (1978) in an intensive survey of 20 Canadian companies found, for instance, that policies which dealt with staffing and achieving the integration of people with their jobs (e.g. performance appraisal, counseling, control and discipline) were least formalized relative to compensation policies. The degree of formalism was considered important since a policy which was not formalized could not assure uniformity because the ambiguity of informal criteria left the way open for varying interpretations.

Similarly, there is evidence that in most cases, employers hiring standards, for instance, are implicit and subjective. Many employers fail to validate their selection procedures either due to the fact that they do not collect the relevant data or when such data are available (for example, on such matters as grievance patterns, turnover, productivity, absenteeism and worker attitudes) they are rarely analyzed as a means of discovering the validity or job relatedness of their selection procedures, (Jain, 1974; Diamond et al. 1970; Doeringer and Piore, 1971).

The influence of these personnel policies and practices on employee behaviour are severe. For instance, lack of validation of hiring standards may lead to artificially high educational requirements. Berg (1970) points out that employers in his studies sought to justify their high educational demands by reference to the need for promoting workers into higher ranks, where their education will be needed. However, in many companies only a small percentage of those who were hired were ever promoted to such positions. Further, the more highly qualified were often no longer in the company when the opportunities for promotion arose. Their frustration with work that did not fully utilize their educational background led them to seek jobs elsewhere.

It is well documented that most firms do not engage in forecasts of their human resource needs and supplies and the human resources are rarely part of business plans of these organizations, (Jain, 1974). For instance, lack of planning for human resources is evident in many employers failure to assess skill needs, replacement schedules and recruiting strategies, (G & M, Nov. 4, 1978, p.4; Education and Working Canadians, 1979).

Available case studies also indicate that some companies decide on a location for a plant and start construction without making any analysis of their labour needs or the labour market in the area. When confronted with shortages, they end up importing labour or paying more for labour than they had anticipated. From a national point of view, this lack of planning can result in imbalances in labour structures such as shortages of human resources and reliance on immigrants; recent reports indicate that this is the present state of affairs in Canada, (G & M, May 2 and May 3, 1979). Added to this is the practice of training employees on the basis of immediate problems and available solutions rather than out of a long term strategic approach to the utilization of people, the developing of careers or the careful analysis of job requirements, (Murray & Dimick, 1976; Education & Working Canadians, 1979.)

A survey of 3,500 employers carried out by the federal Commission on Educational Leave and Productivity in 1978 (Education & Working Canadians, 1979; Adams, 1979) indicated that only about 20 percent of the enterprises reported any training. Other surveys (carried out by the Employment & Immigration Commission covering 44,000 employers in 1969-70 and the Ontario Task Force on Industrial Training in 1968-1969 covering 7,000 employers) also revealed that a majority of employers had no training scheme. Moreover, the training provided by industry is largely short term and specific. For instance, the Commission survey (Education & Working Canadians, 1979) indicated that on average only seven days training were provided to each trainee. Of those who were beneficiary to training

in 1978, 75 percent received five days or less; these data corroborate the findings from other surveys, (Statistics Canada, 1973; Training for Ontario's Future, 1973). The Commission concluded that the training was so short that its adequacy was doubtful, (Education & Working Canadians, 1979, p. 116).[8]

Personnel and Industrial Relations practices in Canada are also affected by the policies of the multi-plant and multi-national companies. For instance, the locus of decision-making in collective bargaining may have consequences for Canadian plants and may be reflected in industrial strife, grievances etc. Whether multi-plant and/or multi-national companies have centralized or decentralized decision-making in industrial relations matters is a subject of great controversy in the literature. One study (Ash, 1976) points out that when it is deemed necessary the "corporate industrial relations department does get into the actions which are normally decentralized...for example, collective bargaining is

---

[8] Another study of on-the-job training of apprentice machinists in 93 companies in Ontario found that on-the-job training lacked consistency, uniformity, and standards. Instruction was unskilled, not well organized in the employer's shops, and received a low priority compared with production, see, The costs and benefits to employers of apprentice machinists in Ontario, Ministry of Colleges and Universities, Toronto, Feb. 1, 1978. Similarly, the recent task force reports sponsored by the Federal Department of Industry, Trade and Commerce indicate serious problems with the level of relevant knowledge possessed by supervisors and managers. Among those industries with the most serious managerial deficiencies are textiles and clothing, commercial printing, construction, food and beverage, footwear, furniture manufacture, and restaurant and food services, (Education and Working Canadians, 1979).

decentralized, but with detailed, continuous reporting of local bargaining, the corporate department can and does step in (1) When the trend of the local bargaining may substantially affect more than one local unit; or (2) when unorganized units are organized for the first time; or (3) when management changes bring new, inexperienced management to the local bargaining table", or, more generally, as Gunter (1974) suggests, "headquarters management seems to interfere in the industrial relations policies of subsidiaries where the overall operations of a corporation are endangered". This may be also true of multi-plant firms in national as well as international settings, (Thomson & Hunter, 1975).

As the report of the Task Force on Labour Relations (1969) indicates, "an important consequence of centralization is absentee decision-making; considerable care must be taken to guard against the situation in which participants to the collective bargaining process are mere message bearers and position staters for persons removed from the places where agreements are implemented..." (p. 164).

In Canada, apart from some multinationals, this has been or is currently the practice in the case of nationally owned multi-branch organizations such as Steinberg's (Tremblay 1977), and several Canadian banks. In the public sector, management organization with respect to collective bargaining varies between levels of government and creates varying degrees of complexity because of the locus of decision making. For instance, at the municipal level (Godenberg 1979), when negotiations reach a point where a choice must be made between a wage increase that a municipality feels unable to pay and a work stoppage that would have adverse effects on the public, the locus of decision making frequently

shifts to the provincial government which will ultimately finance the whole or part of the settlement.

This is equally applicable to the health and education sectors. For instance, in the case of hospitals and schools, whether the bargaining is at local, regional or provincial level, the central role of government in distributing funds to hospitals and schools has seriously undermined their autonomy as employers, according to Goldenberg (1979), even though contract administration remains the responsibility of local hospital and school boards.

