

**EMPLOYMENT TRENDS IN RESEARCH
PSYCHOLOGY IN SOUTH AFRICA: 1976 – 1998**

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Unless specified to the contrary, this project is the result of my own work.

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ACRONYMS

χ^2	Chi-square
ANC	African National Congress
APA	American Psychological Association
BPS	British Psychological Society
BPsych	Bachelor of Psychology
DPsych	Doctorate of Psychology
FRD	Foundation for Research Development
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
IARP	Institute for Academic and Research Psychology
ILO	International Labour Organisation
LFS	Labour Force Survey
NGO	Non-governmental organisation
PsySSA	Psychological Society of South Africa
RDP	Reconstruction and Development Programme
SETA	Sector Education and Training Authority
SIC	Standard Industrial Classification
SOC	Standard Occupational Classification
Stats SA	Statistics South Africa
US	United States
Φ	Cramer's V

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ABSTRACT

This study investigated the demand trends in the employment of psychology graduates — with specific reference to research psychology — in South Africa from 1976 to 1998. A total of 5769 advertisements appearing in the *Sunday Times* and the *Mail and Guardian* were analysed. Results indicated that there has been an increase in demand for research skills coupled with a decrease in demand for technical psychosocial skills (psychodiagnosis, psychotherapy and psychometrics). In addition, there has been an increase in demand for graduates with a background in research and community psychology to work in the public sector and in social welfare and development environments. These results are discussed in the light of other studies, which suggest an increased demand globally for research skills and service professionals. The implications of these results for the planning of psychology curricula suggest that career-oriented studies could concentrate on research skills and exposure to social welfare and development contexts, thereby ensuring that the demand for these skills is met.

1. INTRODUCTION

The increasing reliance on specialised knowledge throughout the world has led to a global increase in demand for knowledge workers (Bell, 1973). Owing to the development of economic, political and social systems, modern society must grasp vast amounts of information. This has resulted in the need to understand, predict and analyse information more efficiently (Bell, 1972). In an intensely competitive global economy, information has become a desired commodity (Claasen, 1999). Within the discipline and profession of psychology, the demand for research psychologists in South Africa has increased across time (Bedell & Phayane, 1998). As a creator and manager of information in the discipline and profession of psychology, the research psychologist is set to enjoy the benefits of a global information age. This age is intertwining with the political and policy necessities of a country that is reengineering its social order in an effort to address the effects of apartheid (Khotseng, 1993).

This thesis seeks to document and identify the major changes in employment possibilities for research psychologists in South Africa over a 26-year period (from 1976 to 1998). Specifically, it seeks to describe employment trends in research psychology as compared with other specialisations in psychology across time, and the industries and sectors in which research psychology is demanded. The number of posts advertised for social scientists and the skills required from social scientists across time will be analysed and compared with the category of research psychology. An analysis of social change within psychology will also be undertaken. The results of this research indicate that there has been an increase in demand in South Africa for graduates with a research psychology background and research skills, in line with research conducted by Bedell and Phayane (1998).

This study is important as it undertakes a longitudinal analysis of employment demand trends within psychology and augments the limited base of available information. It is hoped that this study may inform current professional developments and strategic planning, orientating both the discipline and its research component. The information may be useful, for example, in informing curricular developments within psychology at educational institutions. This research may ensure that occupational trends in broader society are documented and communicated to decision makers. Finally, this analysis may draw the attention of academia and professional communities back to the importance of understanding the changes in research, psychology and society (Buss, 1975).

Chapter 1 provides a brief introduction to the focus of the research. Chapter 2 critically reviews the literature, sharpens the research focus and generates specific research questions. Chapter 3 explains in detail the methodology used to answer the research questions. Chapter 4 reports the research findings and, together with the discussion in Chapter 5, answers the research questions and discusses the implications and limitations of the research. Chapter 6 provides a conclusion to the thesis and presents possibilities for future research.

2. LITERATURE REVIEW

2.1 Introductory remarks

This chapter critically examines relevant literature and the views of key informants. It also seeks to develop a theoretical and interpretative framework for the study. In so doing, the review sharpens and justifies the research focus and generates specific research questions and hypotheses. The review will initially examine the scope of research psychology and will attempt to define the term. An examination of the levels of occupational demand for research skills both in South Africa and internationally will be conducted, followed by an explanation for this demand.

2.2 Defining the scope of research psychology

There is no single, agreed-upon definition of research psychology. The various definitions studied suggest that, depending on the epistemological perspective, paradigm and time period, the definition of research psychology may differ vastly. Research psychology is a disparate category that has changed historically and differs across academic environments and countries. In developing a definition of research psychology, an inductive approach has been followed.

In order to understand the impact of job demand on these skills, one needs an adequate definition of the term. Valuable perspectives on defining research psychology have been provided by academic texts, career guides, professional debates in journals and newsletters [such as the Professional Board for Psychology, the Psychological Society of South Africa (PsySSA) and the Division for Research and Methodology (DRM)] as well as by interviewing certain researchers in the field of South African psychology.

In general, research psychology has been described as the study of methods used to investigate psychological and societal issues in order to generate psychological and social theories for the purpose of understanding and dealing effectively with these issues (Department of Labour, 1999). This research may be for the purpose of expanding the body of knowledge in the discipline of psychology (through basic research) or for utilising existing theories in psychology to understand a problem or situation better (applied research) (Department of Labour, 1999; Sellschop, 1992; University of Cape Town, 1995).

Research psychology is sometimes closely associated with the numerical and quantitative elements of the discipline of science. It has been defined as 'the scientific examination of a subject in order to gain more knowledge about that subject' ('MA Theses Reflections of our Society', 1990, p. 4). Modelling the discipline on science has led to the favouring of certain techniques for collecting information — such as experiments — and certain subject areas with a strong leaning towards quantification — such as physiological psychology and communication systems ('MA Theses Reflections of our Society', 1990). Other schools of thought favour qualitative techniques of data collection and analysis, such as face-to-face unstructured interviews and discourse analysis.

A summary of directed Masters courses in March 1997 indicated that the following topics were included more than once in research methodology courses: qualitative techniques; research methods or methodology (general courses); participant observation; experimental methods; research designs; philosophy of science and social foundations of knowledge; quantitative techniques; planning of research; and development of research proposals (Collier, Ferreria & Foxcroft, 1997). In addition to these modules, a number of related courses were included in the Masters courses, namely community psychology, interpersonal processes and skills training (theory and practice) (Collier et al., 1997). Techniques such as univariate data analysis, multivariate data analysis, sampling methodology, statistics and mathematics may be used to collect and analyse information. Research may be conducted and information gathered through controlled laboratory experiments or by administering personality, performance, aptitude and intelligence tests. Other methods used by researchers include observation, interviews, questionnaires, clinical studies, focus groups, action research, participatory research and surveys (American Psychological Association, 2001; Patton, 1990). It appears that mainstream psychology courses are peripheral to research psychology degrees and courses. Rather, a central focus on the thesis and research methodology courses exists.

Studies suggest that the methods used by researchers in psychology are not unique to the discipline of psychology (Shefer, Shabalala, Strebel & Ratele, 2001; Taft & Day, 1988); they are in fact used across many disciplines such as sociology, anthropology, economics, history, politics and social work. Researchers today may work in many contexts and professional boundaries may be obscured. This trend within research is noted by Durrheim (1999a, p. 1), '... there is nothing that a well-trained research psychologist can do that a trained sociologist or anthropologist may do. With the demands of applied research skills in the marketplace, a psychologist becomes like a

sociologist, and a sociologist becomes like a psychologist, using the same skills ... '. Learning has therefore become 'holistic, or generic, or inter-connected' (Godsell, 1993, p. 1). Collier, Ferreira and Foxcroft (1997) also argue that social research is not the sole territory of research psychologists, and indicate that statisticians and sociologists may also conduct research. While psychology graduates clearly have unique employment opportunities, some advertised positions are open to competition from psychologists, sociologists and other social scientists (Over, 1981). This development is recent; in the 1970s psychological research concentrated on experimentation (Durrheim & Mokeki, 1997).

Whether the propensity of the researcher is towards quantitative or qualitative techniques [which has also gained currency in recent times (Terre Blanche & Durrheim, 1999)], the skilled researcher nevertheless has freedom to select one of many methods to collect and analyse data. Over time, the competencies of researchers appear similar, irrespective of the context in which they are applying these competencies, which may range from a laboratory in an urban centre to a rural community in the Transkei.

Terre Blanche and Durrheim (1999) indicate that social science research training at universities intends to equip the social science researcher with a number of skills that will enable the student to enter a career as a professional researcher. Researchers are involved in many aspects of the economy — business, medicine and community development — where they utilise their skills both theoretically and practically. Researchers may participate in social programme evaluation, community activism, market research, social and psychological assessment and policy development (Terre Blanche & Durrheim, 1999). Terre Blanche and Durrheim (1999) argue that the skills required for this work may range from quantitative data gathering and statistical analysis of data, to group process facilitation.

Skills development and training of research psychologists have changed historically. A higher level of methodological openness and variety exists today, making the rationale for the professional category of 'research psychologist' questionable. The following section will attempt to define a 'research psychologist' and will describe issues relating to the researcher in professional psychology.

2.3 Definition of a research psychologist

South African psychology has experienced peculiar circumstances wherein the category of research psychology has been professionalised, along with other practice areas in psychology. This means that the skills described in the preceding section have been acknowledged as practice areas that may be regulated by the Professional Board for Psychology, which may register an individual as a professional 'research psychologist' depending on educational qualification and practical experience.

However, nowhere in the *Medical, Dental and Supplementary Health Service Professions Act, No. 56, of 1974* (Government Gazette, 1974) (hereinafter referred to as Act 56) are professional categories mentioned. The only professional title mentioned is that of 'psychologist' (Government Gazette, 1974). Prior to Act 56, the occupational title of 'psychologist' did not exist, according to the law. Act 56 gives psychologists the legal right to practice psychodiagnosis, psychometrics and psychotherapy¹. It also specified that psychologists be competent in the area in which they practice (Government Gazette, 1974). Only those registered with the Professional Board for Psychology were, in terms of Act 56, entitled to call themselves psychologists and hence to undertake certain activities (J. Louw, 1992). The protection of psychologists, and therefore the profession of psychology, in the legislative framework of South Africa, ensures that the demand for such services is present, protected and legally controlled.

The Professional Board for Psychology is further tasked in Act 56 with protecting the public and guiding the profession (Government Gazette, 1974). In fulfilling its mandate, the Professional Board for Psychology created five areas of specialisation for psychologists, and required that psychologists register with the Health Professions Council of South Africa (HPCSA) in at least one of the following five fields (which are determined by the Professional Board for Psychology): clinical psychology; counselling psychology; educational psychology; industrial psychology; or research psychology. This system of registering in categories still exists today. Until 2004, psychologists who obtain a Masters degree at a South African university and who complete a 12-month internship at an accredited institution may register as a clinical, counselling, educational, industrial and/or research psychologist with the Professional Board for Psychology under the HPCSA (Cooper, 2001; Department of Labour, 1999).

The Professional Board for Psychology clearly states that psychologists 'practice within the scope of your training in professional psychology and not stray into categories of registration where you are presumed not to have the recognised competence based on formal education and training, eg, a **clinical psychologist** making an organisational diagnosis, a **counselling** or **educational psychologist** making a clinical diagnosis, a **research psychologist** making clinical, learning or organisational diagnoses or providing psychotherapeutic/counselling interventions, an **industrial psychologist** making any non-organisational diagnosis or providing psychotherapeutic/counselling interventions' (Cooper, 2001, p. 6, emphasis in the original). Practicing across boundaries — that are arguably not well-defined (Dobson & Dobson, 1993) and do not conform to formal criteria for the demarcation of specialisation (Matarazzo, 1987; Professor Don Foster, personal communication, January 4, 2002; Sales, 1995) — will be disallowed professionally as they have resulted in 'turf' and 'border' wars among psychologists (Professional Board for Psychology, 1999). The registration categories within the profession have often created 'professional jealousy around categories' that triggered 'border wars' necessitating the need for a 'holistic professional response' and the removal of registration categories (Professional Board for Psychology/PsySSA, 1998, p. 4).

In terms of the existing system of registration, research psychologists may undertake one of two paths to registration with the Professional Board for Psychology. A directed Masters Degree followed by a 12-month internship or candidates with research experience (experience and publications) who submit these to the Professional Board for Psychology may apply for professional registration as a research psychologist ('Registration', 1995). Researchers in psychology may conduct research irrespective of their level of educational attainment, with or without professional registration, however, a PhD in combination with publications experience is a common indication of researcher competence (Plug, 1990; Professor Don Foster, personal communication, January 4, 2002). Collier et al. (1997) dispute this and claim that individuals who attempt to claim the research psychology registration through the route of publications as opposed to directed Masters courses, could lack the 'depth and breadth' of skills and education acquired by graduates of a directed Masters course.

Of the five registration categories, clinical, counselling and educational psychologists are trained in the core competencies of Act 56. Research psychologists — and to some extent industrial psychologists — differ from these professional registration categories

¹ There is dispute as to which professional grouping has jurisdiction over psychotherapy. Other professionals such as social workers, psychiatrists, psychiatric social workers and the clergy, in addition to

in that the specialisation does not involve the practice of the core competencies (psychodiagnosis, psychotherapy and psychometrics) demarcated in Act 56 (Professor Don Foster, personal communication, January 4, 2002). One exception is psychometrics — a module contained in the curricula of Research Psychology Masters degrees at some universities. The required registration of research psychologists in terms of Act 56 is puzzling, as Act 56 makes no significant mention of conducting research in the core competencies of a psychologist. If the core competencies of a research psychologist practicing research psychology have nothing to do with the core competencies of psychology as specified in Act 56, one may enquire as to why research psychology was granted its own registration category. This category may be useful (Durrheim, 1998) but appears unnecessary for the practice of research in psychology and is 'anomalous' (Professor Don Foster, personal communication, January 4, 2002). 'The working world is not particularly interested in whether a student is registered with HPCSA or not, and does not appear to be familiar with the specific value of research psychology as a professional registration' (Govender, Durrheim & Kelly, 2000, p. 3). J. Louw points out that the major fields of psychological practice are education, health and labour and the psychological specialisations associated with these fields are: clinical and counselling psychology (health); child, educational and counselling psychology (education); and industrial and organisational psychology (labour) (1990). Academic and research psychology is not a field of practice; rather it assists in the development of psychological theories, and is arguably problematic as a professional category (J. Louw, 1990). This thesis will expand upon the above statements questioning the demand for professional registration in psychology.

There is little doubt that research in psychology is pivotal to the development of the profession. The necessity for professionalising the category has, however, been described as 'erroneous and superfluous in the beginning and was not in need of professional organisation' (Professor Don Foster, personal communication, January 4, 2002). The establishment of a legally recognised professional practice-oriented specialty category in research psychology has been described as unique to South Africa (J. Louw, 1992). Other countries — for example, Britain — differentiate between psychologists who interact with the public and practice psychology, and those who work in research or academic environments. The British Psychological Society (BPS) conferred the title of 'Academic Psychologist' to professionals who have competencies similar to South African research psychologists. For clinical, counselling, occupational, educational and forensic psychologists, the BPS conferred the title 'Professional

clinical psychologists, perform this activity (J. Louw, 1990).

Applied Psychologists' or, most recently, 'Chartered Psychologists' (British Psychological Society, 1995). The BPS therefore distinguished psychologists who conduct research or who are involved in non-practice-oriented areas, from those who practice psychology in the areas of psychodiagnosis, psychotherapy and psychometrics. It has been argued that the main reason for introducing training at a Masters level in Research Psychology has been to enable students to register professionally and to obtain the same professional status as psychologists registered in applied categories (Plug, 1990).

Prospective students who are unsure as to whether they should enter research psychology or another registration category in psychology, are advised as follows by the University of Cape Town Careers Centre: 'Research psychology would suit a person interested in people and research but who is not necessarily interested in counselling and psychotherapy' (1997, p. 1). In short, research psychology has nothing to do with practicing psychotherapy, psychodiagnosis or psychometrics and is not in need of professional protection by the Professional Board for Psychology. Research psychologists recognised the lack of necessity for registration, and have therefore chosen not to register with the Professional Board for Psychology.

2.4 Research psychologists: to register or not to register with the Board?

Most research psychologists do not maintain their registration with the Professional Board for Psychology as Act 56 does not render it unlawful for non-psychologists to undertake research. Research psychologists have historically expressed lack-lustre support for possible professional membership and have traditionally been registered with the Professional Board for Psychology in small numbers (Richter, Griesel, Durrheim, Wilson, Surendorff & Asafo-Agyei, 1998). Even fewer research psychologists pay membership fees to PsySSA, the voluntary professional body. This low level of professional membership indicates that research psychologists choose to work without professional registration (HPCSA) or professional affiliation (PsySSA), as it is simply not required in order for them to practice in their chosen profession. Research psychologists may work as research managers, project managers, market researchers, general researchers, training officers, directors or deputy directors of local, provincial or national government projects, business analysts, consultants, course developers, lecturers/tutors, database administrators, administration officers or marketing experts across a wide range of contexts (Bedell & Phayane, 1998).

Given that research is common to all disciplines, it is puzzling that psychology has claimed a special professional registration category for research psychology. Other disciplines have not professionalised their research function, or even attempted differentiating it; job titles such as research economist, research anthropologist or research sociologist do not exist (Professor Don Foster, personal communication, January 4, 2002). In their study on employment opportunities for research psychologists, Bedell and Phayane (1998) gathered from recruitment agents that 'it would appear that nobody looks specifically for a Research Psychologist', however, that 'the knowledge, skills, and experience acquired during the course of the Masters in Research psychology have a wide applicability' (p. 19).

Research psychologists find the professional registration category useful and many defend its retention, despite of the low level of registration with the Professional Board for Psychology. Most research psychologists (70%) support the maintenance of a category 'research psychologist' and reject possible Professional Board registration of research psychologists with only a general Masters Degree in Psychology but no research psychology internship (C. Prinsloo, 1997). This thesis seeks to determine the actual demand for professional registration of research psychologists in the context of the demand for research knowledge, skills and experience. This may go some way to determining the employability of research psychologists when the professional registration category is removed.

2.5 Research psychology in the new professional dispensation

The professional structure described above as well as Act 56, continue to govern the professional structure of psychology, however, this is set to change. Professional powers in psychology have concluded that a practice-oriented, curative framework will characterise professional psychology in South Africa (Professional Board for Psychology, 1999). The move to adapt the current professional structure has emerged from concern that the profession of psychology does not cater for the 'indigenous needs of our developing country' (PsySSA, 1999, p. 4). Changes in the professional structure aim to address 'the need to work in preventative, rehabilitative and curative modes' and to concentrate on service delivery (Professional Board for Psychology, 1999, p. 4). In addition, clinical psychologists who wish to register with the HPCSA will, from 2003, be required to undertake a year of community service (Johan Kruger, personal communication, January 18, 2002).

The current categories of clinical, counselling, educational, industrial and research psychologists are set to fall away, and a generic psychologist is envisaged who possesses the core competencies defined as relevant to psychologists, namely; psychodiagnosis, psychometrics and psychotherapy (PsySSA, 1999). The Professional Board has envisaged a three-tiered professional structure for psychology (Professional Board for Psychology, 1999). Lay counsellors who have obtained training from accredited institutions will occupy the first tier of the professional structure (Isemonger, 1994). The category of registered counsellors is to occupy the second tier. Individuals in this category will have completed a minimum four-year Bachelor of Psychology (BPsych) degree and a six-month internship in a specific field (Professional Board for Psychology, 1999). At the highest tier is the 'psychologist' – a title reserved for individuals who have completed a DPsych degree followed by a 12-month accredited internship (Professional Board for Psychology, 1999). The Professional Board will be formally proposing the minimum content areas expected of all education and training programmes providing training for psychologists this year. These are expected to be: assessment skills, diagnostic skills, intervention planning, intervention skills, research (at least 50% of degree) and ethics (Dr Saths Cooper, personal communication, January 29, 2002).

The importance of research has been retained in this new professional dispensation, although this development will result in research psychologists being unable to practice psychology without the core competencies for a psychologist. It has been indicated that for the 'psychologist' category, a professional doctorate at NQF level 8, will contain at least a 50% research component (Dr Saths Cooper, personal communication, January 29, 2002). The research competencies will comprise three areas. First, the ability to design, manage and execute research projects/programmes that contribute to the science of psychology. Second, it would require the ability to report on research results, and third, the ability to implement findings of a research intervention (Dr Saths Cooper, personal communication, January 29, 2002; Simbayi, 2000). The only research competency required by the registered counselor is the ability to conduct a research project and to implement its findings (Dr Saths Cooper, personal communication, January 29, 2002; Simbayi, 2000). Simbayi (2000) recognises that the DPsych will require from students more concentration on research than all the existing Masters courses in psychology provide for. Far from ignoring research skills, the current DPsych model elevates research skills required for registration as a psychologist. The DPsych makes the existing skills level graduates of the Research Psychology Masters Degree the requirement of DPsych graduates (Dr Saths Cooper, personal communication, January 29, 2002; Simbayi, 2000). In the

past, research has been seen as a separate act in the psychological context, despite therapists being researchers at a micro level (Johan Kruger, personal communication, January 18, 2002). This model is likely to be more acceptable to certain universities than previous models, which were rejected on the grounds that they did not contain a significant research component to warrant the awarding of a PhD (Professor Don Foster, personal communication, January 4, 2002; Professor Kevin Durrheim, personal communication, February 11, 2002).

This new structure — by insisting on a significant research component — will significantly alter the status and stature of research in psychology. Research psychology is seldom the first choice for students entering the field of psychology. Interest in the study of psychology generally tends to congregate around clinical, counselling and educational psychology. Plug (1990, p. 1) notes that 'most psychology students at the Masters and Doctoral level are interested in Clinical or Counselling psychology'. Although receiving training in these areas, many graduates are, however, unable to find work and are often forced to find employment in unrelated areas that do not utilise their clinical training (Over, 1981). The integration of research competencies at the PhD level will provide the profession with a steady stream of quality researchers at the PhD level, in addition to students who choose to follow the academic route.

Students completing a practitioner-oriented BPsych followed by DPsych degrees, may apply for professional registration with the HPCSA. Under the new framework, other students following the Bachelors, Honours, Masters and PhD (an academically focused degree) route will not receive professional registration. Students interested in research will therefore be required to follow the scientist-practitioner route if they wish to register professionally as a 'psychologist'. High quality researchers will be produced, should this scientist-practitioner route insist on a significant research component. Writers have expressed concern that training students only in areas such as psychodiagnosis and psychotherapy would be unlikely to produce high-quality researchers (van der Riet & Kelly, 1999).

Convincing arguments have been made for maintaining a strong research capacity at universities. Educational institutions offering research programmes (in experimental, cognitive, social, psychobiological and other areas of psychological science) were more likely to be highly-rated institutions (Maher, 1999) and graduates from research-oriented institutions scored significantly higher on the Examination for Professional Practice in Psychology than did graduates from schools offering professional

qualifications in psychology (Yu, Rinaldi, Templer, Colbert, Siscoe & van Patten, 1997). There therefore appears to be a correlation between research and above-average educational rating and student performance.

The DPsych course to be introduced in South African universities is to some extent modelled on the United States (US) practitioner model. It claims, however, to be neither a watered down PhD nor a bolstered Masters (Dr Saths Cooper, personal communication, January 29, 2002). There is an extensive body of literature criticising the practitioner model and pointing to the negative consequences of reducing the research component. Maher (1999) reports that practice-oriented professional schools in psychology do not enjoy a research environment and thus only train students for applied practice, as opposed to providing training in research. Furthermore, it has been determined that students enrolled at professional schools of psychology score lower on their verbal and quantitative Graduate Record Examination (GRE) scores and the Examination for Professional Practice (EPPP), as compared with graduates enjoying the benefit of research-oriented institutions (Yu et al., 1997).

Research and development is widely understood as driving new theory and practice; its importance as an engine for practice should be stressed. Van der Riet and Kelly warn that the marginalisation of research psychology will 'cut off the blood supply to theoretical development in the field' (1999a, p. 3). It is through the pursuit of knowledge and research that we 'improve our understanding of human nature and behaviour' (Gerdes, 1992, p. 41) and establish a technical knowledge base as a driver for problem solving. According to Bevan (1982), psychology is both a science that seeks to establish a base of knowledge, and a technology that seeks to solve practical problems. It is driven equally and cyclically by research and practice. It is also through theory development and research that the profession of psychology will remain relevant and competitive (van der Riet & Kelly, 1999).

Any professional developments therefore need to stress the importance of the 'science' component of the scientist-practitioner model and to ensure that students gain access to this research education and training. The next section will examine the current demand for research skills both internationally and in South Africa.

2.6 Increasing demand for research skills worldwide and in South Africa

The growth in the profession of psychology has occurred in terms of theory, practice and application, and has influenced society, theory and the fields of practice of

psychology (J. Louw, 1990). The profession of psychology has developed in three areas: social processes, the formation of psychological theory and the application of psychological practice (industrial and organisational psychology, educational psychology, clinical psychology and applied psychology) (J. Louw, 1990). Given the importance of the generation of theory to the profession, currently and historically, research in psychology has retained an important role in the profession and the discipline.

Despite being a core component of the professional's repertoire and a requirement for Masters and PhD education in the 'scientist-practitioner' model, there are practical reasons for ensuring that research remains on the curriculum of tertiary institutions. It is suggested that both internationally and in South Africa, employment opportunities for graduates appear to be increasing in the area of research. A key task of this thesis is to determine the extent of this growth.

Richter (2001, p. 4 in interview with van der Riet, 2001) states that 'Research skills, the ability to identify a problem and devise a process of inquiry, are very transportable skills, and there are a lot of career opportunities available' (p. 4). Shefer et al. (2001, p. 3) illustrate the increasing job demand for researchers (2001), 'A glance at the classifieds of any weekend newspaper provides good evidence that there is a lot of work out there for social science researchers'. They continue, 'For research psychologists, arguably historically marginalised and devalued in the professions, this is a promising moment!' (Shefer et al., 2001, p. 3). Richter et al (1998) determined that more than a third of jobs directed to social science graduates required research and data analysis skills. Richter and Tyeku (1999) indicate that these research skills are not at higher levels, but rather that employers currently seek graduates who possess basic research skills such as 'the capacity to understand and conduct research..., review and summarise existing knowledge, activities and conditions; to explore numerical or text data; to synthesise findings; to concisely report on outcomes; to offer plausible explanations for results; and to apply the knowledge gained to a human or social problem' (p.195). This thesis will seek to answer two questions.

- Has the number of posts available for social science graduates changed over time?
- Has the number of posts advertised for research psychology graduates increased over time?

Literature suggests that employment opportunities are abundant for all psychology graduates. Many psychology graduates are often obliged to find employment in other

sectors, such as business (Mullaly, Kelly & Wearing, 1985; Over, 1981; Richter et al., 1998; van Laar & Redmond, 1993). It has been reported, however, that there is a steady level of employment opportunities for psychology graduates wishing to conduct research. Mullaly et al. (1985) found that an increasing number of psychology graduates obtain employment in research. Schneider (1987) applauds the increase in demand for research skills in applied contexts of psychology. Pion and Lipsey (1984) point out that this increase is not only occurring in academe, but may be located in the public and private sectors where psychology graduates are increasingly finding employment. Edey and Molin (1993), in their study of University of the Witwatersrand graduates, found that skills such as research, keeping records and compiling and searching for information (32%) were ranked as important to obtaining employment. In the US, the dearth of research skills possessed by clinical psychologists is resulting in their occupational demise. Referring to this condition, Belar (1998) states, 'I heard arguments to reduce hiring of psychologists because they can't do anything different from what social workers do, but they cost more' (p. 463). The thesis will address this issue of the demand for psychology graduates over time. It will also seek to answer the question: What is the demand for other psychology graduates over time?

In South Africa, psychology graduates with research skills are increasingly finding employment in the public and private sector. Psychology graduates with research skills are today most likely to find employment in the public sector (local, provincial, and national government), which is a large employer of research psychology graduates (24.8% of all job advertisements) (Bedell & Phayane, 1998). A lesser proportion of graduates are employed in non-governmental organisations (NGOs) (10.3%), tertiary institutions (8.2%) and parastatals (7.2%) (Bedell & Phayane, 1998). Sellschop (1993) noted this trend for NGO employment when he identified local agencies and parastatals, including the *ANC*, *Eskom* and *The Urban Foundation*, as being sites of employment and offering high salaries to attract Masters and Doctoral students with social science research skills. In addition to employment in the public sector, research psychologists may find employment in the private sector (for example, *South African Breweries*), consulting firms with research divisions (for example, *Accenture*), university departments, research institutions (for example, the *Medical Research Council*), private research companies (such as *Research Surveys* and *Markinor*) (Bedell & Phayane, 1998), market research companies and private companies involved in the development of psychometric measures for selection ('*Au Revoir Research Psychology*', 1996). The main industry employing research psychologists is marketing (18.6%), followed by human resources (10.3%), financial services (9.3%), the media (4.1%), communications IT (2.1%), the food and

beverages industry (1.0%) and manufacturing (1.0%) (Bedell & Phayane, 1998). The trend towards an increased employment base in the public service is also noted to have occurred in the US (Pion & Lipsey, 1984).

In addition to jobs in formal employment, there appear to be growing opportunities for researchers who prefer self-employment, freelance or consultancy work (Richter, 2001 in interview with van der Riet, 2001). Tendering for research contracts offered by the government or NGOs has become a lucrative avenue (Shefer et al., 2001). Shefer et al. (2001) indicate that individuals with qualitative and quantitative research skills – which are generic across contexts – may work in many different sectors, the knowledge of which may be easily acquired. This gives research psychologists trained with generic skills the ability to work across contexts. Richter (2001, in interview with van der Riet, 2001) refers to an ex-student who 'operates more as what Charles Handy might call "the portfolio person". She has a Research Masters degree, but utilises predominantly her data base skills for the Department of Labour' (p. 4). 'Portfolio people' are able to 'maintain high levels of knowledge and technical skill to enable them to pick up opportunities as they arise and negotiate lucrative and personally rewarding work conditions with employers for varying durations' (Richter & Tyeku, 1999).

Although much information has been provided on the possible contexts for the employment of research psychology graduates, this thesis will answer the question: What is the demand for research psychology graduates by particular industries over time? In addition, an extension to the industries employing social science graduates and other psychology graduates will be conducted. A consideration of the sectors employing research psychology graduates will also be undertaken.

South African universities are reportedly responding to the growing demand for skilled social and behavioural scientists by providing Masters courses in applied research as opposed to psychological research (Govender et al., 2000). Such educational interventions allow for the provision of broad social science skills that are applicable in a wide range of occupational contexts, as opposed to strictly orienting students in the direction of mental health (Govender et al., 2000). The exact nature of these skills and tasks will be explored in this thesis, and the question 'What skills are in greatest demand for social science graduates?', will be answered.

How to determine this increase in demand for research skills requires analysis and it is here that this thesis adopts an overarching theoretical framework. A number of

theories may explain the increase in demand for researchers in psychology, and this section will focus on three possible reasons. First, the impact of globalisation has resulted in a worldwide increase in demand for researchers and specialists in information gathering and management. Second, globalisation has also led to an increase in the demand workers in the service industry. Finally, in South Africa, the local increase in demand for researchers to assist in the development, implementation and evaluation of a transforming society has contributed to the increase in demand for research psychologists.

2.7 Globalisation

A general consensus has developed among policy makers that, in addition to the economic elements of globalisation, all countries are facing similar global challenges and opportunities. These include rapid innovations in technology, particularly in relation to telecommunications, and the increasing importance of knowledge to organisations' competitive advantage. Change is occurring across national borders, the electronic media has become globally interrelated — and science (including social, human and natural sciences)² (Garbers, 1992; Sellschop, 1992) — has become increasingly located in the corporate and economic realm (Giddens, 1990). Giddens (1989) observes our increasingly interdependent world society that is moving towards a single social system at a more rapid pace in relation to other periods in history. Claasen (1999) indicates that according to the theory of globalisation, national economies and states will disappear, borders will vanish and national cultures will become forms of each other (a global *melange*).

Given their intimate relationship with tools of rational prediction — a requirement for understanding a rapidly changing world and domestic order — South African researchers are certain to benefit from a globalising society. The importance of the ability to rationally predict phenomena represents humanity's quest to 'come to a greater understanding of the world in which he [*sic*] lives and to improve this world by controlling it through increased understanding' (Garbers, 1992, p. 1). Modern social living is thus characterised by the rapid proliferation, exchange and control of information and the control of high levels of risk (Giddens, 2000).

Technology is pivotal to the process of globalisation and it has assisted in creating the information revolution that has resulted in the production of knowledge, as opposed to

² The Ministry of Education, Science and Culture in Japan (1988 in Sellschop, 1992) define 'science' as covering human, social and natural sciences.

the production of material objects. Information has thus become the new economic commodity (Claasen, 1999). The change now occurring in the workplace is post-industrial, whereby employees are shifting their workplaces from the manufacturing sector to the information and service sector (Claasen, 1999). The next section will address this growing service economy that has emerged out of a globalising society.

2.8 Growing service economy

Unlike earlier periods in modern history, Western society's economically active population is no longer engaged in primary industries such as agriculture or secondary industries such as manufacturing. Bell (1972) identifies the growing predominance of the tertiary (services) sector over the primary (agriculture and mining) and secondary (manufacturing) sectors of the economy. In modern day social systems the production of wealth is dependent on the creation and application of technical knowledge, as opposed to a dependence on traditional resources such as land, capital and labour. Modern Western society is involved in the provision of services (Bell, 1972; Gibbons, Limoges, Nowotny, Schwartzman, Scott & Trow, 1994).

Bell (1973) considers modern, global society to be a 'post-industrial society'; a society in which most people are employed in occupations unrelated to growing food or producing objects. With knowledge as its central commodity, modern society is known as the 'knowledge society' (Lane, 1966; Pion & Lipsey, 1984). Or, owing to the increase in supply of personal services, professional services and expertise, it has been defined as the 'personal service society' (Halmos, 1970).

Knowledge production becomes subject to the effects of market fluctuations that constantly adapt and shift the context of knowledge in the capitalist society. Knowledge thus becomes a commodity similar to any commodity, but is a fundamental resource that drives our society (Bell, 1973). When attained, this commodity succeeds in providing knowledge-holders with a competitive advantage, thereby enabling them to exist in the rapidly changing economic marketplace and social structure (Gibbons et al., 1994). In their historical review of the emergence of the professional intellectual class, Cloete and Pillay (1986) point to the traders of knowledge as having become a commodity in recent times. 'Knowledge acquires exchange on the basis of real or purported contributions to the social production of goods and services' (p. 46). The value of knowledge workers is therefore based on the social and economic demand for, and value afforded to, such services.

