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Strategic options for professional firms

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Attorneys regarded the prospect of recommended fees as an eventual reality with tariffs totally disappearing, and viewed this prospect with some concern (Botha, 1988).

b) Competition

Rising operating costs have had a negative effect on the profit margins of both these professions as salaries and rental expense items particularly have escalated rapidly. Added to these costs has been the need to invest in expensive technology in order to remain competitive, provide a fast, accurate service to clients and improve partner productivity.

The above cost-impacts on profitability of these professional firms have resulted in the increasing trend towards diversification into the type of services where higher fees are charged, such as various types of consulting in accounting firms, particularly information technology consulting, or a greater emphasis on commercial services in legal firms. This diversification into non-traditional services evoked different reactions from clients. One client stated: "I am worried that audit firm are not as good at the non-audit services they are offering. When an audit firm moves into management consulting, it can be very useful for a client, but when they start to offer recruiting services, they can be as much of a rogue as anyone else in that area and the relationship could be spoilt." Another reacted to this development by commenting: "As a relatively small firm, we expect our auditors to be our general business advisors, be proactive and point out potential problems in any area before they develop, whether this be in financial, tax, personnel and the provide relevant information at the right time."

Competition for accounting firms is experienced in various forms, namely, from the traditional providers of the services into which they have diversified, from their clients who have their own internal audit department and other qualified in-house experts, from hardware and software houses and computer programs, from general and merchant banks, investment companies, stockbrokers, insurance companies and various management and tax consultants. Similarly, legal firms experience competition from general and merchant banks, from insurance companies, stockbrokers and accounting firms, which employ legally qualified people. Most of these competitors do not operate under the constraints of the professional ethic and are at liberty to promote their services both to existing clients and to prospective clients.

There is also an increasing trend among client companies to enlarge existing legal departments or to initiate their own legal departments. As in the case of the professions in the property industry, a different cognitive make-up and style is required of legal and accounting firms who diversify into these areas. A more risk-taking, innovative, and less conservative style is required, and the ability to make rapid decisions under uncertainty, with a tolerance for ambiguity and an unstructured situation. In the uncertain times in which South African companies are operating an increased demand for external consultants is experienced in order to attempt to reduce the perceived risk and uncertainty of client firms.

c) Changing client needs

The environmental changes which have been listed in Chapter 3 have had a profound impact on clients of

professional firms and consequently on the relationship between client and professional consultant. Clients have become more knowledgeable, critical, sophisticated and demanding.

In many cases the nature of the industries in which client firms operate has changed. The financial industry is a case in point, where a great deal of change has taken place in the conceptual definition of financial institutions, the range of services offered and in the use and impact of technology. This has changed industry boundaries, the definition, the risk profile, and the intensity of competition of client firms and their consequent requirements of professional consultants.

A greater depth and range of expertise is required to assist them in reducing their risk and maximizing their competitive advantage, as industries change and businesses becomes more complex. The purchase of confidence and trust is therefore extended to include services which provide additional perceived value beyond the traditional audit or legal advice. Clients require more interaction, more frequently and at a higher level of expertise and seniority. In many cases the relationship with professional consultants has become more intimate and they are regarded as part of the management team. The ability of the consultant to work in such a team is therefore also more important to these clients.

As a consequence of these changes, a greater range of skills is required of professional consultants in this industry. Clients' expectations now include a knowledge and understanding of the industry, a broad business acumen, proactiveness, flexibility, a critical and questioning approach, insight and judgement, and other

manifestations of additional perceived value such as relevant timely information. Speed and availability, multiple areas of specialization within one firm and continuity were given as additional values required from, for instance, legal consultants. As one client stated, "What is further missing is conceptual thinking. I would be prepared to pay more for this and for stability in the relationship. Each time I get a batch of new faces - people move around too much and that makes me nervous."

d) Increased demand for specialization

As a consequence of the increased sophistication of business, clients require a greater degree of specialization from their professional consultants. Technology has provided an opportunity for accounting firms for consulting in the area of computer auditing, computer security and other areas of information technology applications and management. A need for specialization in certain industries, certain types of clients and certain services has developed. "South Africa is in a bit of a backwood in global terms and is increasingly falling further behind for various reasons. The professions are very light on specialized resources to address such areas as treasury management." Similarly, specialization in certain types of legal service has become necessary, such as industrial and labour law, media law, property law and conveyancing, and the commercial and tax areas. As a client commented, "We don't only want legal advice, as a major bank we need specialists in commercial law, tax law and labour law. We are looking for a commercial solution to our problems and an understanding of our situation."

e) Economic factors

The increased cost of salaries and rentals has been mentioned as a factor responsible for the decreasing margins of these professions and the consequent need to diversify into services with a higher and more flexible fee nature. The cost of investment in technology in order to gear up operations, improve partner productivity and efficiency of service, has been an added expense.