At the provincial and federal levels of government, a central agency acts as employer spokesman in negotiations. The majority of provincial governments have entrusted this function to their civil service commissions while the treasury board performs this function for the federal government. According to Goldenberg (1979) experience has shown that where government negotiators lacked a precise mandate to effect a settlement, particularly on monetary issues, they required constant recourse to the political authority for which they were simply the spokesmen. In such cases when it came to the "crunch" decisions were made at the cabinet level rather than at the bargaining table.

In the situations described above, locus of decision making has an important effect on the outcomes in collective bargaining. A study (Mikalachki, et al. 1970) conducted for the Task Force showed that there was a significant correlation between the remoteness of decision making and labour-management conflict. The study based on 79 structured interviews with union and management representatives found that co-operation (between labour and management) was associated with independence of the local organization from outside control and influ-

ence. For instance, organizations which were not subsidiaries, not members of employer associations, independent from central office control, final authorities during negotiations and which sought no outside help regarding industrial relations problems also tended to manifest more co-operative relations than did their opposites, (p. 34).

It is difficult to say, on the basis of one study, that centralized decision-making is significantly correlated with industrial strife. Co-operation between labour and management is affected by numerous other variables. Peterson & Tracy (1977) in a nationwide survey of union and management negotiators in the United States found that "overall, bargaining behaviour and conditions seem to have as much effect on bargaining success as do the economic variables..." and that "collective bargaining is an interpersonal, attitudinal process as well as an economic one..." (p. 50). The studies by Cooper (1973), involving representatives of labour and management who had experienced a legal strike involving 100 or more employees between Jan. 1, 1971 to June 1972 throughout Canada, Mikalachki et al. (1970) and Peterson & Tracy (1977) confirm that labour-management co-operation is partly a function of management holding positive attitude toward the union, the degree of trust and extensive scope and degree of consultation between the parties etc.

This is exemplified by evidence (Mutu 1979; L.M.I. 1978) indicating that more than one half of the time lost through strikes is due to strikes and lock-outs happening in connection with the first collective agreement. Failure to reach agreement on the first collective agreement may be due to an employer's opposition to unionization and collective bargaining either on ideological grounds or for pragma-

tic reasons. It usually involves conflict on issues such as dues checkoff, lack of good faith bargaining and unfair labour practices. The current dispute between United Steelworkers of America and Radio Shack in Barrie, Ontario mainly involves the dues checkoff issue. Lack of good faith bargaining and unfair labour practices are evident in recent decisions rendered by the Canada Labour Relations Board against the Canadian Imperial Bank of Commerce branches at Kamloops, B.C., Toronto and Sioux Lookout and a Bank of Montreal branch in Tweed, among others, (G & M, January 26, 1979, B-3).

Where collective bargaining relationship has existed between the parties beyond the first collective agreement, limitations on the scope of bargaining, as in the case of public sector labour relations in Canada, may also contribute to industrial strife.[9] As Goldenberg (1979) points out, the range of negotiable issues in Canada is generally narrower in government service than it is in the private sector. In all jurisdictions, collective bargaining excludes the P & IR functions of recruitment, classification and promotion, and sometimes suspension and dismissal; these are exercised by civil service commissions.

---

[9]For instance, strikes in public administration and public service (e.g. education and health) rose to 12.3 percent in 1971 to 1975 compared to only 5.8 percent in 1966 to 1970, (Jamieson 1979). As Jamieson (1979) notes, these public and quasi-public sector strikes accounted for 21 percent of the "major" strikes of 300,000 or more man-days, and 15.5 percent of the "large" strikes of 5,000 or more workers and/or 100,000 or more man-days, (p. 19).

A serious problem (Goldenberg 1979) of keeping staffing and related matters outside the scope of collective bargaining in the public sector legislation is that appeals on classification, and even on suspension and dismissal, are decided in many jurisdictions by a civil service commission which may have been responsible for the original decision; it casts serious doubts in the employees' and the unions' minds on the objectivity of the system.

In the case of the federal government, however, the public service Employment Act requires the Public Service Commission to consult with certified bargaining agents and the employer with regard to staffing and related matters. However, as the D'Avignon Committee (1979) has found, effective consultation has "deteriorated into an intermittent exercise in which policies and procedures about to be implemented are explained to employee representatives, with no possibility of change" since consultation had no means of impasse resolution; and that even the establishment in 1978 of the Joint Consultative Council (JCC) "cannot overcome the inherent structural weaknesses of the consultation process; the JCC has no means of impasse resolution", (p. 217).

Thus, centralized decision making, union management disharmony, lack of formal P & IR policies, failure to plan for and train and develop human resources as well as lack of validation or job relatedness of P & IR procedures contribute to employee turnover, absenteeism, grievances, poor attitudes towards work, industrial strife etc. The impact of lack of sophistication in P & IR management might also result in lack of productivity and growth for the enterprise and the economy. In short, worker job satisfaction and productivity might both be affected.[10] In the

---

[10] Extensive reviews of behavioural science literature have been conducted over the last three decades to ascertain the degree of relationship between job satisfaction and job performance, (Brayfield & Crockett,

behavioural science literature, job satisfaction has been found to be negatively related to absenteeism, turnover, grievances, accidents etc. while job performance has been found to be associated with employee productivity (e.g. units of output, supervisory ratings etc.).

These findings concerning P & IR policies and practices (e.g. centralized decision making, lack of validation etc.) are suggestive rather than definitive. As Murray & Dimick (1976) have noted, no one has attempted a survey of the whole gamut of P & IR policies and practices in Canada, nor has anyone carried out a comprehensive analysis of factors shaping these policies.

An important reason for our lack of knowledge in the human resource field arises from the fact that very few firms keep records of various measures of employee performance such as absenteeism, turnover, etc.

