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Industrial/Organizational Psychology in New Zealand

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The purpose of the special issue is defined and two underlying assumptions are outlined. The evolution of Industrial / Organizational psychology in New Zealand, and some of the major developments during three periods, from 1920 to 1940, from 1940 to 1960, and from 1960 to the present day, are summarised. Issues facing Industrial / Organizational psychologists are outlined. An overview of the papers contained in this special issue is presented.

The purpose of this special issue is to promote an awareness of Industrial/Organizational (I/O) psychology as both an academic and applied sub-discipline which has potential benefits for New Zealand workers, organizations and society. We have chosen to employ the term "Industrial/Organizational" psychology, which is of American origin, but which is now widely used internationally, rather than the British term "Occupational" psychology, in spite of the latter's long usage within the New Zealand Psychological Society and its historical significance in this country. Where we have felt it appropriate, we have referred to organizational behaviour, an interdisciplinary field, which traces its origins from not only industrial or occupational psychology, but also industrial sociology, organization theory, social anthropology and political science (Inkson 1987), and which is resident primarily in management schools.

One assumption which underlies the purpose of this special issue is that ultimately the needs of individual employees, employing organiza-

tions and the broader society should be viewed as linked and even complementary, even though their immediate interests may conflict. Recent legislation, such as the Employment Contracts Act (1991), tends to focus on the organizational goal of increasing productivity, which admittedly, may have social payoffs. But it appears to neglect individuals' interests as well as more particular social goals, such as Equal Employment Opportunity. In the short term, this legislation, and its underlying strategy, may enhance organizational effectiveness, and, by doing so, may achieve its advocates' oft-stated goal of creating new employment opportunities. However it pays little heed to the fact that organizations are aggregations of individuals embedded within a larger social system, from which their interests, in the longer term, cannot be divorced.

A second assumption, which underlies the purpose of this special issue, is that academic psychologists, ie teachers and researchers, and applied I/O psychologists, ie practitioners, can contribute to the well-being of New Zealand workers, organizations and society. Although some contributions to this special issue identify

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a split between the academic and applied sides of the discipline, the two should be linked. Theories derived primarily from academic sources provide a framework to integrate and to interpret the findings of basic and applied research. Ideally, this body of knowledge should then help to identify new research areas, and can, at times, serve as a guide and justification for the practice of I/O psychology, while in turn being modified by evidence derived from the experience of practitioners. Thus both academics and practitioners have a valuable contribution to make to the development of a body of knowledge which can guide interventions aimed at increasing individual, organizational and societal well-being.

The Development of I/O Psychology in New Zealand

The development of I/O psychology in New Zealand has occurred in three stages: the early years, from 1920 to 1940, with developments largely in the then colleges of the University of New Zealand; the period of the Second World War and its aftermath, from 1940 to 1960, with activity not only in the university colleges but also in government departments and the armed services; and the period from 1960 onwards, which has been marked by substantial changes in the structure of university education, by a growth in research and by attention being given to professional status.

Major developments in the early period occurred at Victoria and Canterbury Colleges and at the University of Otago. Sir Thomas Hunter, who in 1909 had become the country's first professor of psychology, mentioned the establishment in the early 1920's of a psychological clinic at Victoria, but this was for "problem children" (Hunter 1952). Hunter, an experimentalist in the tradition of Titchener, appears to have had a considerable distaste for applied psychology (Brown and Fuchs 1971), and it was not until Professor Ernest Beaglehole brought Leslie Hearnshaw to Victoria, at the end of this period, that industrial psychology became established at the college.