These knowledge workers will be members of a swiftly expanding professional and technical class whose livelihood depends on the possession of technical knowledge or expertise (Bell, 1972). Bell (1973) predicted this and argued that at 'the heart of the post-industrial society is a class that is primarily a professional class' (p. 374). Professionals would generate knowledge through research that would inform technical development and social policy (Bell, 1972; Jacobsen, 1992; Ritzer, 1977). These professional groups — including scientists and academics — would be the masterminds of knowledge crucial to shaping social policy and institutions (Freidson, 1986).

Along similar lines, J. Louw (1990) points out that current profession of psychology is not separated from its past. The demand for psychology emerged in response to the rising use of knowledge, and scientific and technical developments in the world in the period after the Industrial Revolution (1875 to 1914). This increasing use of knowledge was characterised by greater specialisation and the reliance of business, industry and government on this specialised expertise. In addition to the Industrial Revolution, the increase in literacy (J. Louw, 1990), the growth of a money economy (Larson, 1977) and the emergence of a middle class (Bledstein, 1976) have led to the professionalisation of the discipline of psychology.

To some extent, professionals control access to their expertise and skills, and influence the demand for their profession, Gyarmati (in J. Louw, 1990), notes that expertise is historically positioned and has been structured by professional groups to restrict societies from having regular access to social services such as health, justice and education. The expert knowledge held by professions, becomes controlled and restricted to groups who are able to afford professional services. J. Louw (1990) identifies professionalisation as a mechanism used by dominant groups to subordinate certain groups in society and control the demand for their skills and services.

Within the discipline of psychology, research psychologists are today best aligned to work as knowledge workers. Just as there has been a worldwide increase in graduates employed in high-level services such as finance, banking and other professions (Stehr, 1994), so too in South Africa is it these service professions that are predicted to enjoy highest growth (Human Sciences Research Council, 1999). Pion and Lipsey (1984) note that the profession of psychology, as a constituent of this occupational class, has shown significant growth. In South Africa there has been an increase in employment opportunities for professional and technical personnel, including research psychologists (Bedell & Phayane, 1998).

This increase in demand for researchers may also be seen in the context of knowledge management in organisations. Modern society is marked by an information overload that has transformed research into a creative activity (Marais, 1992). The great supply of information has made it critical for organisations to identify, filter, collect and transform information into knowledge (van der Westhuizen, 2000). It is in this social environment that Hardijzer (2000) highlights the importance of finding information through the application of research skills, internet skills, interviewing and other data gathering techniques. Research psychologists formally trained in such skills are therefore poised to take advantage of this revolution in information creation and management.

The importance placed on acquiring knowledge may be seen in the increased resources donated to research and development. Thus, 'science has become a national resource in the post-industrial state' (Pion & Lipsey, 1984, p. 741). There are spin-offs for psychological research. Within this focus on research, social researchers are increasingly consulted by the government to conduct research into social problems and the impact of policy (Pick, Leibowitz, Singer, Steinschneider, Stevenson, 1978).

The magnitude of investment in research and development is increasing in various developed countries. Pion & Lipsey report that in the US, funding for research and development has increased from \$19 billion in 1960 to \$32.7 billion in 1980 (held constant for inflation). This is approximately three per cent of US Gross Domestic Product (GDP) (Leutner, 1992). Similarly, Japan contributes 2.9% and Germany spends approximately three per cent of its GDP on research and development (Leutner, 1992). The same may not be said of South Africa's developing economy. Sellschop (1993) indicated that only 0.88% of the GDP is spent was spent on research, representing a decline from 0.96% in 1985 (Garbers, 1992). A Foundation for Research Development report (1998) indicated that South Africa's expenditure on research and development is 0.9% of GDP. This figure — although on par with countries such as New Zealand, Portugal and Spain — is below the two per cent spent by industrialised countries (Foundation for Research Development [FRD], 1998).

Within the social and behavioural sciences there has, however, been an increase in funding as compared with the physical and natural sciences (Smith & Boyle, 1996). Science and technology spending by field of application was surprisingly high for the social sciences (9.7% of total spend across applications) and humanities (4.6% of total spend across applications) (FRD, 1998). Elsewhere in the world access to

research funding is scarce. Kim (1995) reports that East Asian psychology departments face 'an uphill battle' (p. 673) in attracting research funds from government and private research agencies for psychological research, as it compares unfavourably with tangible and beneficial results that the natural and applied sciences have contributed to economic growth. Craig (1993) argues that scientists requesting funding for psychological research have received inadequate support in Canada as compared with other scientific bodies.

Despite the increase in funding to the social sciences, certain theorists have indicated that the increase in demand for technical experts is not necessarily generalisable to the developing world, specifically the African continent, and differs from country to country (Gibbons et al., 1994). For modern, industrialised, high-income societies and major industrial centres, information is important to the functioning and development of their social systems (Stehr, 1994). Such societies boast sophisticated higher education institutions which serve their information needs, but such societies have also generally solved basic national problems of poverty, illiteracy and lack of housing (Potter, 1993). Tothill (1993) argues that South Africa is not a post-industrial economy. Rather, it is a developing country (grappling with basic problems of poverty, literacy and a housing shortage) with increasing opportunities for knowledge-based work, which is capable of accommodating graduates in a shifting occupational structure. The importance of knowledge and personal service workers in South Africa is therefore not equivalent to the more developed northern hemisphere, but still remains an area of high demand for graduates.

As stated earlier, the 'post-industrial' world is based on the increased contribution of service workers, intellectuals and professionals, and the decrease in importance of primary industries such as agriculture and mining and secondary industries such as manufacturing. In the section that follows, an analysis of increasing research opportunities within a transforming South Africa will be presented.

2.9 Opportunities for research in a transforming South Africa

Since 1994, the South African government has been steering towards social development and political transformation. Numerous pieces of legislation intended to reverse the effects of apartheid have been enacted. A 'period of ground breaking and preparation for the longer-term task of the transformation and full-scale democratisation of South Africa' (Gerwel, 2000, p. 4) has been embarked upon. To this end, governmental and other structures have introduced a number of policy

priorities such as addressing poverty and unemployment (Leatt, 1992); rural development and job creation (Khotseng, 1993); nation-building, change facilitation, treating the psychological effects of violence, socio-political guidance, information dissemination, disease prevention (for example, HIV/AIDS), workplace motivation and the provision of primary, secondary and adult education and training. National programmes such as the *Reconstruction and Development Programme* (RDP), *Masakhane* ('let us build together') and the *Growth, Employment and Redistribution* (GEAR) strategy have been initiated at a national level to direct smaller projects that seek to achieve the end of economic growth and job creation (Saunders & Southey, 1998). Motala (1993) indicates that these changes have occurred in the context of the need for 'research for reconstruction' purposes (2001, p. 10) and participation in 'reconstructive policy research' (Ngoasheng, 1992, p. 116). The Department of Labour (1999) indicates that research psychologists are currently focusing increasingly on issues and problems relevant to South Africa.

In this context, those trained in the social sciences are making a significant contribution to transformation in South Africa by participating in devising social policy, designing programmes, managing projects and undertaking research. The role of those broadly educated in the social sciences, and more specifically those with research skills, is valuable in addressing social problems of national significance (Leatt, 1992; Mauer, 1993; van Aardt, 1993). By operating as 'techno-bureaucrats' (Larson, 1977), skilled social researchers are applying their expertise in planning, information generation and administration. The increase in demand for social researchers (and research psychologists) has been occurring in South Africa for some time.

Initially the easing of repression and advancing political change in the mid-1980s resulted in the establishment of NGOs and trade unions, research units and service groups as well as a growth in employment for researchers. Research capacity was developed in organisations such as the *Community Agency for Social Enquiry* (CASE), *The South African Institute of Race Relations* (SAIRR) and *The Institute for Democracy in South Africa* (IDASA) (Richter & Tyeku, 1999). These organisations, funded from foreign sources, addressed a range of problems in South Africa, ranging from policy research to skills training (Foster & Swart, 1997).

The demand for skilled social researchers was also higher in the 1990s as compared with previous decades. After the 1994 elections, foreign donor funds entering South Africa for policy research created an additional demand for social science Masters

graduates (Sellschop, 1993). Writing prior to 1994, Motala anticipated this increase and noted that there was a need to develop the research capacity of previously disadvantaged individuals and those involved in 'the struggle' (Motala, 1993).

It appears that research psychologists are capable of making valuable contributions to the reconstruction and development of the country through research, policy development, project management, political leadership and education and training development. They seem perched to take advantage of the growing professional opportunity noted within the professional structures of the discipline of psychology (R. Prinsloo, 1994 in interview with Strebel, 1994). Indeed, as Hayes (1996) indicates below, social reconstruction has become a basis for the income of research psychologists who will no longer limit themselves to research in ivory tower universities or institutes, or to serving the psychological angst of white South Africans (D. Louw, 1995).

Thinking of a time when South Africa is no longer 'new', but just plain, ordinary South Africa, when all the post-apartheid euphoria and rainbowosity has died down, and the serious realities of social reconstruction become our regular political and intellectual fare ... (Hayes, 1996, p. 2).

What Hayes (1996) alerts us to is the unfortunate reality, and hidden opportunities, of the residue of apartheid, the effects of which will be felt for many future generations. The detestable past and promises of a brighter future in South Africa have resulted in the increased value of research in the emerging democracy. Given the range of social problems and social solutions to be investigated using research skills, an unexpected development of the discipline may be anticipated. This thesis will seek to address the question: To what extent has social change in South Africa impacted on the demand for psychology graduates?

2.10 Way forward

Have you noticed that when you open a newspaper to the employment opportunities section these days there are many positions for RESEARCHERS or PROGRAMME EVALUATORS? This seems to be particularly the case for job opportunities within the social sciences. These positions, and possibilities for doing consultancy work, are in the fields of: health, education, organizational development, and social development. In the transition process in South Africa there also is a great need for individuals to work on policy issues. The availability of jobs in these areas attest to this.' ('Supporting the development process through research', 1997, p. 5).

A quick scan of newspaper advertisements this decade testifies to the broad application of research skills in a number of contexts and the high likelihood of trained researchers obtaining employment. The literature outlined above, and more detailed evidence to follow, indicates the growing demand for social science researchers. The above provides strong grounds for making research more prominent in a new educational and professional structure, but empirical verifications of this assumption are needed, hence this study.

Despite the high enrolment of students into psychology courses in tertiary institutions, as compared with other arts and social science courses, little self-reflective research has been done into professional trends within psychology (Richter et al., 1998). Richter et al. (1998) conducted research into general employment trends in psychology, however, a specific treatment of the specialisation of research psychology is demanded in the light of professional shifts affecting the discipline, the absence of empirical work in the area, and an absence of professional reflection on the specialisation. The monitoring of such trends by empirical means as opposed to speculative and intuitive analysis of trends is crucial (Gosling & Craik, 1999) in order for prospective students, educational institutions, professional organisations, and other interested parties to plan future educational initiatives, make policy recommendations and to justify change in the profession.

The analysis of trends must proceed with caution. Weil (1999) warns against the uncritical acceptance of market-oriented higher education, which will always be in flux, and unsatisfactory in terms of what higher education is able to supply. Muller (1997) comments on the demands of a changing South Africa resulting in a 'market tugged knowledge sprawl' that is seldom containable and controlled by educational institutions (Weil, 1999) and Pion and Lipsey (1984) warn that social forecasts are often crude. The outcome-based focus of education is argued as necessary in order to justify the relevance of the discipline (Bedell & Phayane, 1998). Terre Blanche and Durrheim (1999) argue that the 'evolution of universities from repositories of knowledge and centres for debate to "factories" for the manufacture of skilled professionals should not, however, be seen exclusively as a (reluctant) submission to market forces. The transformation of universities has occurred in the context of a profound shift in how the relationship between knowledge and action is theorised' (p. 9). This study has been conceptualised, given the trend to a more vocational and skills-based approach to education.

This study comprised an examination of the opportunities for graduates with a background in research psychology through the analysis of some five thousand newspaper advertisements appearing in major national newspapers over a 23-year period. The formal investigation of longitudinal trends illuminate current and past trends in the discipline and offer empirical, as opposed to anecdotal, evidence regarding research psychology in South Africa. Additionally, this research would complement local research that has shown a growth in the social science research sector (Richter et al., 1998).

A number of specific questions will be explored in this thesis:

- What is the demand for professional registration in psychology?
- Has the number of posts available for social science graduates changed over time?
- Has the number of posts advertised for research psychology graduates increased over time?
- What is the demand for other psychology graduates over time?
What is the demand for social science graduates by particular industries over time?
- What is the demand for psychology graduates by particular industries over time?
- What is the demand for research psychology graduates by particular industries over time?
- What is the demand for research psychology graduates by particular sectors over time?
- What tasks (skills) are in greatest demand for social science graduates?
- To what extent has social change in South Africa impacted on the demand for psychology graduates?

This thesis hopes to draw the attention of academia and professional communities to the importance of understanding the interaction between research, psychology and society (Buss, 1975). Results of this study may influence strategic planning as well as current professional developments in psychology, orienting both the discipline of psychology and of research.

3. METHODOLOGY

This chapter outlines and justifies in detail the methodology used in this research project. In so doing, it considers issues relating to the suitability of the methods used to resolve the research questions. The success and limitations of the methodological approach will be addressed in Chapter 5, which also provides a general discussion of the research findings. One benefit of this chapter and its discussion in Chapter 5 may be its contribution to the development of methodology relating to the analysis of job demand. This chapter is particularly detailed and lengthy, because methodology is an important dimension to this research.

The demand for researchers in psychology was measured by analysing job advertisements appearing in national newspapers across time. These advertisements were selected, their content coded and entered into a database, following which, the data were analysed statistically. This method allowed for testing of the hypotheses both economically and objectively by means of χ^2 analysis.

3.1 Introducing the research strategy

The research questions debated and discussed previously required a data collection and analysis method that would allow for the measurement of significant differences across time periods for certain identified variables while simultaneously benefiting from a large sample size. A content analysis was used to analyse the data collected in this research study. The content of the data (newspaper job advertisements) was classified into discrete categories to allow for later counting and statistical analysis. Coders categorised the text appearing in the advertisements into a number of categories that were later subjected to inferential analysis.

The technique used in this research is both qualitative and quantitative in nature; content analysis may be considered to be a quantitative method for the analysis of qualitative data (text of newspaper advertisements). Critics of quantification such as Danziger (1986) point to the problematic application of numeric systems [counting, chi-square (χ^2)] to qualitative data. It is argued that the subsequent statistical manipulation of such data distorts the initial nature of the data, transforming it into something else. Thus, statistical manipulation of counted data represents the inferences inherent in the technique, possibly distorting initial relationships between the data (Bailey, 1982). Although quantification may be defined as the transformation of data into categories that represent data (Sayward, 1995), enumeration has been

argued as not the equivalent to quantification. Bailey (1978) points out that 'this simple noting of whether a category exists is nothing more than nominal level classification, or what we have been calling qualitative as opposed to quantitative data analysis' (p. 283). Computer packages such as *Nvivo* utilise frequency counts of themes in their qualitative data analysis repertoire and reduce portions of rich, detailed text to 'nodes' (Richards & Richards, 1994) and codes (Miles & Huberman, 1994).

Researchers are sometimes forced into a methodological dichotomy resulting in the entire research process being characterised as qualitative or quantitative (Bryman, 1988). There is, however, argument for research on a qualitative/quantitative continuum (Holsti, 1969; Jayaratne & Stewart, 1991). Bryman (1988) views quantitative and qualitative methodologies as paradigms that are not mutually exclusive or vastly different. In the context of the current study it may be argued that the selection and coding of newspaper advertisements constitutes a qualitative phenomenon. The counting up and representation of such content categories also reflects a qualitative data collection. However, data may be defined as qualitative, at the point at which techniques of inferential statistics are applied to it in order to generate meaning.

Despite the debate surrounding its 'home' on the qualitative/quantitative continuum, the technique of content analysis has been used widely and has practical application in the analysis of job advertisements. The measurement of occupational demand will be discussed below.

3.2 Measuring occupational demand domestically and internationally

The technique of content analysis of the text of newspaper job advertisements in order to measure job demand and skills trends, is grounded in both conventional wisdom and good examples of labour market demand analysis. The classification of data into categories for statistical analysis has been conducted and supported internationally, for example in Canada.

Although job advertisements are able to provide a longitudinal perspective of job demand, South Africa does not enjoy the benefit of a central agency that measures job demand across occupations and industries. *Statistics South Africa* (Stats SA), the country's official purveyor of statistics, regularly publishes a labour supply survey, *The Labour Force Survey* (LFS), but has no systematic method of measuring labour

demand. Certain research houses and research organisations may conduct *ad hoc* research on employment trends and skills needs for particular niche markets. For example, *Deloitte and Touche Human Capital Corporation* conducts industry-specific surveys and occupation-specific surveys for employers who require this information for strategic and human resource planning requirements. The *Human Sciences Research Council* maintains a database of graduates to monitor the supply and movement of graduates in the labour market, however, this database is limited to specific categories of occupation and education levels. A small number of recruitment agencies collect job demand and salary information specific to their area of recruitment (Derman, 2000). The validity, reliability and representivity of this data cannot, however, be assured. Furthermore, the information collected is frequently industry, occupation and geographically specific. There appears to be no central job vacancies database in South Africa or an organisation that collects information on job demand and vacancies across all occupational sectors, industries and geographical regions (Derman, 2000). More specifically, there is no measure in South Africa for assessing the demand for researchers in psychology. Therefore in the absence of other sources of longitudinal information, this study is therefore important in attempting to measure the phenomenon of job demand for researchers in psychology.

South Africa is not unique in its absence of labour market information in the area of job demand. In the US national data is not collected by any government agency (Veneri, 1999). Periodic studies may be undertaken to measure job demand. The *National Industry–Occupation Employment Matrix Time Series* is based on data from the *Occupational Employment Statistics* (OES) survey, a periodic mail survey of non-farming establishments that collects employment data on employees by industry (Veneri, 1999). There is therefore an absence of comprehensive occupational vacancy data measuring job demand despite the potential value of this methodology, in both the US and South Africa.

An analysis of newspaper job advertisements is conducted in Canada. Since 1988, *Labour Market Information Services* (LMIS) in Ottawa, Canada has surveyed help-wanted and career job advertisements in *The Ottawa Citizen* (first and third Saturday editions each month). From this survey an index of demand for workers in the Ottawa region has been produced. In addition to LMIS (Ottawa), *Statistics Canada* has for a number of years compiled the 'Help–Wanted Index' from a survey of 22 newspapers across the country (Geis, 2000). The 'Help–Wanted Index' has enabled the measurement of occupations showing significant increases and decreases across time, top occupations and new openings or expansions in industries across time (Geis,

2000). Surveys such as this provide employers, learners, professional institutes and education and training providers with useful information for strategic planning and educational development. The utility and power of content analysis of newspaper job advertisements provides strong argument for using this research technique to analyse job demand trends for social science researchers.

3.3 The job advertisement

The newspaper job advertisement, as a base unit for the measurement of job demand, is a product of human conceptualisation. It is a social artefact that is designed for a specific purpose and provides information about an aspect of human society (Babbie, 1989). The job advertisement may contain information about skills required, educational requirements and remuneration. When seen in context with other job advertisements, such advertisements may offer a longitudinal perspective about a specific society. The job advertisement contains information on a wide range of characteristics required of job-seekers such as special characteristics, talents, skills and qualifications (Hunter, 1999). These areas are relevant to job-seekers and when aggregated, indicate employer needs within various economic sectors. By comparing job advertisements over time (see Appendix I) it is possible to see how advertisements reflect the differing values, mores and employment expectations across time.

There are numerous research advantages to using job advertisements. As a form of secondary data [second-hand accounts not directly authored or witnessed by the researcher (Kiecolt & Nathan, 1985; Stouthamer-Loeber & Bok van Kammen, 1995)] job advertisements are freed of experimenter bias (Kellehear, 1993; Webb, Campbell, Schwartz & Sechrest, 1966). The job advertisement may provide researchers with large amounts of data that may be used to exact trends, as well as being easily available and inexpensive to obtain.

There are, however, arguments against the use of job advertisements. Although presenting fewer challenges to bias, the analysis of newspaper advertisements and other non-reactive measures have been said to be a poor substitute for the detailed, depth data that may be extracted in a naturalistic setting, such as in face-to-face interviews with employers. It may be argued that social artefacts such as job advertisements may not be interrogated in the same way that a researcher may probe an individual in a face-to-face interview (Kellehear, 1993). Furthermore, the coding and analysis of the job advertisement is subject to bias as coders may exercise

personal bias when analysing the data. Lastly, job advertisements are only one of many methods used to advertise vacant posts. Recruitment agencies, word-of-mouth and internal placements within organisations constitute a small portion of the range of possible mechanisms for advertising staff placements (Dorio, 1994). In addition to newspaper advertising, a range of media is available to the recruiter. Recruiters may outsource their recruitment needs to private employment agencies or executive search consultants. They may advertise in literature distributed to professional associations or may consult a research firm (Dorio, 1994). Use may be made of employee referrals, graduate recruitment at universities, promotions, the internet, and, less commonly, radio and television advertising (Dorio, 1994). In a study conducted by the Careers and Counselling Unit at the *University of the Witwatersrand* (Edey & Molin, 1993), the majority (49%) of graduates reported obtaining jobs via word-of-mouth whereas only 16% obtained jobs through the newspaper medium.

Although face-to-face interviews with individuals involved in recruitment and selection of staff might produce rich data, the attainment of a sample of reliable and representative responses across time and context for the analysis of trends, is unlikely. Anecdotal reports obtained from face-to-face interviews may lead to subjectivity and inaccuracies. Alternatively, a survey technique might successfully overcome interviewer bias and the dangers of small sample size, but might be limited by a low response rate, as is common with self-completion surveys (van Vuuren & Maree, 1999). In spite of its limitations, job advertisements are reliable indicators of occupational trends (Geis, 2000).

Although not providing a real count of employment opportunities — which is very difficult to achieve practically as there are multiple methods of filling vacant posts — the job advertisement was selected for analysis in this thesis, owing to its relevance in determining career growth areas and job demand. It is only when aggregated, however, that job advertisements provide relevant longitudinal (Bouma, 1996; Mouton & Marais, 1998) or trend (Holsti, 1969; Krippendorff, 1980) information. The analysis of positions across time acts as a barometer of employment and market trends for job-seekers (Gerber, Nel & van Dyck, 1998).

In the main, the data unit of the newspaper advertisement may successfully indicate general trends in employment across the categories requiring analysis — such as sector, qualification and specialisation within psychology — at a relatively low cost to resources.

3.4 Selection

3.4.1 Newspapers: The medium for selection

Prior to the selection and coding of advertisements for analysis, a representative medium in which employment trends could be extracted, was decided upon — that is, the newspaper.

Newspapers are commonly used as a medium for advertising vacant positions (Dorio, 1994); however, they are not the only source of information for employment seekers (Brislin, 1980). Employment may also be sought via employee referrals, graduate recruitment at universities, promotion, radio and television advertising (Dorio, 1994), unsolicited inquiries (Stoops, 1982) and word-of-mouth. Additionally, recruiters may delegate their recruitment needs to private employment agencies, executive search consultants or they may advertise in literature distributed to professional associations (Dorio, 1994). Of late, the internet has become a medium for recruiters and job-seekers alike. The possibility of self-employment and through, for example private practice and consulting is also available for psychology graduates³.

Given that the newspaper is not the only medium for advertising jobs, it may be argued that the sole consideration of newspapers as a measure of job demand may lead to an over-representation of formal sector employment and a bias towards sectors and industries that utilise newspapers as a medium of advertising. For example, *Financial Mail* may tend to advertise for professionals with specific education, training and experience in the area of finance, business and banking, whereas the *Mail & Guardian* may publish job advertisements of relevance to job-seekers in the fields of health, politics, policy and community development.

Two newspapers, *Sunday Times* and *Mail & Guardian* were selected for inclusion in this study on the basis of their wide circulation, their long and successful publishing history in South Africa and their popularity and relevance to behavioural/human/social science graduates. A recent survey indicated that *Sunday Times* has the largest readership compared with other weeklies, while the *Sunday Times* Business Section is read by 1.6 million readers, 'making it the TOP READ for executives and job hunters' (*Sunday Times*, 1999, emphasis in original). Brand (1987) also reports that *Sunday Times* advertises posts appropriate to professionals making it a relevant read for university graduates. In contrast to *Sunday Times*, *Mail & Guardian* enjoys a smaller

niche market of limited circulation (*Mail & Guardian*, 1999) but is read by opinion-makers in business, government, the arts and education (survey conducted by *Market Research Africa* in *Mail & Guardian*, 1998). Given that these newspapers are appropriate, popular and widely read, they characterise a sufficient sample in order to allow for representative inferences to be made on graduate employment trends.

Despite the wide range of possible vehicles for advertising jobs, the South African newspaper has been ranked as the second most popular medium for job-seekers, word-of-mouth proving more successful, but difficult to measure. In a study conducted by *The Careers and Counselling Unit* at the *University of the Witwatersrand* (Edey & Molin, 1993), 16% of graduates reported obtaining employment through the newspaper compared with 49% by word-of-mouth and 10% through recruitment agencies. Although Edey and Molin's study (1993) suggests that newspapers were not the most popular medium for advertising in the early 1990s. The utilisation of newspapers as a vehicle for recruitment is likely to have increased. This is because of recent emphasis on equity and transparency in the recruitment process as well as the pressures on sound corporate governance procedures demanded by legislation that governs the workplace such as the *Labour Relations Act* (No. 66 of 1995), *Basic Conditions of Employment Act* (No. 75 of 1997), the *Employment Equity Act* (No. 55 of 1998) and the *Skills Development Act* (No. 97 of 1998) that govern the workplace.

This legislation has recently mandated recruiters to ensure that their recruitment practices are inclusive, accessible and transparent for job-seekers. This suggests that it is a requirement that all jobs be publicly advertised. Prior to this legislation, it is possible that jobs were more likely to be advertised using methods such as word-of-mouth. The effect of the introduction of labour legislation on the number of jobs advertised may have led to a nominal increase but obscured a real increase in vacancies. Appropriate statistical techniques in the analysis of data should prevent the disguise of real trends over nominal trends.

National Sunday newspapers are also said to have a wider circulation as compared with dailies (Brand, 1987). (See Appendix II for a list of national and daily newspapers in South Africa.) Daily newspapers, including those with significant employment sections, are not read nationally and are often regionally specific, not providing national employment opportunities. As the concern of this study was national employment trends, a selection of national weekend newspapers was chosen.

³ Ebersohn (1983) estimated that six per cent of psychologists are in full-time private practice.

3.4.2 Sampling strategy

The decision was made to select advertisements from 1976 up 1998 (data collection began in 1999). The year 1976 was selected as a starting point for data collection as it allowed for a sufficiently longitudinal focus. In addition, the three decades to be covered by the data — namely the 1970s, 1980s and 1990s — allowed for an analysis of possible trends that overlapped with significant political periods in South African history. Furthermore, the demand for research psychologists, other registered psychologists and psychology graduates across psychological specialisation areas, skills demand, industry and sector demand, and the impact of social change, was measured more meaningfully across three periods characterised by diverse historical and political events.

The 23 one-year categories (from 1976 to 1998) proved cumbersome to analyse, although useful for a detailed analysis. More useful conceptual categories were suggested by Richter et al. (1998), Butchart and Seedat (1990) and members of staff at the *University of Natal (Pietermaritzburg)* (Professor Linda Richter, personal communication, June 5, 1999). The years between 1976 and 1985 were collapsed to represent the 'uncritical' period in professional psychology. Professional psychology from the 1970s up to the mid-1980s has been characterised by a discipline and profession uncritical of its role in a politically segregated society (Richter et al., 1998). The years from 1986 to 1993 were collapsed to represent the years in which political consciousness began to emerge in the discipline (Richter et al., 1998). The second period, from 1984/5 to 1994 was a period in which South African psychologists began to challenge the social injustice of a society deeply divided by apartheid but heading towards a democratic alternative (Butchart & Seedat, 1990). The years following 1994 — from 1994 to 1998 — which coincided with the election of a democracy in South Africa and the concerted dismantling of apartheid, were collapsed. After 1994, South African psychology has been defined by Richter et al. (1998) as 'moving beyond *angst*' (p. 1, emphasis in original) from the previously described 'state of insecurity, confusion and self-doubt' (Berger & Lazarus, 1987, p. 6) regarding its relevance in the broader context (Retief, 1989).

It may be argued that years might be more sensibly categorised on the basis of employment trends rather than the political *zeitgeist* in psychology. This information was, however, not available or suggested for this research project at the time of analysis. The 'uncritical period' from 1976 to 1985 (10 years) — the emergence of political consciousness from 1986 to 1993 (8 years) and the new democratic phase in

South Africa from 1994 to 1998 (5 years) differ in year duration. These periods, however, offer an appropriate and contextual approximation of the extent to which the labour market may have been affected by social and political forces.

Given that the full universe of newspaper advertisements applicable to graduates in the behavioural/human/social sciences for the sampled period, 1976 to 1998, is significantly large, a sampling strategy was devised in order to reduce this universe of advertisements into a manageable but representative number, given the resources available for the project. *Sunday Times* publishes 52 newspapers per annum. On average, each Sunday issue may contain approximately 40 advertisements applicable to graduates in the behavioural/human/social sciences (the criterion for applicability will be discussed below). Over a one-year period the total advertisements relevant to behavioural/human/social science graduates might sum to 2080. Over a 23-year period, a total of 54 080 job advertisements would be applicable to behavioural/human/social science graduates for one newspaper alone. This number might be even higher considering that there may be an increase in advertised posts with time due to a range of factors including the introduction of labour legislation affecting recruitment practices. The size of the potential data set supported the adoption of a sampling strategy as opposed to a census of all advertisements.

3.4.3 Procedure for sampling

The sampling procedure entailed reducing the 52 weeks of the calendar year. Weeks 1 to 52 of any given year were given consecutive week numbers, ranging from 1 to 52. For example, the week from January 1 to January 7 was coded as week number 1. This process was continued for all weeks up to and including the 52nd week (the last week) of the year, week 52.

There were difficulties in allocating consecutive numbers to the weeks of the year for the newspapers selected for the study. Whereas *Sunday Times* is a weekly Sunday paper making the selection of the appropriate week according to consecutive numbers unproblematic, *Mail & Guardian* is published every Friday, and the date is specified as a weekly range. For example, 14 to 20 May. In order to ensure that both newspapers were selected from the same week each year, the date of each *Sunday Times* was noted and the Sunday falling in the weekly date range of *Mail & Guardian* was selected. For example, should the publication date of *Sunday Times* have been Sunday 16 May 1987, the corresponding date range of *Mail & Guardian* would have been 14 to 20 May 1987.

After the numbering of the weeks was completed, a random sampling of the 52 numbers corresponding to the 52 weeks was conducted. Twenty numbers were randomly selected from the total of the 52 available numbers using random number tables. The twenty selected numbers that resulted (corresponding to the weeks) were 5, 9, 10, 13, 15, 18, 19, 24, 28, 29, 30, 36, 37, 40, 41, 43, 47, 48, 50 and 52. Given the unexpected, and incrementally increasing volume of advertisements appearing in newspapers across time – set against limited resources available for this project – it was impossible to select and code advertisements for all 20 randomly selected weeks. A purposive sampling of the 20 randomly selected numbers was therefore conducted, to reduce the number of advertisements to be analysed.

It was decided to select 10 weeks from the 20 randomly selected weeks. The original set of randomly selected numbers was reduced to ten purposively selected weeks. The final selected weeks were (approximate calendar months in parentheses) 5 (in February), 13 (in March), 18 (in April), 24 (in June), 28 (in July), 30 (in August), 36 (in September), 40 (in October), 43 (in November) and 50 (in December), which generally allowed for analysis of one week per month of the calendar year for the 23-year period. No months of the year were duplicated. Two months of the year were excluded, namely January and May. In South Africa, fewer jobs are traditionally advertised in the month of January given that employees complete working for the year in order to obtain vacation and Christmas bonuses.

3.4.4 Criteria for selection of advertisements

Using the sampling strategy described above, weeks of the year were selected for inclusion. A number of broad, over-inclusive requirements were devised for selection purposes. The selection criteria developed provided a checklist for the selection or rejection of an advertisement in the data set. The inclusion of advertisements in the sample was at times difficult to judge, but careful consideration of the criteria for selection successfully guided the selection process.

The criteria for selection were:

1. a requirement that graduates were broadly educated in the behavioural/human/social sciences (in the absence of specific reference to the historical registration categories in psychology) such as a call for graduates with an *appropriate bachelors degree*,

2. a specification of a professional registration such as *psychologist* or *psychometrist*,
3. or a reference to tasks traditionally completed by graduates with a major in psychology, for example, *counselling*, *psychometrics* or *change management*.

A pitfall of the selection strategy was the non-inclusion of job advertisements not requiring training in psychology or an education in the social sciences. Although this would have created a useful measure against which the demand for psychological skills could be set against other qualifications, this was not the scope of the survey. Rather, the intention to survey trends within psychology, as opposed to the changing demand of psychology skills as compared with other occupations, was the purpose of the research. Advertisements were therefore not selected from newspapers if they fell outside of the pre-determined selection criteria.

Examples of advertisements not included for selection included occupations requiring education and training in the physical, natural or business sciences. These included posts for engineers, quantity surveyors or accountants. For example, advertisements that called for an *industrial psychologist with a B.Comm.* (Bachelor of Commerce) degree was rejected on the grounds that the degree excluded behavioural/human/social science graduates despite referring to tasks (skills) traditionally fulfilled by graduates with a major in psychology. Alternatively, an advertisement that called for an *industrial psychologist with an appropriate bachelors degree*, was selected for inclusion on the basis that it was broadly applicable to graduates in the behavioural/human/social science and referred to tasks (skills) traditionally completed by such graduates.