As professional firms have been required to invest in technology, the need to employ expensive experts in this area has further increased their salary expense. The high interest and inflation rates have added their impact on the expense items, as has the rapidly increasing professional indemnity insurance premiums which have become necessary as a consequence of the higher claim rate.

As diversification into non-traditional service areas has increased, so has the need to accommodate different cultures within the firms. The conservative auditor is now required to live with the dynamic, more flamboyant management consultant, and the analytical and cautious attorney with the more entrepreneurial and creative commercial attorney. This has caused a certain amount of friction within the firms as cultural clashes inevitably occur.

7.2.3 The health care sector

Since extensive interviews of clients were not undertaken in this industry, the following comments were distilled from interviews with the partners of the firms and various stakeholders in the industry.

The medical profession has been affected by the same environmental forces as the other professions. The medical firms which were selected for this research study, namely, the pathology and radiology specializations, have been particularly affected by the need to invest in expensive technology in order to offer the most modern diagnostic techniques which increased consumerism and patient knowledge have demanded. This has also resulted in greater salary expense as more highly qualified staff are employed, similar to the experiences of professions in other industries.

The remuneration permitted by The Scale of Benefits prescribed by the Representative Association of Medical Aid Societies is seen as unprofitable and restrictive. This is one option as a basis for fee determination open to the medical profession. Eighty per cent of private practitioners in South Africa adhere to this scale. The alternative option of fee determination is the use of the Recommended Scale suggested by the Medical Association of South Africa. In the economic recessionary climates experienced in the 1980's, this has resulted in higher profits for those practices operating in the affluent areas of the country, but with the high collection costs producing further eroded profits.

The Medical Schemes Act has provided guaranteed payment until now, but pressures have been strong for the abolition of the guarantee. There have been numerous complaints regarding the rapidly rising medical costs, and suggestions have been made for alternative health care delivery systems, such as Health Maintenance Organizations and more socialized health care services, as well as for the abolition of separate hospitals for separate racial groups, which add to the costs of health

care. Since there is a dichotomy between the provision and financing of medical services, there is little incentive for cost containment, and as with other forms of short-term insurance, abuse of this system by both patient and medical practitioner is found.

The constraint of a maximum number, twenty, of partners per practice, disallows maximum exploitation of economies of scale as an option, and regional geographic distribution is consequently the norm. Where a larger distribution has been attempted, the prohibitive costs of transportation have additionally severely cut into profit margins.

An increase in the supply of medical practitioners, both general and specialist, has occurred in urban areas. This has resulted in an excess of supply in these areas, and consequently general practitioners have resorted to diversification into dispensing, to over-servicing (i.e. providing more services than is required for the interests of the well-being of patients), or to performing more surgical procedures, while specialists have increased the number or the range of procedures performed.

Since the capital required for investment in the necessary technology is problematical, radiologists and pathologists have increasingly formed strategic alliances and joint ventures with private hospital groups, backed by powerful financial and industrial interest groups. The consequence of this has been a loss of autonomy and independence for these medical firms, as well as the fear of a consequent drop in the traditional ethical standards and quality of service, as the profit motive increasingly dictates clinical and ethical judgement. This has certainly not been the rule as yet

among the firms interviewed, and was denied by most of the firms interviewed, but the observation was made that this would become inevitable. As a senior partner of one of the medical firms admitted: "We want to go to the Stock exchange in five years' time. We are in this game to make a profit. The days are gone when we can afford to be magnanimous and altruistic."

An increase in personal contact with the patients of both pathologists and radiologists was observed, as well as more contact and discussion with the referring practitioners. These traditionally detached, diagnostic services were therefore becoming more personalized, with greater interaction with their clients.

There was also a greater need for super-specialization among these already specialized firms. Non-invasive radiological techniques as a method of improving profits have resulted in more of this type of technology being found in private practice in South Africa than anywhere else in the world. (In some instances there are two to three of the relevant machines within a radius of five kilometres of each other.)

7.3 Attributes of service quality

Parasureman, Zeithaml and Berry (1985), in a landmark article on the measurement of service quality, listed ten determinants of this elusive concept, namely responsiveness, competence, access, courtesy, communication, credibility, security, understanding and knowing the customer and tangibles. This list was arrived at in research done on financial and other services, but did not include professional or consulting services.