Three names stand out during the early period at Canterbury College (Jamieson 1990). Professor, subsequently Sir, James Shelley, a man of eclectic interests and vast energy, and who later became Director of the National Broadcasting Service, probably gave the first

lectures on industrial psychology at Canterbury, in the early 1920s. Shelley was certainly "doing some mental testing" with intelligence tests (Beeby 1979) shortly after his arrival at Canterbury in 1920. In 1927, with Clarence Beeby, a later Director of Education, Shelley developed a psychological clinic, an extension of the experimental psychology and education laboratory which had been established in 1923. The clinic undertook educational and vocational testing and research (Gardner Beardsley and Carter 1973). In 1979, while recalling research activities and forays into what was essentially management consulting during those early years, Beeby, (who in 1925 had been granted leave to work on a PhD, and who had gone initially to Manchester and later to University College, London), said,

"In Manchester, I had had contact, through my research on muscular skill and motion study, with the regional branch of the National Institute of Industrial Psychology, and, when I returned, Shelley and I took up Industrial Psychology with more enthusiasm than expertise. At the request of the DSIR, we started a bit of research at Aulsebrook's chocolate factory on the relationships between production rates and temperature and humidity. Production was measured by the wages earned, but after a few months, complicated changes in the piece rates ruined the continuity of our figures. ... We did time and motion study in Bunting's brush factory, and planned a complete new layout to improve the flow of work through the "making" shop in Duckworth and Turner's shoe factory, which resulted in an increase in output. It really took little more than common sense, a few simple rules, an outsider's eye and more free time than a factory manager normally has."

(Beeby 1979)

The third of the Canterbury notables was Ralph Winterbourn, who was appointed as a lecturer in Education in 1935, and whose work with the clinic was primarily in vocational guidance. Winterbourn, who was soon to work with Hearnshaw in wartime activities for the Department of Scientific and Industrial Research, subsequently became Professor of Education at Auckland, where he established the country's first training programme in professional applied psychology, in this case in

educational psychology (Shouksmith and Shouksmith 1990).

In 1930, Henry Ferguson had been appointed as a lecturer in experimental psychology at the University of Otago. Writing some years later, Ferguson (1979) recorded in substantial detail his early work in psychology at that university, including lectures on fatigue, work curves, rest pauses, vocational guidance and selection, time and motion study, and the design of machinery. Academics might note with some envy that entry pressures to courses in the 1930's were different to those which typically apply today. Ferguson noted that there was at Otago, at that time, an industrial psychology option in the B Com. degree, opted for by only one student from 1931 to 1938. Ferguson, too, was involved in consulting activities (including market research), investigations into road accidents and the problems of driving under wartime "black-out" conditions, as well as research for the armed services.

The second stage of the development of I/O psychology in New Zealand was dominated by the Second World War and by events outside the university colleges. Developments in the armed services during this period have been reviewed by Toulson and Williams (1979) and included psychological testing and other forms of assessment of Royal New Zealand Air Force aircrew, technical trades personnel, air traffic controllers, radio direction finder operators and electronics maintenance personnel.

In 1942, an Industrial Psychology Division of the DSIR was established in Wellington under the direction of Leslie Hearnshaw, released for 75 per cent of his time from Victoria College, and with branches in Auckland and Christchurch. This development occurred partly as a response to criticism of the standard of personnel management in New Zealand factories, and its adverse effects on industrial relations, voiced by a visiting specialist from the United Kingdom, Dr A E C Hare, who had been brought to Victoria College as the result of a gift by a businessman, Mr Harry Valder (Hearnshaw 1948). The division, during its regrettably brief life, was a small unit with never more than six on its staff, but its work, particularly that of its two major figures, Hearnshaw (who had worked previously with the National Institute of Industrial Psychology¹ in England) and Winterbourn, (who was still a lecturer in Education at Canterbury), was significant at