A 1977 survey (Robertson & Humphreys 1978) of 1,600 firms in Ontario showed that only 17 percent of the responding organizations (958 or 59.8 percent) kept absenteeism data and only 13 percent kept data on labour turnover; this is true despite the fact that absenteeism and turnover were identified by more than one-third of the establishments (36 and 37 percent respectively) as among their most significant human resource

---

1955; Herzberg et al. 1957; Vroom, 1964; Robinson et al. 1969; Schwab and Cummings, 1970; Quinn et al. 1974). These investigations have concluded that the relationship between the two is so tenuous and variable that, if there is a causal connection, it must either be intrinsically weak or conditioned by other circumstances in the work situation, (Katzell et al. 1975). In fact, Schwab & Cummings (1970) review of the literature led them to conclude that the relationship between job satisfaction and performances are so convoluted that they should be dealt with separately. This is because employee attitudes (e.g. job satisfaction) and behaviour (e.g. performance) are affected by such variables as leadership and supervision, organizational reward systems, labour management relations, and organizational style, (Schneider, 1976). It is for this reason that Katzell et al. (1975) have suggested that job satisfaction and job performance may be associated because of one or more mechanisms such as better supervision or when better performance leads or is expected to lead to greater rewards etc.; and that conditions necessary for the operation of these mechanisms were that workers were motivated by the rewards available in that situation and they were able to control their performance, Katzell et al. 1975).

problems. Moreover only five percent compiled productivity statistics, only three percent on labour-management relations.

The implications of these data are severe for the companies and the national economy. Let us take the example of absenteeism to illustrate these implications. A recent study estimates the absenteeism cost to the economy of $760 a year an employee or $21 million a day (Sanderson, 1979). The yearly costs have been variously estimated at $26 billion in the U.S. (Steers & Rhodes, 1978) and $10 billion in Canada (Financial Post, October 22, 1977). In a given week, according to Sanderson (1979, about 745,000 people or about 7.6 percent of the labour force were absent from work for at least part of the week, (G & M, September 24, 1979, B-4). The costs to the individual enterprise have been estimated at $66 per employee per day in one United States study (Mirvis & Lawler, 1977), while another study indicates that a firm employing 1,000 people could save $150,000 per year with a one percent reduction in absenteeism (Hawk, 1976).

The Sanderson study (1979), based on Statistics Canada figures and research by private industry and provincial governments indicates that about 83 million days were lost to the economy through absenteeism in 1978. This is more than ten times the 7.3 million days lost through strikes and lockouts, (G & M, Oct. 4, 1979, p.1).[11]

---

[11] Even the costs associated with lack of safety in the workplace do not seem to be higher than the estimates of the costs of absenteeism. For instance, in 1978 over one million Canadians were injured on the

Absebteeism cost estimates cited above do not include the cost of employing more people than would be needed if attendance was perfect. One study found that, on average, firms employed ten percent more people to avoid the disruptive effects of absenteeism, (Roberston & Humphreys, 1978).[12]

It will be misleading to suggest that absenteeism, turnover, industrial strife, industrial accidents etc. are solely caused by the human resource policies and practices of organizations documented above. Turnover, for instance may also be influenced by numerous other factors such as the state of the economy, technological developments in the industry, the nature of the local work force, the industry wage scale, government wage and unemployment policies, changes in demographic patterns and the values and attitudes the employees bring with them to the job. However, reduced rates of absenteeism and turnover experienced by those firms that have taken steps to improve the quality of working life and "intrinsic" aspects of work would suggest that a great deal can be accomplished if more attention was paid to

---

job. Virtually half of all those injured were temporarily or permanently disabled. Compensation costs were calculated to be around $970 million including associated outlays such as lost production and hospital costs amounting to $4 billion per year, see L. Alexander, speech to I. R. Seminar, Queen's University, Oct. 25, 1979).

[12] The study found that the cost of absenteeism ranged from one to three times the hourly wage rate of the absent worker, depending on whether employees were paid for days absent, whether absent employees were replaced and the degree of experience of those who replaced them. The cost of turnover ranged from $3,000 to $7,000 for the average employee, depending on the method of replacement. These figures included the cost of advertising, interviewing, training and orienting the new employee, lower productivity due to inexperience and lost production resulting from the vacancy, see, Robertson & Humpreys, Labour Gazette, November/December, 1978 .

the management of human resources. These include enhancing opportunities for advancement, increasing employee's involvement in decisions affecting their jobs, and trying to improve the nature of the work itself.

For instance, in an extensive review of empirical studies on absenteeism, Muchinsky (1977) found that overall, job satisfaction has been found to be negatively related to absenteeism; in job facet studies, satisfaction with work has been found to have a consistent negative relationship to absenteeism and that other facets of job satisfaction (e.g. co-workers, pay, promotion, and supervision) have not been found to be related to absenteeism, in most studies. Muchinsky's review of the literature (1977) also revealed that employee attendance was better in those jobs that offered a greater degree of autonomy and responsibility;[13] most of the studies reviewed involved blue-collar workers.

Muchinsky (1977) concludes that employee participation and behaviour modification[14] techniques seem to be useful techniques in reducing absenteeism.[15]

---

[13]For instance, Turner and Lawrence (1965) reported an inverse relationship between the amount of autonomy and responsibility allowed on a job and absenteeism in a sample of blue-collar workers. Similarly, Hackman and Lawler (1971) found that absenteeism was negatively related to the amount of autonomy and task identify present in a job in a sample of telephone operators and clerks. Lastly, Fried, Westman, and Davis (1972) reported that absenteeism among factory workers was less for those employees who could set their own pace of work and who could adjust or correct their machine, see Muchinsky (1977).

[14]For example, one study (Pedalino and Gamboa 1974) described a behaviour modification program that was particularly effective in reducing absenteeism. The investigators gave each employee who came to work and was on time a playing card from a poker deck. At the end of the five-day

Employee participation and other related programs have been and are currently being used to reduce not only absenteeism but a variety of other industrial problems such as turnover, drug abuse, accidents etc. For instance, employee participation has been the main thrust of quality of work life (QWL) experiments in the last few years.

QWL Experiments

The QWL experiments have been invariably called as "work innovations", "humanization of work", "work reform", "work restructuring", "work design", "new forms of work organization" and "socio-technical systems". These terms, for instance, range from improvements in QWL from an individual to company level encompassing individual (e.g. job enrichment), small group (e.g. autonomous work groups), department, old or new plant and the entire organization.