A list of attributes which could be used in the model of service quality for professional services was independently arrived at for five of the professions through the post coding of interviews with their clients. The list in Table 7-1 summarizes the constructs which are common to all professions and which can be used in a service quality model for the professions, similar to the model suggested by Parasuraman et al.(1985), and also indicates whether the constructs match those of Parasuraman et al. or not.

The purpose of eliciting these attributes was to identify whether the current options chosen by professional organizations, as reflected in their profiles, were meeting the needs of their clients, or whether the attributes desired by their clients were more likely to be found in some other position in the multi-dimensional representation empirically found. Other dimensions may also be needed and a new multi-dimensional space defined for professional organizations to reposition themselves in alignment with the needs of their clients.

The constructs found indicate the need for professional organizations to continue to maintain the professional ethic of honesty, integrity and independence, and provide a service of technical excellence, while at the same time becoming more entrepreneurial, widening the service base and offering specialization. These attributes appear to indicate that the positions of Groups 2 and 3 are more likely to meet the needs of clients, which may explain why they are regarded as the most effective groups of organizations.

Wittreich (1966) has underlined the need for professional services to make a direct contribution to

the reduction of the uncertainties of a client. This is reflected in the constructs of speed and decisiveness; co-operation and supportiveness; and in the flexibility of the service offered by providing a diversity of services. A final construct required is that of pragmatism in the face of South African environmental conditions which may be unique to the South African situation.

Table 7.1

List of attributes for a service quality model for the professions

Determinant	Constructs	Match
Professional ethic	Integrity, ethics, independence	No
Technical competence		Yes
Reliability	Consistency, accuracy	Yes
Access	Speed of response	Yes
Decisiveness	Make fast, good decisions	No
Supportiveness and teamwork	Co-operation, personal service communication, feedback, teamwork	
Specialization	Offer specialist services	No
Broader service	Diversify out of traditional range, functional area	No
Entrepreneurship	Risk-taking, creativity, proactivity, flexibility, dynamism	No

Pragmatism	Practical, realistic, relevance to SA socio-cultural situation	No

This list differs somewhat from the model suggested by Parasuraman et al., and it is therefore shown that different attributes exist for different types of services and for the amount of perceived risk attached to the purchase or non-purchase of the services. In the services provided by the professions in this study there is a high need for the reduction of client risk and uncertainty while at the same time there is a the need for the firms concerned to provide a full service to their clients.

The above analysis of the qualitative findings of each sector illustrate the value of the contextual aspects in policy research in order to identify additional constructs omitted in coarse-grained, quantitative techniques.

7.4 Analysis of interviews, brochures and press reports on individual professional organizations

In order to confirm the quantitative findings of each group, additional analysis of the interview information about specific professional organizations, and content analysis of brochures and press reports, on the basis of common or differing characteristics, are included.

Content analysis of the firm brochures, staff recruitment advertisements and press reports was done where these were available. The units of measure were

the descriptive words identified in each of the strategic types, and the results tended to confirm the above findings. This technique could not be used uniformly for all the professions or all participating firms. Medical and legal firms, for instance, did not have promotional brochures at all.

It was found that in some of the brochures, for instance brochures about consulting engineering organizations, quantity surveying organizations and some architectural organizations, the technical competencies of the organization were accentuated, whereas in the brochures of other professional organizations more information was given about the organization's mission and culture, and the attributes required of its partners and employees.

The latitude to use staff recruitment advertising as a means of creating an awareness of the firm within the professional code of ethics was practised by the professions in the construction and building industry and, to a lesser extent, by accounting firms and some legal firms. The number of firms on which additional information was gathered from these sources was therefore limited largely to those in Groups 2, 3 and 4.

The descriptions of each group are drawn from results of the post-coding of the information given during the interviews with partners of firms, their clients and competitors, and of the content analysis, and is based on the common characteristics of each group.

Group 1: The sentient group
(8 firms: 3 legal, 3 medical, 1 accounting and 1 architectural)

When comparing the interview information of members of this group, it is found that there are conflicting management styles within the group, as well as a conflicting attitude towards commercialism, entrepreneurialism, R & D and marketing. Firms in the group state that they are client-oriented (hence the high importance of interpersonal skills) but resources are stretched with a large number of branches. They tend to espouse an ethic of giving back to the profession, hence the academic orientation. They have no further strongly characteristic value system.