the time. Hearnshaw (1948) acknowledges that the division made no fundamental contributions to industrial psychology, but its three major activities, namely research with a local focus (eg the adjustment of girls in industry), education (by way of lectures, courses, bulletins and reports) and service (eg consulting assignments for specific firms and dealing with individual problems of vocational adjustment) became widely known throughout the country. Later, the division also had a considerable involvement in the selection of officers for the armed services. Like the earlier ill-fated Bureau of Social Science Research, also established within the DSIR (Robb 1980), it was destined not to last. In 1948 the "service" function was transferred to the Personnel Advisory Division of the Department of Labour, headed by Jack Jennings another ex-NIIP and British Admiralty psychologist, while the "research" function remained within the DSIR. The division, which was renamed the Occupational Psychology Research Section of the DSIR, had Dermot Straker, also an ex-NIIP and British Admiralty psychologist, and Ralph Waite as psychologists, and in 1950, Jennings joined them, when the Personnel Advisory Division of the Ministry of Labour ceased to operate. The DSIR Occupational Psychology Research Section lasted until 1954, when it was closed after Straker's return to the United Kingdom.

Developments in the armed services continued post-war and included among these was the recruitment of psychologists to the new Defence Science Corps (Toulson and Williams 1979). These positions led to doctoral studies and to subsequent academic careers for psychologists such as Laurie Brown, who later held chairs at Massey and Victoria Universities before moving to Australia, and the late Hugh Priest, who was a psychologist at Canterbury and who, subsequently, had a term as President of the New Zealand Psychological Society.

Later in this period, in 1957, George Shouksmith, now Dean of Social Science at Massey University, came to Canterbury from the Applied Psychology Unit at Edinburgh Univer-

¹ In 1919, in the United Kingdom, the National Institute of Industrial Psychology was formed as a non-profit making scientific body to study work behaviour and to apply the results of these studies. It undertook investigations relating to the application of physiology and psychology to the problems of industry, as well as publishing activities, and continued in operation until 1973.

sity, having had experience in the British army Education Corps and as British European Airways first industrial psychologist. In addition to maintaining this link with aviation by working as a consultant with the National Airways Corporation, Shouksmith, like his predecessors at Canterbury, Shelley, Beeby and Winterbourn, worked with a number of organizations and did much to make occupational psychology widely known in the business community. Until leaving Canterbury in 1964, Shouksmith taught a post-graduate course in occupational psychology, first taught as "industrial psychology" by his then Head of Department, Alan Crowther, in 1951.

Four significant developments have characterised the period since 1960, and each has had considerable effects on the manner in which I/O psychology in New Zealand has evolved in the last 30 years and on its current nature. The first involves departments of psychology in the universities, which have grown from the four colleges and two associated agricultural colleges of the old federal University of New Zealand, to the current seven autonomous universities. Among the six universities which have departments of psychology — Lincoln University is the exception — varying undergraduate and post-graduate courses, permitting more specialisation in I/O psychology, have emerged. In addition, courses with multiple post-graduate papers and/or post-graduate diplomas leading to professional level qualifications in I/O psychology, have been developed at the University of Canterbury, at Massey University, and at the University of Waikato. Post-graduate courses and diplomas in the related field of Human Factors/Ergonomics have also been developed. Typically the numbers of students in any one I/O graduate course have been small. However, in one case, the numbers have been considerable. Since 1970, more than 220 post-graduate students from the Department of Psychology at the University of Canterbury have completed two or more I/O psychology papers in their graduate studies, and the majority of them have gone on to positions as psychologists, or in human resource management and related fields.

The second development since 1960, also sited within the universities, has been far greater in scale. This is the major growth of schools of management, together with the accompanying

increases in courses in the multidisciplinary field of organizational behaviour (Inkson 1987), and in human resource management, a development paralleling one which has occurred in the United States of America and other western countries. Each university in New Zealand, with the possible exception of Lincoln, now offers a considerable range of post-graduate courses in organizational behaviour and/or human resource management. Certainly, many more academic staff specialising in this general area, currently work in management departments than in departments of psychology in universities in New Zealand. The relationship between I/O psychology and organizational behaviour is interesting. Inkson (personal communication, 8th March 1993) argues that even acknowledging the intellectual and educational base of I/O psychology in psychology, I/O psychology researchers and practitioners can benefit by establishing links with their colleagues in business schools. It is a similar view to that expressed by Offerman and Gowing (1990), who in examining challenges faced by I/O psychologists in the 1990s and the consequential educational implications, state,

"In garnering support for our activities, I/O psychologists need to be able to speak the language of business ... Given the current focus on competitiveness, appeals to altruism, scientific advancement, or societal gain are less likely to meet with success".