---

week the person with the highest poker hand won $20. Pedalino and Gamboa reported that absenteeism remained low following termination of the program. Their study was one of the most methodologically sound studies reported in this area, and through the use of control groups, they were able to document the effectiveness of their program. Pedalino and Gamboa concluded that both behaviour modification techniques and employee participation were processes that held promise for reducing absenteeism, cited in Muchinsky (1977). The use of behaviour modification programs to reduce absenteeism has been discussed by Nord (1972) and Porter (1973), see Muchinsky (1977).

[15] How much absenteeism is controllable by managerial action? According to Mikalachki & Gundz (1979) "...as much as one half of the absenteeism in a plant with an inactivity index of more than 8% can be eliminated by managerial action. Simple arithmetic suggests that a 1,000 person plant with that kind of inactivity rate stands to gain $600,000 per year through the absenteeism control..." Inactivity Index = $\frac{\text{Time lost to absenteeism in period}}{\text{Time usually worked in the period}} \times 100\%$.

The latter is inherent in "new forms of work organization" as defined by Goodman & Lawler (1977)[16] or in socio-technical systems.[17]

Ondrack and Evans (1978) suggest organization wide change in order to improve QWL. They, for instance, contend that unless an organization is committed to changes in structure and nature of work, QWL is unlikely to succeed. Thus, according to these authors, organizations which concentrate their attention on the levels of safe working conditions and fair compensation may be making necessary improvements but not motivating workers unless changes were made to provide opportunities for growth and greater worker participation in decision-making.

Katzell and Yankelovich (1975) spell out the various strategies for improving QWL. These include, "helpful and considerate supervision, giving employees work that more completely utilizes their aptitudes and skills, composing harmonious work groups, affording opportunities for upward and lateral mobility, giving workers a voice

---

[16] Goodman & Lawler (1977) define New Forms of Work Organization (NFWO) as attempts to restructure multiple dimensions of the organization and to institute a mechanism which introduces and sustains the change over time. They go on to point out that the focus of the multi-dimensional change is to provide democratization of the workplace, greater control for the worker over his or her environment, and greater joint problem solving between labour and management.

[17] Socio-technical systems refer to the interrelated set of psychological, economic and work culture factors which must be integrated and harmonized if the system is to be effective in the long run, see Katzell et al. (1977).

in decisions that affect them, improving working conditions so as to increase comfort, health, and safety, and creating an environment with which the worker can form a positive identification.

It would, therefore, appear that in order to improve worker motivation by improving their QWL, organization-wide, multi-dimensional changes are necessary.

Rationale for QWL: Alienation of young and well educated workers since the 1960's and overall decline in worker motivation, (Strauss, 1979), stagflation in the 1970's, and other environmental contexts have stimulated the search for new ways to increase productivity and resolve unfavourable economic factors. Although there may not be any causal connection between the number of QWL experiments and the economic conditions, the nature of the latter provided a legitimated context for experiments with work improvements at the national and firm level. The AIB and restraints at the federal level encouraged some unions to participate in the QWL programs. Recently, for example, the board of directors of the Public Service Alliance of Canada (PSAC) issued a policy paper recommending that the union co-operate with management in accelerating QWL experiments because economic restrictions on collective bargaining had drastically curtailed the ability of the PSAC to improve pay and benefits; the paper went on to suggest that "QWL is the only remaining area in which progress is possible". The purpose of QWL programs will be to reduce the "mounting boredom, frustration, dissatisfactions and alienation..." by "increasing participation in decision-making, improved communications, broadening of responsibilities, greater self determination, and more open and democratic management styles", (G & M, July 14, 1979, B-1). In the

private sector, one of the few unions involved in QWL experiments is the Oil, Atomic and Chemical workers International which has joint decision-making QWL programs at Polysar Ltd. & Shell Canada Ltd. at Sarnia. At Shell, for example, the union is involved in planning a new plant in Sarnia, which is staffed by multi-skilled, self regulating teams. Another company, Steinbergs has shared responsibility with union representatives for the redesign of stores and to provide for autonomous work groups in various departments.

In addition, both the federal and provincial governments have also been promoting the development of QWL programs.[18]

Evidence: A comprehensive study of the empirical literature by the Work in America Institute, (Parnes 1978) concluded that a better QWL usually resulted in a direct increase in job satisfaction. Increased productivity, on the other hand, seemed more to be a by-product of improved QWL. In other words, while the relationship between QWL and productivity appeared to exist, it was less clear.

In another study of QWL projects that originated in the U.S. during 1970 to 1976, Goodman and Lawler (1977) reviewed 25% of the 70 to 90 QWL projects (25-30 in new plants, 15-20 in old union sites and 30 to 40 in old nonunion sites). They concluded that mixed results existed with respect to productivity; about half the time increases did

---

[18]Government of Ontario, for instance, sponsored a trip to Europe for the labour and management members of the committee on work life. The Canada Department of Labour has established a QWL unit while the Ontario Ministry of Labour has established a QWL center. Moreover, several QWL experiments, on a limited scale, were started at Statistics Canada, the translation bureau of the Department of the Secretary of State, and the Department of National Revenue in 1975. These programs have been cautious and restricted to small number of employees and so far have resulted in relatively small changes, (G & M, July 1979, B-1).

result while in the other half no change occurred. However, absenteeism, turnover, and tardiness (which are negatively related to job satisfaction in the literature) were affected strongly and positively.[19]

The results concerning productivity are confirmed by Walton (1979). He suggests that QWL projects might add to productivity but not necessarily. He concludes by asserting that work improvement efforts that had both productivity and QWL as goals were more likely to succeed on both counts than projects that stressed one goal to the exclusion of the other.[20]