Jobs more directly aligned with training in research, academic teaching posts of various kinds and senior research positions were selected. Positions advertised for the public service such as *directorships*, *deputy directorships* and *assistant directorships* were also selected. At the bottom of the career range, positions for *research assistants* and *project officers* in various contexts were selected if they met the specified criteria. In the private sector there were posts such as *Employee Relations Officer*, and advertisements for a *behavioural science graduate with a qualification in psychology or sociology*, who was to work on *projects designed to increase the health and effectiveness of the organisation*. Finally, positions were advertised in large donor-funding organisations such as, *Research and Development Officer in the Pretoria office of the European Union*, *Research Assistant for the Social Law Project at the University of Cape Town*, and *Research Officer for the Human Sciences Research*

Council required to have experience in research methodology, questionnaire design, data analysis and interpretation.

No restriction was placed on career level or work experience requirements for job applicants and the advertisements selected ranged from those for inexperienced, recent graduates to those for senior public service and educational posts. Job advertisements selected included titles such as *Regional Coordinator in the Department of Welfare (Northern Province)*, *Policy Advisor Western Cape Parliament*, *Education Officer for the National Union of Mine Workers*, *Lay Counsellors for the Eastern Cape branch of Life Line*, *Market Researcher for Markinor (Randburg)* or *Trainee Commissioner for the Centre for Conciliation Mediation and Arbitration (Johannesburg)*.

In the years 1998 and 1999, the selection of advertisements was measured for reliability as the use of different selectors in these years may have introduced bias into the selection process. To assess inter-selector reliability of the selection process in 1998, a five per cent sample (20 weeks for *Sunday Times* and 10 weeks for *Mail & Guardian*) was checked. The percentage reliability for selection from each newspaper was: *Mail & Guardian* 80% and *Sunday Times* 86%. A second round of selection was conducted in order to improve the comprehensiveness of the sample. All advertisements selected in both selection rounds were included in the final sample, ensuring that no applicable advertisements were overlooked. The research assistants each focused on selected years in order to increase detection of repeated advertisements and, in the later coding procedure, repeats were tagged, thereby avoiding the coding of advertisements more than once. The combination of the two selection rounds led to total agreement obtained on the selection of advertisements in 1998.

In 1999, 98% agreement was obtained on the selection of advertisements. A different selection procedure was used as compared with that used by the research team in 1998. In 1999, only two years were due for selection (1997 and 1998) in two newspapers only (*Mail & Guardian* and *Sunday Times*) leading to fewer advertisements being selected as compared with the research efforts on 1998. Two selectors were employed in 1999 as compared with four selectors in 1998 and each selector checked all advertisements selected by the other. Only 40 disagreements were noted out of a total of 1655 newspaper advertisements selected. For the advertisements where agreement between selectors was not reached, the selection of

these advertisements were discussed and the advertisements were added or excluded on the basis of the agreement reached between selectors.

The selection of advertisements was undertaken in the *Natal Society Library* between 1997 and 1999. All selected advertisements were photocopied and assigned a reference code based on the date of publication of the newspaper, the newspaper from which it was selected, the week in which it appeared and the number of the advertisement in the sequence selected.

3.5 Coding of advertisements

Of the selected advertisements, a total of 3050 advertisements were coded in 1998. These were advertisements were selected and coded from the newspapers published in the even years (1976, 1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996 and 1998). In 1999, an additional 3500 advertisements selected from newspapers published in the odd years (1977, 1979, 1981, 1983, 1983, 1985, 1987, 1989, 1991, 1993, 1995, 1997 and 1999). The complete data set was comprised of 5769 advertisements (this included advertisements selected for the period 1976 to 1999 in *Sunday Times* and *Mail & Guardian*).

Despite two differently constituted research teams participating in coding in 1998 and 1999, the coding of the advertisements was undertaken using identical coding schemes, ensuring standardisation. The selection and coding of advertisements in 1998 and 1999 proceeded according to the explicit selection and coding principles of the selection and coding schedule developed in 1998 (see Appendix III).

An elaborate coding scheme was developed in 1998, through 14 revisions. The categories emerged from the advertisements rather than from theory of job demand. A process of team coding and discussion about ambiguous categories was pursued in order to produce a comprehensive and clear coding scheme. Four coders were trained and worked together until complete agreement was attained in the coding process. The extensive piloting process was undertaken to ensure that all possible content appearing in the advertisements could be coded according to the principles laid out in the coding scheme.

3.5.1 Coding strategy: content analysis

The task of extracting data from the coded advertisements was done using the technique of content analysis. This technique required that information in each advertisement was classified into the closest category within a variable. This category was to be selected from the pre-designed coding scheme (Appendix III) and allowed for the content in the advertisement to be represented by an arbitrary number representing the information category. For example, advertisements selected from *Sunday Times* were assigned the nominal value of 1, representing the category *Sunday Times* within the newspaper variable, whereas advertisements selected from *Mail & Guardian* were assigned the nominal value of 2. These data were later analysed by various arithmetic and statistical processes. Content analysis therefore allows for the transformation and classification of text — which may include single words, phrases, sentences or characteristics/themes (Berelson, 1952; Holsti, 1969, Krippendorff, 1980) — into a form that may be later analysed by descriptive or inferential statistics (Abercrombie, Hill & Turner, 1984; Holsti, 1969).

The coding principles developed were systematically applied to each advertisement selected from the newspapers. The 33 identified variables described in the coding principles were systematically coded according to their content (although only seven variables were analysed in this thesis and will be described below). Each advertisement was entered into a database. The advertisement was assigned an identity number (case number) and its data entered into the data set for each of the 33 variables and categories within the variables. Given that the content of each advertisement coded for did not contain all the information allowed for in the coding scheme, many cells in the data set contained missing data. For example, an advertisement may not have specified *Industry* of the position, thus no data could be entered into that field, resulting in a missing data cell.

A number of coding principles and definitions were adhered to in the coding process. Where information was not specified in the advertisement, the coders were instructed not to interpret or make assumptions about the intention of the advertisement; this was irrespective of whether the coder had a 'gut feel' about what the advertisement was saying. If, for example, the advertisement called for a *counsellor* but provided no details of educational background, researchers could not interpret that the candidate possess a Masters degree (organisations such as *Life Line* may employ counsellors without Masters degrees). Coding according to the most specific category was undertaken for each variable. For example, if *participatory research skills* were

specified in the advertisement, that skill was coded in the *participatory research* category rather than the *general research* category of the *tasks* (skills) variable.

Although much information coded from the advertisements was non-interpretive in nature, requiring only the assignment of content to a nominal category, certain variables coded required the coder to make a subjective decision as to which category was appropriate. The requirement for subjective decisions to be made by the coders may be seen as compromising the validity and reliability of the study. Although allowing for a wider application for the technique of content analysis, the analysis of subjective variables allow for the entry of bias, and may render the coding process unsystematic and data unverifiable, unreliable and not objective (Berelson, 1952; Holsti, 1969). Less interpretive variables, and more explicit coding rules, may result in more accurate replication in the future and a lower likelihood of biased data. One may consider, however, that the existence of interpretive and non-interpretive variables within a set of coding principles illustrates the power of content analysis; namely, that is may be used to analyse data which extends along a continuum of subjectivity.

A number of checks and balances were introduced into this study, in order to minimise bias, especially around interpretive categories. For this reason, the analysis of variables considered subjective, was kept at a minimum. Instead factual categories were analysed [such as the variable *Profession Psychology (Specified)*, see below for a description].

In addition, to limit the number of interpretive variables in the final analysis, bias was initially minimised during the process of creating the coding scheme. All information contained in selected advertisements from 1976 to 1996 was, through a series of pilot coding exercises, allocated to categories on the pilot coding scheme that was finalised after 14 versions. Literature to inform the variables and coding categories was consulted where necessary, however, the scheme emerged through a largely inductive process. In addition to this, the reliability of the data set was measured. This will be discussed below.

3.5.2 Variables coded

A number of general and specific rules and criteria guided the coding process. Each job advertisement was counted once only. Where positions were advertised more than once across newspapers and across more than one week, it too was counted once only. Where one advertisement sought to fill more than one position, it was counted

as per the number of positions it sought to fill. For example, 'Planner/Researcher (Social Crime Prevention), 2 posts' was entered twice to the data set (two case numbers and two rows in the data set). If, however, the same advertisement was identified as appearing across more than one newspaper in the same advertising period (for example, appearing in *Mail & Guardian* on Friday in addition to *Sunday Times* on Sunday), it was entered only once and the category *repeat* was checked.

The coding scheme allowed for the coding of 33 variables, however, only seven variables were analysed in this thesis as they were used to address the research questions. These variables are listed below and are described by the name of the variable, a description of the variable, why the variable was included in the research project, the categories according to which the variable was coded, how the variable was conceptualised and what rules governed the coding process.

3.5.2.1 Time

Variable	Time
Description	The period (year and week) in which the advertisement was published.
Why included?	To determine whether other variables and categories differed across periods.
Categories	Years: 1976 to 1998 Weeks: 5, 9, 10, 13, 15, 18, 19, 24, 28, 29, 30, 36, 37, 40, 41, 43, 47, 48, 50, 52
Conceptualised?	The sampling strategy determined the inclusion of the categories within this variable.
Rules, Problems and Examples	No interpretation was required for the coding of this variable. Only job advertisements published on these dates were coded. Coding was depicted in the following way: Year. Week. Advertisement Number. S/W/R, Publication [The <i>Sunday Times</i> (01) and <i>Mail & Guardian</i> (03)], Year (max. 2 digits), Week (max. 2 digits), Advertisement Number (max. 3 digits, advert no. 1 = 001). e.g. 19309014 = Advertisement 14 from Week 9 of The Sunday Times 1993.

3.5.2.2 Sector

Variable	Sector
Description	The sector for which the job advertisement was published. The sector in which the incumbent would be expected to work.
Why included?	To determine the sectors where employment for psychology graduates is likely to be offered.
Categories	1. Public 2. Private 3. NGO (non-governmental organisation)
Conceptualised?	Categories and examples were developed iteratively, through the piloting process, and summarised into three broad categories (described above).
Rules, Problems and Examples	Some interpretation for the coding of these advertisements was required. Advertisements were coded according to the broad sector in which the job will be performed. Namely, 1. Public sector e.g. schools, universities, colleges, municipal offices, hospitals,

	<p>government departments, parastatals, technikons. [The candidate is reimbursed by the state, irrespective of the time period in which it occurred or the political affiliation of the employer. It could be argued that it might be misleading to 'lump together' universities, some of which were active sites for social activism.]</p> <p>2. Private sector e.g. banks, business or the mining industry [Where remuneration is independent of the state.]</p> <p>3. NGO e.g. <i>Lifeline</i>, <i>FAMSA</i>, <i>ATICC</i> or the <i>Black Sash</i>. [These jobs are separate from both the public and private sector.]</p>
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3.5.2.3 Industry

Variable	Industry
Description	The industry for which the job advertisement was published. The industry in which the incumbent would be expected to work.
Why included?	To determine the most industries most likely to offer employment to psychology graduates.
Categories	<ol style="list-style-type: none"> 1. Service 2. Manufacturing/Industrial 3. Mining 4. Technology/Science 5. Research 6. Consumer 7. Professional Development 8. Construction 9. Education 10. Investment 11. Communications 12. Health 13. Social Development/Welfare (including community development) 14. Retail 15. Agriculture
Conceptualised?	The coding scheme represents industries as they occur in the natural environment i.e. the employment context of South Africa and was developed iteratively and inductively after 14 versions to ensure that all industries possibly occurring in advertisements could be coded.
Rules, Problems and Examples	<p>Some interpretation in the coding of this variable was required.</p> <p>This category refers to the sector in which the employee will work, and NOT to the specific job that the incumbent will be doing. Only one category was selected per job advertisement. There were problems where more than one category was applicable and coders were instructed to select the most applicable category.</p> <ol style="list-style-type: none"> 1. Service e.g. <i>Eskom</i>, <i>Telkom</i>, <i>Investec Bank</i>, <i>Barberton Municipality</i>, <i>Kelly Girl</i>. Jobs that required the applicant to provide a service to a client. Parastatal organisations such as <i>Eskom</i> and <i>Telkom</i> were classified as non-financial service industries. Companies offering <i>financial and investment</i> services (for example, <i>Investec Bank</i>) were categorised separately to those offering non-financial services. Job advertisements that included posts advertised for municipalities and government departments in the civil service (for example, <i>Barberton Municipality</i>) or in recruitment agencies (for example, <i>Kelly Girl</i>) were also categorised into this <i>Service</i> category. 2. Manufacturing/Industrial e.g. <i>Tiger Oats</i>, <i>Hullett's Aluminium</i>. Organisations that concentrated on manufacturing goods, ranging from foodstuffs (for example,

	<p><i>Tiger Oats</i>) to machinery (for example, <i>Hullett's Aluminum</i>) were classified in this category.</p> <ol style="list-style-type: none"> 3. Mining e.g. <i>Anglo American</i>. 4. Technology/Science e.g. <i>Centre for Science and Industrial Research</i>. 5. Research e.g. <i>Human Sciences Research Council, Ask Africa</i>. Where the industry provided research services, it was categorised here. 6. Consumer e.g. <i>Markinor, Decision Surveys International</i>. Market research houses were considered to offer <i>consumer services</i>. 7. Professional Development e.g. <i>Gemini Consulting</i>. Where companies concentrated on training and development or offered consultancy services they were categorised as belonging here. 8. Construction e.g. <i>Murray & Roberts Construction</i>. 9. Education e.g. <i>University of Cape Town, University of Natal (Durban), Technikon Pretoria</i>. Jobs advertised on behalf of universities, colleges, or technikons were classified here. 10. Investment e.g. <i>Barnard Jacobs Mellet, Investec Asset Management</i> 11. Communications e.g. <i>SABC</i>. Jobs advertised in the media and communication field were classified here. 12. Health e.g. <i>Valkenberg Hospital, Tara</i>. Jobs in hospitals, clinics and health and welfare government departments were categorised here. 13. Social Development/Welfare (including community development) e.g. <i>Triple Trust, Black Sash</i>. 14. Retail e.g. <i>Pick 'n Pay, Morkels</i> 15. Agriculture e.g. <i>SAPPI, Mondi</i>.
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When developing the coding scheme in 1998, the research team chose to utilise iteratively developed coding schemes over standard coding protocols. For example, the Standard Occupation Classification (SOC) Codes and Standard Industrial Classification (SIC) Codes, promoted by the *International Labour Organisation (ILO)*, allows for the internationally comparable coding of occupations and industries/sectors respectively. Statistics South Africa (Stats SA) also makes use of SIC Codes to describe industrial sectors of the South African economy, allowing for the comparability of statistics generated in South Africa. Surveys such as the survey of *Gross Domestic Product (GDP)* and the *Labour Force Survey (LFS)* utilise this coding.

The SIC was designed to classify establishments according to kind of economic activity, and to provide a standardised framework for the collection, tabulation, examination and presentation of data on establishments. Stats SA recommend that public institutions, private institutions and private researchers undertaking the classification of establishments as statistical units, use the SIC. The general application of the principles and definitions of SIC is seen to encourage the homogeneity and comparability of statistics compiled from different sources (Stats SA, 1993).

SIC Codes used by Stats SA differ from the categories used in the coding scheme in this thesis. SIC Codes are based on numbers that are used to identify a specific industry according to a level of detail. The industry will fall into one of 10 major divisions, divisions, major groups, groups and subgroups and are arranged according to a decimal system. Each subgroup consists of five digits, the first digit denotes the major division (Appendix IV), the first and second digits together denote the division, the first three digits together the major group, the first four digits together the group and the full five digits the subgroup (Stats SA, 1993). The level of detail of SIC Codes may therefore differ depending on the needs of the research, while the rules governing application of a particular SIC code to an establishment, are complex. The categorisation scheme developed previously and used for this thesis has not differentiated major divisions, divisions, major groups and subgroups.

For example the coding scheme reflects *Area 15: Agriculture*, which according to the SIC code scheme would constitute *Major Division 1 Agriculture, hunting, forestry and fishing*. *Area 10: Investment* would not constitute a Major Division, rather it would form a four-digit code subgroup within *Major Division 8. Financial Intermediation, Insurance, Real Estate and Business Services, Division 81 Financial Intermediation, except Insurance and Pension Funding, Major Group 819 Other Financial Intermediation n.e.c.* (not elsewhere classified) and finally subgroup 8199 *Other Financial Intermediation n.e.c.* which is described as such: 'This group includes other financial intermediation primarily concerned with distributing funds other than by making loans. This includes investment in securities (e.g. shares, bonds, bills, unit trusts, etc.) including dealing for own account by securities dealers, investment in property where this is carried out primarily for other financial intermediaries (e.g. property unit trusts) and writing swaps, options and other hedging arrangements. Activities of financial holding companies are included' (Stats SA, 1993, p. SIC Code\mdvdvimg8.htm).

Although useful, the coding scheme developed in the thesis would not strictly conform to preferred coding protocol in South Africa or internationally as it combines different levels of classifying industry and establishment, combining broad and specific areas.

3.5.2.4 Psychological Area (professional registration not specified)

Variable	Psychological Area (professional registration not specified)
Description	The broad areas of specialisation within the discipline and/or profession of psychology. Where no professional registration is required of the incumbent.
Why included?	To classify psychological areas (sub-disciplines) gleaned from the job advertisements across other variables and categories.
Categories	<ol style="list-style-type: none"> 1. Industrial in general 2. Psychometrics 3. Education 4. Counselling 5. Research 6. Community 7. Clinical 8. Social 9. Not specified – e.g. lecturer in Psychology, no specifications
Conceptualised?	The piloting of the coding scheme reflected that the majority of advertisements did not specify that graduates have a professional registration in psychology, for example <i>Registered in the category Educational Psychology with the Health Professions Council of South Africa</i> . However, the skills required for the post such as counselling skills or psychometric skills suggested that candidates for the post have a background in psychology, although not specifically stated in the advertisement. The need for capturing unspecified areas of psychology led to the development of a variable containing the broad categories/subject areas within professional South African psychology. Given that this variable sought to code the area of psychology required, it contained more categories within as compared with the variable that sought to code advertisements requiring a professional registration in psychology (of which there are only five). Community psychology and social psychology do not enjoy the benefits of professional registration in South Africa.
Rules, Problems and Examples	<p>The coding of this variable was open to interpretation. The type of psychological area/application required coding. Only two (non-hierarchical) choices were provided and coders were instructed to decide on only two specialisations of psychology: There were cases where advertisements may have required knowledge of more than one specialisation in psychology. The categories in the variable are listed below.</p> <ol style="list-style-type: none"> 1. Industrial in general (recruitment, personnel evaluation, psychometric testing, knowledge of labour or industrial relations, manpower planning and development, people management, organisational development and change management). 2. Psychometrics (psychometric testing, psychodiagnostic measures or where reference was made to a required professional registration in the use of psychometric measures, either as a psychometrist or as a psychotechnician) 3. Education (work in educational environments such as schools, universities, technikons, colleges, career counselling centres, clinics or in national departments of education, where knowledge of educational psychology and/or educational processes were required) 4. Counselling (work in a counselling centre such as <i>Life Line</i>, a career unit at an educational institution, or in a counselling practice) 5. Research (mathematics, statistics, research, methodology, evaluation and monitoring, maintaining databases, analysing trends, project evaluation, carry out regular evaluation activities, overall assessment of the project progress,

participatory research, participatory rural appraisal, rapid rural appraisal and action orientated research, socio-political research, general research)

6. Community (skills in any kind of community organisation, activities, development, participation, project implementation and field work, advise on how to strengthen community participatory aspects of project activities, advise on and assist in the preparation, organisation and backstopping of village level planning and village based training, advise on procedures for assessment of community responsiveness to community activities, strengthen the community's democratic processes and work with rural communities, capacity building, empowerment or skills training of disadvantaged groups, campaigning. advocacy, information and communication)
7. Clinical (psychotherapy, psychometrics and psychodiagnosis to be performed in a clinical environment such as a hospital or a clinic)
8. Social (candidate be aware of aspects of human behaviour that involve persons and their relationships to other individuals, groups, social institution and society as a whole. Selection would have been in line with the now classic definition of social psychology as provided by Gordon Allport in Reber, 1985, that social psychology 'attempts to understand and explain how the thought, feeling or behaviour of individuals are influenced by the actual, imagined or implied presence of others')
9. Not specified – e.g. lecturer in Psychology, no specifications (where job advertisements did not specify or indicate the specific area of psychology required, or a specific context in which the job applicant was to work. Usually selected in cases where a psychology graduate with very general skills, or skills in all specialisations of psychology was required, such as a lecturer in psychology.)

At times there was overlap between the requirement for educational psychology, clinical psychology or counselling psychology background, especially where skills in psychodiagnosis, counselling and psychometrics were required. There was at times overlap between the categories *Community Psychology* and *Research Psychology*. There was sometimes overlap between the categories *Clinical Psychology* and *Counselling Psychology*, in such cases both categories were entered to the data set in the two, non-hierarchical spaces provided. Unfortunately the coding scheme developed in 1998 only provided for two specialisations in psychology to be non-hierarchically entered into the database per advertisement. Should a coder have determined that *Research Psychology* and *Industrial Psychology* were the main specialisations required for competent functioning within an advertised job, the coder would have coded those categories in the two options provided for. However, another coder may have, depending on their conceptual framework and/or their assumptions, have coded the two specialisations as *Industrial Psychology* and *Social Psychology*. The inclusion of two specialisations violates the assumption of independence for the calculation of inferential statistics, which states that each observation (that is, each job advertisement) must be independent of another for the calculation of inferential statistics (Berelson, 1952; Holsti, 1969; Howell, 1999; Krippendorff, 1980; Wickens, 1989). It may be argued that the coding of a maximum of two psychological areas violates the assumption of independence underlying the χ^2 technique.

The coding of this category was not exact in terms of Holsti's (1969) principles of reliability, consistency and objectivity described in the sections following. It is an area which could be improved upon in the next attempt at this data set to ensure that greater objectivity, less interpretation and more clear definitions are provided to coders.

In 1998, at the point of development of the coding scheme, the research team chose iteratively developed categories over standard categories for coding sub-disciplines within psychology. In the US, the American Psychological Association (APA) similarly divides the profession into sub-disciplines (see Appendix V). In South Africa, PsySSA has a number of institutes and divisions that separate psychology into specialisations. Neither coding schemes were used leading to the exclusion of certain specialisations, for example, health psychology or hypnosis. Another limitation of the coding scheme was its non-provision of rules for exclusion and inclusion in certain categories. In future years it could be recommended to use a more structured coding scheme to allow for the non-interpretive coding of this variable.

3.5.2.5 Profession Psychology/Psychological Area (specified)

Variable	Profession Psychology/Psychological Area (specified)
Description	The specific areas of specialisation within the discipline and/or profession of psychology. Where a professional registration <u>is</u> required of the incumbent.
Why included?	To classify psychological areas (professional registration categories) gleaned from the job advertisements across other variables and categories.
Categories	<ol style="list-style-type: none"> 1. Clinical 2. Counselling 3. Education 4. Industrial 5. Research 6. Psychometrist 7. Registration required, but category not specified (e.g. registered with SAMDC) 8. Registration an advantage, category unspecified (e.g. registration with the SAMDC an advantage) 9. An intern in any category
Conceptualised?	These are professional registration categories of the Professional Board for Psychology. The formal professional definition of a psychologist is a graduate in possession of at least a Masters degree in psychology and registration with the previous SAMDC, now the Health Professions Council of South Africa (HPCSA) (under which the Professional Board for Psychology falls) in one of five registration categories including clinical, counselling, educational, industrial and research psychology.
Rules, Problems and Examples	No interpretation of this variable was required. Instances where job advertisements expressly required the skills of a psychologist, either in a specific registration category, or a psychologist registered with the

	<p>relevant professional body. Advertisements sometimes called for a psychologist registered in more than more than one category (e.g. 'a psychologist registered in the category of clinical or counselling psychology'). Where this occurred, the first registration category mentioned in the advertisement was coded. There is debate as to whether these registration categories are mutually exclusive/completely distinct and separate from each other. For example, there may be overlaps between the work undertaken by clinical and counselling psychologists. Please refer to debate in Chapter 2 for an explication of this debate.</p>
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3.5.2.6 Tasks

Variable	Tasks
Description	The tasks (skills) to be completed by job applicants and the skills to be possessed by them.
Why included?	To classify tasks (skills) required in the job and relevant skills from the job advertisements across other variables and categories.
Categories	<ol style="list-style-type: none"> 1. Recruitment 2. Person Evaluation 3. Testing 4. Labour/Industrial Relations 5. Manpower Planning and Development 6. Management 7. Organisational Development and Change Management 8. Personnel Administration/Function 9. Increase Productivity and Performance 10. Data Analysis 11. Project Evaluation 12. Participatory Research 13. Socio-Political Research 14. Research 15. Community Organisation/Development 16. Capacity Building 17. Reporting/Presenting 18. Campaigning 19. Public Relations/Liaison 20. General Administration and Organisational Skills 21. Interpersonal Communication 22. Group Leadership/Workshops 23. Training/Teaching 24. Managerial Training and Development 25. Counselling 26. Psychotherapy 27. Welfare 28. Social Investment 29. Affirmative Action 30. Visionary/Lead Future 31. Policy 32. Negotiation and Mediation
Conceptualised?	Many tasks (what the employee was required to do in their job) and skills (experience and or knowledge to be possessed) appeared in the content of the advertisements and through a process of elimination and induction, and after 14 revisions to the coding scheme, 32 tasks were extracted.
Rules, Problems and Examples	<p>Not open to interpretation of coders.</p> <p>Tasks were coded non-hierarchically and to the most specific level in order to avoid overlap. A maximum of 10 choices was allowed.</p> <ol style="list-style-type: none"> 1. Recruitment: Anything to do with recruitment/selection 2. Person Evaluation: Monitor personnel performance, progress etc. Specifically

	<p>refers to employee evaluation.</p> <ol style="list-style-type: none"> 3. Testing: Specifically referred to testing/psychometrics. 'use psychometric and/or psychodiagnostic measure' 4. Labour/Industrial Relations – General and specific – negotiations with trade unions and labour groups, company's policy, inter-employee communication, wage rates etc. 'applying personnel policies and labour legislation', 'grievance handling' 5. Manpower Planning and Development – Specifically mentions manpower 'responsibilities cover the total spectrum of manpower management' 6. Management – Any managerial tasks and responsibilities (general and specific) 'supervising staff', 'ability to manage people' 7. Organisational Development and Change Management: General and specific 'organisational diagnosis', 'determine appropriate organisational culture and develop interventions to achieve it', 'assist management to achieve change' 8. Personnel Administration/Function: Specifically mentions <u>personnel</u> administration tasks or general personnel function 'wages and administration of the compound', 'salary administration', 'administration of housing' 9. Increase Productivity and Performance: Anything to do with productivity/performance enhancement 'assist incumbents to achieve the highest level of competence their abilities will allow', 'performance appraisal' 10. Data Analysis: Keep database, analyse trends etc 'preparation of statistical data' 11. Project Evaluation: Specifically applies to community projects 'carry out regular evaluation activities', 'overall assessment of the project progress' 12. Participatory Research: All forms of participatory research e.g. participatory rural appraisal (PRA), rapid rural appraisal (RRA), action research 'experience in participatory rural appraisal', 'action orientated research' 13. Socio-Political Research: Specifically mentions socio-political (and socio-economic) research 'researcher required for short term socio-political projects' 14. Research: General, always checked in the case of a university (not Technikon or College) teaching post. Any research tasks not coded above 15. Community Organisation/Development: Any kind of community organisation, activities, development, participation, project implementation, fieldwork, 'advise on how to strengthen community participatory aspects of project activities, advise on and assist in the preparation, organisation and backstopping of village level planning and village based training, advise on procedures for assessment of community responsiveness to community activities', 'strengthening communities democratic processes', 'work with rural communities' 16. Capacity Building: Capacity building, empowerment or skills training of disadvantaged groups 17. Reporting/Presenting: Submitting of development reports', 'documentation of ongoing developments', 'production of regular reports, fact sheets, newsletters', 'excellent writing and analytical skills', 'use of audiovisual equipment', 'production of visual material' 18. Campaigning: Advocacy, information, communication 'promotional activities' 19. Public Relations/Liaison: Networking etc 'ability to liaise with the press, embassies, lawyers, and other resource groups', 'liaison with students' 20. General Administration and Organisational Skills: Does not include personnel
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	<p>administration 'basic administrative skills'</p> <p>21. Interpersonal Communication: Specifically mentions interpersonal communication 'work with people', 'work as part of a team'</p> <p>22. Group Leadership/Workshops: Required to lead groups 'develop and run workshops', 'facilitation skills'</p> <p>23. Training/Teaching: Any teaching or training, including technical training (always check for university or other teaching post). 'Establish training needs and then adapt existing material to meet those needs', 'Trade union educator: compile and run courses in shopsteward's training'</p> <p>24. Managerial Training & Development – Specifically working with management 'Training to bring about management style change', 'specialisation in supervisory and management development'</p> <p>25. Counselling: Specific and general, in industry and in education e.g. student counselling</p> <p>26. Psychotherapy: Specifically mentions psychotherapy</p> <p>27. Welfare: Any welfare-related activities e.g. pensions, medical aids, recreation of employees, public recreation etc 'organising indoor and outdoor recreation groups and ingroup leadership'</p> <p>28. Social Investment: Lead, run or advise on social investment policies and actions</p> <p>29. Affirmative Action: To guide or participate in the implementation of an AA policy</p> <p>30. Visionary/Lead Future: Analyse and interpret social environment and change 'provide vision and leadership'</p> <p>31. Policy: Includes broad policy issues, national level policy 'formulation of government policy on labour relations', 'experienced policy formulator with the insight and know-how to develop and implement the RDP', 'production of formal policy documents', 'monitoring the effect of constitutional, political, and economic policy on the health care system'</p> <p>32. Negotiation and Mediation: Specifically mentions these tasks (includes conflict resolution) – not necessarily within industry</p>
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3.5.2.7 Social Change

Variable	Social Change
Description	The extent to which the advertisement indicates and requires from the incumbent a commitment to social change.
Why included?	To monitor the references to social change across variables (especially time) and categories. This interpretive variable was developed for the purposes of Wilson (1998) and proved useful in the current analysis as it indicated the extent to which social change in South Africa overlapped with other variables under analysis.
Categories	1. Promote social change 2. Unsure
Conceptualised?	Wilson (1998) defined social change as any move away from apartheid as described in the literature review and a historical review made available for the training of coders (see Appendix VI).
Rules, Problems and Examples	Open to interpretation. In order to code this variable, the coder was required to consider the year of the advertisement, the organisation placing the advertisement and look beyond the

	<p>specific text of the document. An interpretation of the vision for the position, the job environment and the incumbent was required.</p> <p>Following democratic elections in South Africa in 1994, a number of public and private sector organisations reflected social change agendas. In contrast, NGOs have, across time, reflected a social change or anti-apartheid mission statement. Certain organisations (for example, <i>the Black Sash</i>, the <i>Institute for Race Relations</i> and <i>Sached Trust</i>) were known to promote social change agendas, even if the job description did not overtly imply this. Where there was no overt reference to a social change agenda, for example the vision and mission statement of the organisation was not reproduced and the requirements for the job did not imply social change (for example, reference to campaigning, advocacy, socio-political research), these positions were not coded in this variable.</p> <p>Statements in the advertisement such as '<i>sensitivity to all people</i>', '<i>non-discriminatory</i>', '<i>affirmative action</i>' and '<i>equal opportunity</i>' were considered to be indicative of promoting social change, and the advertisements were coded accordingly. Such wording was characterised as progressive, democratic, and in support of the Reconstruction and Development Programme and the 'new' South Africa.</p> <ol style="list-style-type: none"> 1. Promote social change/transformation/progressive/anti-apartheid/democratic/RDP/the New South Africa '<i>sensitivity to all people</i>', '<i>non-discriminatory</i>', '<i>affirmative action</i>', '<i>equal opportunity</i>' 2. Unsure (this category serves to mark any ambiguous advertisements – not included in 1, above – which seemed to imply social change; these marked advertisements were subject to further analysis)
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3.6 Method of statistical analysis

In order to answer the research questions, general descriptive statistics in the form of frequencies and percentages were run on variables in the data set. Statistical significance has been tested with χ^2 analysis at a five per cent level of significance. χ^2 is the appropriate analysis in this instance as it allows for the inferential analysis of frequency or count data (Howell, 1999), in this case job advertisements.

By taking into account both row and column totals, χ^2 calculates the difference between observed frequencies and those that could be expected to occur if changes across time were only due to chance. The number of advertisements in each category is likely to fluctuate across time, however, χ^2 allows one to determine whether this is statistically significant taking into account both the number of advertisements over the years in each category, as well as the number of advertisements in each year (to calculate expected frequencies).

If the sum of deviation between the observed and expected frequencies is low, then the null hypothesis — that the row and column factors are independent — cannot be

rejected. By looking at the difference between observed and expected frequencies, χ^2 can determine whether or not the differences across time and between specialisation categories is significant.

For interpreting larger contingency tables, Rosenthal and Rosnow (1991) and Everitt (1977) recommend studying the table of χ^2 results, because the entries in such tables show which of the cells contribute most to the overall large χ^2 as well as showing where the significant differences lie. A small sample size may, however, yield an insignificant χ^2 encouraging the researcher to dismiss the χ^2 result. The insignificant χ^2 may obscure an interesting interaction or cell within the large contingency table. A second option is to partition the larger table of counts into smaller 2 X 2 χ^2 tables. Wickens (1989) points out, however, that such tables 'proliferate unmercifully' (p. 2). Furthermore, the calculation of numerous χ^2 tests increases the possibility of family-wise error (Wickens, 1989). A third option is the adjusted standardised residuals that indicate the difference between the observed and expected totals. These residuals are found by dividing the expected and actual totals by the square root of the expected value, then adjusting that figure for row and column totals (SPSS Help, 2001).

The third approach is recommended as the adjusted standardised residuals show, as a ratio of error variance, the amount each cell differs from expected. This allows one to isolate individual cells that differ significantly from what one would expect if the null hypothesis were true (H^0 : the row and column factors are not associated). The purpose of assessing the adjusted standardised residuals is to highlight the differences across categories and variables, whether or not these achieve statistical significance (Rosenthal & Rosnow, 1996). Where the adjusted standardised residuals are $<\pm 1.96$, the individual cell in the table reflects a count significantly more or significantly less than expected (Everitt, 1997).

A conservative approach must be adopted where numerous adjusted standardised residuals are analysed. There is a greater propensity that the residuals will, by chance, be significant. For example, using a 5% level of significance, it is possible that 5 of 100 adjusted standardised residuals analysed are not significant.