The third development concerns research in the universities. Prior to 1970, New Zealand academic research on topics related to I/O psychology was very sparse, with little more than isolated papers and occasional masterate theses (Jamieson 1990), focussing on local practical problems rather than on contributions to the international literatures, a style which was characteristic of research in occupational psychology in the United Kingdom prior to 1960 (K. Inkson, personal communication, 8th March 1993). This is not surprising given that prior to 1960, many psychologists, both academic and applied, had come to New Zealand from the United Kingdom. Reviews by Inkson (1987) and by Inkson and Paterson in this volume, confirm that the amount of research on organizational behaviour is still not large, although we have seen a considerable increase during the last 20 years.

During this third period, five researchers

stand out. George Hines, in the 1970's, while at Victoria University and later at Massey University, published extensively, particularly in the area of work motivation. Kerr Inkson, initially at the University of Otago and now at the University of Auckland, has conducted research on diverse organizational topics, including several studies on work attitudes, and a number on the New Zealand meat industry. Currently, among those publishing on I/O psychology topics, there are three particularly active and productive researchers. Michael O'Driscoll of Waikato University, with a number of co-authors, has published on a wide range of research topics, including job involvement and organizational commitment, consultant competency, managerial performance and management training needs analysis. Ming Singer, from the University of Canterbury, has published extensively on selection and leadership topics, while Philip Dewe, from Massey University has worked intensively on work stress. Together, these latter three authors account for or have contributed to approximately one third of the papers included within the 1987 to 1992 research on organizational behaviour reviewed by Inkson and Paterson in this special issue.

Organizational behaviourists in management schools have also produced two further examples of research and scholarship which are worthy of mention. The first was the research programme of the South Pacific Work Research Unit in the Department of Management Studies at the University of Auckland. This research, which has been summarised by McLennan, Inkson, Dakin, Dewe and Elkin (1987), led to a number of publications focussing on the integration of Pacific Island migrants into New Zealand work organizations. Unfortunately, it has not been matched by a similar programmatic emphasis on Maori work issues, perhaps for reasons addressed by Stokes (1985) in her discussion of Maori research and development. The second example concerns what is arguably the most significant textbook, in terms of its New Zealand organizational content, published during this period, namely "People and Enterprises: Human Behaviour in New Zealand Organizations" (McLennan et al, 1987). A second edition of this book is currently under preparation.

The final development during this period has been the increasing attention paid to pro-

fessional matters. The New Zealand Psychological Society (and its predecessor, the New Zealand branch of the British Psychological Society) has long had an Occupational Psychology Division, now known as the Industrial / Organizational Division. Its membership numbers have been small, involving mainly academic psychologists and psychologists from the armed services as its largest groups. The passing of the Psychologists Act (1981), with the protection of the term "Registered Psychologist" and the consequent establishment of the Psychologists' Board was a further step. While this legislation has not had the significance for I/O psychologists that has been the case for their clinical and educational colleagues, it still has been of considerable importance to those who wish to work as psychologists in organizations in the public sector, or in some management consulting organizations where registered status is preferred for psychologists they employ. Possible amendments to the Psychologists Act, and the likelihood of the establishment of separate categories of registration, will probably increase the importance of this matter for I/O psychologists, as well as for university departments which wish to continue with professional training.