---

[19] Goodman and Lawler (1977) came up with the several following conclusions based on their review of QWL or what they term as New Forms of Work Organization (NFWO) projects. These are: 1. Attitudes. Most NFWO projects seem to result in increases in job satisfaction, feelings of personal growth, job involvement and organizational commitment; 2. Membership behavior. Absenteeism, turnover, and tardiness seem to be affected strongly and positively in most NFWO projects. This is in agreement with the finding that satisfaction increases; 3. Productivity. Mixed results seem to exist with respect to productivity. About half the time increases seem to result while in the other half no change occurs; 4. Work force skills and flexibility. Most NFWO projects seem to create more skilled and flexible work forces. The result is that the organizations end up with more valuable human resources; 5. Unions. There is little evidence that NFWO projects have had a strong impact on the union in those situations where a union was part of the project. Contrary to what some have feared, no union officials have lost their positions. On the other hand, there is little evidence of increased commitment to the union as an organization on the part of the membership; 6. Stability. So far, many NFWO that have been started are continuing. Although their specific direction has been subject to changes and course correction, many of the NFWO projects seem to be highly durable. Once they begin, there seems to be a spirit and thrust to them that survives even fairly major setbacks.

[20] A good example, of what Walton (1979) has suggested, might be the cost-benefit study of a QWL experiment at Rushton Mining company, introduced in December 1973. The study was conducted by Goodman (1979). The experiment lasted three years. The objectives of the project included greater productivity, earnings, job satisfaction, job flexibility, and safety. The QWL experiment was devised by a labour-management committee with an external research team. Goodman measured four sets of variables: 1) Investment costs (i.e. steering committee meetings, foremen meeting,

QWL includes a variety of techniques that come within the preview of the P & I R function. Katzell et. al (1977) reviewed numerous studies relating some of these techniques to worker productivity. They reviewed 103 worker productivity experiments from 1971 to 1975 in the United States. Eighty-five of these experiments found favourable effects on one or more aspects of productivity. The successful experiments used a variety of strategies to improve worker performance. These included selection and placement, training and instruction, appraisal and feedback, management by objectives, goal setting, financial compensation, job design, group design, supervisory methods, organizational structure, work schedule, and sociotechnical systems.

One of the most important finding of the Katzell et. al study (1977) was that training was the most frequently used personnel technique and that it had a large and consistent impact on productivity. In fact, most of the techniques used in the experiments to improve worker productivity involved P & IR technology and the P & IR function.

Another important conclusion reached by Katzell et. al (1977) was that improvement of worker performance was attainable

---

costs of the research team, etc.) 2) operating costs (e.g. costs of increased crew size, increased wages and other expenses needed to maintain the effectiveness of the intervention; 3) tangible benefits (e.g. value of increased production resulting from experiment; and 4) intangible benefits varying from $350,000 to $700,000 based on evaluation of managers in the mining industry. Goodman concluded that the QWL experiment at Rushton had a positive net effect, based on the costs and benefits assessment of this project. In 1979, however, there was no functioning QWL program at Rushton. Goodman (1979) documents, in the epilogue, the variety of benefits despite the demise of the program.

through strategies already within the grasp of organizations.

Even though the evidence of QWL experiments is positive with regards to worker job satisfaction and mixed with respect to productivity, these programs represent a very small number of organizations and are truly "experiments."

In order to improve worker job satisfaction as well as productivity, an organization would have to keep systematic personnel records and develop cost-benefit analyses on the utilization of human resources.

Human Resource Accounting

One way to measure worker productivity is to evaluate the economic value of human resources by identifying and recording the value of these resources (e.g. employees), and treat them as an asset. Economists have long recognized that human beings constitute an important asset in any production system (Friedman 1956, Becker 1964, Schultze 1960). Becker has suggested that human capital is an important factor in explaining and predicting economic growth (Becker 1964). At the micro level, however, only a few organizations have attempted to record the value of human assets, (Hari Das and Mallika Das, 1979).

The concept of human resource accounting (HRA) and its impact on organizational decision making is of recent vintage. It is generally associated with the name of Rensis Likert. In his highly influential book, Likert (1967) asserted that short-term company profits are too often obtained through autocratic "System I" methods which result in the wastage of human resources through neglect of training

and development, turnover, etc. He argued that conventional accounting procedures ignored human assets, even though their depletion almost invariably led to reductions in profit over the long run. He challenged accountants to develop measures of the value of human resources (Strauss, 1976).

Following Likert, numerous researchers have speculated on the consequences of treating human resources as assets. Hekimian and Jones (1967) and Gilbert (1970) suggest that HRA can result in: more satisfied people working in more challenging jobs, a more efficient allocation of resources within the economy, an aid to decision making by providing more accurate information to management and investors, and a better estimate of the firm's value and its return of investment. Similarly Brummet, Flamholtz and Pyle (1968) have suggested the following outcomes: (1) Management receives complete information on the costs of personnel turnover; (2) The ratio of investments in human resources to total assets acts as an indicator of the firm's potential to generate future profits; (3) Rates of return on investment can be more intelligently interpreted if the value of human assets is included in the rate base; (4) Valid estimates of the usefulness of organizational training programs are available, and (5) Planning and control of personnel costs can be more efficiently performed if data relating to costs of recruiting, induction, and training are available. Measurements of human resources also are likely to be relevant and useful in several phases of human resources planning, development, and compensation decisions.

Given these and many other consequences, numerous researchers have proposed alternative models of HRA. Several extensive reviewers of

the literature on HRA are agreed that the search has been beset with numerous difficulties, (Craft and Birnberg 1976; Rhode, Lawler and Sundem 1976, Blau 1978; Das and Das, 1979). These relate to the method of calculating human resource values and to the use to which the resulting data will be put, (Strauss 1976, p. 1). Craft and Birnberg (1976), after an extensive review of the literature, have concluded that the "HRA may eventually obtain greatest acceptance as an aid in personnel management operations analysis (e.g. turnover cost analysis, training cost analysis, costing out selection procedures, and the like) and in evaluating managerial performance in service-oriented industries..." (p. 12). Blau (1978) has suggested that the currently available human resource cost and valuation methods need to be validated. However, the available evidence does suggests the efficacy of HRA systems. Further application of these systems might provide general application in both public and private sectors.[21]