3.7 Reliability

The description of the variables indicates the importance of the need to consider elements of subjectivity and interpretation that may enter the selection and coding

process. Many variables described were defined as interpretive in nature. To measure the extent to which interpretation of the variables, and categories within the variables, may have affected the quality of results. It therefore became important.

Measuring the reliability of the database increased in importance in the second year of the study. In 1998 a group of coders worked together in selecting and coding the advertisements. All coding was done collectively and coders shared the same internal frame of reference. In 1999, when the second phase of selection and coding occurred, the coding team was different and coders did not code collectively. It therefore became imperative to establish a methodology that could be reproduced under different circumstances, for example, by different researchers or in a different location. To address this concern reliability statistics were therefore generated.

3.7.1 Inter-rater reliability

The measurement of inter-rater reliability was conducted to ensure that the coding patterns across coders were consistent and reflected a conceptually similar coding trend. The principle of similar coding patterns was crucial to general research. Simply put, the same results should be obtained under different conditions and at different times by different people (Brislin, 1980). For example, if medical doctors have differing conceptual understandings of the cause of death of a client, this differing interpretive understanding will cause death statistics to be incomparable for a researcher or epidemiologist wishing to establish trends and patterns across time.

In this study, many initiatives were set in place to avoid subjectivity and to increase the reliability of the data set. First, the variables selected for analysis in this study were largely factual in nature. Variables such as *Sector* or *Industry* involved a largely factual coding of information, whereas variables such as *Social Change* required some interpretation of the context and text of the advertisement.

Second, selectors and coders of advertisements were trained intensively for approximately two weeks in selection and coding criteria in order to facilitate their common conceptual framework. This involved a practice selection and coding of already selected and coded advertisements and the comparison of results obtained against actual advertisements selected and coded. These practice sessions were continued until total agreement was reached. Thus, as is required in order to attain methodological reliability, each selector and coder when selecting and coding

advertisements had a common understanding of selection criteria and what were encompassed by each variable (Brislin, 1980).

Third, sporadic checks were conducted throughout the study on the selection and coding of advertisements, thereby ensuring that selection and coding principles were consistent between coders, and to reduce bias (Stewart & Kamins, 1993; Stouthamer-Loeber & Bok van Kammen, 1995).

Fourth, it was contended that the reading of advertisements was in terms of a consensual coding schedule and discrepancies or queries arising were resolved through discussion and negotiation among researchers, rendering a high level of inter-rater reliability. Following discussion among coders, data was inputted consensually. If no consensus could be reached, data was not entered in the field of that advertisement.

Lastly, a process of double-coding a random selection of job advertisements was conducted to ensure that coders obtained the same responses for the variables being coded. These reliability statistics are presented below.

3.7.2 Reliability statistics

It was decided in 1999 to measure inter-coder reliability of one variable only. Of the seven variables selected for the analysis, the variable *Psychological Area (Professional Registration Not Specified)* was checked for reliability, as it was understood to be an area of special conceptual importance with the greatest potential for subjectivity, owing to the absence of a clear set of categories and coding rules. This variable was also of special importance because it was used to sort the database into fields of specialisation and was cross-tabulated with other variables and other categories. The other variables selected for analysis and discussed above were seen as factual in nature, with fewer possibilities for coder bias.

Testing of the variable *Psychological Area (Professional Registration Not Specified)* in 1999 constituted the only reliability test performed on coded variables over the coding period (1997 to 1999). The researchers in the 1998 coding team defended the absence of reliability testing on coded variables, and argued that certain categories in the job advertisements were not filled, making the number of observations unequal. They argue that this would have resulted in an inflated overall reliability, as factual

categories (for example, *Industry*) were generally filled and little variation in these categories was likely (Wilson & Surendorff, 1998).

A random selection of advertisements coded in 1998 was recoded in 1999 by a different coder. The results of this coding were checked against coding results obtained in 1998 and a reliability statistic was generated for correct nominations in this variable in relation to total advertisement nominations. In order to compare the nominations of each coder, a measure of reliability was borrowed from Holsti (1969, p. 140) that allowed the calculation of reliability statistics based on the number of agreements within the variables as compared with the number of disagreements. This reliability coefficient is a suitable measure of inter-rater agreement, but Holsti (1969) points out that it does not account for coder agreement by chance. As this variable contained many categories, the possibility of coders coding categories by chance diminished as compared to coders coding between only two choices. The statistic used was as follows:

$$\text{Reliability coefficient} = \frac{2M}{N^1 + N^2}$$

where M equals the number of coding decisions the coders are in agreement on, N^1 equals the total coding decisions of the choice of the first specialisation and N^2 equals the total coding decisions of the second specialisation.

Reliabilities of 79% for the category *research psychology* and 75% for the choice of *industrial psychology* were attained. Other categories such as *clinical, educational, and counselling psychology* yielded rates of inter-rater agreement of below 50%. Overall, the inter-rater agreement for all nominations was 67%.

Few guidelines direct the establishment of criteria for acceptable inter-rater reliability. Criteria for high and low correlations exist for measurement data, but the same does not exist for agreement rates for nominal data. Haas, Malouf and Meyerson (1986) and Chevalier and Leon (1993), however, set the criteria for acceptable inter-rater reliability at 75%, whereas Durrheim and Mokeki (1997) obtained relatively high inter-rater reliability rates of between 94.5% and 97.8% for categories within their variables under analysis. Given a range of acceptable inter-rater reliability from 75% to 98% and in the absence of established criteria for good inter-rater agreement, 75% was accepted for the purposes of this study. For the categories *research* and *industrial psychology*, the inter-rater reliability statistics are therefore acceptable allowing for the analysis of trends in these categories. For other categories within this

variable the same, however, cannot be said and inter-rater reliabilities for *clinical, counselling, educational, social and community psychology* are low. This must be borne in mind when analysing results obtained from this study.

3.8 What is credibility?

According to Scott (1990), content analysis has the potential to create data that meets conditions of credibility, reliability and validity. To ensure that the analysed data were credible, accurate and ethical, as well as to maintain a high level of research ethics, and ethically responsible generalisations on the basis of the data set were made (Stouthamer-Loeber & Bok van Kammen, 1995), a number of quality control measures were implemented.

One attempt at quality control involved auditing the data set. This audit involved the 'cleaning' of the data. During the coding phase — and the addition of advertisements to the existing data set created in 1998 — it was noted that certain advertisements were incorrectly labelled resulting in the assigned casenames not being consistent with other entries. All advertisements in the data set were therefore checked against the photocopied advertisements to ensure that the allocation of casenames was correct.

The completeness of the data set was initially assessed by drawing a random sample of 10% of cases for checking, as is recommended by Durrheim (1999b). This random sample was done to evaluate the systematic inclusion of advertisements across all categories. This exercise did not address the consistency and reliability of coding. This was instead addressed through the undertaking of a reliability analysis. The analysis of the randomly drawn advertisements indicated that many advertisements contained errors. Cases were considered to be in error where the checking of the photocopied advertisements against the data set yielded missing advertisements in the data set. Where advertisements were present in the photocopied archives but not reflected in the data set, these advertisements were coded and included as new cases in the data set. Duplicate entries were noted and deleted. Advertisements that were assigned incorrect casenames were corrected. Where casenames did not follow sequentially, these were checked against original photocopied advertisements and corrected where required. In total, 194 advertisements were deleted and 106 missing advertisements were included into the data set. All advertisements coded in 1999 were correctly entered and showed none of the errors of credibility described above. The difference between the two years is owing to the respective attention to detail of each research

team. Attention to housekeeping detail of the 1999 data set seems to be higher. It should be noted that data error here is generally unintentional, and due to carelessness and lack of correct documentation as opposed to intentional deception.

Detailed notes have been kept as to the changes made to the database and these notes may be consulted in the event of future data auditing. The presence of error in a data set may have contributed to systematic error and constituted a pattern in the results generated. However, given that all errors were satisfactorily corrected for, it may be argued that systematic error in the inclusion of advertisements was not a significant risk to the credibility of the data set. The final data set used in analysis was consistent with all photocopied and archived advertisements.

3.9 Validity

Scott (1990) also advises that research is undertaken with considerations of validity. A valid set of data and results emerging from that data would be relevant, representative, appropriately sampled and measuring what it is intends to measure.

The newspaper advertisements selected in this research covered a long period, spanning the mid- and post-apartheid political periods in South Africa, thereby offering a perspective of trends in this period. The generalisation from particular conditions (such as newspaper advertisements) to general conditions (such as the broad employment trends) must, however, be done carefully. Newspaper advertisements contribute to the employment market, but they are not the only source for employment seekers nor — as argued previously — do they represent jobs advertised in daily newspapers. The advertisements sampled might therefore reflect trends of a small proportion of jobs sought and may arguably not constitute an ecologically valid data set.

The reliability of the data set was, however, improved by using relatively objective variables, as well as categories with high reliabilities within variables. Given these interventions, the data set was determined to be highly credible and offered the potential for valid conclusions to be drawn.

3.10 Concluding remarks

This chapter outlined and justified the methodology used to generate data for analysis and to answer the research questions. Chapter 4 examines the data set by means of a statistical analysis and findings for discussion and debate are outlined in Chapter 5.

4 RESULTS

4.1 Introductory remarks

This chapter begins by justifying the chosen method of analysis, χ^2 analysis. It also examines the data gathered and provides the results of the statistical analysis in relation to the research questions posed in Chapter 2 – the review of literature. These research questions will be addressed and the findings of analysis will be reported. An analysis and discussion of these results will be undertaken in Chapter 5.

4.2 Method of analysis

General descriptive statistics in the form of frequencies and percentages were conducted on variables in the data set in order to answer the research questions. Statistical significance was tested with χ^2 analyses at a 5% level of significance. χ^2 analysis is the appropriate analysis in this instance as it allows for the inferential analysis of frequency or count data (Howell, 1999), in this case job advertisements.

4.3 The demand for a professional registration in psychology

The first research question asked in Chapter 2, 'What is the demand for professional registration in psychology?', was tested by generating a table of percentages and itemising the percentages of demand within each registration category in psychology. *Table 1* is the result of a percentage analysis on the variable *Profession Psychology/Psychological Area (specified)*

Analysis of the data suggested that the demand for a professional registration with the HPCSA or PsySSA is not an important requirement for graduates of psychology. Text such as '*the candidate should be registered with the Medical and Dental Council*' appearing in the job advertisement would indicate demand in a particular category. In addition, demand for a specific professional specialisation – such as '*the candidate should be registered in the category industrial psychology with the Health professions Council of South Africa*' – indicated job demand for a specific registration category in psychology.

Table 1: Specification of professional registration categories in psychology (1976–1998) (N=5769)

Category	N	% of specified adverts	% of total (5769)
Reg required (category not specified)	170	44.62%	2.99%
Psychometrist	96	25.20%	1.69%
Clinical	36	9.45%	0.63%
Counselling	29	7.61%	0.51%
Industrial	25	6.56%	0.44%
Education	10	2.62%	0.18%
Registration an advantage (category not specified)	9	2.36%	0.16%
An intern in any category	5	1.31%	0.09%
Research	1	0.26%	0.02%
Total	381	100%	6.71%

Table 1 indicates that, in total, only 6.71% of advertisements selected required a professional registration in psychology. Of the specialisations in the profession, psychometrists (1.69% of total), clinical psychologists (0.63% of total) and counselling psychologists (0.51% of total) were in greatest demand over the 23-year period. Professional registration as a research psychologist was in least demand (0.02% of total), with only one advertisement over a 23-year period advertising for this professional qualification. This low count indicates that the demand for professional registration in the category of research psychology is very low, and is especially low relative to other specialisations within professional psychology.

4.4 The demand for a professional registration in psychology across time

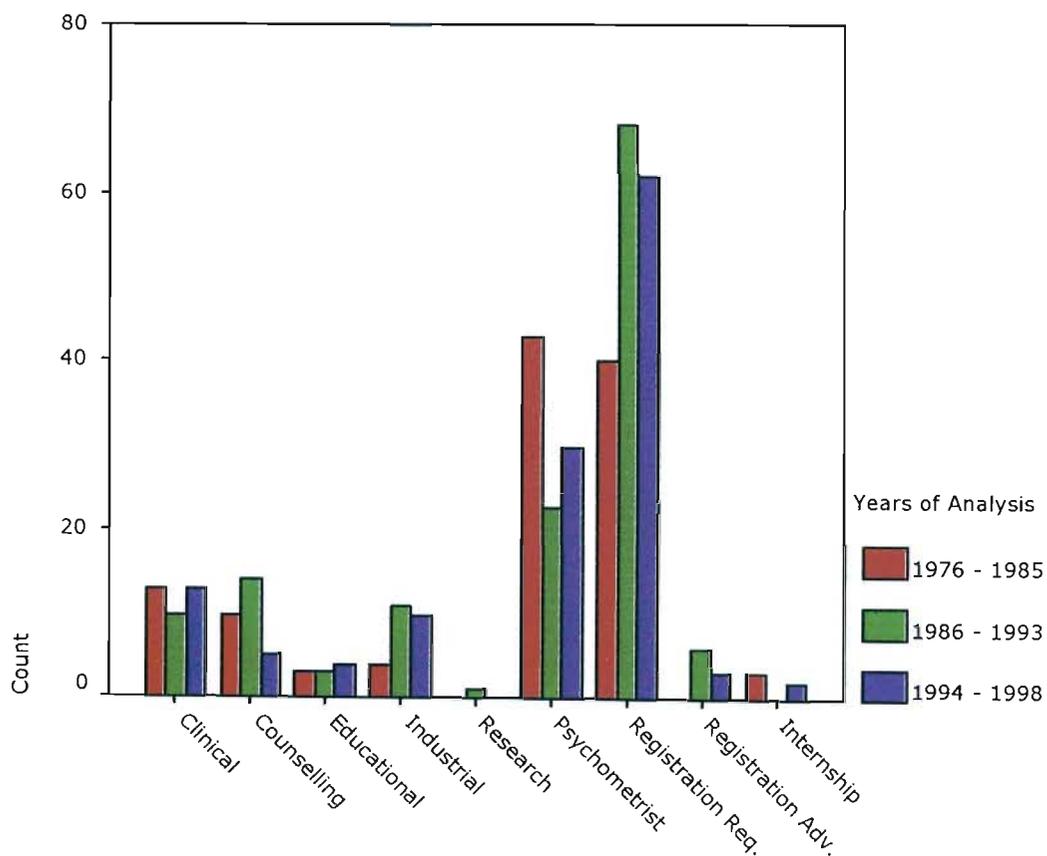
To determine whether or not the demand for psychologists who hold a professional registration in psychology is different across time, the variables *Profession Psychology/ Psychological Area (specified)* and *Time* were analysed by χ^2 . Table 2 is the outcome of this analysis. The variable *Profession Psychology/ Psychological Area (specified)* covers newspaper job advertisements that require a professional registration.

These results indicate that there has been a change in the demand for professional registrations across time ($\chi^2 = 131.95$, $df = 20$, $p < 0.00017$, Cramer's $V^4 = 0.107$). Placers of newspaper job advertisements relevant to social science graduates have, across time, generally not requested that the applicant hold a professional registration in psychology; this is indicated by a high number of missing nominations for this category (93.38%).

Figure 1 shows the number of counts of *Profession Psychology/Psychological Area (specified)* in advertisements across *Time* and indicates little numerical growth in the demand in certain professional registration categories across time. However, an interrogation of the significant χ^2 and the adjusted standardised residuals in Table 2 below illustrates the significant relationships between cells.

In Figure 1 the categories *psychometrist* and *registration required* show irregular increases and decreases. For the registration category *psychometrist*, the most nominations were obtained in 1976 to 1985. For the category *registration required*, the most nominations were obtained in 1986 to 1993.

Figure 1: Time and Profession Psychology/Psychological Area (specified) excluding the missing category⁵



⁴ Φ allows one to see the level of association regardless of the size of the table and is an overall measure of association that, unlike Chi-square, does not change if the table size changes. 1.00 would show a perfect association, 0 would show none, much like a correlation coefficient (Phi) (Howell, 1999).

⁵ Missing specifications (n=5387) have not been graphically displayed as this would have forced the graph out of scale.

It should be noted that there is a low expected count in many cells in *Table 2*. Fourteen cells (42.4%) have an expected count of less than 5. The minimum expected count is 0.19. Twelve cells in *Table 2* (44.4%) have an expected count of less than 5 (the expected count was 0.3). An assumption of χ^2 is that the expected frequency for each category be at least 1. No more than 20% of the categories should have expected frequencies of less than 5 as this may reduce the power of the test (Howell, 1999). With tables of more than 9 cells, however, this is less of a problem (Howell, 1999). χ^2 is a conservative test that produces few false positives (Type I error: rejecting the null when it is true). Low power, however, may result in existing significant differences remaining undetected (Howell, 1999). In the case of *Table 2* the number of cells exceeds 9 making the low count less of a problem.

For *clinical, counselling, educational, industrial and research psychology*, the demand for a professional registration is mostly statistically unchanged across time (only 11 of the 27 adjusted standardised residuals relating to professional registration categories were significant). In the category *clinical psychology*, the adjusted standardised residual increases to 2.15 in the time period 1976 to 1985, showing popularity for this registration at that time. For *counselling psychology*, the adjusted standardised residual increases to 3.64 in the time period 1986 to 1993 and decreases to -4.32 in the time period 1994 to 1998. Significant adjusted standardised residuals are noted for *industrial* (2.24) and *research* (2.09) psychology in the period 1986 to 1993. For the category *psychometry*, an increasing standardised residual is noted for the period 1976 to 1985, whereas a decreasing adjusted standardised residual of -5.79 is noted in the period 1994 to 1998. Recruiters, however, call broadly for a *professional registration (required)* – which may include any of the registration categories – in the period 1986 to 1993 (adjusted standardised residual = 5.88); declining in 1994 to 1998 (adjusted standardised residual = -5.23). In 1986 to 1993, recruiters found *professional registrations advantageous* – which may include any of the registration categories – but not a requirement (adjusted standardised residual = 2.85). Interestingly, *Table 2* reflects the absence of mention for a professional registration in the bulk of the advertisements selected. The number of *missing* nominations increased significantly in 1994 to 1998 (adjusted standardised residual = 8.86) as compared with 1976 to 1985 (adjusted standardised residual = -4.39) and 1986 to 1993 (adjusted standardised residual = -6.52).

Table 2: Specification of Time and Profession Psychology/Psychological Area (specified) (n=5769)

Time	Missing	Clinical	Counselling	Educational	Industrial	Research	Psychometry	Registration Required	Registration Advantageous	Intern in any category	Total
1976–1985 <i>Count</i>	1122	13	10	3	4	0	43	40	0	3	1238
<i>Expected Count</i>	1156.02	7.73	6.22	2.15	5.36	0.21	20.60	36.48	1.93	1.07	1238
<i>% within 1976–1985</i>	90.63	1.05	0.81	0.24	0.32	0	3.47	3.23	0	0.24	100
<i>% within prof.regs.</i>	20.83	36.11	34.48	30	16	0	44.79	23.53	0	60	21.46
<i>% of Total</i>	19.45	0.23	0.17	0.05	0.07	0	0.75	0.69	0	0.05	21.46
<i>Adj. Std. Residual.</i>	-4.39	2.15	1.71	0.66	-0.67	-0.52	5.62	0.67	-1.57	2.10	
1986–1993 <i>Count</i>	954	5	13	2	9	1	23	61	5	0	1073
<i>Expected Count</i>	1001.95	6.70	5.39	1.86	4.65	0.19	17.86	31.62	1.67	0.93	1073
<i>% within 1986–1993</i>	88.91	0.47	1.21	0.19	0.84	0.09	2.14	5.68	0.47	0	100
<i>% within prof.regs.</i>	17.71	13.89	44.83	20	36	100	23.96	35.88	55.56	0	18.60
<i>% of Total</i>	16.54	0.09	0.23	0.03	0.16	0.02	.40	1.06	0.09	0	18.60
<i>Adj. Std. Residual.</i>	-6.52	-0.73	3.64	0.11	2.24	2.09	1.36	5.88	2.85	-1.07	
1994–1998 <i>Count</i>	3311	18	6	5	12	0	30	69	4	2	3458
<i>Expected Count</i>	3229.03	21.58	17.38	5.99	14.99	0.60	57.54	101.90	5.39	3	3458
<i>% within 1994–1998</i>	95.75	0.52	0.17	0.14	0.35	0	0.87	2	0.12	0.06	100
<i>% within prof.regs.</i>	61.46	50	20.69	50	48	0	31.25	40.59	44.44	40	59.94
<i>% of Total</i>	57.39	0.31	0.10	0.09	0.21	0	0.52	1.20	0.07	0.03	59.94
<i>Adj. Std. Residual.</i>	8.86	-1.22	-4.32	-0.64	-1.22	-1.22	-5.79	-5.23	-0.95	-0.91	
Total <i>Count</i>	5387	36	29	10	25	1	96	170	9	5	5769
<i>Expected Count</i>	5387	36	29	10	25	1	96	170	9	5	5769
<i>% within 1976–1985</i>	93.38	0.62	0.50	0.17	0.43	0.02	1.66	2.95	0.16	0.09	100
<i>% within prof.regs.</i>	100	100	100	100	100	100	100	100	100	100	100
<i>% of Total</i>	93.38	0.62	0.50	0.17	0.43	0.02	1.66	2.95	0.16	0.09	100

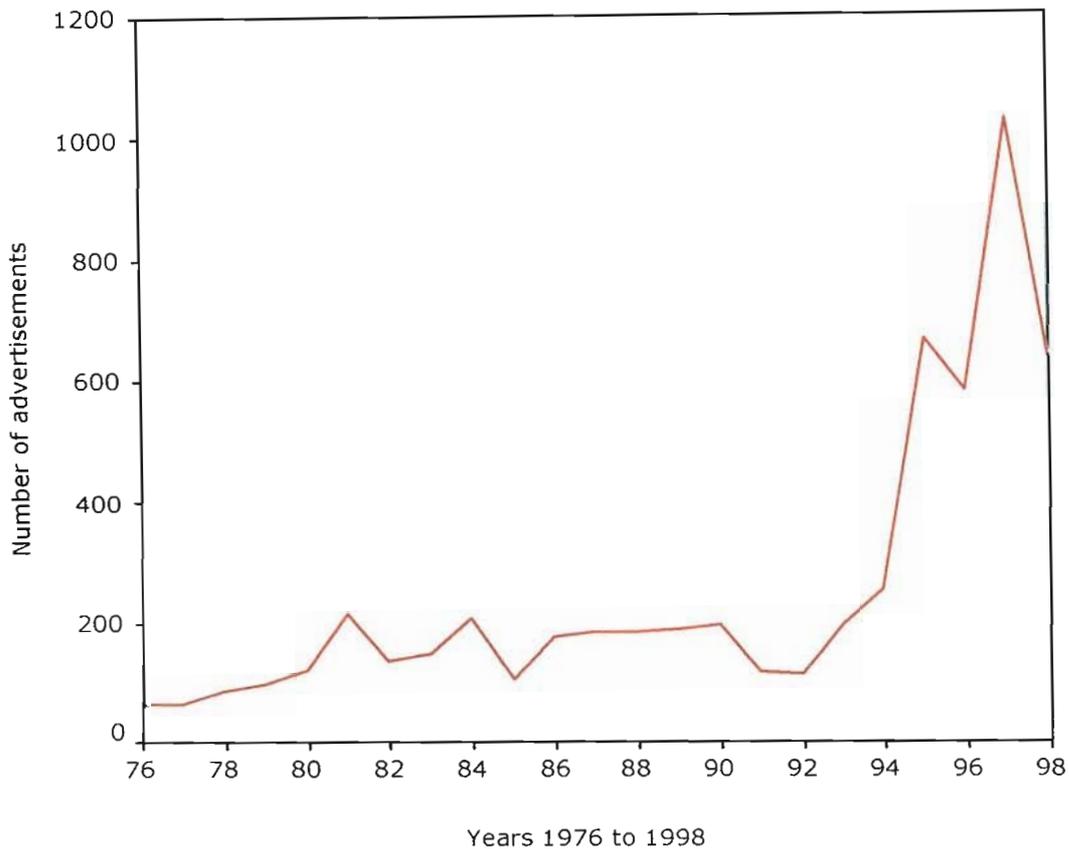
4.5 Number of advertised posts for Social Science graduates across Time

To determine whether there has been a change in the demand for social science graduates across time, an analysis of the number of advertisements selected was conducted. Despite the absence of growth in demand for graduates of psychology who hold certain professional registrations, there appears to have been a numerical increase in the number of jobs (of total 5769) advertised for graduates in the social sciences across time (including the behavioural and human sciences). This growth rate exceeds South Africa's population or economic growth rates (Wilson, 1998), indicating a real increase in the demand for those with backgrounds in the behavioural/human/social sciences. *Figure 2* below is the result of a count across *Time* of all advertisements selected. The small increases and decreases in the frequency of positions advertised probably reflect annual fluctuations.

Table 3: Frequency of advertisements for Social Science graduates across Time (1976–1998) (n=5769)

Time	Frequency	Percent	Time	Frequency	Percent
1976	61	1.06	1988	185	3.21
1977	62	1.07	1989	187	3.24
1978	87	1.51	1990	194	3.36
1979	96	1.66	1991	118	2.05
1980	121	2.10	1992	112	1.94
1981	214	3.71	1993	196	3.40
1982	138	2.39	1994	252	4.37
1983	147	2.55	1995	665	11.53
1984	208	3.61	1996	580	10.05
1985	104	1.80	1997	1033	17.91
1986	176	3.05	1998	648	11.23
1987	185	3.21	Total	5769	100

Figure 2: Advertisements for Social Science graduates across Time (total 5769)



In 1976, 61 job advertisements were applicable to social science graduates. In 1986, this figure had increased to 176 while by 1998, 648 jobs were advertised. This represents a growth rate of 948% over 23 years. The slow increase is visible in the non-linear, non-incremental increase across time. A dramatic increase to 1027 advertised jobs is observed in 1997.

Given that a count was not undertaken of all advertisements appearing in the newspapers sampled across time, and all advertisements appearing in these newspapers were not coded according to applicable disciplines, it is impossible to ascertain, the proportional increase of social science positions available to other disciplines over the time period.

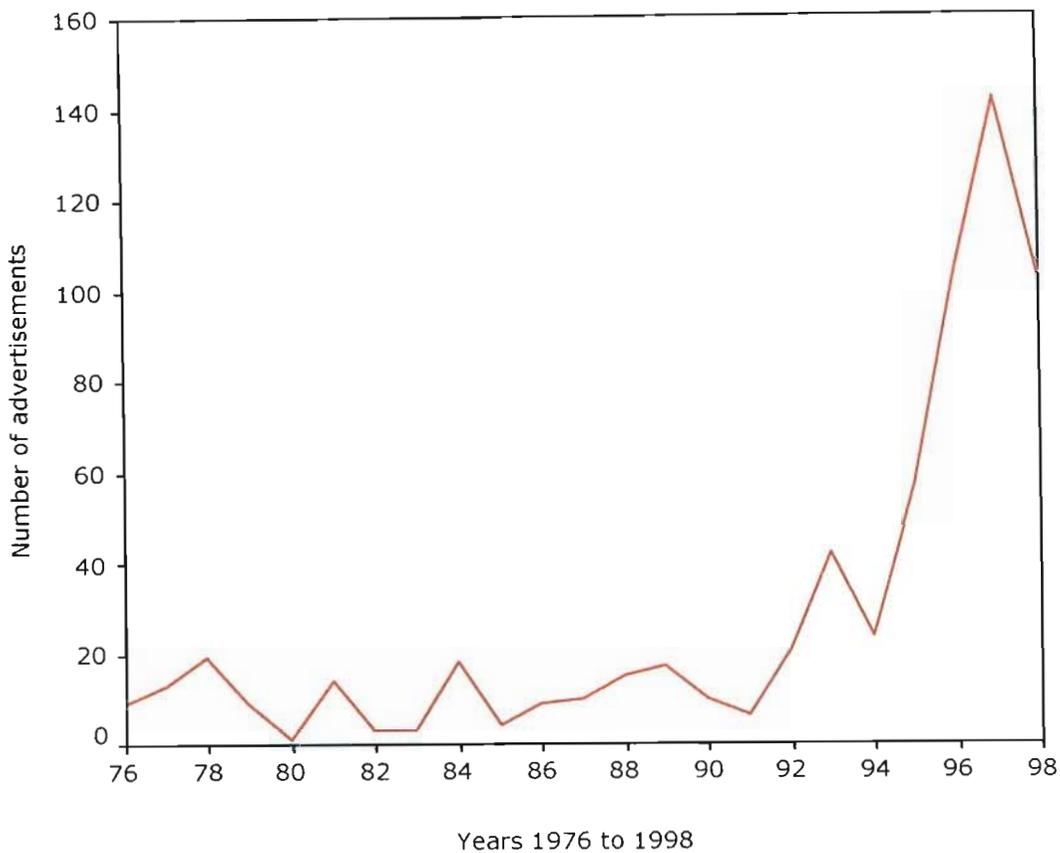
4.6 Number of advertised posts for *Research Psychology* graduates across *Time*

Figure 2 indicates that there has been a general increase across time in the demand for social science graduates, with a noteworthy increase occurring from 1992 onwards. As the category of interest in this thesis is research psychology, a specific count was performed on the category research psychology in the variable *Psychological Area (professional registration not specified)* to answer the research question: Has the number of posts advertised for research psychology graduates increased over time? *Figure 3* is the result of this count across a 23-year period. The figure indicates there has been a slow numerical increase in the number of jobs advertised for research psychology graduates. The small increases and decreases in the frequency of positions advertised probably reflect annual fluctuations.

Table 4: Frequencies of advertisements for *Time* and *Research Psychology* in the variable *Psychological Area (professional registration not specified)* (n=654)

Time	Frequency	Percent	Time	Frequency	Percent
1976	9	1.38	1988	15	2.29
1977	13	1.99	1989	17	2.60
1978	19	2.91	1990	10	1.53
1979	9	1.38	1991	6	0.92
1980	1	0.15	1992	21	3.21
1981	14	2.14	1993	42	6.42
1982	3	0.46	1994	24	3.67
1983	3	0.46	1995	57	8.72
1984	18	2.75	1996	105	16.06
1985	4	0.61	1997	142	21.71
1986	9	1.38	1998	103	15.75
1987	10	1.53	Total	654	100

Figure 3: Time and Research Psychology in the variable Psychological Area (professional registration not specified) (n=654)



The number of advertised positions remains relatively stable and low for the years 1976 to 1993, followed by an increase in growth in the mid-1990s. The distribution of *research psychology* appears to increase substantially from 1991 onwards, but is marked by increases and decreases over specific years. Whether this increase is real or nominal, reflected similarly in *Psychological Area (professional registration not specified)* across time, is of interest. This analysis is depicted in *Table 5* below.

4.7 The demand for Psychology Graduates across Time

The question of whether there has been a change in demand for specialisations in psychology across time, as well as to answer the question: *What is the demand for other psychology graduates over time?* was tested by generating a cross-tabulation of actual counts and percentages of the variable *Specialisations* within clustered *Time* categories. *Table 5* is the result of a crosstabulation of the variable *Time and Psychological Area (professional registration not specified)*.

Table 5: Time and Psychological Area (professional registration not specified) (n=5931)

Time	Psychometry	Clinical	Counselling	Educational	Industrial	Research	Community	Social	No spec/ Missing	Total	
1976-1985	Count	60	21	59	93	940	93	10	7	32	1315
	% within 1976-1985	4.56	1.60	4.49	7.07	71.48	7.07	0.76	0.53	2.43	82
	% within all psy specs	34.29	20.79	25.88	15.30	30.51	14.22	1.11	15.91	22.54	
	% of Total	1.01	0.35	0.99	1.57	15.85	1.57	0.17	0.12	0.54	22
1986-1993	Count	27	31	63	149	792	130	131	6	67	1396
	% within 1986-1993	1.93	2.22	4.51	10.67	56.73	9.31	9.38	0.43	4.80	100
	% within all psy specs	15.43	30.69	27.63	24.51	25.71	19.88	14.59	13.64	47.18	
	% of Total	0.46	0.52	1.06	2.51	13.35	2.19	2.21	0.10	1.13	24
1994-1998	Count	88	49	106	366	1349	431	757	31	43	3220
	% within 1994-1998	2.73	1.52	3.29	11.37	41.89	13.39	23.51	0.96	1.34	100
	% within all psy specs	50.29	48.51	46.49	60.20	43.78	65.90	84.30	70.45	30.28	
	% of Total	1.48	0.83	1.79	6.17	22.74	7.27	12.76	0.52	0.73	54
Total	Count	175	101	228	608	3081	654	898	44	142	5931
	% within all years	2.95	1.70	3.84	10.25	51.95	11.03	15.14	0.74	2.39	100
	% within all psy specs	100	100	100	100	100	100	100	100	100	
	% of Total	2.95	1.70	3.84	10.25	51.95	11.03	15.14	0.74	2.39	100

Across the time periods 1976 to 1985, 1986 to 1993 and 1994 to 1998 there appears to be a change in the demand for specialisations in psychology. Table 5 indicates that *research psychology*, in particular, has shown growth over the three time periods (1976 to 1985, 1986 to 1993 and 1994 to 1998). From 1994, however, there has been a marked increase in demand for graduates in *research psychology*, increasing from 93 nominations in the period 1973 to 1985 to 431 in the period 1994 to 1998. The increase in demand for *research psychology* graduates is overshadowed by a dramatic increase in demand for graduates with a background in *community psychology*. From 1994, however, there has been a marked increase in demand for graduates in *community psychology*, increasing from 10 nominations in the period 1973 to 1985 to 757 in the period 1994 to 1998. Clinical psychology is in consistently low demand across time. Only 21 (1.6%) advertisements were counted in 1976 to 1985, 31 (2.2%) advertisements in 1986 to 1993 and 49 (1.5%) in 1994 to 1998. *Counselling*⁶ psychology shows a dramatic drop in the 1990s. 59 (4.5%) advertisements were counted in 1976 to 1985, 63 (4.5%) advertisements in 1986 to 1993 and 106 (3.3%) in 1994 to 1998.

It was not possible to test the association between these variables by means of chi-square analysis. The assumption of independence, required for chi-square analysis, was violated through the counting of more than one *Psychological Area (professional registration not specified)* per newspaper advertisement.

⁶ A comparison of specialisations must be done cautiously given that many of these variables had a low reliability level. Comparisons may be misleading, but do have an indicative value.