What does the future hold? Offerman and Gowing (1990) identified issues related to the changing work force and changing work organizations, which pose challenges to I/O psychologists as the year 2000 approaches. They included demographic changes in the work force (eg the declining numbers of workers, changing rates of participation by sex, race and ethnicity and the changing proportions within the work force of middle aged and older workers), changing skill requirements and skill levels, retirement issues and changing job attitudes, motivations and values. They also pointed to the significant implications of the ways in which organizations are changing, eg company failures and downsizing, mergers and acquisitions, and the effects of being part of a global economy. Furthermore, they identified the need to manage change and the challenges involved in maintaining organizational productivity through optimizing the use of technology, creating effective work environments and improving products and services.

Similar issues relating to the changing work organization, the reality and the impact of the

global economy and the implications these have for individuals' jobs and how these are valued, are developed at length in a provocative analysis by Reich (1991). Reich shows that the traditional corporate pyramids are giving way to "enterprise webs" such as independent profit centres, "spin-off" and "spin-in" partnerships, licensing, and pure brokering. At a job level, he identifies the rising value being placed on the work of *symbolic analysts* — jobs that entail problem identification, problem solving or strategic brokering (which involves bringing the problem identifiers and solvers together and facilitating their activities). Reich also presents evidence of the declining value of traditional production and service occupations as well as the growing irrelevance of the ways in which occupational class has been traditionally conceptualised.

In addition, I/O psychologists in New Zealand face challenges from issues which are of a particular national concern. These include issues relating to biculturalism in the economy and in the workplace, as well as the effective employment and management of a multicultural work force. They also face problems in contributing to the development of a work force appropriately skilled for a very small country operating within a global economy. They face problems of dealing with the individual and social costs resulting from continuing high levels of unemployment and their differential impacts on sub-groups in the population. They face the need to contribute to the development of industrial relations frameworks and enterprise systems which will promote equity and the satisfaction of individual, organizational and societal goals in a world where traditional securities are constantly under threat.

There are sufficient issues in this agenda, additional to those that will inevitably develop from the idiosyncratic interests of those within the field, to take I/O psychologists — teachers, researchers and professionals, into what might be considered to be its fourth stage of development in New Zealand, perhaps one which will require a more inter-disciplinary focus than that with which I/O psychologists have been comfortable in the past.

Summary

This brief examination of developments in I/O psychology suggests that the sub-discipline

has gone through three stages, each of which has been quite distinct. The first twenty years were marked by the enthusiastic work of a small number of very able pioneers in the university colleges. The next period was dominated by the Second World War with growth in the armed services and, for a time, in the public service, but relatively little activity in the universities. In the third period, since 1960, there have been major developments in the universities with the education and the training of I/O psychologists and the growth of schools of management, in research output and professional matters. Finally the rapidity and the extent of change in national and global economies and the consequences for organizations and individuals' jobs will provide challenges to occupy I/O psychologists well into the future.

Overview of the Contents of this Issue

The articles in the special issue deal with a variety of theoretical, practical and professional issues which are important to I/O psychology. Although all contributions have a strong academic emphasis, they point out areas where further research is needed and ways to improve practice which can increase the potential of I/O psychology to enhance the wellbeing of New Zealand workers, organizations and society.

The first article focuses on the central theme of this special issue by examining managers' perceptions of the role of I/O psychologists in helping resolve important problems experienced in New Zealand organizations. Hansson and O'Driscoll's results suggest that the skills of I/O psychologists are under-utilised. They demonstrate a tendency for managers to under-estimate the potential of both practitioners and researchers to help resolve many organizational problems which are normally considered part of the discipline. The list of problems managers reported, serves as a valuable source of information to help identify research topics which are relevant to organizational needs, and indicates areas on which practitioners could focus their future efforts. Perhaps more importantly, the results of this study demonstrate that there is an urgent need for the profession to communicate information concerning the knowledge, skills and expertise of I/O psychologists to potential clients much more effectively.