The above descriptive terms derived from the distillation of interviews, company brochures and press reports and advertisements, tend to confirm the description of this group arrived at in Chapter 6. Firms in this group are therefore characterized by a lack of consistency in terms of their descriptive attributes.

Group 2: The capable group
(14 firms: 2 medical, 1 accounting, 2 legal, 2 engineering, 2 quantity surveying, 5 architectural)

According to an analysis of the interviews with partners, clients and contractors, company brochures and press reports and advertisements, and despite the widely differing professions, the firms in this group share common attributes of being specialized, business oriented and client-oriented. They are also innovative and hard working and have a continuity in their relationship with clients. Internally they have diverse cultures and exhibit a co-operative orientation with

internal teamwork, participatory management style and co-operative alliances with other firms. Added to this is the distinctly characteristic business orientation of firms in this group.

Group 3: The reputable group
(18 firms: 7 accounting, 5 legal, 5 engineering, 1 quantity surveying)

According to the qualitative information it appears that the predominant profile of firms in this group indicate that, although they provide a specialized and good service to their clients, they are nevertheless rather conservative, highly ethical and professional. However, there is a certain percentage of firms in this group with a poor morale, which could be associated with the history of mergers or the process of negotiations for mergers, which may result in a degree of uncertainty and a lack of internal cohesion. This may be a reason why they appear to be holding in their strategic choice.

Group 4: The uneven group
(4 firms: 3 architectural, 1 medical)

According to the qualitative information gleaned from interviews with the partners of the firms in this group, they are characterized by a democratic management style and by providing the highest quality work. They run their practices as a business, have a flat organic structure with open communications internally and externally, with emphasis on the importance of good relationships. They also work with stakeholders and with each other (two of the architectural firms were at one stage one firm). They further have a strong cultural identity and are regarded as being adventurous and innovative.

Group 5: The amorphous group
(4 firms: 2 medical, 2 engineering)

The four firms in this group did not exhibit any common characteristics, which tended to confirm their rather nondescript profile, except that they were all of an exclusive cultural identity, dealt with a highly focused client base and inclined to have autocratic leadership.

7.5 Co-operative strategies

The alternative to the disadvantages of vertical integration and formal mergers to reduce the perception of environmental uncertainty by managers of organizations, and to increase divergence to provide a fuller service range to clients, is the formation of some form of co-operative or collaborative strategy.

Thorelli (1986) maintained that inter-organizational networks have become increasingly relevant in services marketing where such aspects as technology transfer and information exchange require a holistic approach. Powell (1987) has proposed that network forms of social organization are found in research and knowledge production and in such professional organizations as architecture and engineering. The disadvantages of large-scale vertical integration may become acute when the pace of technological change quickens, product or service life cycles shorten and market demand becomes more specialized, as is being experienced by professional service organizations. The increase of these organization forms permit the access of centres of knowledge rapidly and the sharing of resources on a less irreversible basis than formal mergers, through networks of generalized reciprocity agreements.

The above types of arrangement were frequently found in professional service organizations in South Africa as described and were almost the rule in all types of organizations in the study, but were found to a lesser degree in organizations in Groups 1 and 5. Harrigan (1988) has proposed various typologies of co-operative strategies depending on various market, client and industry contingencies. In the South African environmental context the following types of co-operative strategies were observed among professional service organizations.

The formal joint venture

In this form of co-operative organization was created outside of the professional partnership with either another professional organization of the same profession or with one of a different profession, or with a "non-professional" organization. The purpose of this outside organization was generally to diversify into other services while operating without the constraints of professional liability and ethics. Examples of this type were accounting firms which had equity in management consulting firms, and architectural and/or engineering organizations which had equity in interior design and urban and environmental design firms. Medical organizations were also found to have equity in private hospital groups, but in these situations their dependence on the parent organization was high and their professional independence became reduced.

Formal temporary strategic alliance

This type of arrangement would be dictated by client needs and would be project-based where the skills, knowledge and expertise of participant organizations

would be combined on a temporary basis for the duration of the project, after which the alliance would disband and each organization go its separate way. Examples of this type of arrangement were the co-operation between accounting organizations, legal organizations, merchant banks and stockbrokers during the process of a flotation, two architectural organizations working together on a project, or a consortium of consulting engineering organizations, project management and construction companies on a major project.

In the medical profession co-operation on a major epidemic or emergency situation was found to exist between members of different disciplines resulting in a team effort for the duration of the crisis.