From the above discussion of QWL, productivity experiments and the HRA, it is apparent that improvement in job satisfaction and

---

[21] One such application of a HRA system is provided in a recent article by Mirvis and Lawler (1977). In this article, the authors present a methodology for attaching behavioural costs to attitudes based on data from 116 tellers in a midwestern bank in the U.S. The authors measured attitudes through an employee survey, and constructed behavioural measures based on company records. Behavioural costs per employee were assigned through cost accounting techniques. Attitudes were correlated with future behaviour, and the behavioural changes associated with attitudinal shifts were estimated using these relationships. New behavioural costs per employee were computed. The results showed expected direct-cost savings of $17,664 in absenteeism, turnover, and performance from a .5 standard deviation increase in job satisfaction; the authors also reported savings associated with enhanced job involvement and motivation.

productivity of the workforce in an enterprise can be achieved as well as measured. Most of the techniques of improving worker performance involve P & IR technology and the P & IR function.

However, as has been noted, the P & IR managers in Canada are under-educated and under-trained; they occupy a low status in the management hierarchy, (Kumar 1975). For instance, to introduce a QWL experiment or a HRA system, a set of skills are necessary that are often lacking in most P & IR departments; most P & IR departments do not have the resources or technical skills, (Goodman and Lawler 1977) or indeed the clout that may be necessary to bring about these changes.[22]

For these reasons, it has been suggested that QWL, worker training and development etc. should be legislated. Lawler (1976) has proposed that the government should legislate QWL programs and charge organizations either for the negative social outcomes they produce or for human resource practices they engage in.

Lawler (1976) explains the outcomes this way. If, due to a poor quality of work life, a company had unusually high rate of turnover, alcoholism, drug addiction and mental illness among its employees, the government could increase its taxes proportionately as it does in the area of unemployment compensation.

---

[22] Goodman and Lawler (1977) in their review of the QWL experiments in the U.S. found that absence of necessary skills (to implement NFWO) in P & IR personnel, raised questions about the effectiveness of these departments and thereby led to some dismissals. This in turn led the members of the P & IR departments to feel threatened and to resist change.

The second alternative, according to Lawler (1976), is not to fine the companies for the outcomes they produce but for the practices they engage in. For example, organizations might be taxed if they produce goods on an assembly line that had highly repetitive jobs; such action, claims Lawler, could serve to eliminate the economic advantages of producing goods on an assembly line. This provides employees with dissatisfying, meaningless work lives and is a form of pollution, the cost of which is borne by the society and the individual harmed rather than the organization responsible.

Lawler (1976) asserts that this type of pollution leads to increased costs in such areas as mental illness, alcoholism, shorter life expectancy and less involvement in the community. These expenses are paid for by the government and private funds that support unemployment benefits, welfare payments, hospitals, mental health centers and civic programs.

In a similar vein, the recent report of the Commission of Inquiry on Educational Leave and Productivity (1979) has recommended a training levy scheme for Canadian employers; this is one of the principal recommendations of the Commission. The Commission recommended that Canadian industry be required to spend .5% of payroll annually on training of its employees. Among the reasons cited for this recommendation were QWL and productivity problems.

While both the proposals (e.g. by Lawler and the Commission) are intriguing, it is difficult to forsee their implementation in the current economic climate. Both the proposals, however, do reflect on the current state of inefficiency in the effective utilization of human resources.

Summary and Conclusions

1. Relative to their counterparts in the United States, Canadian managers as well as P & IR specialists are under-educated and under-trained.

2. In both the private and public sectors in Canada, P & IR managers occupy a low status in the management hierarchy; the responsibilities of the P & IR departments are confined to insignificant kind of activities.

3. P & IR policies and practices in Canada are ad-hoc in nature and are determined at lower organizational levels. For instance, policies relating to compensation and related matters are formulated, determined and carried out at higher organization levels; P & IR departments rarely participate in these decisions.

In the United States, at least some organizations seem to be increasingly viewing the P & IR function as making a positive contribution to the overall effectiveness and survival of the organization. P & IR officials in these organizations seem to be well trained, well rewarded, and make substantial inputs into important decisions of all types.

4. As a result of the low status of the P & IR function and P & IR staff's lack of professionalism, P & IR policies and practices are implicit and subjective.

4a. Many employers fail to validate their selection precedures; they do not engage in forecasts of their human resource needs and supplies and the human resources are rarely part of business plans of these organizations.

4b. Similarly, training of employees is so short that its adequacy is doubtful; employees are trained on the basis of immediate problems and available solutions rather than out of a long term strategic approach, the utilization of people, the developing of careers or the careful analysis of job requirements.

4c. P & IR practices in Canada are also affected by the policies of the multi-plant and multi-national companies. The locus of decision making in collective bargaining, where it is highly centralized, may have consequences for Canadian plants and may be reflected in industrial strife, grievances etc.

4d. Locus of decision-making, however, is only one variable, albeit an important one, which may be significantly correlated with industrial strife. Co-operation between labour and management is affected by numerous other variables. These include economic variables as well as bargaining behaviour and conditions such as attitudes of management toward the union, the degree of trust and consultation etc.

4e. In short, locus of decision-making, union management co-operation, lack of formal P & IR policies, failure to plan for and train and develop human resources, lack of validation or job relatedness of P & IR procedures contribute to employee job dissatisfaction and lack of productivity.

5. In the behavioural science literature, job satisfaction has been found to be negatively correlated to absenteeism, turnover, grievances, accidents etc. while job performance has been found to be associated with employee productivity (e.g. units of output, supervisory ratings etc.).

6. Employee participation and other related programs have been and are currently being used to improve employee job satisfaction and possibly employee productivity. Evidence, based on studies of QWL programs, whose main thrust is employee participation in decision making etc., indicates that QWL programs usually result in a direct increase in job satisfaction. However, the evidence on productivity is mixed.

7. QWL programs include a variety of techniques that involve P & IR procedures. These include selection and placement, training and instruction, appraisal and feedback etc. A study (Katzell et al. 1977) of 103 worker

productivity experiments which used P & IR techniques found that 85 of these experiments had favourable effects on one or more aspects of productivity. One of the most important finding was that training was the most frequently used personnel technique and that it had a large and consistent impact on productivity.