4.8 The demand for *Social Science* graduates by *Industry* and *Time*

A χ^2 analysis was run to test the hypothesis that there is no association in the demand for social science graduates by various industries across time (Research question: *What is the demand for social science graduates by particular industries over time?*) The analysis indicated that there was a relationship between industry and time ($\chi^2=1356.95$, $df=14$, $p < 0.0001$, Cramer's $V=0.351$).

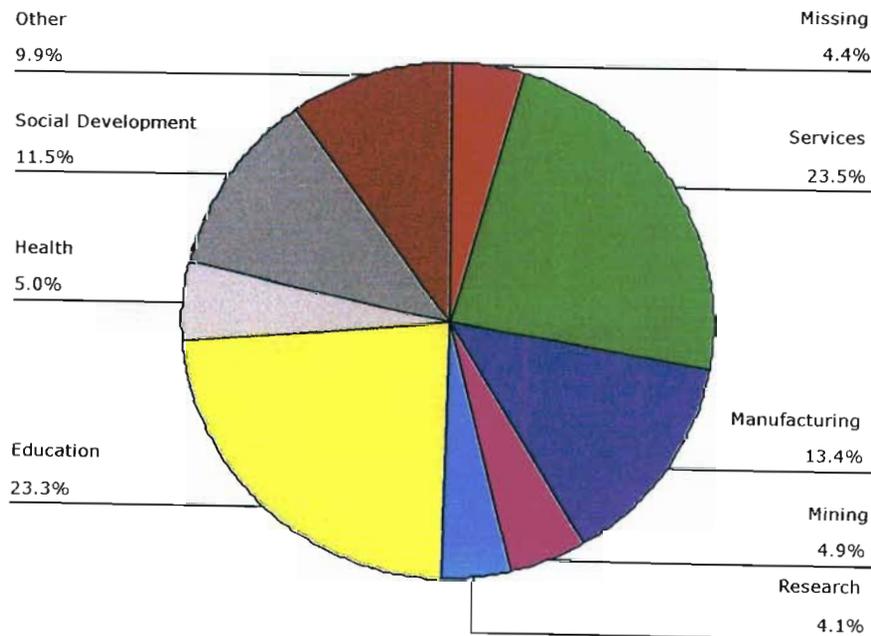
A closer inspection of the cell contents and adjusted standardised residuals in *Table 6* indicate the industries and time periods showing significant relationships. Industries such as *research* (2.35), *education* (3.82), *services* (7.20), *health* (12.46) and *social development/welfare* (16.88) show increased demand in the period 1994 to 1998. Decreases in demand in the period 1994 to 1998 were indicated in labour-intensive industries such as *manufacturing/industrial* (-24.53) and *mining* (-17.29).

Table 6 and *Figure 4* indicate that the most popular employers of social science graduates from 1976 to 1998 have been, in descending order: *services* (24.58%), *education* (24.4%), *manufacturing* (14%), *social development/welfare* (11.98%), *health* (5.24%) and *mining* (5.15%). In the period 1994 to 1998, the most popular employers of social science graduates were *services* (27.92%), *education* (26.17%) and *social development/welfare* (17.88%). By combining the adjusted standardised residuals with an analysis of percentage, it may be concluded that in the period 1994 to 1998, the *services*, *education* and *social development/welfare* industries show both the greatest growth across time and are the largest employers of social science graduates.

Table 6: Time and Industry for all Social Science Graduates (n=5769)

Time	Services	Manufacturing/ Industrial	Mining	Research	Education	Health	Social Development/ Welfare	Other	Missing	Total
1976-1985 Count	224	358	165	61	200	8	16	132	74	1238
Expected Count	290.99	165.67	60.95	50.22	288.85	62.02	141.85	123.18	54.29	1238
% within Years	18.09	28.92	13.33	4.93	16.16	0.65	1.29	10.66	5.98	100
% within Industries	16.52	46.37	58.10	26.07	14.86	2.77	2.42	23.00	29.25	21.46
% of Total	3.88	6.21	2.86	1.06	3.47	0.14	0.28	2.29	1.28	21.46
Adj. Std. Residual	-5.07	18.12	15.42	1.75	-6.74	-7.94	-12.67	0.95	3.09	
1986-1993 Count	192	251	84	13	265	4	43	133	88	1073
Expected Count	252.21	143.59	52.82	43.52	250.35	53.75	122.94	106.76	47.06	1073
% within Years	17.89	23.39	7.83	1.21	24.70	0.37	4.01	12.40	8.20	100
% within Industries	14.16	32.51	29.58	5.56	19.69	1.38	6.51	23.17	34.78	18.60
% of Total	3.33	4.35	1.46	0.23	4.59	0.07	0.75	2.31	1.53	18.60
Adj. Std. Residual	-4.80	10.68	4.88	-5.24	1.17	-7.72	-8.49	2.97	6.77	
1994-1998 Count	940	163	35	160	881	277	602	309	91	3458
Expected Count	812.80	462.75	170.23	140.26	806.81	173.23	396.21	344.06	151.65	3458
% within Years	27.18	4.71	1.01	4.63	25.48	8.01	17.41	8.94	2.63	100
% within Industries	69.32	21.11	12.32	68.38	65.45	95.85	91.07	53.83	35.97	59.94
% of Total	16.29	2.83	0.61	2.77	15.27	4.80	10.44	5.36	1.58	59.94
Adj. Std. Residual	8.06	-23.66	-16.79	2.69	4.71	12.78	17.36	-3.15	-7.96	
Total Count	1356	772	284	234	1346	289	661	574	253	5769
Expected Count	1356	772	284	234	1346	289	661	574	253	5769
% within Years	23.50	13.38	4.92	4.06	23.33	5.01	11.46	9.95	4.39	100
% within Industries	100	100	100	100	100	100	100	100	100	100
% of Total	23.50	13.38	4.92	4.06	23.33	5.01	11.46	9.95	4.39	100

Figure 4: Industries offering employment to Social Science graduates from 1976 to 1998 (n=5769)⁷



⁷ Variables of less than 5% collapsed into 'Other' category, including category 'Research'=234(4.2%). 'Other' also includes the industries Agriculture (1.2%), Retail (0.8%), Communications (1.3%),

4.9 The demand for *Psychology Graduates by Industry*

The question of whether there has been a change in demand for psychology graduates by specific industries over time, as well as to answer the question: *What is the demand for psychology graduates by particular industries over time?*) was tested by generating a cross-tabulation of actual counts and percentages of the variables *Industry* and *Profession Psychology/Psychological Area (not specified)* (Table 6).

Table 7: Industry for Psychology Graduates (n=5934) from 1976 to 1998.

Psychology specialisation		Services	Manufacturing/ Industrial	Mining	Research	Education	Health	Social Development/ Welfare	Other	Missing	Total
Industrial	Count	881	753	261	64	281	96	88	462	196	3082
	% within psy specs	28.59	24.43	8.47	2.08	9.12	3.11	2.86	14.99	6.36	100
	% within Industries	67.82	95.20	88.18	20.78	19.53	39.02	12.17	75.61	88.69	51.94
	% of Total	14.85	12.69	4.40	1.08	4.74	1.62	1.48	7.79	3.30	51.94
Psychometrics	Count	31	17	9	1	85		3	19	10	175
	% within psy specs	17.71	9.71	5.14	0.57	48.57		1.71	10.86	5.71	100
	% within Industries	2.39	2.15	3.04	0.32	5.91		0.41	3.11	4.52	2.95
	% of Total	0.52	0.29	0.15	0.02	1.43		0.05	0.32	0.17	2.95
Education	Count	32	6	4	13	497	6	46	3	1	608
	% within psy specs	5.26	0.99	0.66	2.14	81.74	0.99	7.57	0.49	0.16	100
	% within Industries	2.46	0.76	1.35	4.22	34.54	2.44	6.36	0.49	0.45	10.25
	% of Total	0.54	0.10	0.07	0.22	8.38	0.10	0.78	0.05	0.02	10.25
Counselling	Count	45	2	3		108	5	53	6	6	228
	% within psy specs	19.74	0.88	1.32		47.37	2.19	23.25	2.63	2.63	100
	% within Industries	3.46	0.25	1.01		7.51	2.03	7.33	0.98	2.71	3.84
	% of Total	0.76	0.03	0.05		1.82	0.08	0.89	0.10	0.10	3.84
Research	Count	102	6	8	206	162	26	114	30		654
	% within psy specs	15.60	0.92	1.22	31.50	24.77	3.98	17.43	4.59		100
	% within Industries	7.85	0.76	2.70	66.88	11.26	10.57	15.77	4.91		11.02
	% of Total	1.72	0.10	0.13	3.47	2.73	0.44	1.92	0.51		11.02
Community	Count	178	6	4	23	121	85	394	85	2	898
	% within psy specs	19.82	0.67	0.45	2.56	13.47	9.47	43.88	9.47	0.22	100
	% within Industries	13.70	0.76	1.35	7.47	8.41	34.55	54.50	13.91	0.90	15.13
	% of Total	3.00	0.10	0.07	0.39	2.04	1.43	6.64	1.43	0.03	15.13
Clinical	Count	13	1	4		42	22	8	6	5	101
	% within psy specs	12.87	0.99	3.96		41.58	21.78	7.92	5.94	4.95	100
	% within Industries	1.00	0.13	1.35		2.92	8.94	1.11	0.98	2.26	1.70
	% of Total	0.22	0.02	0.07		0.71	0.37	0.13	0.10	0.08	1.70
Social	Count	15		2	1	8	5	12		1	44
	% within psy specs	34.09		4.55	2.27	18.18	11.36	27.27		2.27	100
	% within Industries	1.15		0.68	0.32	0.56	2.03	1.66		0.45	0.74
	% of Total	0.25		0.03	0.02	0.13	0.08	0.20		0.02	0.74
Not Specified	Count	1		1		134	1	5			142
	% within psy specs	0.70		0.70		94.37	0.70	3.52			100
	% within Industries	0.08		0.34		9.31	0.41	0.69			2.39
	% of Total	0.02		0.02		2.26	0.02	0.08			2.39
Total	Count	1299	791	296	308	1439	246	723	611	221	5934
	% within psy specs	21.89	13.33	4.99	5.19	24.25	4.15	12.18	10.30	3.72	100
	% within Industries	100	100	100	100	100	100	100	100	100	100
	% of Total	21.89	13.33	4.99	5.19	24.25	4.15	12.18	10.30	3.72	100

Construction (0.5%), Professional Development (1.3%), Technology/Science (0.9%), Investments (3.5%) and Consumer (0.9%).

A closer inspection of the cell contents and adjusted standardised residuals in *Table 7* indicate the industries and specialisations in psychology showing significant relationships. From 1976 to 1998, the industries most likely to employ students with a background in industrial psychology are the *services* (n=881), *education* (n=281) *manufacturing/industrial* (n=753) and *mining* (n=261) industries. The industries least likely to employ *industrial psychology* graduates are the *research* (n=64), *health* (96) and the *social development/welfare* (n=88) industries.

For the specialisation *psychometrists*, the industries most likely to employ such graduates are the *education* industry (n=85). The industries least likely to employ such graduates are *research* (n=1), *health* (n=0) and *social development/welfare* (n=3).

For the specialisation *educational psychology*, the industry most likely to employ such a specialisation is unsurprisingly *education* (n=497). All other industries are not substantial employers of educational psychology graduates: *services* (n=32), *manufacturing/industrial* (n=6), *mining* (n=4), *research* (n=13), *health* (n=13) and *social development/welfare* (n=46).

For the specialisation *counselling psychology*, the industries most likely to employ such graduates are *education* (n=108) and *social development/welfare* (n=53). The industries least likely to employ these graduates are *manufacturing/industrial* (n=2), *mining* (n=3) and *research* (n=0).

For the specialisation *clinical psychology*, the most popular employers are in the *education* (n=42) and *health* (n=22) industries. The least popular employers are in the *mining* (n=4), *manufacturing/industrial* (n=1) and *research* (n=0) industries.

For the psychological specialisation of *research*, the most likely employers are: *research* (n=206), *social development/welfare* (n=114) and *services* (n=102). *Manufacturing/industrial* (n=6), *mining* (n=8) are least likely to employ research psychology graduates relative to the other specialisation areas of psychology.

For *community psychology* specialists, the most popular employers are *social development/welfare* (n=394), *services* (n=178) and *health* (n=85). *Community psychology* graduates are least likely to find employment in the *manufacturing/industrial* (n=6), *mining* (n=4) and *research* (n=23) industries.

For *social psychology* graduates, the number of employers advertising for these graduates is small, however, the most likely employers are services (n=15), *social development/welfare* (n=12) and *health* (n=5). The least likely employer is *manufacturing/mining* (n=0).

4.10 The demand for *Research Psychology* graduates by *Industry* and *Time*

To test the hypothesis that there is no association in the demand for research psychology graduates and various industries across time (Research question: *What is the demand for research psychology graduates by particular industries over time?*), a χ^2 analysis was run. The analysis indicated that there was a relationship between industry and time ($\chi^2 = 127.18$, $df=8$, $p < 0.000086$, Cramer's $V=0.312$). The results of this analysis are in reported *Table 8*.

A closer inspection of the adjusted standardised residuals in individual cells indicates relationships between the row and column variables. Research organisations, research units and companies in the research industry predictably offered employment to graduates with a research psychology background. What is interesting, however, is the declining growth in this industry, as reflected in the adjusted standardised residuals. Whereas in 1976 to 1985 the jobs offered within this industry exceeded market expectations (adjusted standardised residual = 5.95), during the years 1986 to 1993 fewer employers in the research industry were offering employment (adjusted standardised residual -5.05). Slightly negative growth is seen recently in the period following 1994 (adjusted standardised residual -0.13).

In contrast to work offered within the *research* industry proper, there has been a growth in research offered in the *social development/welfare* industry. In the period 1976 to 1985, the actual jobs offered were below expectation (adjusted standardised residual -4.19). A growth was detected in the period 1986 to 1993 marked by an adjusted standardised residual of 2.41, while this growth decreased slightly to an adjusted standardised residual of 1.06 in the period following 1994 election.

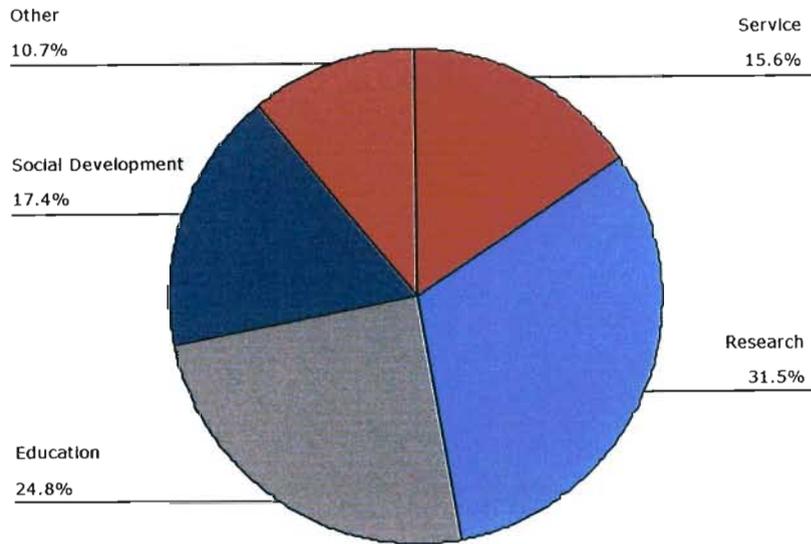
In the period 1986 to 1993, the adjusted standardised residual of 8.13 indicates an unexpected increase in demand for *research psychology* graduates in the *education* industry. In period 1994 to 1998, however, this demand appears to decline (adjusted standardised residual = -5.69). *Education* is therefore seemingly an industry that of late is not offering employment to graduates with a background in research psychology.

In contrast, the *services* industry (including the public sector) has exhibited a trend towards increased employment offered to graduates with a background in research. In 1976 to 1985, only eight positions were advertised (adjusted standardised residual = -2.01). This number was equally disappointing in 1986 to 1993 (adjusted standardised residual -4.40), however, in 1994 to 1998 the *service* sector offered 90 positions to graduates with a background in *research psychology*, marking a significant increase (adjusted standardised residual 5.18).

Table 8: Time and Industry for all Research Psychology graduates (n=654)

Time		Services	Research	Education	Social Development/ Welfare	Other	Total
1976-1985	<i>Count</i>	8	54	17	2	12	93
	<i>Expected Count</i>	14.50	29.29	23.04	16.21	9.95	93
	<i>% within Years</i>	8.60	58.06	18.28	2.15	12.90	100
	<i>% within Industry</i>	7.84	26.21	10.49	1.75	17.14	14.22
	<i>% of Total</i>	1.22	8.26	2.60	0.31	1.83	14.22
	<i>Adj. Std. Residual</i>	-2.01	5.95	-1.57	-4.19	0.74	
1986 to 1993	<i>Count</i>	4	17	68	32	9	130
	<i>Expected Count</i>	20.28	40.95	32.20	22.66	13.91	130
	<i>% within Years</i>	3.08	13.08	52.31	24.62	6.92	100
	<i>% within Industry</i>	3.92	8.25	41.98	28.07	12.86	19.88
	<i>% of Total</i>	0.61	2.60	10.40	4.89	1.38	19.88
	<i>Adj. Std. Residual</i>	-4.40	-5.05	8.13	2.41	-1.56	
1994-1998	<i>Count</i>	90	135	77	80	49	431
	<i>Expected Count</i>	67.22	135.76	106.76	75.13	46.13	431
	<i>% within Years</i>	20.88	31.32	17.87	18.56	11.37	100
	<i>% within Industry</i>	88.24	65.53	47.53	70.18	70	65.90
	<i>% of Total</i>	13.76	20.64	11.77	12.23	7.49	65.90
	<i>Adj. Std. Residual</i>	5.18	-0.13	-5.69	1.06	0.77	
Total	<i>Count</i>	102	206	162	114	70	654
	<i>Expected Count</i>	102	206	162	114	70	654
	<i>% within Years</i>	15.60	31.50	24.77	17.43	10.70	100
	<i>% within Industry</i>	100	100	100	100	100	100
	<i>% of Total</i>	15.60	31.50	24.77	17.43	10.70	100

Figure 5: Industries offering employment to Research Psychology graduates from 1976 to 1998 (n=654)⁸



4.11 The demand for Research Psychology graduates by Time and Sector

A χ^2 analysis was run to test the hypothesis that there is no difference in the demand for research psychology graduates and specific sectors across time. The analysis was run for the variables *Sector* and *Time* for advertisements in the category *Profession Psychology/ Psychological Area (not specified): Research Psychology* category (Research question: *What is the demand for research psychology graduates by particular sectors over time?*) The H_0 is: There is no association between the variables *Time* and *Sector* for this category of graduates. *Table 9* outlines these results. The analysis indicated that there was a relationship between industry and time ($\chi^2 = 97.379$, $df=4$, $p < 0.00036$, Cramer’s $V=0.273$).

⁸ Missing data = 0. Variables of less than 5% collapsed into 'Other' category which includes the industries Agriculture (0.5%), Retail (0.5%), Communications (0.7%), Construction (0%), Professional Development (0.9%), Health (4%), Manufacturing (0.9%), Mining (1.2%), Technology/Science (0.3%), Investments (1.4%) and Consumer (0.2%).

Table 9: Sector demand for Research Psychology Graduates across Time (n=654)

Time		Public	Private	NGO	Total
1976–1985	Count	58	30	5	93
	Expected Count	71.95	7.68	13.37	93
	% within all years	62.37	32.26	5.38	100
	% within Sector	11.46	55.56	5.32	14.22
	% of Total	8.87	4.59	0.76	14.22
	Adj. Std. Residual	-3.73	9.08	-2.67	
1986–1993	Count	93	4	33	130
	Expected Count	100.58	10.73	18.69	130
	% within all years	71.54	3.08	25.38	100
	% within Sector	18.38	7.41	35.11	19.88
	% of Total	14.22	0.61	5.05	19.88
	Adj. Std. Residual	-1.78	-2.40	4	
1994–1998	Count	355	20	56	431
	Expected Count	333.46	35.59	61.95	431
	% within all years	82.37	4.64	12.99	100
	% within Sector	70.16	37.04	59.57	65.90
	% of Total	54.28	3.06	8.56	65.90
	Adj. Std. Residual	4.25	-4.67	-1.40	
Total	Count	506	54	94	654
	Expected Count	506	54	94	654
	% within all years	77.37	8.26	14.37	100
	% within Sector	100	100	100	100
	% of Total	77.37	8.26	14.37	100

A closer inspection of the cells and the adjusted standardised residuals indicates the presence of relationships between categories within the variables. For the period 1976 to 1985, 58 positions were advertised in the *public sector* whereas 72 positions were statistically expected (adjusted standardised residual -3.73). This trend is similar in the 1986 to 1993 period (adjusted standardised residual -1.78), however, in 1994 to 1998 there appears to be an increase in employment offered in this sector (adjusted standardised residual 4.25).

For positions advertised in the *private sector*, graduates in research psychology are significantly less in demand relative to the *public sector* and the *NGO sector*. For 1976 to 1985, jobs offered in the *private sector* constituted 32.3% of all positions (adjusted standardised residual 9.08). This declined in 1986 to 1993 to comprise only 3.1% of all positions advertised within this period (adjusted standardised residual 2.4), whereas in 1994 to 1998 slightly more positions were advertised within the year (yet, the adjusted standardised residual was -4.67). Across time, there is therefore a decrease in demand for research psychology graduates within the *private sector*.

4.12 Demand for Tasks (Collapsed) across Time for Social Science graduates

The question of whether there has been a change in the skills/tasks profile of social science graduates across time and to answer the question, *What tasks (skills) are in greatest demand for social science graduates?* The variable *Task* was a less subjective

analysis of the content of newspaper advertisements. Furthermore, the coding of tasks was not limited to a number of choices; unlimited tasks could be coded. These tasks coded were not coded hierarchically. The 32 tasks were collapsed into seven categories. It was not possible to test the association between these variables by means of chi-square analysis.

The assumption of independence, required for chi-square analysis, was violated through the counting of more than one *Task* per newspaper advertisement, Therefore, the research question above was tested by generating a cross-tabulation of actual counts and percentages of the *Tasks* category within the categories of *Time*. *Table 10* is the result of a crosstabulation of the variable *Time and Tasks*.

Table 10: Demand for Tasks for all graduates across Time (n=14597)

Time		Administrative	Conflict	Technical Psychosocial	Training	Interpersonal	Research	Social Development	Total
1976-1985	Count	412	411	465	662	452	269	119	2790
	% within year	14.77	14.73	16.67	23.73	16.20	9.64	4.27	100
	% within tasks	16.38	26.53	35.15	24.16	13.34	16.92	7.98	19.11
	% of Total	2.82	2.82	3.19	4.54	3.10	1.84	0.82	19.11
1986-1993	Count	356	411	305	635	500	235	171	2613
	% within year	13.62	15.73	11.67	24.30	19.14	8.99	6.54	100
	% within tasks	14.16	26.53	23.05	23.18	14.75	14.78	11.47	17.90
	% of Total	2.44	2.82	2.09	4.35	3.43	1.61	1.17	17.90
1994-1998	Count	1747	727	553	1443	2437	1086	1201	9194
	% within year	19.00	7.91	6.01	15.70	26.51	11.81	13.06	100
	% within tasks	69.46	46.93	41.80	52.66	71.91	68.30	80.55	62.99
	% of Total	11.97	4.98	3.79	9.89	16.70	7.44	8.23	62.99
Total	Count	2515	1549	1323	2740	3389	1590	1491	14597
	% within year	17.23	10.61	9.06	18.77	23.22	10.89	10.21	100
	% within tasks	100	100	100	100	100	100	100	100
	% of Total	17.23	10.61	9.06	18.77	23.22	10.89	10.21	100

The demand for *research skills* appears to be increasing at a stable level across time. From a lower count of 269 it rises to 1086 advertisements requiring *research skills*. The task category of *administrative skills*, *interpersonal skills* and *social development* also shows an increase over time. In contrast, the demand for *technical psychosocial skills* exhibits a clear decline. In 1976 to 1985, the demand for such skills was 465, this demand declined in the period 1986 to 1993 to 305. In the period 1994 to 1998 there is a steep decline in the demand for these skills. Although the count of 553 nominations is nominally higher, this number is low relative to the increase in demand that is reflected across other categories of tasks. Other declines may be observed for *training skills* and *conflict skills*.

4.13 Social Change across Time for Psychology graduates

Newspaper job advertisements were analysed to determine the extent to which they communicated an overall goal of *social change*, that is, whether there is a relationship between the increase in demand for research skills and references to social change in advertisements (Research question: *To what extent has social change in South Africa impacted on the demand for psychology graduates?*). Table 11 below indicates that a commitment to social change — often described in the mission statements of organisations — or depicted within the context or nature of the job increases across time for graduates in the social sciences. The H_0 is: There is no association between the variables *Social Change* and *Time* for graduates. The result of this analysis is depicted in Table 10.

Table 11: Social Change across Time and Profession Psychology/Psychological Area (not specified) across Time (n=974)⁹

Time	Industrial	Psychometrics	Education	Counselling	Research	Community	Clinical	Social	Not specified	Total
1976–1985 Count	21	0	5	0	4	3	0	3	0	36
Expected Count	9.50	0.22	2.55	0.44	5.54	15.89	0.52	0.81	0.52	36
% within year	58.33	0	13.89	0	11.11	8.33	0	8.33	0	100
% within psy specs	8.17	0	7.25	0	2.67	0.70	0	13.64	0	3.70
% of Total	2.16	0	0.51	0	0.41	0.31	0	0.31	0	3.70
Adjusted Residual	4.43	-0.48	1.62	-0.68	-0.73	-4.41	-0.74	2.50	-0.74	
1986–1993 Count	63	2	14	5	12	18	5	0	1	120
Expected Count	31.66	0.74	8.50	1.48	18.48	52.98	1.72	2.71	1.72	120
% within year	52.50	1.67	11.67	4.17	10.00	15.00	4.17	0.00	0.83	100
% within psy specs	24.51	33.33	20.29	41.67	8.00	4.19	35.71	0.00	7.14	12.32
% of Total	6.47	0.21	1.44	0.51	1.23	1.85	0.51	0.00	0.10	12.32
Adjusted Residual	6.93	1.57	2.09	3.11	-1.75	-6.87	2.68	-1.78	-0.59	
1994–1998 Count	173	4	50	7	134	409	9	19	13	818
Expected Count	215.84	5.04	57.95	10.08	125.98	361.13	11.76	18.48	11.76	818
% within year	21.15	0.49	6.11	0.86	16.38	50.00	1.10	2.32	1.59	100
% within psy specs	67.32	66.67	72.46	58.33	89.33	95.12	64.29	86.36	92.86	83.98
% of Total	17.76	0.41	5.13	0.72	13.76	41.99	0.92	1.95	1.33	83.98
Adjusted Residual	-8.49	-1.16	-2.71	-2.44	1.94	8.42	-2.02	0.31	0.91	
Total Count	257	6	69	12	150	430	14	22	14	974
Expected Count	257	6	69	12	150	430	14	22	14	974
% within year	26.39	0.62	7.08	1.23	15.40	44.15	1.44	2.26	1.44	100
% within psy specs	100	100	100	100	100	100	100	100	100	100
% of Total	26.39	0.62	7.08	1.23	15.40	44.15	1.44	2.26	1.44	100

⁹ Only 974 nominations of the variable *Profession Psychology/Psychological Area (not specified)* reflected references to *Social Change*. Those not reflecting *Social Change* in the dataset have not been including in this analysis (i.e. 4795 missing cases).

The χ^2 indicates the existence of a relationship between these variables and the low Φ indicates a low level of association between the variables ($\chi^2=132.86$, $df=16$, $p < 00018$, $\Phi =0.37$). A closer inspection of the adjusted standardised residuals in individual cells, indicates relationships between the row and column variables. It should be noted that 11 cells (40.7%) have an expected count of less than 5. The minimum expected count is 0.22.

It is clear from the table above that the greatest reference to *social change* was made in the period 1994 to 1998 (83.98%). The period 1976 to 1985 saw the least incidence of references to *social change* in advertisements (3.7%). Specialisations that are most affected by *social change* in the period after 1994 appear to be *research* (adjusted standardised residual 1.94 in the period 1994 to 1998) and *community psychology* (adjusted standardised residual 8.42 in the period 1994 to 1998).

4.14 Concluding remarks

This chapter presents an analysis of data and answers the research questions by means of a descriptive and statistical analysis. It reports findings for discussion and debate in Chapter 5.

5. DISCUSSION

5.1 Introductory remarks

This chapter debates and discusses the research questions with reference to the literature surveyed in Chapter 2 and the results obtained and presented in Chapter 4. It also discusses the methodology presented in Chapter 3 and provides commentary to researchers interested in the content analysis of newspaper advertisements as a technique for measuring job demand.

5.2 Lessons from the study

This study set out to ascertain the demand trends in the employment of psychology graduates, with specific reference to research psychology in South Africa from 1976 to 1998. It did this by adopting a historical analysis of newspaper job advertisements over these years. In summary, the results of the analysis indicate that the demand for research skills has steadily increased across time relative to other registration categories, specialisations and skills within psychology. Significant growth in the period following 1994 has been observed. In addition to research psychology, there has been an increase in demand for community psychology specialists and employment in social development contexts.

The results indicate that there is an extremely low demand for psychologists who hold a professional registration in psychology, relative to the number of positions available to social science graduates. Only 6.6% of all advertisements selected called for a professional registration in psychology. 93.4% of advertisements did not specify that incumbents possess a professional registration at all. This figure indicates that a professional registration with a professional body such as the HPCSA is not a necessity for employment. This concurs with the study undertaken by Richter et al. (1998) which determined that the bulk of advertisements following 1994 did not specify an educational qualification i.e. non-specific academic background (*a university degree or a tertiary education*). This low demand for professional registration may be alternatively explained. Newspaper advertisements may assume that candidates applying for positions are in possession of a registration with professional bodies. It is likely that the demand for clinical psychologists is an under-representation of actual demand, given that clinicians are most likely to work in private practice (Richter et al., 1998). It is likely, however, that formal sector employers advertising in newspapers

have a relatively small and declining demand for professionally registered psychologists across time.

Of the Professional Board for Psychology registration categories, research psychology (n=1 over 26 years) is in lowest demand, whereas psychometrics (n=96) and clinical psychology (n=36) are most likely to be specified by employers. This is not surprising as the focus of the latter specialisations are clearly demarcated in Act 56 and are subject to legal penalty should professionals practice psychodiagnosis, psychotherapy and psychometrics without professional registration and the required level of education. Given that the specialisations of clinical and counselling psychology, the technical areas of psychological expertise are in greatest demand for postgraduate study in South Africa (Richter et al., 1998). It is interesting to note that there may be a low likelihood that these professionals be employed in the formal sector should they not enter private practice.

What appears to be a move away from the employment of professionals and a move towards generalist employment might arguably be a reflection of the economic and social realities of a South Africa emerging from apartheid. Of the employers that requested graduates be professionally registered, most did not specify the registration they should possess (44.6% of all advertisements that specified a professional registration). There appears to have been an increase in the number of jobs (of total 5769) advertised for graduates in the social sciences, despite the absence of growth in demand for graduates of psychology who hold professional registrations. This indicates that, across time, there is more employment available to social science graduates.

Reasons for the increase in demand for social science graduates have been offered by Stumpf (1993) who, at the crest of the new South African democracy, points to the pattern in developing countries for previously disadvantaged students to study the social sciences. Stumpf predicts that this pattern will endure until candidates choose to study the natural sciences (1993). Given the national focus on the social upliftment of disenfranchised blacks (Sellschop, 1993), the call for social science or non-specific degrees might be an attempt to accommodate disadvantaged students who have acquired an education in the social sciences. The supply of such students is ample. Despite the contribution of the social sciences to the social engineering policies of apartheid (Cloete, Muller & Orkin, 1986), the popularity of the social sciences and humanities among black students remains and is attributable to the influence of role models to whom black students have been exposed. These role models include

teachers, politicians and administrators, as opposed to engineers, scientists and businessmen (Duminy, 1992).

As an element of the repertoire of skills taught in the social sciences, research has been identified as increasing in demand owing to the knowledge demands of an information and a post-industrial society. The data analysed in this thesis reflects this trend. The demand for research psychology graduates has been increasing over time, especially since 1994. The other specialisations of psychology showing growth across time include community psychology and social psychology. This development is especially interesting and indicates that research psychologists, community and social psychologists have skills that are in relatively high demand in a democratic, post-apartheid South Africa. Similarly, the increase in research skills (a central component of training and practice for research psychologists) as compared with technical psychosocial skills (such as psychodiagnosis, psychotherapy, counselling and psychometrics, a requirement of, for example, clinical psychologists) testifies to the increasing importance of research and information management to contemporary society. The relatively low demand for technical psychosocial skills is surprising given the demand for behavioural scientists who are able to support South Africa in coming to terms with the residue of apartheid and the implications of HIV/AIDS on the population. Declines are also detected in the demand for training skills (typically the domain of industrial and educational psychologists) and conflict resolution skills (typically the domain of industrial psychologists). The significant decrease in demand for industrial psychology may indicate the less prominent role for industrial psychologists in the occupational landscape in the new South Africa as well as the increasing prominence of community – and research-minded graduates.

Other skills showing an increase in demand since 1994 are administrative, interpersonal and social development skills. The increased demand for graduates with social development skills may represent the national move to value social welfare and development in the context of a new South Africa. There is a demand for psychologists to perform a generic function. This may include having to perform needs assessments, design programmes, gather and analyse data, assess cost-effectiveness, measure outcomes and solve problems using an empirical approach. The development of knowledge and the conducting of research to 'design better mousetraps' (p. 463) appear to be critical skills for psychologists to develop (Belar, 1998).

Although the demand for psychology graduates with technical psychosocial skills has declined across time, the increase in demand for community psychology may extend

to opportunities for graduates with a clinical, counselling and educational psychology background. Given the skills in demand for social science graduates, psychology graduates possessing any of the five professional registrations are likely to obtain employment, provided they possess administration skills, interpersonal skills, skills in research and social development skills. Schneider (1987) predicted this and indicated the overlapping functions of those who have studied clinical psychology, experimental psychology or developmental psychology. An important consideration in evaluating the employability of job applicants appears to be the level of relevant skill to achieve competence in the job in question.

For educationalists constructing curricula, these research findings may prove useful in indicating the skills requirements of employers. Skills in social development, research, administration and interpersonal skills were reported to be in greatest demand. Although traditional psycho-technical areas are less frequently demanded they continue to absorb much teaching time and resources at universities. Strydom (1993), Duminy (1992) and Oosthuizen (1993) argue that postgraduate research courses should contain (amongst other core areas) training in report writing, as well as in lecturing and teaching techniques.