The two following articles address issues

relating to personnel selection, an area which was recognised by the managers in Hansson and O'Driscoll's study as appropriate for I/O practitioners and for researchers. Taylor, Mills and O'Driscoll, in their survey of the personnel selection methods used by New Zealand organizations and personnel consultancies, focus on potential benefits to the organization by emphasising psychometric issues. The results of this survey are consistent with earlier and overseas research in demonstrating a tendency for New Zealand practitioners to under-utilise the more valid selection methods and to over-estimate the validity of the methods they do use. Taylor and his colleagues also outline a number of relatively inexpensive methods practitioners can use to improve the validity of their selection decisions, but note the need for further research to establish the utility of combining various methods, and the importance of disseminating research findings more effectively. Given that the use of reliable and valid selection instruments is essential if the workers who are most likely to perform successfully are to be appointed, the advice in this article can help I/O psychologists make a major contribution to increasing the effectiveness of New Zealand organizations.

In contrast with the preceding article, Singer emphasises the role of personnel selection in achieving social goals. She uses organization justice theories as a framework to consider factors which influence the perceived fairness of preferential selection, and the effect of such perceptions on later work attitudes and behaviours. In addition to identifying areas for selection fairness research, by noting that subgroup differences in job-relevant abilities can cause conflict between the organizational goal of maximising productivity and the social goal of enhancing employment opportunities for disadvantaged groups, Singer raises an important ethical dilemma for I/O psychologists. Unlike the U. S. A. legislation outlined by Singer, the New Zealand employment legislation offers few clear guidelines to help local I/O psychologists resolve this dilemma. On one hand, the Human Rights Commission Act (1977, 1992) prohibits discrimination against specific disadvantaged groups in employment situations. The State Sector Act (1988) encourages the employment of ethnic minorities in the public sector and the short lived Employment Equity Act (1990) promoted EEO

and equal pay for work of equal value. Taken together, this legislation focused attention on the goal of increasing social fairness through employment. However, the repeal of the Employment Equity Act and the passing of the Employment Contracts Act (1991) and other legislation intended to encourage the development of a competitive, deregulated, free market economy, has directed attention away from social justice to organizational goals. In the absence of clear guidelines, resolving conflicts between the needs of workers, organizations and society, to maximise the benefits for all, remains one of the greatest challenges for I/O psychology.

Ng's contribution to this volume which reflects concern over the possibility of cultural and occupational specificity in attitude measures, has the potential to promote research and enhance the practice of I/O psychology. This article reports reliability, validity and normative data for a short job satisfaction scale which was designed to reflect the job context and content of New Zealand nurses, and outlines the benefits of proportional hazards regression in predicting personnel turnover. Although job satisfaction received only a moderate rating as an area for I/O research and practice in Hansson and O'Driscoll's study, it is important that reliable and valid instruments for evaluating quality of work-life programmes, and assessing changes arising from deregulation and organization restructuring, be available or be developed. Work of this nature can make a major contribution to the welfare of New Zealand workers and organizations.

This special issue concludes with Inkson and Paterson's review of the New Zealand organizational behaviour literature published between 1987 and 1992. This contribution also draws on Hansson and O'Driscoll's results to assess the relevance of the current research topics to worker and organizational interests and to identify directions for future research. These authors found some indication that I/O psychology is contributing to the effectiveness of New Zealand organizations, but also found that the full potential of the discipline has yet to be achieved. Inkson and Paterson suggest that problems associated with communication between researchers, practitioners and potential clients are a major impediment to realising the full potential of I/O psychology

and suggest ways in which communication could be improved.

It is hoped that the articles in this special issue will stimulate greater recognition of the complementary, reciprocal relationship between the academic and applied faces of I/O psychology, and encourage the development of more effective communications between researchers, practitioners and their prospective clients. Researchers should seek input from practitioners to identify topics which reflect organizational needs, practitioners must draw on empirical research to guide and justify their practice, and both researchers and practitioners need to communicate information concerning the knowledge, skills and expertise of I/O psychologists to potential clients. The development of a more cohesive discipline can only enhance the quality of future research and practice which, in turn, will help Industrial/Organizational psychology achieve its full potential to benefit New Zealand workers, organizations and society.

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