8. Studies on worker productivity such as those reviewed by Katzell et al. (1977) are few and far between. One of the reasons for lack of information on worker job satisfaction and productivity is that most firms do not identify and record the value of their human resources. This is because, according to Likert (1967), conventional accounting procedures ignore human assets, even though their depletion almost invariably leads to reductions in profits over the long run.

8a. It has been suggested that, at the minimum, Human Resource Accounting (HRA) can aid in personnel management operations analysis (e.g. training cost analysis, turnover cost analysis, costing out selection procedures etc.).

8b. Thus, the worker productivity experiments, and properly designed QWL programs can improve productivity of the workforce of an enterprise and HRA methods can measure such productivity.

9. Most of the techniques of improving worker performance involve P & IR technology and the P & IR function in an enterprise. However, P & IR specialists lack necessary skills and occupy a low status in management hierarchy.

10. It has been suggested that organizations may not fully appreciate the value of their human resources unless QWL programs and worker training and development programs are legislated; firms could be taxed either for the negative social outcomes they produce or for human resource practices they engage in. Similarly, the recent report of the federal Commission on Educational Leave and Productivity (1979) has recommended a training levy

scheme (e.g..5% of payroll) for Canadian employers.

10a. While the proposals to tax employers are intriguing, it is difficult to foresee their implementation in the current economic climate.

REFERENCES

1. Adams, Roy, "Towards a More Competent Labour Force: A Training Levy Scheme for Canada", McMaster University working paper, 1979.

2. Alexander, Lincoln, Speech to the Industrial Relations Seminar, Queen's University, October 25, 1979.

3. Ash, P., "Measurement of Industrial Relations Activity", Journal of Applied Psychology, Vol. 51, no. 5, 1976.

4. Berg, Ivar, Education and Jobs: The Great Training Robbery, New York: Praeger, 1970.

5. Becker, G. S., Human Capital, New York: National Bureau of Economic Research, 1964.

6. Blau, Gary, Human Resource Accounting, Scarsdale, N. Y.: Work in America Institute, 1978.

7. Brayfield, A. H. and Crockett, W. H., "Employee attitudes and employer performance", Psychological Bulletin, Vol. 52, 1955.

8. Brummet, R. L., Eric G. Flamholtz, and William C. Pyle, "Human Resource Measurement: A Challenge for Accountants", The Accounting Review, XLIII, April 1968.

9. Canadian Industrial Relations, The Report of the Task Force on Labour Relations, Queen's Printer, 1969.

10. Clarkson, Max B. E., "A Parasitical Reliance on Imported Skills", Canadian Business Review, Spring 1979.

11. Cooper, William H., "A Study of Strike Duration", School fo Business Administration, University of Western Ontario, Working paper series no. 105, August 1973.

12. Craft, James A., and J. Birnberg, "Human Resource Accounting: Perspective and Prospects", Industrial Relations, February 1976.

13. Daly, D. J., "Canadian Management: Past Recruitment Policies and Future Needs", revised draft, September, 1979.

14. Das, Hari and Mallika Das, "One More Time: How Do We Place a Value Tag on our Employees? Some Issues in Human Resource Accounting", Human Resource Planning, Vol. 2, no. 2, 1979.

15. D'Avignon, Guy R. et al. Report of the Special Committee on the Review of Personnel Management and the Merit Principle, Ottawa: Minister of Supply and Services Canada, September, 1979.

16. Diamond, Daniel E. et al. Industry Hiring Requirements and the Employment of the Disadvantaged, New York: New York University, 1970.

17. Dimick, Daniel E., "Factors Associated with the Importance of Policy in Personnel Decisions", Academy of Management Proceedings 1978, edited by J. C. Susbauer, Cleveland, Academy of Management, 1978.

18. Doeringer, Peter B. and Michael J. Piore, Internal Labor Markets and Manpower Analysis, Lexington, Mass.: D. C. Heath, 1971

19. Education and Working Canadians, Report of the Commission of Inquiry on Educational Leave and Productivity, Ottawa, 1979.

20. French, Wendell, The Personnel Management Process: Human Resources Administration, 3rd Edition, Boston: Houghton Mifflin, 1974.

21. Friedman, M., "The Quantity Theory of Money: A Restatement", in Studies in the Quantity Theory of Money, Chicago: University of Chicago Press, 1956.

22. Foulkes, Fred K. and Henry M. Morgan, "Organizing and Staffing the Personnel Function", Harvard Business Review, May-June, 1977.

22a. Gilbert, M. H., "The Asset Value of the Human Organization", Management Accounting, July 1970.

23. Globe & Mail -"Absenteeism Costs Canada $21 Million Daily, study says", October 4, 1979, (cited as G. Sanderson study).

24. -"PSAC policy paper urges cooperation in job life experiments", July 14, 1979, B-1.

25. -"More Ontario firms get aid in search for foreign workers", May 3, 1979.

26. -"Failure by firms to train apprentices blamed for need to recruit overseas", May 2, 1979.

27. -"Bank wage levels hamper union organizing", January 26, 1979, B-3.

28. Globe and Mail -"Growing rate of employee absenteeism seen as symptoms of bad managment", February 3, 1979, B-5.

29. -"Change in attitudes toward work could help cut frivolous absences", September 24, 1979, B-4.

30. Glueck, William F., Personnel: A Diagnostic Approach, Revised edition, Dallas: Business Publications, 1978.

31. Goodman, Paul S., and E. E. Lawler, New Forms of Work Organization in the United States, Geneva, Switzerland: ILO, 1977.

32. Goodman, Paul S., Assessing Organizational Change: The Rushton Quality of Work Experiment, New York: Wiley, 1979.

33. Goldenberg, Shirley, "Public-Sector Labor Relations in Canada", in Public-Sector Bargaining, edited by B. Aaron, J. Grodin and J. Stern, Washington, D. C., Bureau of National Affairs, 1979.