The small number of specifications for professionally registered research psychologists represents a low professional demand for this category as compared with other registration categories within psychology. An analysis of the number of nominations for graduates with a specialisation in research psychology (research) and community psychology since 1994 indicates, however, that the demand for this area is high relative to other specialisations such as clinical, counselling and industrial psychology across time. The increased demand for research psychologists is not surprising and corresponds with the social forecasts of Bell (1973), who asserts that there has been an increase in knowledge-based work and the development of professions in the modern occupational system. Alongside the increase in demand, there has been an overwhelming increase in the supply of graduates in psychology, both domestically and internationally (Richter et al., 1998; Rosenzweig, 1999).

In addition, research psychologists have enjoyed increased job opportunities as compared with other disciplines in psychology across time, especially and most recently, in the public sector. There has been a relative decline in demand for research psychologists in the private and NGO sectors. These sectors were popular employers of research psychology graduates in the period preceding 1994. It is possible that the NGO sector, which performed much social welfare and development

prior to the 1994 elections, experienced a loss of funds and therefore was unable to offer employment to the same number of researchers as compared with the struggle years of the mid-1980s. Between 1976 and 1985, the NGO sector offered little employment to graduates with a background in research psychology. From 1994 onwards, however, there was a decline in demand for researchers within the NGO sector. Naidoo (1997) argues that the election of the ANC to government led to much foreign donor funding being frozen or withheld until such time that the policies of the government towards social development and reconstruction were clarified. With the eventual establishment of an RDP office in government, much foreign donor funding was reapportioned to the government, leading to a decline in employment offered in the NGO sector (Naidoo, 1997).

The popular employment contents for research psychology graduates are public service industries such as schools, universities, colleges, municipal offices, hospitals, government departments, parastatals or technikons. Fewer graduates will be employed in the private sector by business, such as banks or the mining industry. This trend is in contrast with Bedell and Phayane (1998), as this study found that the private sector offered little employment to research psychology graduates as compared with other sectors. For the period 1994 to 1998 there was a decline in demand for graduates in the private sector (only 4.6% as compared to Bedell & Phayane's 49.7%). This might reflect a seasonal fluctuation or might likely be a result of different coding categories. More investigation into this phenomenon is required.

This study showed that the service industry (including the public service) (15.6%), social development (17.4%), education (24.8%) and the research industry (31.5%) are the largest employers of research psychology graduates. Research psychologists are therefore able to offer their skills in industries that allow for change and transformation to occur through research, social development and policy development. This trend has been confirmed internationally (Pion & Lipsey, 1984) and domestically (Bedell & Phayane, 1998). Pion and Lipsey (1984) note that graduates with a background in experimental psychology find employment in the US government. In South Africa, graduates in research psychology can find work in a number of contexts, such as government departments, parastatals, NGOs, consulting firms, the private sector, university departments, private research companies and research institutes (Bedell & Phayane, 1998).

Waterman, Waterman and Collard (1994) point to the importance of employees possessing multiple skills to enable them to focus on numerous variables across many

contexts in order to become 'career-resilient' to change, retrenchment and promotion, enabling them to 'thrive in an era in which the skills needed to remain competitive are changing at a dizzying pace' (Waterman et al., 1994, p. 88). Psychologists are career-resilient; in the event of a decrease in demand for the skills of psychologists, most psychologists would be able to enter aligned occupations such as teaching, management or administration (J. Louw, 1990). In addition to possessing multiple skills, research psychologists should be encouraged to continually explore the content areas of the industries in which they choose to undertake research. Research psychology graduates are likely to be better placed for employment in these industries, provided they familiarise themselves with relevant content areas. For example, research psychologists wishing to do, research and planning work in the education industry at, for instance, a *Sector Education and Training Authority (SETA)*, should familiarise themselves with the *Skills Development Act (1998)*, the *South African Qualifications Authority Act (1995)* and the *Skills Development Levies Act (1999)* in order to understand the education sector better.

Research psychology has been highly affected by the demand for social change in South Africa. The results indicated that jobs of relevance to research psychologists are likely to contain references to the requirement of social change as compared with other specialisations in psychology. In the period following 1994, graduates with specialisations in research and community psychology are expected to be committed to social change. The same is not true of clinical psychologists or psychometrics. Does this indicate that research and community psychologists are expected to transform South African society? Predictably, recruiters have become overt in their commitment to social change in the 1980s and 1990s, with a greater commitment to social change occurring in conjunction with the election of a national government committed to social change in 1994.

It appears from this study that research has moved out of its historical site of application in institutions of higher learning and research units (Wassenaar, 1998), and into wide-ranging applied contexts, such as social development and welfare, health and education. For those graduating in research specialities in the US and Canada, employment in the academic sector is less likely (Adair, Paivio, & Ritchie, 1996; Pion & Lipsey, 1984). In the US in 1975, 32.7% of all graduates were employed in universities. This figure dropped to 18.3% in 1980, decreasing further in 1981/82 to 9.2% (Stapp, Fulcher & Wicherski, 1984). The shrinking of the academic job market and its inability to offer employment to large numbers of psychology graduates (Stapp et al., 1984) has led to the importance of an uptake of research

psychologists in non-university contexts (Ellis, 1992). It appears that research psychologists are moving out of the 'ivory tower' — from employment in academia into areas of applied research.

5.3 Methodological appraisal

The methodology employed in this research provided an excellent basis for future research and development in the area of job demand in the social sciences. Much was achieved in the appraisal of the coding scheme developed and the benefits for using standard coding schemes available in South Africa. The sampling method was carefully considered and investigation was done into available newspaper media for sampling strategy. An analysis of the coding techniques and the advantages and disadvantages of the technique employed was conducted. A number of areas, however, require illustration in the final discussion and analysis of research findings. These have been presented below.

A decision was made to classify advertisements according to specialisations within psychology. Although these categories were developed and used consensually by coders, there was an absence of coding rules determining the application of these categories and they were affected by low inter-rater reliability statistics. The lack of consistent coding for the variable *Profession Psychology/Psychological Area (not specified)* is partly due to accidental and inconsistent coding but also speaks to the poorly understood professional specialisations/registration categories within the profession of psychology. The coders — who were senior students in the discipline of psychology) — other psychologists and the general public do not understand the difference between a professional clinical or counselling psychologist. To some extent this explains the lower-inter rater reliabilities and offers a possible rationale for the rejection of professional registration categories — sometimes debated as artificially created and not justified in terms of the required criteria for valid specialisation (Schneider 1987) — in favour of a single definition and professional title of a psychologist. However, the strong positive relationships across categories of the crosstabulation of *Industry* and *Profession Psychology/Psychological Area (not specified)* indicate that a measure of validity exists for this variable.

More evidence of the coded variables measuring what they intend to measure may be seen in the comparison of the variable *Profession Psychology/Psychological Area (not specified)* with the variable *Tasks*. The result of the analysis of these variables indicates an increasing demand for research and social development and welfare, both

in the profession of psychology and in the skills required by employers. Although the internal validity (or interpretive validity according to Durrheim & Wassenaar, 1999) of the interpretive categories appears consistent across variables (see grey shaded cells in *Table 7*), in the absence of a standard coding scheme, the more objective variable of *Tasks* (skills) may be considered to be the chief source of evidence underpinning this thesis. The results of this study generally hold in relation to international and other national trends and it may therefore be concluded that a fair level of internal validity exists.

The coding scheme represented skills as they occur in the natural environment, that is, the employment context of certain South African newspapers. It is, however, inconsistent with standardised coding protocols. For example, the International Labour Organisation (ILO) promotes the use of SOC Codes and SIC Codes for the internationally comparable coding of occupations and industries/sectors. Stats SA also makes use of SIC Codes to describe industrial sectors, allowing for the comparability of statistics generated in South Africa. The coding scheme developed after fourteen iterations may, however, be relevant for the study for which it was performed but has limited application and comparability to other studies conducted using other coding schemes. It may be deemed true and accurate within the context of this study – and more broadly the South African employment market – but is not comparable in terms of Stats SA or ILO international statistics.

Regarding its external validity, it should be noted that the data medium used here (newspapers advertisements) limits the generalisability of this study to employment trends contained within that medium. It has been explained elsewhere that a number of alternative recruitment methods may be used when employers recruit for candidates, and newspaper advertising is the least utilised in comparison with other media. Recent legislation governing the transparent and accessible recruitment of staff has, however, forced many employers to place advertisements in widely accessible media so that they are not accused of unfair recruitment practices. This legislative influence might have led to an increase in advertisements placed (thereby inflating the nominal increases in employment opportunities available to graduates). It might have also led to improvements in the representivity of employment positions available in the labour market. Furthermore, it might be noted that certain industries do not historically recruit for staff through the newspaper. It nevertheless is impossible to make broad assertions about the employment market using newspaper advertisements as a benchmark. As already indicated, recruitment of staff, and the employment market in general, is largely unregulated. Advertisements placed in the

newspaper therefore do not reflect the entire population of jobs available to graduates as is required to assert representivity (Tredoux, 1999), but are more likely to be representative of jobs available to graduates.

Regarding statistical validity and the extent to which this study has used an appropriate design and statistical method of analysis (Durrheim & Wassenaar, 1999), it may be noted that some problems existed which should be corrected for in future usage of this data set. In the original study (1998) and the current study (1999), little attention was paid to ensuring that an adequate sample was collected for the categories contained within the variables in the database. This resulted in instances where small expected frequencies were obtained across categories preventing further, or statistically powerful, analysis. In the early years especially, the small frequency of advertisements placed hampered the obtaining of large enough samples.

It may be useful in a future study to combine a number of methods in order to test the research questions. The triangulation of methods such as face-to-face interviews with selected recruitment specialists, a questionnaire distributed to recruitment agencies combined with the longitudinal analysis of job advertisements, may provide a stronger base of evidence for conclusions drawn in this study. However, time and available resources precluded this, allowing scope for future development in the area.

5.4 Concluding remarks

In the main, this study provides both specific and broad indicators regarding job demand in psychology. Despite the methodological difficulties with regard to data collection, the results presented in Chapter 4 and debated in Chapter 5 concur with international trends regarding skills and professional development argued in Chapter 2. The study offers value to the discipline and profession of psychology in that it appraises psychology with reference to international trends. Chapter 6 concludes this thesis and presents a vision for South African research psychology.

6. CONCLUSION

Within the global and national context of high demand for skilled professionals – and more specifically professionals who are managers of information in a world experiencing an information overload – researchers have found a niche in the global economy. An increasing reliance on specialised knowledge in Western society has led to a rise in demand for researchers, and within the discipline and profession of psychology, research psychologists. As the information creator and information manager in the discipline and profession of psychology, the research psychologist, is set to enjoy the benefits of a globalising world and a global information age, intertwining with the political and policy necessities of a country that is reengineering its social order. New policies and implementation strategies will assist in revisiting the social and economic fabric of South Africa, a country disseminated by apartheid (Khotseng, 1993).

Given that only one professional title of a generic psychologist will exist and that the professional route of research psychology will be done away with, professional representation in psychology must consider how it intends to retain a powerful research capacity. This is of importance given the introduction of the practice-oriented DPpsych degree route to professional registration and the exclusion from professional registration of the Masters and PhD routes. The results of this study state powerfully that there is an increase in demand for research skills and research psychologists as compared with technical psychosocial skills and technically oriented psychologists.

The introduction of a significant research component within the BPsych and DPpsych model would enable high level research skills to be retained at all levels of the professional psychological practitioner. Consideration within the HPCSA, PsySSA or the DRM may be given to the granting of professional registration to researchers emerging from the Masters/PhD route to ensure that sufficient research skills are generated to meet the increasing demand for these skills. Although the results of this study indicate that there is little demand for a professional registration for research psychologists, the offering of professional protection of some sort to those who choose to concentrate solely on research and ensure that the theoretical lifeblood continues to flow into the discipline, would be useful and might serve to reverse the movement of excellent would-be researchers to courses based on a medical and applied model of psychology.

Research psychology in the South African context therefore seems to be moving toward the development of a broad social science research model, as opposed to psychological research skills. Levi–Strauss (1996, p. 17) refers to this emergent researcher as a *bricoleur*: ‘Jack of all trades or a kind of professional do–it–yourself person’ (in Denzin & Lincoln, 1994). Researchers in psychology have become ‘hybrid researchers’. This may be defined as ‘a researcher who can move across contexts and has many skills. They have a lot of key knowledges about various disciplines and know how to plug them into different contexts, create new knowledge and understand new processes.’ (Johan Kruger, personal communication, January 18, 2002). Using methods, techniques, and processes borrowed from many disciplines, this researcher may tackle both basic and applied research problems. In the context of a post–apartheid South Africa, the research psychologist with some knowledge of communities, social development or education is poised to tackle a number of employment possibilities.

REFERENCES

- Abercrombie, N., Hill, S. & Turner, B.S. (1984). The Penguin dictionary of sociology (2nd ed.). London: Penguin.
- Adair, J.G., Paivio, A., & Ritchie, P. (1996). Psychology in Canada. Annual Review of Psychology, *47*, 341–370.
- American Psychological Association (2001, November 15). Some of the subfields of psychology. [On-line]. Available: <http://www.apa.org/about/division.html>
- Au Revoir research psychology? (1996). The Researcher, *3*, 1–3.
- Babbie, E.R. (1989). The practice of social research. Belmont: Wadsworth.
- Bailey, K.D. (1978). Methods of social research. New York: The Free Press.
- Bailey, K.D. (1982). Methods of social research. New York: MacMillan.
- Bedell, B. & Phayane, O. (1998). Employment opportunities for postgraduates in research psychology (Report No. 33). Pretoria: University of South Africa, Department of Psychology.
- Belar, C.D. (1998). Graduate education in clinical psychology: 'We're not in Kansas anymore'. American Psychologist, *53*(4), 456–464.
- Bell, D. (1972). Labour in the post-industrial society. Dissent, *19*, 163–189.
- Bell, D. (1973). The coming of post-industrial society: A venture in social forecasting. New York: Basic Books.
- Berelson, B. (1952). Content analysis in communication research. Glencoe: Free Press.
- Berger, S. & Lazarus, S. (1986). The views of community organisers on the relevance of psychological practice in South Africa. Psychology in Society, *7*, 6–23.
- Bevan, W. (1982). A sermon of sorts in three plus parts. American Psychologist, *37*(12), 1303–1322.
- Bledstein, B. (1976). The Culture of Professionalism. New York: WW Norton.
- Bouma, G.D. (1996). The research process (3rd ed.). Melbourne: Oxford University Press.
- Brand, P. (1987, November/December). Recruitment advertising – a different kind of art. Marketing Mix, p. 25.
- Brislin, R.W. (1980). Translation and content analysis of oral and written materials. In H.C. Triandis and J.W. Berry (Eds.), Handbook of cross-cultural psychology: Methodology (Vol. 19, pp. 389–439). Boston: Allyn & Bacon, Inc.
- British Psychological Society (1995, June). Psychologists and students wishing to come to the UK. (Available from British Psychological Society, St. Andrews House, 48 Princess Road East, Leicester, LE17DR)

- Bryman, A. (1988). Quality and quantity in social research. London: Unwin Hyman.
- Buss, A.R. (1975). The emerging field of the sociology of psychological knowledge. American Psychologist, *29*, 821–840.
- Butcharadt, A. & Seedat, M. (1990). Within and without: Images of community and implications for South African psychology. Social Science and Medicine, *31*, 1093–1102.
- Chevalier, N.E. & Leon, M.A. (1993). A survey of ethical decision-making among practicing school psychologists. Psychology in the Schools, *30*, 327–337.
- Claasen, C. (1999). The state, globalisation and education. In E. Lemmer (Ed.). Contemporary education: Global issues and trends (pp. 26 – 45). Sandton: Heineman Higher and Further Education (Pty) Ltd.
- Cloete, N. & Pillay, S. (1988). Professional neutrality: In the service of the clients and/or the professionals. Psychology in Society, *9*, 44–65.
- Cloete, N., Muller, J., & Orkin, M. (1986). How we learned to stop worrying and love the HSRC. Psychology in Society, *6*, 29–46.
- Collier, P. Ferreira, L. & Foxcroft, C. (1997, March). Summary of directed research psychology Masters programmes. University of Port Elizabeth, Department of Psychology.
- Cooper, S. (2001, April 30). Letter to all registered Board members. (Available from the Professional Board for Psychology, 553 Vermeulen Street, Arcadia, Pretoria, 0001).
- Craig, K.D. (1993). The organization of professional psychology in Canada. In D.J.G. Dobson & K.S. Dobson (Eds.), Professional psychology in Canada (pp. 11–48). Seattle: Hogrefe & Huber.
- Danziger, K. (1986). The methodological imperative in psychology. Philosophy of the Social Science, *15*, 1–13.
- Denzin, N.K. & Lincoln, Y.S. (1994). Introduction: Entering the field of qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), Handbook of qualitative research (pp. 1–17). Thousand Oaks, CA: Sage.
- Department of Labour (1999). My Career, 1998. Department of Labour. Private Bag X117, Pretoria, 0001. South Africa.
- Derman, L. (2000, March). Proposal for the development and maintenance of a South African Employment Opportunity Index. (Available from the Skills Development Planning Unit, Department of Labour, Private Bag X117, Pretoria, 0001. South Africa)
- Dobson, D.J.G & Dobson, K.S. (1993). The scope of professional psychology in Canada. In D.J.G. Dobson & K.S. Dobson (Eds.), Professional psychology in Canada (pp. 3–10). Seattle: Hogrefe & Huber.
- Dorio, M. (1994). Staffing problem solver for human resource professionals and managers. New York: John Wiley.
- Duminy, A.H. (1992). The humanities – The challenge for the universities. Afrika 2001, *1*(2), 66–71.

Durrheim, K. & Mokeki, S. (1997). Race and relevance: A content analysis of the South African Journal of Psychology. South African Journal of Psychology, 27, 206–213.

Durrheim, K. & Wassenaar, D. (1999). Putting design into practice: Writing and evaluating research proposals. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 54–71). Cape Town: University of Cape Town Press.

Durrheim, K. (1998). Comments on the new policy for psychology document. The Researcher, 1, 3,7.

Durrheim, K. (1999a). Research design. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 29–53). Cape Town: University of Cape Town Press.

Durrheim, K. (1999b). Quantitative measurement. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 72–95). Cape Town: University of Cape Town Press.

Ebersohn, D. (1983). Die sielkundiges van die RSA. Pretoria: HSRC, Report MM-92.

Edey, S. & Molin, R. (1993). WITS BA graduates and the job market. Afrika 2001, 2(1), 19–24.

Ellis, H.C. (1992). Graduate education in psychology: Past, present, and future. American Psychologist, 47(4), 570–576.

Everitt, B.S. (1977). The analysis of contingency tables. London: Chapman & Hall.

Foster, D. & Swartz, S. (1997). Introduction: Policy Considerations. In D. Foster, M. Freeman & Y. Pillay, Mental Health Policy Issues for South Africa. MASA Multimedia.

Foundation for Research Development (1998). National Research and Technology Audit: Scientific and Technological Infrastructure. Pretoria: Department of Arts, Culture, Science and Technology.

Freidson, E. (1986). Professional powers: A study of the institutionalization of formal knowledge. Chicago: University of Chicago Press.

Garbers, J.G. (1992). Opportunities and constraints in science policy in South Africa. Afrika 2001, 1(1), 1–6.

Geis, G. (2002, January 15). The Employment Opportunity Index. [On-line]. Available: <http://www.on.hdrc-drhc.gc.ca/ottawa/eondrx/rmeondrx.stm>

Gerber, P.D., Nel, P.S. & van Dyck, P.S. (1998). Human Resource Management (4th ed.). Halfway House: International Thomson Publishing (Southern Africa).

Gerdes, L.C. (1992). Impressions and questions about psychology and psychologists. South African Journal of Psychology, 22(2), 39–43.

Gerwel, J. (2000). Human Sciences Research Council Annual Report 1999–2000. Human Sciences Research Council Corporate Services Group. 134 Pretorius Street, Pretoria, Private Bag X41, Pretoria, 0001. South Africa.

- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. & Trow, M. (1994). The new production of knowledge: The dynamics of science and research in contemporary societies. London: Sage.
- Giddens, A. (1989). Sociology. Cambridge: Polity Press.
- Giddens, A. (1990). The consequences of modernity. United Kingdom: Polity Press.
- Giddens, A. (2000). Runaway world: How globalisation is reshaping our lives. New York: Routledge.
- Godsell, B. (1993). The Arts graduate and the new South Africa. Afrika 2001, 2(1), 1–2.
- Govender, K., Durrheim, K. & Kelly, K. (2000). A home away from the professional qualifications framework, PsySSA and the Health Professions Council. The Researcher, 1, 3.
- Government Gazette (1974). Law on doctors, dentists and supplementary health professions, No. 56 of 1974. Pretoria: Government Printer.
- Haas, L.J., Malouf,, J.L. & Meyerson, N.H. (1986). Ethical dilemmas in psychological practice: Results of a national survey. Professional Psychology: Research and Practice, 17, 317–321.
- Haas, L.J., Malouf,, J.L. & Meyerson, N.H. (1986). Ethical dilemmas in psychological practice: Results of a national survey. Professional Psychology: Research and Practice, 17, 317–321.
- Halmos, P. (1970). The personal service society. London: Schocken.
- Hardijzer, C. (2000, September). Harness Tomorrow's Knowledge. People Dynamics, p. 22–25.
- Hayes, G. (1996). Editorial. Psychology in Society, 21, 1–4.
- Holsti, O.R. (1969). Content analysis for the social sciences and humanities. London: Addison–Wesley.
- Howell, D.C. (1999). The fundamental statistics for the behavioural sciences. (4th ed.). Pacific Grove: Duxbury Press.
- Human Sciences Research Council (1999). SA Labour Market Trends and Future Workforce Needs 1998–2003. Pretoria: HSRC Bookshop.
- Hunter, C. (1999). Managing People: Lecture notes for Human Resource Management 230 & Personnel Management A. Unpublished lecture notes. School of Business, University of Natal, Pietermaritzburg.
- Isemonger, I. (1994). Professionalism: Trick or treat? Psychology in Society, 18, 21–33.
- Jacobsen, D.H. (1992). Private sector expectations of the research community. Afrika 2001, 1(1), 19–21.

- Jayarathne, T.E. & Stewart, A.J. (1991). Quantitative and qualitative methods in the social sciences. In M. Fonow & J.A. Cook (Eds.), Beyond methodology: Feminist scholarship as lived research. Indianapolis: Indianapolis University Press.
- Kellehear, A. (1993). The unobtrusive researcher: A guide to methods. St Leonards, Australia: Allen & Unwin.
- Khotseng, B.M. (1993). BA graduates and educational need of today and tomorrow. Afrika 2001, 2(1), 12–15.
- Kiecolt, K.J. & Nathan, L.E. (1985). Secondary analysis of survey data. Beverly Hills: Sage.
- Kim, U. (1995). Psychology, science and culture: Cross-cultural analysis of national psychologies. International Journal of Psychology, 30(6), 663–679.
- Krippendorff, K. (1980). Content analysis: An introduction to its methodology. Beverly Hills: Sage.
- Lane, R.E. (1966). The decline of politics and ideology in a knowledgeable society. American Sociological Review, 31, 649–642.
- Larson, M. Sarfatti (1977). The rise of professionalism: A sociological analysis. Berkeley: University of California Press.
- Leatt, J.V. (1992). The role of the humanities in the period of reconstruction. Afrika 2001, 1(2), 2–6.
- Leutner, H. (1992). Science policy and funding of basic science in the Federal Republic of Germany with an outlook to the perspectives after 1992. Afrika 2001, 1(1), 12–16.
- Louw, D. (1995). Psychology in South Africa: Old problems and new challenges. World Psychology, 1(1), 69–82.
- Louw, J. (1990). Professionalising Psychology. HSRC: Pretoria.
- Louw, J. (1992). South Africa. In V.S. Sexton & J.D. Hogan (Eds.), International psychology: Views from around the world (pp. 353–363). Lincoln: University of Nebraska Press.
- Louw, J. (1992). South Africa. In V.S. Sexton & J.D. Hogan (Eds.), International psychology: Views from around the world (pp. 353–363). Lincoln: University of Nebraska Press.
- MA Theses Reflections of our Society (1990). Institute for Academic & Research Psychology [IARP], 1, 4.
- Maher, B.A. (1999). Changing trends in doctoral training programmes in psychology: A comparative analysis of research-oriented versus professional-applied programs. Psychological Science, 10(6), 475–481.
- Mail & Guardian (1998, August 7 to 13). M&G on the up and up. Mail & Guardian, 14(31), p.2.
- Mail & Guardian (1999, February 15). M&G doing well despite declining. [On-line]. Available: <http://www.sn.apc.org/wmail/issues/990219/NEWS30.html>

- Marais, H.C. (1992). Research management: necessary but not sufficient. Afrika 2001, 1(1), 30–33.
- Matarazzo, J.D. (1987). There is only one psychology, no specialities, but many applications. American Psychologist, 42, 893–903.
- Mauer, K.F. (1993). Philosophy of science versus practical skills: What does a researcher need to know? Afrika 2001, 2(2), 25–29.
- Miles, M.B. & Huberman, A.M. (1994). Qualitative data analysis: An expanded sourcebook (2nd ed.). Thousand Oaks: Sage.
- Motala, S. (1993). Research training needs in the NGO sector. Afrika 2001, 2(2), 10–12.
- Mouton, J. & Marais, H. (1988). Basic concepts in the methodology of the social sciences. Pretoria: HSRC Press.
- Mullaly, E.M., Kelly, R.A., & Wearing, A.J. (1985). Where do psychology honours graduates go? Australian Psychologist, 20(1), 51–60.
- Muller, J. (1997). Citizenship and curriculum. In N. Cloete, J. Muller, M.W. Makgoba, & D. Ekong (Eds.), Knowledge, identity and curriculum formation in Africa. Cape Town: Maskew Miller Longman.
- Naidoo, K. (1997). South African NGOs – The path ahead. London: Catholic Institute for International Relations.
- Ngoasheng, M. (1992). Policy Research inside the African National Congress. Transformation, 18, 115–124.
- Oosthuizen, T. (1993). What does industry expect from commercial researchers? Afrika 2001, 2(2), 8–9.
- Over, R. (1981). Employment prospects for psychology graduates in Australia. Australian Psychologist, 16, 335–345.
- Patton, M.Q. (1990). Qualitative Evaluation and Research Methods (2nd ed.). Newbury Park: Sage.
- Pick, J.L., Leibowitz, H.W., Singer, J.E., Steinschneider, A & Stevenson, H.W. (1987). In Psychology from research to practice. Plenum Press: New York.
- Pion, G.M. & Lipsey, M.W. (1984). Psychology and society: The challenge of change. American Psychologist, 39, 739–754.
- Plug, C. (1990). Post-graduate training: A debate. Institute for Academic & Research Psychology [IARP], 2, 1.
- Potter, A.M. (1993). Defining the problem of the unemployability of arts graduates in terms of context and convention. A radical solution. Afrika 2001, 2(1), 57–59.
- Prinsloo, C. (1996). Report on the DRM Poll. The Researcher, 2, 5–7.
- Professional Board for Psychology (1999, February) Professional Board for Psychology: Policy on roles, registration/licensing, training and education within the professional field of psychology. Lynwood Ridge, Pretoria.

Professional Board for Psychology (2001, March 26). Letter to all registered Board members. (Available from the Professional Board for Psychology, 553 Vermeulen Street, Arcadia, Pretoria, 0001).

Psychological Society of South Africa/Professional Board for Psychology (1998, February). Proposed policy on roles, registration/licensing, training and education within the professional field of psychology. (Available from Psychological Society of South Africa (PsySSA), PO Box 74119, Lynwood Ridge, 0040, Pretoria).

Registration. (1995). The Researcher, 1, 5.

Retief, A. (1989). The debate about the relevance of South African psychology – a metatheoretical imperative. South African Journal of Psychology, 19(2), 75–83.

Richards, T.J. & Richards, L (1994). Using computers in qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), Handbook of qualitative research (pp. 445–462). Thousand Oaks, CA: Sage.

Richter, L. & Tyeku, S. (1999). Jobs and careers in social science research. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 54–71). Cape Town: University of Cape Town Press.

Richter, L.M., Griesel, R.D., Durrheim, K., Wilson, M., Surendorff, N. & Asafo-Agyei, L. (1998). Employment opportunities for psychology graduates in South Africa: A contemporary analysis. South African Journal of Psychology, 28(10), 1–7.

Ritzer, G. (1977). Working: Conflict and change (2nd ed.). Engelwood Cliffs, NJ: Prentice-Hall.

Robins, R.W., Gosling, S.D., & Craik, K.H. (1999). An empirical analysis of trends in psychology. American Psychologist, 54(2), 117–128.

Rosenthal, R. & Rosnow, R.L. (1991). Essentials of behavioral research. New York: McGraw-Hill.

Rosenthal, R. & Rosnow, R.L. (1996). Beginning behavioral research: A conceptual primer (2nd ed.). New York: McGraw-Hill.

Rosenzweig, M.R. (1999). Continuity and change in the development of psychology around the world. American Psychologist, 54(4), 252–259.

Sales, B. (1985). Specialisation: Past history and future alternatives. The Clinical Psychologist, Summer, 48–52.

Saunders, C. & Southey, N. (1998). A dictionary of South African history. Cape Town: David Philip.

Sayward, C. (1995). Quantification. In R. Audi (Ed.), The Cambridge dictionary of philosophy (p.667–668). New York: Cambridge University Press.

Schneider, S.F. (1987). Meanwhile, back at the ranch ... (Can community psychology save psychology?). American Journal of Community Psychology, 15(5), 591–601.

Scott, J. (1990). A matter of record. Polity Press Cambridge.

Sellschop, J.P.F. (1992). Universities as patrons of basic research. Afrika 2001, 1(1), 22–26.

- Sellschop, J.P.F. (1993). The 1990 investigation into post-graduate training in South Africa. Afrika 2001, 2(2), 3-7.
- Shefer, T., Shabalala, N., Strebel, A. & Ratele, K. (2001). Research consulting: It takes some tender care! The Researcher, 2, 2.
- Simbayi, L. (2001). DRM at the crossroads: Priorities and vision for 2001. The Researcher, 1, 1-3.
- Smith, P.M. & Boyle, B. Torrey (1996, February 2). The future of the behavioural and social sciences. Science, 271, 611-612.
- SPSS (2002). Chi-Square (Crosstabs). [On-line].
- Stapp, J., Fulcher, R. & Wicherski, M. (1984). The employment of 1981 and 1982: Doctorate recipients in psychology. American Psychologist, 39(12), 1408-1423.
- Statistics South Africa (1993). Standard Industrial Classification Of All Economic Activities (Fifth Edition). [On-line].
- Stehr, N. (1994). Knowledge societies. Sage: Thousand Oaks.
- Stewart, D.W. & Kamins, M.A. (1993). Secondary Research: Information sources and methods (2nd ed.). Newbury Park: Sage.
- Stoops, R. (1982). Recruitment Strategy. Personnel Journal, 2, p. 102.
- Stouthamer-Loeber, M. & Bok van Kammen, W. (1995). Data collection and management: A practical guide. Thousand Oaks: Sage.
- Strebel, A. (1994). Interviewing the PsySSA president. [Interview with Rachel Prinsloo]. Psychology in Society, 19, 45-52.
- Strydom, A.H. (1993). Overview of research training needs market of undergraduates/academic staff/others, outside academic institutions: A perspective from higher education as a field of study. Afrika 2001, 2(2), 13-17.
- Stumpf, R.H. (1993). Opening address. Afrika 2001, 2(2), 1-2.
- Sunday Times (1999, August 1). Tops Again! Sunday Times, p. 1.
- Supporting the development process through research: opportunities for Social Science Researchers. (1997). The Researcher, 1, 5.
- Surendorff, N. (1998). The use of demographics in recruitment and job selection with a view to analysing patterns and techniques of exclusion. Unpublished honours thesis, University Natal (Pietermaritzburg), Pietermaritzburg.
- Taft, R. & Day, R.H. (1988). Psychology in Australia. Annual Review of Psychology, 39, 375-400.
- Terre Blanche, M. & Durrheim, K. (1999). Histories of the present: social science research in context. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 1-16). Cape Town: University of Cape Town Press.

- Tohill, A. (1993). Higher education and employment in the OECD: Lessons for South Africa? Afrika 2001, 2(1), 40–45.
- Tredoux, C. (1999). Sound conclusions: judging research designs. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 309–330). Cape Town: University of Cape Town Press.
- University of Cape Town (1995). Psychology. Unpublished Report. Careers Office, University of Cape Town. South Africa.
- University of Cape Town (1997). Branches of Psychology. Unpublished Pamphlet. Careers Office, University of Cape Town. South Africa.
- van Aardt, C. (1993). The labour market, the needs of the economy, and the humanities. Afrika 2001, 2(1), 7–8.
- van der Riet, M. & Kelly, K. (1999). Reflections on the new professional practice framework. The Researcher, 2, 1–3.
- van der Riet, M. (2001). Psychologist leads social development initiative. [Interview with Linda Richter]. The Researcher, 2, 1–4.
- van der Westhuizen, G. (2000). Knowledge management and innovative learning system. People Dynamics, May, 26–30.
- van Laar, D. & Redmond, P. (1993). If not psychology, what do psychologists really do? Phoenix, 19–21.
- van Vuuren, D. & Maree, A. (1999). Survey methods in market and media research. In M. Terre Blanche & K. Durrheim (Eds.), Research in practice: Applied methods for the social sciences (pp. 269–286). Cape Town: University of Cape Town Press.
- Veneri, C.M. (1999). Can occupational labor shortages be identified using available data? Monthly Labor Review, March 1999, p. 15–21.
- Wassenaar, D.R. (1998). A history of ethical codes in South African psychology: An insider's view. South African Journal of Psychology, 28(3), 135–145.
- Waterman, R.H., Waterman, J.A. & Collard, B.A. (1994). Toward a career-resilient work force. Harvard Business Review, 72, 87–95.
- Webb, E., Campbell, D.T., Schwartz, R.D. & Sechrest, L. (1966). Unobtrusive measures: Non-reactive research in the social sciences. Rand McNally & Co.: Chicago.
- Weber, R.P. (1985). Basic content analysis. Beverley Hills: Sage.
- Weil, S. (1999). Re-creating universities for 'Beyond the Stable State': From 'Dearingesque' systematic control to post-Dearing systematic learning and inquiry. Systems Research and Behavioral Science, 16, 171–190.
- Wickens, T.D. (1989). Multiway contingency tables for the social sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Wilson, M. & Surendorff, N. (1998). Employment trends for psychology and social/human science graduates: Methodology manual. Unpublished methodology manual, University of Natal (Pietermaritzburg).