The formal spider's web network

In this type of strategy a formal network of contacts with other organizations and individuals was set up for the purposes of sporadic access to resources, information and expertise when required. There was a reciprocity arrangement among these organizations that kept the web intact.

The informal spider's web network .

These networks are those generally found in business and social circles and are not structured in any way.

7.6 Summary of integrated typology

The summaries of the configurations of each of the five groups which are now given, are distilled from the quantitative analysis in Chapter 6, on self-typing of

the organizations by the organization members, through external assessment of the organizations by their clients and competitors, and by researcher inference from data gathered during interviews and from published documents.

The descriptive words used are those which were shown to contribute most to the particular type or configuration. The configurations are therefore crystallized from multiple sources and represent a mixture of a normative and interpretive assessment of the archetypes. The types correspond well with the proposed theoretical model developed in Chapter 5 and confirm the induced or modified theoretical base of the derived model.

The descriptions of three of the groups are also remarkably similar to three of those identified by Bleeke (1983) in his analysis of the strategies adopted by organizations after deregulation, namely the national distribution firms, corresponding to Group 3, the low cost producers, corresponding to Group 4 and the speciality firm, corresponding to Group 2. It thus appears that the present research has inadvertently confirmed part of his model, except that Bleeke's model also included new entries into the market, which, it is suggested, constitute the "non-professional" firms competing in the market-place for these services.

Group 1: The sentient group
(8 firms: 3 legal, 3 medical, 1 accounting and 1 architectural)

Firms in this group have a high perception of the uncertainty of politico-economic factors and place a higher importance on interpersonal skills and strength than firms in other groups. They do not espouse any

particularly obvious strategy, are younger, academically oriented, hard working, have a high percentage of standard services, and a high number of branches with high people gearing.

There are conflicting management styles within the group, as well as a conflicting attitude towards commercialism, entrepreneurialism, R & D and marketing. Firms in the group state that they are client-oriented (hence the high importance of interpersonal skills) but resources are stretched with a large number of branches. They tend to espouse an ethic of giving back to the profession, hence the academic orientation. They further have no strongly characteristic value system.

The firms in this group are not industrialized and are not as effective as firms in other groups according to the group of criteria used to measure this construct.

Group 2: The capable group
(14 firms: 2 medical, 1 accounting, 2 legal, 2 engineering, 2 quantity surveying, 5 architectural)

This group perceives a relatively high uncertainty of all environmental factors. They espouse the values of credibility fairly highly and have clearly defined multiple strategies relative to firms in other groups, as is reflected in their image. Members of these firms have a relatively higher experience in other firms, and socialize more with clients.

Their strategies reflect a higher diversification into non-standard services and a particularly active interest in research and development.

As mentioned previously, firms in this group are specialized, business oriented and client-oriented. Further, they are innovative and hard working. There is also a continuity in their relationships with clients. Internally they have diverse cultures and exhibit a co-operative orientation with internal teamwork, participatory management style and co-operative alliances with other firms.

The above descriptions tend to confirm the image of multiple specialization, a long-term service orientation towards clients and of innovation. Added to this is the distinctly characteristic business orientation of firms in this group. The additional attributes of this group are hard work and a co-operative nature, with internal team spirit, a participatory management style and co-operative alliances externally with other firms. There is also a tendency to have an internally diverse culture which would tend to reinforce the importance of teamwork and co-operation and assist in the cementing of external relationships with a variety of clients and stakeholders.

The above description of firms in Group 2 appears to be the closest to that of the ideal professional firm as elicited in the interviews and as delineated in the attributes of the service quality model. This also explains why they appear to be the most effective of the professional organizations.

The firms in this group are industrialized and are also the most effective professional organizations according to the criteria of effectiveness decided on.

Group 3: The reputable group
(18 firms: 7 accounting, 5 legal, 5 engineering, 1 quantity surveying)

Firms in this group appear to be rather amorphous in their identity. They value interpersonal skills highly and rely on their reputation and long-standing social relationships with their clients. They have a higher tenure, attend more overseas conferences and socialize more with their clients than firms in the other groups. They have a large number of branches.

Once again, as previously stated, firms in this group tend to have a dominant cultural identity, are specialized and diversified and are also aggressive marketers. They have the predominant characteristics of conservatism, conformity and reliability, and provide good service to clients. They have a high post-graduate educational level, are well managed with good leadership. They are generally also nice people, but are inclined to have a poor morale, and a history of mergers or of being in the process of negotiations for mergers.