34. Gunter, H., "An Overview of some recent research on multinational corporations and labour", Bulletin No. 12, International Institute of Labour Studies, Geneva, 1974.

35. Hawk, D., "Absenteeism and turnover", Personnel Journal, June 1976.

35a. Hekimian, J. S. and C. H. Jones, "Put people on your balance sheet", Harvard Business Review, Jan.-Feb., 1967.

36. Herzberg, F., B. Mansner, R. O. Peterson and D. F. Capwell, Job Attitudes: Review of Research and Opinion, Pittsburgh: Psychological Service of Pittsburgh, 1957.

37. Jain, Harish C., "Managerial Staffing Practices in the Canadian Manufacturing Industry", Public Personnel Management, May-June, 1974.

38. Jamieson, S. M.,"Industrial Conflict in Canada 1966-75", report prepared for the Economic Council of Canada, 1979.

39. Janger, Allen R., The Personnel Function: Changing Objectives and Organization, New York: The Conference Board, 1977.

40. Katzell, Raymond A., and Daniel Yankelovich & others, Work, Productivity and Job Satisfaction: An Evaluation of Policy Related Research, New York: New York University, January 1975.

41. Katzell, Raymond A., Penney Bienstock and Paul H. Faerstein, A Guide to Worker Productivity Experiments in the United States 1971-75, New York: New York University, 1977.

42. Kumar, Pradeep, Personnel Management in Canada: A Manpower Profile, Industrial Relations Centre, Kingston: Queen's University 1975.

43. Likert, Rensis, The Human Organization: Its Management and Values, New York: McGraw-Hill, 1967.

44. Lawler, E.E., "Should the Quality of Work Life be Legislated?" The Personnel Administrator, January, 1976.

45. Mealie, Laird W. and Dennis Lee, "Contemporary Personnel Practices in Canadian Firms: An Empirical Evaluation", Relations Industrielles, (forthcoming).

46. Meyer, Herbert E., "Personnel Directors are the New Corporate Heroes", Fortune, February, 1976.

47. Mikalachki, A. M., G. Forsyth, and J. J. Wettlaufer, Employer Approaches and Practices in Industrial Relations, Ottawa: Queen's Printer, 1970.

48. Mikalachki, A. and Jeffrey Gandz, "Measuring Absenteeism", Relations Industrielles, Vol. 34, no. 3, 1979.

49. Minutes of Proceedings and Evidence of the Standing Committee on Labour, Manpower and Immigration (cited as LMI in this paper), House of Commons, Thirtieth Parliament, 1977-78, Issue No. 3, February 16, 1978, 3:32; Issue No. 8, March 9, 1978, 8A:19.

50. Mirvis, P. H. and E. E. Lawler, "Measuring the financial impact of employee attitudes, Journal of Applied Psychology, Vol. 62, 1977.

51. Muchinsky, P. M., "Employee Absenteeism: A Review of the Literature", Journal of Vocational Behaviour, Vol. 10, 1977.

52. Murray, V. V. and David E. Dimick, Personnel Administration in Large and Middle-Sized Canadian Business, Ottawa: Roayal Commission on Corporate Concentration, Study No. 25, November, 1976.

53. Mutu, S., "Settlement of first collective agreement: An Examination of the Canada Labour Code Amendment", a working paper, 1979,

54. Ondrack, D. and M. Evans, "The Use of OD Techniques to Introduce QWL Changes", Toronto: Faculty of Management Studies, University of Toronto, October 1978.

55. Parnes, Steven, Productivity and the Quality of Working Life, Scarsdale, N. Y.: Work in America Institute, 1978.

56. Peterson, R. B. and Lane Tracy, "Testing a Behavioural Theory Model of Labour Negotiations", Industrial Relations, February, 1979.

57. Quinn, R. P. et al., Job Satisfaction: Is There a Trend? Washington, D. C.: U.S. Government Printing Office, 1974.

58. Rhode, J., Edward E. Lawler and Gary Sundem, "Human Resource Accounting: A Critical Assessment", Industrial Relations, February, 1976.

59. Robertson, G. and J. Humphreys, Labour Turnover and Absenteeism in Selected Industries: Northwestern Ontario and Ontario, component study No. 10, Toronto, 1978.

60. Robinson, J. P. et al. Measures of Occupational Attitudes and Occupational Characteristics, Ann Arbor, Mich.: Institute of Social Research, 1969.

61. Schneider, Benjamin, Staffing Organizations, Pacific Palisades, California: Goodyear, 1976.

62. Schultz, T. W., "Capital Formation by Education", Journal of Political Economy, 1960.

63. Schwab, D. P. and L. L. Cummings, "Theories of Performance and Satisfaction: A Review", Industrial Relations, Vol. 9, 1970.

64. Steers, R. M. and Susan R. Rhodes, "Major influence on employee attendance: A process model", Journal of Applied Psychology, Vol. 63, No.4 1978.

65. Strauss, George, "Worker's Participation: Symposium Introduction", Industrial Relations, Fall 1979.

66. Strauss, George, "Human Resource Accounting: A Complementary Collection", Industrial Relations, February, 1976.

67. The costs and benefits to employers of apprentice machinists in Ontario, Toronto: Ministry of Colleges and Universities, February 1, 1978.

68. Thomson, A. W. J. and L. C. Hunter, "The Level of Bargaining in a Multi-plant Company", Industrial Relations Journal, Vol. 6, No. 2, 1975.

69. Training in Industry, Ottawa: Statistics Canada, February, 1973.

70. Training for Ontario's Future, Report of the Task Force on Industrial Training, Toronto: Ministry of Colleges and Universities, 1973.

71. Tremblay, Henri, "Organizational Development at Steinberg's Limited: A Case Study", in Behavioural Issues in Management: The Canadian Context, edited by Harish C. Jain and R. N. Kanungo, Toronto: McGraw-Hill Ryerson, 1977.

72. Vroom, V. H., Work & Motivation, New York, Wiley, 1964.

73. Walton, Richard E., "Work Innovations in the United States", Harvard Business Review, July-August, 1979.

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-Stage 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 Labor 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.