Wilson, M. (1998). Professional Psychology: Where are we headed? Unpublished Honours thesis, University of Natal (Pietermaritzburg), Pietermaritzburg.

Yu, L.M., Rinaldi, S.A., Templer, D.I., Colbert, L.A., Siscoe, K. & van Patten, K. (1997). Score on the examination for professional practice in psychology as a function of attributes of clinical psychology graduate training programs. Psychological Science, 8, 347–350.

Sunday Times, November 27, 1977

Group Personnel Services Manager

Negotiable salary

Generous benefits

Prolux Paint Holdings (Pty) Limited member of the AECI Group and national manufacturers, wholesalers and retailers of Duco, Dulux, Rockgrip and Etyolac products, require a man with in-depth knowledge and broad experience of modern personnel practices.

Responsibilities include: Development and implementation of existing and new policies regarding compensation systems, employment practices, employee relations and future human resource requirements.

Our ideal candidate will preferably be between 30 and 40 and in possession of:

Either: A Social Science or Personnel Management degree
: or the Higher Personnel Management Diploma (Wits or equivalent from another university)
: or the I.P.M. Advanced Diploma in Personnel Management

Alternatively: 5 years post-matriculation experience in Personnel Administration in a large company.

Operating from the Group's Alrode, Transvaal, Head Office the successful candidate will report to the Group Personnel Director and work in close co-operation with the Group Personnel Development Manager. In performance of his duties he will frequently visit the Group's operations throughout Southern Africa.

We offer: Excellent opportunities for personal growth in an expanding organisation with international connections; an attractive negotiable salary and a full range of generous fringe benefits.

For further information or to arrange an interview, please telephone The Group Personnel Development Manager at (Jhb. 011) 864-3814 between 09h00 and 13h00. Alternatively write in confidence, enclosing a curriculum vitae to him at: Prolux Paint Holdings (Pty) Limited, P.O. Box 3704, Alrode 1451.

PROLUX PAINT HOLDINGS (PTY) LIMITED

VZ2505

Have you got what it takes to be a Mine Personnel Manager in 2 years?

One of South Africa's foremost mining houses wishes to appoint an experienced DPO to one of its largest group mines.

Once on site you will help to manage and develop the total mine human resource which covers all aspects of training, development and manpower management.

Applicants must have a thorough knowledge of modern industrial relations and preferably possess a relevant degree or PM diploma.

This is a job for a real personnel professional who has the ability to become

a full fledged Personnel Manager in two years.

Salary will be in the region of R12 000 p.a. plus the usual generous Chamber of Mines conditions.

This mining house is a leader in its enlightened personnel programmes.

Please send full details to Tim Gibbon, Managing Director (AH 6377), Austin Knight (Pty) Ltd., P.O. Box 1017, Johannesburg 2000. (Tel. 23-8903).

Applications are forwarded to the client concerned therefore companies in which you are not interested should be listed in a covering letter.

AK ADVERTISING

Ralph Parrott Associates

Management and Personnel Consultants

Acting on behalf of our client, we invite applications for the following position

PERSONNEL MANAGER

East Rand

+ R23 000 Package

Our client is the largest and most successful company in South Africa in their particular industrial sector. Their East Rand plant, which is one of several similar establishments, employs ± 2 500 people of all races. The Human Resources function covers Personnel Administration, Training and Development and Productivity Improvement and each sector is controlled by a competent manager. The company now wishes to appoint a Senior Personnel Manager to co-ordinate and control all of these functions.

Applicants will be fully bilingual, 35/45 with qualifications in Industrial Psychology, Social Sciences, etc. A university degree is preferred but is not essential. A first class track record in major industrial establishments with in depth knowledge of all aspects of personnel management are essential requirements.

An excellent remuneration package will be negotiated, supported by unusually good fringe benefits.

All applications and enquiries should be directed to Gordon Whittaker at the telephone numbers or address given below:

Tel. 37-4030/80

7th Floor, Diamond Corner, Cnr. Market and Eloff Streets
Johannesburg. PO Box 61860, Marshalltown 2107

Branches at * Cape Town * Pretoria * Port Elizabeth * Durban



TRAINING OFFICER

A training man is required to fill this position in our Training Unit, reporting to the Training Manager. The position is based in the Company Headquarters in Selby, Johannesburg.

The training and development associated with this position will be mainly in the manufacturing and selling activities of our many operations throughout South Africa. The successful candidate will be required to take projects from inception to finish and to administer core training programmes throughout the company. Activities will be based on highly defined needs of the business. Projects will be tackled as a whole and will involve knowledge and skills training in the technical sales, supervisory, management and administrative areas. The incumbent will be exposed to a fertile and structured training environment and will be afforded the opportunity to use his initiative and creativity to improve the effectiveness of the Training Unit and the organisation.

The man best suited to this position will be a person who:

- Has industrial training experience
- Has working knowledge of the latest Training techniques
- Is in possession of a Behaviour Science degree, or I.P.M. Training diploma or Higher Education Teaching diploma
- Has a high degree of personal commitment.

An attractive salary is offered in addition to a Pension fund and medical aid scheme.

Please telephone Training Officer, Mr. Richard Pruett at 836-2971 for further details, or write to the Training Manager, Afrox Limited, Box 5404, Johannesburg 2000.

AFROX

Manpower Specialist

Our Department for Manpower Utilisation requires the services of a personnel man to fill an additional post, recently created. He must have appropriate academic qualifications as well as the necessary practical experience, to be able to perform the following duties with efficiency:

1. Manpower studies at companies, which will entail the following:
 - Identification of opportunities for improvement in utilisation of manpower and labour productivity.
 - Formulation of plans for better utilisation of manpower.
 - Implementation and follow-up of systems to achieve the above objectives.
2. Investigations and reports on labour matters such as industrial legislation, labour relations, mobility of labour, remuneration, training, labour economic matters, tendencies in the labour field, etc. Practical experience in the functions listed above, obtained in an industrial environ-

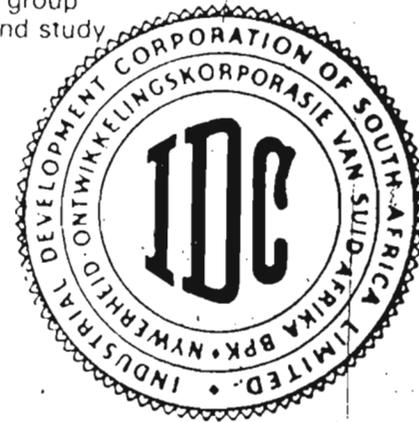
ment, will form the basis in determining the successful candidate. The incumbent will also be fully bilingual and must be able to function independently.

This position offers an opportunity to make an important contribution in a wide range of labour activities in various industries.

The IDC offers a competitive salary as well as excellent fringe benefits such as a housing loan scheme, pension fund, group life assurance scheme, medical aid and study assistance scheme.

Interested applicants should address their applications, giving full particulars of qualifications, experience, age, marital status, present salary and benefits, as well as a telephone number, to:

The Personnel Manager
Industrial Development
Corporation of SA Limited
P.O. Box 6905
Johannesburg
2000



Training and Development

Mutual & Federal is one of the largest short-term insurance companies with branches in all the major centres in South Africa.

Primarily we are looking for a person to develop and conduct management training courses. He will also be involved in Career Planning and the introduction of a Trainee Scheme. In brief the job is as wide as he makes it.

In meeting this challenge you will have had experience in Training and Development with proven drive and initiative. You will probably have a degree in the Social Sciences or an IPM Diploma, be bilingual and be aged between 25 and 32.

We offer a good salary ● a housing purchase scheme ● excellent pension and medical aid ● and, where necessary, assistance with relocation expenses.

Interested? Write to Mr P. Horovsky, Personnel Manager, Mutual & Federal Insurance Company Ltd, P.O. Box 1120, Johannesburg 2000 enclosing a full curriculum vitae.

Applications should reach us by 17 August.

MUTUAL
& FEDERAL

Insurance Company Limited

Admark Recruitment Advertising 7160.

Personnel Manager

An interesting opportunity will shortly arise for an experienced man to replace, on his retirement, The Personnel Manager of our operating company based in Port Elizabeth. This company is concerned with building and civil engineering contracts in the Eastern Cape, Ciskei and Transkei, and employs a total labour force of some 1 600 people.

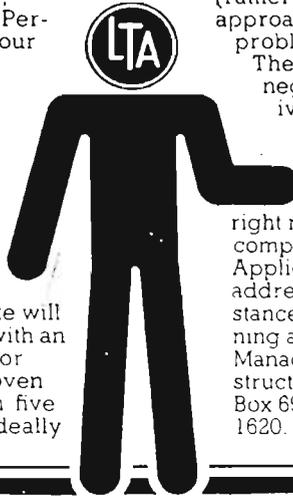
The successful candidate will probably be qualified with an appropriate degree or diploma, and a proven record of not less than five years at senior level, ideally

in a construction environment.

A realistic and practical (rather than academic) approach to personnel problems is essential.

The company will negotiate an attractive remuneration package, fringe benefits and re-location expenses with the right man, including a company car.

Applications should be addressed in the first instance to the Staff Planning and Development Manager, LTA Construction Limited, P.O. Box 690, Kempton Park 1620.



AK Austin Knight 5951

RESEARCHER

The Kwazulu Natal Indaba invites applications from experienced Social Science researchers to compile "Who's who" of blacks in Natal and Kwazulu. The focus of the project will include politics, education, sport, business, entertainment etc. The researcher will be subject to direction of independent editorial board.

Good salary neg.

Apply in writing to :

Executive Director,
Kwazulu Natal Indaba,
Box 2925, Durban, 4000.



AREA CO-ORDINATOR

The ESP is a non-profit education trust which provides supplementary education to Std 9 and 10 students.

Responsibilities will include:

- co-ordinating our Johannesburg based tuition project.
- developing materials.
- participating in the planning and running of workshops.
- participating in the overall management of the project.

Applicants should have:

- a University degree or relevant qualifications
- teaching experience and administrative skills
- an interest in educational issues in the South African context and an ability to work well in a team committed to democratic practices.

Applications in writing together with CV and two references should be sent to:

108 Dunwell House
35 Jorissen Street
Braamfontein 2001

Closing date: 28 April 1989. To start as soon as possible.



CBDP is a developmental and change agency committed to building organisation and human resource capacity in support of the ongoing transformation to a just, democratic, sustainable SA free of racism, sexism and other forms of oppression.

CBDP is currently seeking applications for the following position:

GENDER AND DEVELOPMENT CO-ORDINATOR

Position: To establish a Gender and Development Section in the Organisational Development Unit in order to:

- plan, organise and implement the Project;
- provide back-up service to client organisations; and
- conduct a needs assessment exercise to determine opportunities for project entry points as outlined in the RDP Policy guidelines.

Requirements:

- A post matric qualification in the Social Sciences and 1 year relevant experience or a matric certificate with 3 to 5 years relevant experience in Community-based organisations or NGOs.
- Experience in Gender issues and computer literacy preferable. Applicants should be able to articulate and interpret gender issues into developmental initiatives, be self-motivated, pro-active and able to work without supervision.

Salary:

Approximately R4 400 per month, excluding benefits.

Applications, including a full CV should be sent to the HR Officer, CBDP, P O Box 32679, BRAAMFONTEIN no later than 12 May 1995.

The above position will give preference to Black and in particular Black women participants.

COMMUNITY BASED DEVELOPMENT PROGRAMME

The South African Association for
Academic Development

is seeking to appoint



***A Deputy Director:
(HBI Liaison Officer)***

whose responsibilities will be to assist in determining the educational development needs of Historically Black tertiary institutions.

***A Researcher/
Information Officer***

whose responsibilities will include developing a research agenda, conducting research at National level on aspects of education development, developing National information systems and producing the SAAAD Newsletter.

The two posts will be 3 year contracts to be filled as soon as possible.

Please send your letter of application, including the names of two referees as well as a CV to:

The Director, SAAAD National Office, 76 Juta Street,
Braamfontein 2001

Tel: (011) 339-3751, Fax: (011) 339-5869

The Human Rights Committee is an independent non-governmental organisation monitoring and reporting on various human rights issues in South Africa. During the transitional period HRC is committed to ensuring that effective and coherent human rights legislation is adopted and implemented.



**HUMAN
RIGHTS
COMMITTEE**

Applications are invited from dynamic individuals for the position of:

RESEARCHER

The successful applicant's main responsibility will be to conduct research in various human rights fields and to write reports for HRC publications.

REQUIREMENTS

The successful applicant should meet with as many of the requirements as possible.

- a university degree with research experience
- a good understanding of human rights issues (especially in South Africa)
- a commitment to human rights ideals
- good writing skills
- a basic level of computer literacy
- the ability to work well under pressure and meet deadlines
- the ability to take initiative

We offer an annual salary about R50 000 with benefits. This is a contract position.

CLOSING DATE FOR APPLICATIONS: 19 June 1995

The position will be based at HRC's Johannesburg office and applications should be sent to: The Director *Human Rights Committee, P O Box 32723, BRAAMFONTEIN, 2017, Johannesburg * Tel: (011) 403-4450 * Fax (011) 339-1422.

**Please include CV, names of three contactable referees,
and a contact telephone number.**



HUMAN SCIENCES RESEARCH COUNCIL

RESEARCHER

CENTRE FOR SOCIO-POLITICAL ANALYSIS

Duties : ● Manage a large textbank and database on conflict trends and violence in South Africa ● Responsible for data analysis using a computer.

Requirements: ● A post-graduate degree in the Social Sciences (preferably with a Sociology/ Political Science background) ● Some research experience (preferably in qualitative methods) ● Computer literacy is essential although training will be provided in the following specific packages: ATLAS/ti, Paradox, Microsoft Word/Word Perfect and ATLAS/gis ● Good analytical skills.

Recommendation : ● Writing and graphic skills ● A proven track record of textbank and database design and development.

RESEARCHER

CENTRE FOR DEVELOPMENT POLICY AND PLANNING

Duties : Undertake research in the field of development policy and planning. The incumbent must be willing to work in any part of the country for short periods.

Requirements: ● Thorough knowledge of the social/economic context of development and/or housing/urban planning, with at least an Honours degree or equivalent ● One year's appropriate research experience, backed by a proven skill in writing research reports ● Fluent, with reading and writing skills, in English and one other official language.

Recommendation : ● Basic computer skills, although training will be provided ● A valid Code 08 driver's licence.

RESEARCHER

CENTRE FOR HEALTH PROMOTION AND DEVELOPMENT

Duties : Stationed in Pretoria, to undertake research in primary health care. Must be willing to work in other parts of the country for short periods.

Requirements: ● Appropriate research experience in the field of health ● Able to work independently and write research reports ● Fluency, with reading and writing skills, in English ● Commitment to serving disadvantaged communities.

Recommendation : ● Some experience and/or qualifications in health promotion/ education ● Some experience in health related community work ● A valid Code 08 driver's licence.

Address your CV to the Personnel Manager, Private Bag X41, Pretoria 0001, (Fax no. (012) 202-2196). Indicate your current salary as well as a contact telephone number and for which discipline your application should be considered. Closing date: 15 June 1995.

THE ORGANISATION PROMOTES THE PRINCIPLES OF AFFIRMATIVE ACTION.

RESEARCH AND TEACHING POSTS

Applications for the undermentioned posts are invited and must reach the Head, Personnel Department, on the prescribed form on or before **23 June 1995**. Academic merit is the sole criterion for appointment to the University irrespective of the candidate's creed, sex, race or political affiliation.

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES BUREAU OF MARKET RESEARCH

A Chair/Research Director or a Chief Researcher or a Senior Researcher or a Researcher.

Requirements: Chair/Research Director: Doctorate.

Chief Researcher/Senior Researcher: Master's degree.

Researcher: Honours or B degree with research experience.

FACULTY OF THEOLOGY DEPARTMENT OF SYSTEMATIC THEOLOGY AND THEOLOGICAL ETHICS

A Chair or an Associate Professorship or a Senior Lectureship.

Applications close on **23 JUNE 1995** and selection committees will conduct interviews during **AUGUST 1995**. Appointments normally take effect on **1 JANUARY 1996**.

Application forms as well as particulars regarding fringe benefits and salary scales are obtainable:

BY POST

The Head: Personnel Department, P O Box 392, Pretoria 0001.

IN PRETORIA

Personally from: Counter 10B, Level 10, Administration Building, Muckleneuk Ridge.

By telephone from: (012) 429-2788, 429-2571, 429-2575, 429-2618 or 429-2705.

By fax: (012) 429-3445.

IN DURBAN

Personally from: 230 Stanger Street.

By telephone from: (031) 368-1443.

IN CAPE TOWN

Personally from: 63 Riebeeck Street.

By telephone from: (021) 25-1528.

IN PIETERSBURG

Personally from: 29a Landdros Maré Street.

By telephone from: (0152) 291-2167/8.



**UNIVERSITY
OF
SOUTH AFRICA**

FACULTY OF HUMANITIES

**SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT
PSYCHOLOGY**

SENIOR TUTOR (REF: M&G 38)

Applications are invited for above full-time position to assume duties by **March 2002**.

Qualifications: Minimum qualification an Honours or equivalent degree in Psychology. A Masters degree will be preferable. A Minimum of two years involvement in designing and conducting tutorial support programmes for undergraduate psychology at University level, and demonstrable engagement in teaching and learning issues is essential. Experience of small and large group teaching to culturally and educationally diverse learners essential. Registration or eligibility for registration as a psychologist with the HPCSA would be an advantage.

Duties: Leadership and coordination of Psychology 1 undergraduate tutorial and academic support programmes. Research and evaluation of teaching and learning experience and methods. Leading participation in team-based curriculum design. Administrative and service duties to the department, school, and university.

Enquiries: Professor Tokozile Mayekiso, Head of School, tel: (011) 717-4525
E-mail: 018toko@muse.wits.ac.za or Ms Cha Johnston, Senior Psychology Administrator, tel: (011) 717-4541. E-mail: 018cha@muse.wits.ac.za.

To apply, submit a covering letter, detailed CV with names, addresses and contact details of 3 referees & certified copies of degrees/diplomas to: Pumla Ngcobo, Human Resources Officer, Faculty of Humanities, University of the Witwatersrand, Private Bag 3, WITS, 2050 or e-mail: 508psn@atlas.wits.ac.za by **4 February 2002**.



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www.wits.ac.za**

Project Leader



The South African Data Archive (SADA) serves as a broker between a range of data providers (e.g. statistical agencies, government departments, opinion and market research companies and academic institutions) and the research community. The archive does not only preserve data for future use, but also adds value to the collections. It safeguards data sets and related documentation and attempts to make it as easily accessible as possible for research and educational purposes.

The South African Data Archive requires the skills of an accomplished project leader to join its team. The successful candidate will acquire research data; market and promote SADA nationally and internationally; lead, shape and enhance online data development; and plan, design and implement marketing packages.

Essential attributes: • A degree in the natural/social sciences with a background in qualitative and quantitative research • Adequate experience in statistical analysis and social science research • Knowledge of basic statistical processing software • Marketing experience • A good understanding of technical issues related to data archiving and virtual archives • Very good IT and web development skills and an understanding of users and depositors in the science domain • Good communication, writing, problem-solving and critical thinking skills • Good presentation and public speaking skills.

The NRF offers a challenging career and competitive remuneration package commensurate with qualifications and experience.

Applicants should submit a letter of application stating the position being applied for and a detailed CV, including the names, addresses and contact numbers of at least three referees. These should be either mailed or faxed to Mrs Day Barnard, Head: Personnel, National Research Foundation, PO Box 2600, Pretoria 0001, telefax (012) 349-1179 and must reach the NRF no later than 15 February 2002.

The National Research Foundation is committed to employment equity and redress.

NATIONAL RESEARCH FOUNDATION
Meiring Naudé Road (Just off the N1)
Pretoria

NATIONAL RESEARCH FOUNDATION

NRF website: www.nrf.ac.za

INVESTING IN KNOWLEDGE AND INNOVATION

**FACULTY OF MANAGEMENT,
DEVELOPMENT & COMMERCE**

Lecturer:

Psychology

(Two-year contract position)

The Faculty requires the services of a suitable lecturer who is able to lecture undergraduate and post-graduate students on the following modules: Research Methods & Statistics and Psychopathology to undergraduate students and Psychopathology, Psychodagnosis and Psychotherapeutic Techniques to post-graduate students.

Qualifications: •A Master's degree in Psychology and lecturing experience at tertiary level •Registration with the HPCSA as a psychologist will be a recommendation

Duties: •Lecturing undergraduate and post-graduate students on the above-mentioned modules •Supervision of post-graduate students' research projects •Assisting with student administration and conducting research.

Enquiries should be directed to Prof H.M. Verhage at tel. (040) 602-2065/082 200 4708 or e-mail: hermanverhage@freemall.absa.co.za

Foreign qualifications must be accompanied by an evaluation certificate from the SAQA.

In addition to competitive salaries, the University offers attractive fringe benefits subject to certain conditions

The University of Fort Hare is an equal opportunity employer, committed to affirmative action.

TO APPLY

Please send or fax a comprehensive CV, proof of remuneration package, the names and addresses of three work-related referees and certified copies of academic qualifications to: The Recruitment Officer, Human Resources Department, University of Fort Hare, Private Bag X1314, Alice 5700. Tel: (040) 602-2471. Fax: (040) 653-1023. E-mail: chocho@ufh.ac.za

Closing date: 8 February 2002.

Note: •The University reserves the right not to make an appointment •Applicants who have not been informed about the outcome of their applications within two months from the closing date may regard their applications as having been unsuccessful.



University of Fort Hare
Together in Excellence

OM Business School: **LEARNING CONSULTANT**

**Top notch Employment Equity opportunity for
ambitious Black (African) professionals**

This is an exciting opportunity to join Old Mutual Business School, working alongside a team of dedicated professionals on the development and learning of people at Old Mutual. Operating in a team, you will:

- assist with identifying generic learning needs
- design & develop learning material
- facilitate learning & training
- work with vendors/suppliers to ensure standards are strictly maintained
- offer consultation related to learning
- evaluate learning solutions in terms of content, design and user interface
- determine measurement & evaluation criteria for learning interventions.

Our ideal candidate should therefore meet these requirements:

- a Tertiary qualification in the field of Human Resources/Education/Adult Learning, with a particular leaning towards psychology
- experience in the field of adult education, training & development
- a good understanding of business processes/systems
- proven facilitation and excellent interpersonal liaison skills
- ability to work under pressure
- demonstrable knowledge and experience of a range of interactive facilitation styles
- ability to communicate at different levels.

To pursue this personal & career development opportunity with an employment equity employer, visit our website: www.oldmutual.co.za and select "Work for Us" on our homepage. Closing date:

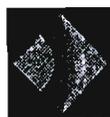
15 February 2002.

AD
MARK
CAPE 95821

EVERY STEP OF THE WAY



BUSINESS SCHOOL



The Transition and Reconciliation Programme at the
Centre for the Study of Violence and Reconciliation
is looking to fill the following positions

CSV R
CENTRE FOR THE
STUDY OF VIOLENCE
AND RECONCILIATION

**Project Manager (2 years):
International Comparative Project**

CSV R is presently coordinating a Southern Africa project on civil society reconciliation initiatives and is about to engage in various international projects related to transitional justice and reconciliation. We are looking for an experienced project manager who is capable of managing a complex project budget with a range of international partners, who is committed to human rights and victim empowerment and who has a thorough understanding of issues of political violence and transitional justice.

Requirements

- Post-graduate degree in Social Sciences or Law, preferably an MA
- At least two years project management experience
- Sound financial and people management skills
- International (particularly African) expertise or experience
- Good understanding of research methodology and human rights advocacy
- Training and Materials development experience
- Broad understanding of transitional justice, political violence, identity and reconciliation in South Africa
- Good writing and analytical skills
- African language and a driver's licence would be advantageous

**Contract Researcher (12 months):
Race and Reconciliation Project**

The researcher will be primarily responsible for creating, developing and analysing a database on incidents of racial violence in South Africa, across the period 1994-2001. In addition, the researcher will monitor specific incidents of racial violence across the year 2002 and contribute to a quarterly brief on hate and crime trends.

Requirements for the position:

- Bachelors degree in Social Sciences, preferably an Honours or MA.
- At least two year's research experience.
- Familiarity with database development, data coding and inputting
- Good understanding of research methodology
- Good writing and analytical skills.
- Knowledge in the field of racism and xenophobia.
- African language and a driver's licence would be advantageous

For more information contact Thoki Mofokeng at CSV R (011-403-5650)

To apply: send a CV, a short writing sample and names of two referees to Xoliswa Ntintili at CSV R by 18 February 2002.

CSV R, 4th Floor, Braamfontein Centre, 23 Jorriison St, Braamfontein.

Fax: (011) 339-6785. Email: xntintili@csvr.org.za

CSV R promotes equal opportunity

ABBREVIATIONS



MD Morning Daily, Mo-Fri	BIM Bi-Monthly	T Tuesday	Sun Sunday	Ts Tswana	Se Sesotho
AD Afternoon Daily, Mo-Fri	BiW Bi-Weekly	W Wednesday	Wk Saturday & Sunday	Fm French	C Chinese
Wk Weekly	BIA 2x a Year	Th Thursday	E English	Ger German	Lan Language
Mt Monthly	Q Quarterly	Fr Friday	A Afrikaans	Xh Xhosa	Frq Frequency
F Fortnightly	M Monday	Sat Saturday	B Bilingual, Eng/Afr	Zu Zulu	O Other when required

NEWSPAPER ASSOCIATION (27)

URBAN DAILY AND WEEKLY NEWSPAPERS (22)

TITLE	PROPRIETOR	FRQ	LAN	PO BOX	CODE	TEL NO	FAX NO	E-MAIL
Beeld	Media 24 Bpk	MD, Sat	A	333 AUCKLAND PARK	2006	[011] 713-9300	[011] 713-9960	beeld@beeld.com
Burger, Die	Media 24 Bpk	MD, Sat	A	692 CAPE TOWN	8000	[021] 406-2222	[021] 406-3221	kschroed@dieburger.com
Business Day	BDFM Publishers (Pty) Ltd	MD	E	1742 SAXONWOLD	2132	[011] 280-3000	[011] 280-5505	kotzeg@tml.co.za
Cape Argus, The	Independent Newspapers Cape Ltd	AD, Wk	E	56 CAPE TOWN	8000	[021] 488-4911	[021] 488-4075	argusnews@ctn.independent.co.za
Cape Times	Independent Newspapers Cape Ltd	MD	E	56 CAPE TOWN	8000	[021] 488-4911	[021] 488-4744	argus@ctn.independent.co.za
City Press	Caxton Publishers & Printers Ltd	MD, Sat	E	43069 INDUSTRIA	2042	[011] 248-6000	[011] 248-6211	citizen@citizen.co.za
City Press	RCP Media Limited	Sun	E	8422 AUCKLAND PARK	2006	[011] 713-9002	[011] 713-9977	eangus@rapport.co.za
Daily Dispatch	Dispatch Media (Pty) Ltd	MD, Sat	E	131 EAST LONDON	5200	[043] 702-2000	[043] 702-2968	basith@dispatch.co.za
Daily News, The	Independent Newspapers KZN	AD	E	47549 GREYVILLE	4023	[031] 308-2911	[031] 308-2662	bspum@nn.independent.co.za
Diamond Fields Advertiser	Independent Newspapers	MD	E	610 KIMBERLEY	8300	[053] 832-6261	[053] 832-8902	
EP Herald	Times Media Eastern Cape	MD, Sat	E	1117 PORT ELIZABETH	6000	[041] 504-7911	[041] 585-4966	epherald@tmed.co.za
Independent on Saturday, The	Independent Newspapers KZN	Sat	E	47549 GREYVILLE	4023	[031] 308-2911	[031] 308-2662	bspum@nn.independent.co.za
Mercury, The	Independent Newspapers KZN	MD	E	47549 GREYVILLE	4023	[031] 308-2304	[031] 308-2333	bspum@nn.independent.co.za
Post	Independent Newspapers KZN	W	E	47549 GREYVILLE	4023	[031] 308-2911	[031] 308-2662	bspum@nn.independent.co.za
Pretoria News	Independent Newspapers Gauteng	MD, Sat	E	439 PRETORIA	0001	[012] 325-5382	[012] 325-7300	ptanews@ptn.independent.co.za
Rapport	RCP Media Limited	Sun	A	8422 AUCKLAND PARK	2006	[011] 713-9001	[011] 713-9988	eangus@rapport.co.za
Star, The	Independent Newspapers Gauteng	AD, Sat	E	1014 JOHANNESBURG	2000	[011] 633-9111	[011] 836-8389	
Sunday Independent, The	Independent Newspapers Gauteng	Sun	E	1014 JOHANNESBURG	2000	[011] 633-9111	[011] 633-2735	
Sunday Times	Times Media Limited	Sun	E	1746 SAXONWOLD	2132	[011] 280-3000	[011] 280-3773	kotzeg@tml.co.za
Sunday Tribune	Independent Newspapers KZN	Sun	E	47549 GREYVILLE	4023	[031] 308-2106	[031] 308-2715	bspum@nn.independent.co.za
Volksblad, Die	Media 24 Bpk	MD, Sat	A	267 BLOEMFONTEIN	9300	[051] 404-7600	[051] 447-7363	nuus@volksblad.com

**INDEPENDENT URBAN DAILY NEWSPAPERS**

(2)

TITLE	PROPRIETOR	FRQ	LAN	PO BOX	CODE	TEL NO	FAX NO	E-MAIL
Natal Witness	Natal Witness P&P Co (Pty) Ltd	MD, Sat	E	362 PIETERMARITZBURG	3200	[033] 355-1111	[033] 355-1122	mail@witness.co.za
Sowetan	New Africa Publications Ltd	MD	E	6663 JOHANNESBURG	2000	[011] 471-4000	[011] 474-2074	

INDEPENDENT NATIONAL WEEKLY NEWSPAPERS

(4)

China Express, The	China Express SA (Pty) Ltd	Tu, Fr	C	53335 TROYEVILLE	2139	[011] 337-3322	[011] 337-3321	
Mail & Guardian	M & G Media (Pty) Ltd	Fr	E	91667 AUCKLAND PARK	2006	[011] 727-7000	[011] 727-7111	ceo@mg.co.za
Overseas Chinese Gazette	Overseas Chinese Media Corp	Tu,Th,Sat	C	39773 BRAMLEY	2018	[011] 887-0510	[011] 887-2625	ocgsa@icon.co.za
Sowetan Sunday World	New Africa Publications Ltd	Sun	E	6663 JOHANNESBURG	2000	[011] 471-4200	[011] 471-4165	bongani@sundayworld.co.za

ADVERTISEMENTS FOR EMPLOYMENT – CODING SCHEME #14

General guidelines

1. For missing values (information that is not included in the text of the advertisement) leave the cell blank. In *Statistica* a value of –9999 is automatically assigned as a missing value.
2. Where information is not specified in the advertisement, do not interpret or make assumptions (although one often has a ‘gut feeling’ about what the advertisement is saying). For example, if the ad calls for a ‘counsellor’ but gives no details of educational background, one cannot interpret this as implying a masters degree as people can train to become counsellors at organisations such as Life Line. Only information that is stated in the text can be coded. The only exception to this rule is the category of ‘social change’ and as it was defined as interpretive at the outset. The personality categories do at times require some degree of interpretation, but this should be exercised with caution.
3. Always code to the most specific category under each section heading. For example, if participatory research is specified in the ad it will fall into the participatory research category rather than the general research category.
4. Check for specific category instructions throughout the coding scheme.

ID Identification – Year.Week.Advertisement Number.S/W/R
Publication [The Sunday Times (01), Rapport (02), The *Mail & Guardian* (03)], Year (max. 2 digits), Week (max. 2 digits), Advertisement Number (max. 3 digits). e.g. 19309014 = Advertisement 14 from Week 9 of The Sunday Times 1993.

SELECTION 1. Not selected for analysis because should not have been sampled, but included because of the ‘fuzzy area’ guiding principle

REPEAT Only repeats noticed, as repeated advertisements cannot be gauged through the sampling procedure, especially since there are many coders
1. Repeat

NEWSPAPER 1. The Sunday Times
2. Rapport
3. Mail & Guardian

YEAR 76 onwards (use 2 digits to represent the current year being coded)

ADVERT 1. Direct employer
2. Recruitment firm

SECTOR 1. Public (Schools, Universities etc.)
2. Private (Banks, Businesses etc.)
3. NGO (e.g. Lifeline, FAMSA, ATICC, Black Sash, Sached Trust, and others)

LOCATION State the location of the position advertised in words (i.e. code as a text value). If required for analysis at a later point numbers can be assigned.

INDUSTRY

This category refers to the sector in which the employee will work, and **NOT** to the specific job that he or she will be doing

1. Service
2. Manufacturing/Industrial
3. Mining
4. Technology/Science
5. Research
6. Consumer
7. Professional Development
8. Construction
9. Education
10. Investment
11. Communications
12. Health
13. Social Development/Welfare (including community development) e.g. Black Sash, Race Relations
14. Retail
15. Agriculture

TYPE OF APPLICATION IN SOCIETY

Specifically refers to what the employee **will be doing** in his or her job.

1. Education
2. Human Resources/Industrial/Manpower/Organisation/Personnel/Training/Management/Public relations
3. Health
4. Social Development/Welfare
5. Research

LEVEL OF GRADUATE SOUGHT (code to the highest level)

Do not infer this information, it must be stated in the advertisement.

eg. 'be qualified to graduate or postgraduate level' – code as postgraduate

1. Non-specific academic background (*a university degree; tertiary education*)
2. Undergraduate social sciences (generally – social or human science)
3. Undergraduate psychology (specific e.g. psychology or behavioural science)
4. Postgraduate social or human sciences (non-specific)
5. Honours social or human sciences (specific)
6. Masters social or human sciences (specific)
7. Doctorate social or human sciences (specific)
8. Postgraduate psychology (non-specific)
9. Honours psychology (specific)
10. Masters psychology (specific)
11. Doctorate psychology (specific)
12. Masters in Education
13. Bachelors in Education
14. Doctorate in Education

ADDITIONAL QUALIFICATIONS (not coded unless a prominent part of the advert)

2 columns are allowed for additional qualifications in the database as more than one additional qualification is at times specified. Order is not important.

1. Teaching diploma
2. Education degree

3. Personnel Qualification (e.g. SA Board for Personnel Practitioners (SABPP) registration, IPM Diploma)
4. Human Resource or Industrial Relations qualification
5. RVQ14 qualification
6. Numerical qualifications (includes statistics, maths, accounting, budgeting)
7. Driver's licence
8. Literacy ('*proven writing ability*')
9. Technical proficiency (e.g. computer literacy)
10. Training Management Diploma

PSYCHOLOGICAL AREA – Type of psychological area/application

2 columns are provided for psychological area in the database as more than one area is at times required. Order is not important.

1. Industrial in general
2. Psychometrics
3. Education
4. Counselling
5. Research
6. Community
7. Clinical
8. Social
9. Not specified – e.g. lecturer in Psychology, no specifications

PROFESSION (PSYCHOLOGY) – SPECIFIED

1. Clinical
2. Counselling
3. Education
4. Industrial
5. Research
6. Psychometrist
7. Registration required, but category not specified (*e.g. registered with SAMDC*)
8. Registration an advantage, category unspecified (*e.g. registration with the SAMDC an advantage*)
9. An intern in any category

POSITION/JOB ADVERTISED (name of job)

Code any job title into the appropriate category, the names do at times differ slightly. Where arbitrary titles are given to the job leave this variable out.

1. Personnel/Recruitment Consultants
2. Human Resources
3. Labour/Industrial Relations
4. Manpower
5. Training and Development
6. Psychologist
7. CommunityResearcher/Facilitator/Developer/Worker/Fieldworker/Project Officer
8. Organisational Development/Consultant
9. Teacher/Lecturer/Subject Coordinator
10. Researcher (general)
11. Recreation officer
12. Liaison Officer/Public Relations/Organiser
13. Management (includes Directors, Assistant Directors etc – anything to do with the management of employees)
14. Career counsellor/Officer/Youth coordinator
15. Financial Aid Counsellor

16. Conflict resolution
17. Dean of Students
18. Administrative Officer
19. Productivity improvement
20. Information Officer
21. Counsellor (general)
22. Remuneration Specialist
23. Psychometrist

LEVEL OF THE POSITION

Here the salary, tasks required, experience and responsibility of the position must be considered using the benchmark examples provided below.

1. Junior (does not necessarily mean no experience, rather a lower level position)
2. Middle (take as a benchmark 'Administrative Officer' – student affairs UCT)
3. Senior (e.g. 'Consultant', 'Executive', 'National')

TASKS:

Fields 1–10, non-ordinal.

{tc \15 "TASKS:

Fields 1-10, non-ordinal}What
employee is required to do {tc \15
"What employee is required to do }

Code to the most specific level to avoid overlap

- | | | |
|-----------|---|--|
| 1. | RECRUITMENT | Anything to do with recruitment/selection |
| 2. | PERSON EVALUATION | Monitor personnel performance, progress etc
Specifically refers to individual employee evaluation. |
| 3. | TESTING | Specifically mentions testing/psychometrics
<i>'ability to use psychometric and/or psychodiagnostic measures'</i> |
| 4. | LABOUR/INDUSTRIAL RELATIONS | General and specific – negotiations with trade unions and labour groups, company's policy, inter-employee communication, wage rates etc.
<i>'applying personnel policies and labour legislation'</i>
<i>'grievance handling'</i> |
| 5. | MANPOWER PLANNING & DEVELOPMENT | Specifically mentions manpower
<i>'responsibilities cover the total spectrum of manpower management'</i> |
| 6. | MANAGEMENT | Any managerial tasks and responsibilities (general and specific)
<i>'supervising staff'</i>
<i>'ability to manage people'</i> |
| 7. | ORGANISATIONAL DEVELOPMENT AND CHANGE MANAGEMENT | General and specific
<i>'organisational diagnosis'</i>
<i>'determine appropriate organisational culture and develop interventions to achieve it'</i>
<i>'assist management to achieve change'</i> |
| 8. | PERSONNEL | Specifically mentions <u>personnel</u> administration tasks or |

	ADMINISTRATION/ FUNCTION	general personnel function <i>'wages and administration of the compound'</i> <i>'salary administration'</i> <i>'administration of housing'</i>
9.	INCREASE PRODUCTIVITY AND PERFORMANCE	Anything to do with productivity/performance enhancement <i>'assist incumbents to achieve the highest level of competence their abilities will allow'</i> <i>'performance appraisal'</i>
10.	DATA ANALYSIS	Keep database, analyse trends etc <i>'preparation of statistical data'</i>
11.	PROJECT EVALUATION	Specifically applies to community projects <i>'carry out regular evaluation activities'</i> <i>'overall assessment of the project progress'</i>
12.	PARTICIPATORY RESEARCH	Includes all forms of participatory research for example, participatory rural appraisal (PRA), rapid rural appraisal (RRA), action research <i>'experience in participatory rural appraisal'</i> <i>'action orientated research'</i>
13.	SOCIO-POLITICAL RESEARCH	Specifically mentions socio-political (and socio-economic) research <i>'researcher required for short term socio-political projects'</i>
14.	RESEARCH	General, always checked in the case of a University (not Technikon or College) teaching post. Any research tasks not coded above
15.	COMMUNITY ORGANISATION/ DEVELOPMENT	Any kind of community organisation, activities, development, participation, project implementation, field work. <i>'advise on how to strengthen community participatory aspects of project activities, advise on and assist in the preparation, organisation and backstopping of village level planning and village based training, advise on procedures for assessment of community responsiveness to community activities'</i> <i>'strengthening communities democratic processes'</i> <i>'work consistently with rural communities'</i>
16.	CAPACITY BUILDING	Capacity building, empowerment or skills training of disadvantaged groups
17.	REPORTING/ PRESENTING	<i>'Submitting of development reports'</i> <i>'documentation of ongoing developments'</i> <i>'production of regular reports, fact sheets, newsletters'</i> <i>'excellent writing and analytical skills'</i> <i>'use of audiovisual equipment'</i> <i>'production of visual material'</i>
18.	CAMPAIGNING	Advocacy, information, communication <i>'promotional activities'</i>

19.	PUBLIC RELATIONS/LIAISON	Networking etc <i>'ability to liaise with the press, embassies, lawyers, and other resource groups'</i> <i>'liaison with students'</i>
20.	GENERAL ADMINISTRATION & ORGANISATIONAL SKILLS	Does not include personnel administration <i>'basic administrative skills'</i>
21.	INTERPERSONAL COMMUNICATION	Specifically mentions interpersonal communication <i>'work with people'</i> <i>'work as part of a team'</i>
22.	GROUP LEADERSHIP/ WORKSHOPS	Required to lead groups <i>'develop and run workshops'</i> <i>'facilitation skills'</i>
23.	TRAINING/TEACHING	Any teaching or training, including technical training (always check for university or other teaching post). <i>'Establish training needs and then adapt existing material to meet those needs'</i> <i>'Trade union educator: compile and run courses in shop steward's training'</i>
24.	MANAGERIAL TRAINING & DEVELOPMENT	Specifically working with management <i>'Training to bring about management style change'</i> <i>'specialisation in management development'</i> <i>'supervisory and management development'</i>
25.	COUNSELLING	Specific and general, in industry and in education e.g. student counselling
26.	PSYCHOTHERAPY	Specifically mentions psychotherapy
27.	WELFARE	Any welfare-related activities e.g. pensions, medical aids, recreation of employees, public recreation etc <i>'organising indoor and outdoor recreation groups and ingroup leadership'</i>
28.	SOCIAL INVESTMENT	Lead, run or advise on social investment policies and actions
29.	AFFIRMATIVE ACTION	To guide or participate in the implementation of an AA policy
30.	VISIONARY/LEAD FUTURE	Analyse and interpret social environment and change – provide vision of future and leadership
31.	POLICY	Includes broad policy issues, national level policy <i>'formulation of government policy on labour relations'</i> <i>'experienced policy formulator with the insight and know-how to develop and implement the RDP'</i> <i>'production of formal policy documents'</i> <i>'monitoring the effect of constitutional, political, and economic policy on the health care system'</i>

32. NEGOTIATION & MEDIATION

Specifically mentions these tasks (includes conflict resolution) – not necessarily within industry

PURPOSE {tc \I5 "PURPOSE }

APPROACH/PHILOSOPHY

(Only code when specifically stated – must consider year of advertisement)

1 **Employer declared**

'the Equal Opportunity Foundation, established for both educational and developmental purposes, actively attempts to encourage and initiate change away from apartheid towards a normal, non-racial and humane society'

2 **Employee required** (philosophy is implied in the job description and employee characteristics)

'applicants should be firmly committed to the ideal of a single, non-racial, non-sexist system of education in South Africa'

'if you are a recent graduate with a commitment to promoting the process of fundamental change in our society'

'ability to work in a democratic environment'

NATURE OF PHILOSOPHY

IN INDUSTRY (this section is included to mark any advertisements that describe jobs in which the prospective employee will be working to further the aims of the workers as opposed to those of management)

1 **From employer's perspective** (working to further employer's (management) aims)

'implementation of Unilever employee relations programmes'

'application of grievance and disciplinary procedures'

2 **From worker's perspective** (this would include all positions within trade unions)

'back-up to trade unions on wage bargaining'

'assist workers with industry related problems, a person committed to the labour movement'

WITH REGARD TO SOCIAL CHANGE

For the purposes of this study social change is understood as any move away from the apartheid system described in the historical overview. When coding this category please pay particular attention to the **year** of the advertisement in terms of the historical overview (rather be **overinclusive** than underinclusive). This is an **interpretative category** – one can look beyond the specific text of the advertisement.

Some organisations (e.g. Black Sash, Race Relations, Sached Trust etc.) always promote social change, even if the job description does not overtly imply this.

1 Promote social change/transformation/progressive/anti-apartheid/democratic/RDP/the New South Africa

'sensitivity to all people'

'non-discriminatory'

'affirmative action'

'equal opportunity'

2 Unsure (this category serves to mark any ambiguous advertisements – not included in 1, above – which seem to imply social change; these marked advertisements will be subject to further analysis)

GRASSROOTS APPROACH

1. Grassroots/people-driven/community based/{tc \I5 "GRASSROOTS APPROACH
1=Grassroots/people-driven/community
based/}participatory/community empowerment 'work with indigenous leaders'

SALARY

Any amount stated, use approximate mean (Rands/Annum)

SALCODE

(lower inclusive, upper exclusive)

(if a salary range is given, code according to the mean)

	Rands/Annum	Rands/Month
1.	<R7 500	<R625
2.	R7 500–15 000	R625–R1250
3.	R15 000–25 000	R1250–R2083
4.	R25 000–50 000	R2083–R4167
5.	R50 000–75 000	R4167–R6250
6.	R75 000–100 000	R6250–R8333
7.	R100 000–125 000	R8333–R10417
8.	R125 000–150 000	R10417–R12500
9.	R150 000+	R12500+
10.	No amount specified, but competitive salary implied	<i>'salary and company benefit designed to attract the skilled company employee'</i>
11.		Negotiable according to qualification & experience (only if no salary is stated)

BENEFITS

- 1 All benefits (housing, car, pension and medical aid) *'attractive staff benefits'*
- 2 Some benefits 'car'
- 3 Contract position (which will mean no benefits) 'organisational development consultant'

EXPERIENCE

Only coded where experience is specifically stated

1. Development Position (Affirmative Action)
2. Training Position *'Personnel Trainee'*{tc \15 " "Personnel Trainee"}
3. Experience required, but amount not specified *'preferably experienced in the personnel field'*
4. Moderate *'at least 3 years experience'*
5. Extensive *'at least 10 years experience in the discipline'*
'candidates will already enjoy authoritative status in the profession'
'sound, all round experience'

LANGUAGE

1. English
2. Afrikaans
3. one or more African language (eg Zulu, Xhosa, Sotho)
'proficiency in at least two black languages'
'ability to speak Zulu'
4. Bilingual (English/Afrikaans)
5. One of the official languages (apartheid era)
6. One or more of the official languages (New South Africa)
7. English **and/or** Afrikaans **and** one or more African language (multilingual)
'bilingualism (1976) is essential, knowledge of Northern Sotho will be a distinct advantage'
'fluency in Zulu and English'

GENDER

1. male/man/he/his
2. female/woman/she/her

3. 'person' or 'candidate' or 'applicants'
'male or female', 'he or she', 'irrespective of race,sex or religion' or other neutral description (when employer is specifically trying to make a point of neutrality), or if there is no mention of gender.

AGE

1. Young (<30 years) (must be specified) 'aged 25 to 30'
2. Mature (30+) (must be specified)
3. Young implied (no experience, training position, maximum age limit set)
'part of young management team'
4. Mature implied (extensive experience etc)'at least 28 years of age'
'between 20 and 40' (this was coded as a mature implied as it was felt that a mature 20 year old could fill the post otherwise an older person would be preferred)

MARITAL STATUS

1. Married
2. Single

NATIONALITY (only if stated in the ad)

1. South African
2. Homeland
3. African (south of Sahara)

RACE

1. White
2. Black (african/black/coloured.....)
3. Irrespective of race
4. No reference to race (neutral)

EQUAL OPPORTUNITIES

Applies to candidate selection

1. Employer declared statement
'An Equal Opportunity, Affirmative Action Employer'
2. Explicit in text
'affirmative action position'
3. Implied or explicit in text about employee
'black candidates are especially encouraged to apply'
4. Explicit job description/role/task

PERSONALITY TRAITS

Must come from the data, may be specific words or implied in job description (avoid over-interpretation and reading too much into the ads)

See the table describing the 'Big 5' Personality traits (attached at the back) for more information.

1. INTROVERSION/EXTROVERSION

- 0 LOW
- 1 HIGH

'Assertive', 'Energetic', 'Enthusiastic', 'Leadership', 'Motivated'

2. AGREEABLENESS

- 0 LOW
- 1 HIGH

'Sensitive personal style', 'Interpersonal skills', 'Patient', 'Sympathetic', 'Empathy', 'Team working ability'

3. CONSCIENTIOUSNESS

- 0 LOW
- 1 HIGH

'Efficient', 'Responsible', 'Practical', 'Sober', 'Independent'

4. NEUROTICISM

0 LOW

1 HIGH

'Calm', 'Stable', 'Tough', 'Resolute'

5. OPENNESS TO NEW EXPERIENCE

0 LOW

1 HIGH

'Creative', 'Flexible', 'Initiative'

APPENDIX IV: Standard Industrial Classification Codes

List of Major Divisions

1. Agriculture, hunting, forestry and fishing
2. Mining and quarrying
3. Manufacturing
4. Electricity, gas and water supply
5. Construction
6. Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods; hotels and restaurants
7. Transport, storage and communication
8. Financial intermediation, insurance, real estate and business services
9. Community, social and personal services
10. Private household extraterritorial organisations, representatives of foreign governments and other activities not adequately defined



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- [29. Psychotherapy](#)
- [30. Society of Psychological Hypnosis](#)
- [31. State Psychological Association Affairs](#)
- [32. Humanistic Psychology](#)
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- [41. American Psychology-Law Society](#)
- [42. Psychologists in Independent Practice](#)
- [43. Family Psychology](#)

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Peace (48)
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Physiology (6)
Police and public safety (18)
Population (34)
Psychoanalysis (39)
Psychopharmacology (28)
Psychotherapy (17, 29)
Public service (18)
Rehabilitation (17, 22)
Religion (36)
School (16)
Social (8)
Social policy issues (7, 9, 17, 27, 34, 35, 37, 44, 45, 48)
Sport (47)
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Theoretical (24)
Therapy (17, 29, 39, 49)
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Vocational (17)
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**EMPLOYMENT TRENDS
FOR
PSYCHOLOGY AND SOCIAL/HUMAN SCIENCE GRADUATES**

**METHODOLOGY MANUAL
(1999)
Edited by LP Derman in 2002**

**COMPILED BY
MERRIDY WILSON, NINA SURENDORFF AND LAUREN DERMAN**

EMPLOYMENT TRENDS DATA COLLECTION AND CODING PROCEDURE

1. Advertisement selection method

{tc \I3 "1. Advertisement selection method

}Job

advertisements in three national weekly newspapers, *Sunday Times*, *Rapport* and *Mail & Guardian (M&G)* were analysed. The study spanned the years from 1976 to 1996, except for the *M&G* which started publication in 1985. Twenty weeks were randomly selected and held constant across the newspapers for each year. This was done according to 20 random numbers generated by a computer programme, and the weeks of the year numbered according to the definition of each month consisting of four weeks.

The random numbers and corresponding weeks in the year were as follows:

50 – 2 nd week Jan	28 – 4 th week July
52 – 4 th week Jan	29 – 1 st week Aug
5 – 1 st week Feb	30 – 2 nd week August
9 – 1 st week March	36 – 4 th week Sept
10 – 2 nd week March	37 – 1 st week Oct
13 – 1 st week April	40 – 4 th week Oct
15 – 3 rd week April	41 – 1 st week Nov
18 – 2 nd week May	43 – 3 rd week Nov
19 – 3 rd week May	47 – 3 rd week Dec
24 – 4 th week June	48 – 4 th week Dec

Both *Sunday Times* and the *Rapport* are weekly Sunday papers making the selection of the appropriate week according to random numbers unproblematic. The *M&G*, however, comes out on a Friday, and the date is specified as a weekly range, for example, 14 – 20 May. In order to ensure that all three papers were selected from the same week each year the dates (Sunday) of the selected *Sunday Times/Rapport* were noted and the *M&G* papers selected such that the date of the corresponding Sunday paper fell within the *M&G*s weekly date range.

The advertisement selections were done in the Natal Society Library where the newspapers are archived. Three research assistants were trained in the advertisement selection procedure. Each of the research assistants focused on an equal number of the randomly selected weeks across the 20 years of the study. Selected newspapers were first collectively scanned by the research assistants in order to familiarise

themselves with the content and wording of the advertisements, and to ensure comprehensiveness and selectivity of the procedure.

The parameters of the search were wide, and included any job which:

1. specified the professional title of 'psychologist' or 'psychometrist'
2. was in a traditional area of work for psychologists (eg. counselling or human resources)
3. called for a graduate in the social, behavioural or human sciences generally
4. was judged to consist of primary tasks capable of being done by a graduate with a major in psychology (regardless of other qualifications).

Owing to this wide focus, it was recognised that the definition of what should be selected was 'fuzzy'. To ensure that borderline advertisements were not overlooked, the initial approach was therefore over-inclusive (i.e., an extensive approach was adopted) rather than under-inclusive, meaning that any advertisements that one thought might be appropriate were selected and could later be discarded if not suitable.

The advertisements selected were recorded by date and photocopied. A running list of all advertisements selected was kept so that the photocopies could be checked against the dated recordings to ensure that no advertisements were inadvertently missed whilst photocopying. These lists later formed the checklist for reliability tests.

Photocopied advertisements were marked with date, issue number and newspaper name. Each selector kept a running grid of the weeks within each year that had been covered. This is important as for some of the weeks no papers were available and the grids allowed the selectors to keep a record of this. The grids also provided a good indication of the progress of the selections, thereby helping to ensure that deadlines were met.

To assess inter-selector reliability of the selection process, a 5% sample (20 weeks for *Sunday Times* and *Rapport*, and 10 weeks for the *M&G*) was checked. The percentage reliability for selection from each newspaper was: *M&G* 80%, *Sunday Times* 86%, and *Rapport* 75%. A second round of selection was conducted in order to improve on the comprehensiveness of the sample. All advertisements selected in both selection rounds were included in the final sample, ensuring that no applicable advertisements were overlooked. The research assistants each focused on selected years in order to increase detection of repeated advertisements and, in the later coding procedure, repeats were tagged, thereby avoiding the coding of advertisements more than once.

2. Content analysis of advertisements

An elaborate coding scheme was developed through 14 revisions. The categories emerged from the advertisements rather than from employment theory. A process of team coding and discussion about ambiguous categories was pursued in order to produce a comprehensive and clear coding scheme. Four coders were trained and worked together until complete agreement was attained in the coding process. The data set is comprehensive, covering a wide range of variables that can be identified within the advertisements under review. The practicalities of this amount of data, however, make it difficult to calculate a statistical inter-rater reliability for the coding process. The reasons for this are threefold: First, advertisements have been regarded as texts and as such there are a number of readings that can be made of each of these. We read and coded the texts with our specific purposes in mind. These categories were imposed jointly and consensually. Second, it was believed that consensual coding was the most appropriate method to use since many of the categories were interpretative in nature, with *fuzzy* boundaries. The coders were thus trained to code according to a common interpretative framework. Third, all advertisements did not necessarily include all the information that the coding scheme allowed for. Some categories were therefore not filled in a number of advertisements, making the number of observations unequal. This would have resulted in an inflated overall reliability, as factual categories were generally filled and little variation in these categories is likely.

A number of precautions were adopted to ensure that the consensual coding methods used were reliable. All coders were trained initially until 100% agreement was reached. This ensured that each coder had a complete common understanding of what each category encompassed, as well as the correct application of each of the options within a category. All discrepancies were addressed and agreement reached on the optimum categorisation. During coding there was also constant questioning and deliberation upon uncertainties. Problems were marked to be checked and discussed at a later date (all problematic advertisements were kept aside and discussed once a week to reach a consensual decision about how to code it), and random checks were conducted at various points throughout the coding period.

Due to the vast amount of available data (approximately 12 000 advertisements from 20 weeks in each of 21 years) and the time constraints of the study, it was decided to further sample the data set, including each month of the year once, with the exception of November and December which had fewer advertisements.

After applying the sampling strategy, the selected random numbers and corresponding weeks were:

50 – 2 nd week Jan	28 – 4 th week July
5 – 1 st week Feb	30 – 2 nd week August
13 – 1 st week April	36 – 4 th week Sept
18 – 2 nd week May	40 – 4 th week Oct
24 – 4 th week June	43 – 3 rd week Nov

The computer programme used was Statistica.

Some practical guidelines to ensure efficient coding

1. Any specific coder should code an entire year from one paper before beginning the next. This makes the detection of repeated advertisements more likely.
2. Each pile of advertisements from a specified week should be kept together and numbered before beginning with the coding of that week.
3. To avoid missing any advertisements, always complete the coding of one week before beginning with the next.
4. It is useful to keep a record of the weeks to be coded from each paper and to cross these off as you go along. This helps to provide a clear picture of how the project is progressing and also ensures that no weeks are inadvertently overlooked.
5. We found it helpful to underline the relevant information in each advertisement as the text is read through. This makes the coding procedure faster as one does not have to reread the text as one moves through the database.
6. When analysing the data, copy the relevant variables to a new working file so that the original data set is not altered in any way (e.g. if it is necessary to collapse categories).

Problematic categories

Some of the categories were found to be of little value, either because the information was so rarely specified, or because the advertisements were not specific enough to allow the required information to be extracted without a great deal of interpretation, which would have led to reliability problems. Firstly, the location category was found to be complex as South Africa has had different provincial divisions across the time of the study. During the first round of coding this category was eventually scrapped, but for the second round of coding the name of the location was included as a text value

so that if anybody required this information it would be available. The even years would, however, have to be recoded. The category called job advertised, which was included to provide an indication of the name of the job, was difficult to work with since there are so many varying titles for jobs, and the titles are used differently by different companies. Similar positions were sometimes given different names and visa versa. If interpreted with caution, this category should, however, provide basic information about the general types of jobs, as reflected by their names, being advertised. The categories of *race* and *gender* were found to be unusable. The options for no mention of race or gender were often marked because advertisers cannot blatantly request a specific race or gender, especially in more recent years. It was hoped that these categories would provide an indication of advertisements that were specifically aiming to avoid gender or racial stereotypes, but this could not be picked up from the data without *reading between the lines* to a great degree. The *age* category was problematic as *age* is often implied in the advertisement, but seldom specified. Few advertisements therefore have this category coded. *Marital status* and *nationality* were almost never mentioned, making the categories irrelevant. It was also found that the detail included in the *equal opportunities* category was misleading. The category was most useful when collapsed, in terms of there being an *equal opportunities* statement or not.

These categories have not been removed from the database, but it is suggested that the information be treated with caution as it may be unreliable, or provide a biased picture of the trends.

HISTORY OF APARTHEID AND ITS EFFECTS IN SOUTH AFRICA

NOTE: This is in no way a complete history of apartheid, but serves only to mark certain key events and tenets of the apartheid system, in order to help contextualise the time period of the study.

Apartheid = the system of legalised and institutionalised race discrimination and segregation in South Africa (Lipton, 1994:36). The apartheid ideal was the separation of the races as much as possible and in all spheres of life.

Racial segregation and forced removals

Central to the National Party's apartheid programme was the racial classification of the population. This was achieved by the Population Registration Act of 1950, which

required that every person in South Africa be classified into one of four racial groups (Native, European, Coloured, Indian).

Another pillar of the new apartheid state was provided by the Group Areas Act of 1950 which designated specific urban areas for occupation by particular racial groups. When any area was set aside for a particular group, all non-members of that group could be forced to move. In addition, every African person had to carry a pass book at all times and produce it to any policeman on demand. Labour bureaux were set up to control the movement of workers into the cities and to ensure that workers did not leave the 'white' rural areas unless farmers' labour needs were fulfilled.

In 1959, the Promotion of Bantu Self-Government Act was passed, providing for the establishment of eight (later ten) bantustans or 'Bantu homelands'. In time, every African in South Africa was to become a citizen of one of these 'homelands', and would thus be deprived of his or her South African citizenship; 'white South Africa' would then be left with no African citizens.

The practice of influx control had its origin in the Black Land Act of 1913. The *Community Development Act* and the *Group Areas Act* — whereby Coloureds and Asians were also restricted to certain areas — further limited the geographic mobility of labour in general. Influx control did not solve the problem of poverty, but merely transferred it from urban to rural areas. Many did not attach importance to the necessity of building up an effective, experienced labour corps because apartheid provided cheap labour to employers. With the lifting of influx control, the government pledged itself to allow greater mobility of labour, provided that job and housing opportunities exist. At present, however, restrictions on the mobility of labour still exist, particularly in the form of inadequate housing and other facilities.

Political structures

Following the State of Emergency (1986 — 1990) the state could bypass judicial procedures and assume even greater repressive power. By 1990, South Africa was entering a period of negotiations between the government and forces under the African national Congress (ANC) leadership, which were seeking a non-racial and democratic constitution.

Repression

'Repressive laws were built up in successive stages as the state responded to resistance, by increasing its powers. Step by step the range of prohibited actions were

widened, people's rights were narrowed, and the powers of the regime to act and to withhold information about its actions increased' (Lipton, 1994:63).

Resistance and liberation struggle

The history of resistance is as old as the history of colonial intrusion and white minority rule. Between 1976 and 1977 nationwide uprisings occurred. These were brutally suppressed by the police. A visible expression of growing commitment to defeat the apartheid regime became clear from this point. Local struggles against particular aspects of apartheid grew. By 1983 they were structured into a national movement which identified itself with the ANC. In 1955 the non racial SACTU (South African Congress of Trade Unions) was established, and represented unity between the different forces that opposed apartheid. This alliance, headed by the ANC, formulated the Freedom Charter, a programme for a non-racial democratic state.

The Freedom Charter (Lipton, 1994:102) was adopted on 26 June 1955, at the Congress of the People at Kliptown. The apartheid regime regarded the Freedom Charter as a treasonable document.

The introduction to the Freedom Charter read as follows:

We, the People of South Africa, declare for all our country and the world to know: that South Africa belongs to all who live in it, black and white, and that no government can justly claim authority unless it is based on the will of all the people; that our people have been robbed of their birthright to land, liberty and peace by a form of government founded on injustice and inequality; that our country will never be prosperous or free until all our people' live in brotherhood, enjoying equal rights and opportunities; that only a democratic state, based on the will of all the people, can secure to all their birthright without distinction of colour, race, sex or belief; And therefore, we, the people of South Africa, black and white together equals, countrymen and brothers adopt this Freedom Charter. And we pledge ourselves to strive together, sparing neither strength nor courage, until the democratic changes here set out have been won.

(When coding for social change, any advertisements which further the aims of the Freedom Charter must be marked).

Economic growth

The state intervened directly in the economy. Tariff protection helped selected industries to establish themselves and grow without the threat of being crushed by foreign competition. White workers made advances as job reservation was strengthened, and many manual workers were promoted to supervisory, technical and clerical jobs. The most controversial aspect of the wage structure in South Africa was the great discrepancy between the incomes of white and black South Africans. This

can be traced to the Civilised Labour Policy which was intended to protect 'poor whites' from competition by black workers. Since then, wage policy in South Africa has been used to answer political developments. In other words, South African wage policy has usually been directed at some political or social objective in terms of the country's dominant policy.

The industrial colour bar

The industrial colour bar is defined as '... all those practices that are constraints to black advancement. These constraints come in the form of legal and institutional barriers, social custom, political and economic impediments' (Bendix, 1996:421). The most obvious of these was the institution of job reservation, originally intended to reserve certain skilled positions for persons of certain race groups. Between 1965 and 1975, 28 job reservation regulations existed, and although in 1975 they affected only 2.3% of the total labour force, they were accompanied by unofficial reservation of jobs and employer and social prejudice, which effectively barred the advancement of black, coloured and Asian Africans on the labour market. This, together with lack of educational and training facilities for these groups, certain closed shop agreements, and the fact that black Africans were not regarded as employees and could not form registered trade unions, led to the monopoly of skilled positions by whites. This in turn resulted in lax work attitudes among whites, a shortage of skilled workers, artificially inflated wages for whites and concomitant high labour costs. In 1978 five job reservations were in force, in 1979 two job reservations still in force, in 1982 the second last job reservation was removed and, in 1983, the last job reservation regulation (in the mining industry) was abolished, bringing an end to official job reservation.

With the Labour Relations Act of 1979, the government committed itself to the elimination of discriminatory labour practices. Furthermore, the restrictive effects of so many closed shop agreements were minimised by the redefinition of blacks as employees and their right to belong to registered trade unions. Although, legally, most measures restricting the upward and vertical mobility of labour were removed and in many enterprises equality of opportunity became the professed practice, impediments such as social and employer prejudice and restrictions on geographical mobility remained, as well as the fact that the black labour force was not sufficiently skilled or qualified to utilise the opportunities for upward mobility which might have been present, due to the heritage of the past.

Affirmative action

During the past few years, the need for affirmative action has been repeatedly emphasised and new job opportunities have been created for persons who were previously disadvantaged, thereby addressing to some extent the structural imbalances. In 1993 the National Affirmative Action Alliance was launched to spearhead, facilitate and monitor the effective implementation of affirmative action initiatives in the private and public sectors.

Labour relations

Before 1979 trade unions, although not illegal, were excluded from official processes of determining wages and working conditions. In 1979 the Wiehahn Commission advised the government to 'bring independent unions under control by allowing them to register and become involved in the official bargaining machinery' (Lipton, 1994:49). Registered unions were subjected to government controls. This process aimed to remove bargaining from the shop floor to institutions which favoured the employers.

Developments in all spheres of labour relations were extremely rapid during the 1980s, which saw the rise of politically involved, community-based unions. Only since 1983 have strong, representative, independent trade unions emerged, and African workers have been able to press for better wages and working conditions. The unionisation of black workers was not as immediate and rapid in the mining industry as in the manufacturing sector. Since 1985 employers have increasingly adopted a stance reflected in the socio-political dispensation, leading to the establishment of the South African Business Charter in 1986. Like unions, employer representatives perceived the need to position themselves within a possible new dispensation. In 1987 the then Department of Labour adopted a policy geared towards the fullest possible utilisation of the country's human resources.

Momentum increased from the beginning of 1990, when far-reaching reforms within the socio-political system were announced by the then government (special attention was paid to employment creation). These greatly changed the preoccupations, attitudes, strategies and expectations of trade unions. By 1990, however, the South African trade union movement still reflected the divisions within the socio-political spectrum.

The main problem at present is that, while a large pool of labour exists, it cannot be fully utilised since the job opportunities do not exist and, where they do, the

unemployed are not sufficiently skilled or educated to fill existing shortages. The present dilemma of the South African labour market is attributable largely to past practices which hampered the achievement of technical and educational qualifications by blacks, prevented horizontal and upward mobility and led to sanctions and disinvestment.

University education

In 1959, legislation was passed that prevented blacks from registering at white universities and whites from registering at black universities, without ministerial permission. A limited number of black students were allowed access to white universities if courses were not available at black universities. The 1984 Quota Act allowed universities to admit a specified number of black students. By 1986 the quota system was scrapped, but the effects of this are still marked. In 1990, 300,000 students registered at universities in South Africa. The number of black students doubled between 1980 and 1987 (from 40,000 to 82,000), but the underlying inequalities still persist.

Bantu education

The Bantu Education system was meant mainly to provide basic knowledge for unskilled manual workers, to train African children to accept an inferior position in society and to promote an ethnic — as opposed to national — consciousness in students.

The Reconstruction and Development Programme (why it is needed)

South Africa's history has been a bitter one. It has been dominated by colonialism, racism, apartheid, sexism and repressive labour policies. As a result, poverty and degradation exist side by side with modern cities and a developed mining, industrial and commercial infrastructure. Income distribution is racially distorted and is one of the most unequal in the world. Women are still subject to innumerable forms of discrimination and bias and rural people are marginalised.

The economy was built on systematically enforced racial division in every sphere of society. Rural areas were divided into underdeveloped bantustans and well-developed, white-owned commercial farming areas. Towns and cities were divided into townships without basic infrastructure for blacks, and well-resourced suburbs for whites. Segregation in education, health, welfare, transport and employment left deep scars of inequality and economic inefficiency. In commerce and industry, large conglomerates dominated by whites control large parts of the economy. Cheap labour

policies and employment segregation concentrated skills in white hands. Small and medium-sized enterprises are underdeveloped, while highly protected industries under-invested in research (RDP White Paper Discussion Document, 1994:4-5).

References

- Apartheid: The Facts. (1991). London: International Defence and Aid Fund for Southern Africa.
- Bendix, S. (1996).(3rd Ed.) Industrial Relations in South Africa. Kenwyn: Juta.
- Lipton, M. (1994). The debate about South Africa. In E. Webster, L.-Alfred, L. Bethlehem, A. Joffe, T. Selikow (eds.) Work and Industrialisation in South Africa. Randburg: Ravin Press.
- Race Relations Survey, 1976 - 1996/97.
- RDP White Paper, 1994.