It appears that the predominant profile of firms in this group is that, although they provide a specialized and good service to their clients, they are nevertheless perceived to be rather conservative, highly ethical and professional. This tends to confirm that they rely more on their reputation and long-standing relationships with their clients than on being innovative and risk-taking. They also have the profile of being well educated, well managed and are nice people.

A certain percentage of firms in this group exhibit poor morale, which could be associated with the history of mergers or the process of negotiations for mergers,

which may result in a degree of uncertainty and a lack of internal cohesion. This may be one reason why they appear to be holding in their strategic choice and appear to occupy this rather undecided strategic position. Because of their larger size, they do not find it necessary to engage in as much co-operative strategies as firms in Groups 2 and 4.

The firms in this group are not as industrialized as firms in other groups but they are perceived to be effective along the criteria used for measuring this construct.

Group 4: The uneven group
(4 firms: 3 architectural, 1 medical)

This group is characterized by a high perception of environmental uncertainty for competition and also of known factors. Their values are those of a service orientation and leadership and they have an image of innovation relative to the other groups. The members of this group are rather older with a high tenure and they spend more time doing professional work. They also give more lectures than firms in other groups, exhibit the greatest amount of diversification into other non-standard services and have the least number of branches, making them geographically focused.

As has been stated, the firms in this group, are characterized by a democratic management style, providing the highest quality work. They run their practices as a business, have a flat organic structure with open communications internally and externally, with emphasis on the importance of good relationships. They further have a strong cultural identity and are adventurous and innovative.

This group of firms are perceived to be adventurous and innovative, not only in their service offering but also in the fact that they are business oriented while still placing importance on relationships, both internally and externally. They work with stakeholders and with each other (two of the architectural firms were at one stage one firm). The organic structure and open communications assist them in being innovative and proactive. They therefore exhibit strong co-operative relationships.

Firms in this group are highly industrialized but slightly less effective than the firms in Groups 2 and 3.

Group 5: The amorphous group
(4 firms: 2 medical, 2 engineering)

The firms in this group do not perceive much environmental uncertainty and espouse only the value of leadership highly. They are perceived to be less reputable and less broadly based than firms in other groups. Their members have a higher age and higher experience in the public sector and the least experience in other firms, socialize the least with clients and spend less time on work relative to the firms in other groups.

They appear to have more standard services, a low number of branches, little research and development but high boundary-spanning activity relative to firms in the other groups.

They are highly industrialized but are not effective organizations according to the criteria used.

7.7 Summary

In this chapter the results of the initial analysis of the questionnaires were integrated into the typology of five professional organizations, strategic types and profiles of the top management team that were quantitatively established. This was achieved by combining a normative and an interpretive perspective of these organizations in line with the technique of triangulation. The theory had suggested four alternative strategic choices but the data which the research process generated led to the conclusion that there were in fact five groups of professional firms, two of which fitted the broad descriptions of the four part, two dimensional taxonomy, while one straddled the boundaries between two of these four parts, and a fifth group, although also classified together with one of the other groups within one of the parts, projected outwards in multi-dimensional space along the axis of values.

The possibility that additional types exist which were not accounted for in the theoretical model is not discounted, particularly in view of the fact that other "non-professional" firms compete with the professional firms in the same market. If a more comprehensive research survey were to be conducted which were to include these competitors for the service, additional groups could be identified or the grouping could be changed according to another set of predominant attributes along which they would tend to cluster or group together.

CHAPTER 8

ASSESSMENT OF RESULTS AND THEORY

8.1 Introduction

In this chapter the implications of the empirical research findings are discussed in more detail in relation to the theoretical background and to the particular circumstances of the South African professional service organizations participating in the research. Additionally, some propositions are derived from the above discussions which could be used as a basis for future research.

8.2 Summary of the theoretical background

This thesis mainly aimed to arrive at a typology of professional organizations which would reflect the integration of their organizational, strategic and top management attributes in the face of increasing environmental uncertainty and determinism. This environmental uncertainty would include in particular the increased competition, high politico-economic instability and risk of the South African socio-cultural environment.

The effectiveness of each of the professional organizational postures was as measured along a set of attributes which encompass aspects of both the strategic constituents approach and the competing values approach.

Further, professional firms become more industrialized as they adapt to changing environmental circumstances. The extent of this industrialization in each type was assessed, as measured by the five values which emerge from the industrialization process. The progression of the professional groups along stages of industrialization was also tracked.

The intrinsic nature of the service encounter at the interface between the service organization and its clients, makes service organizations vulnerable to the personal expectations and perceptions of the service experience of this encounter by both parties. The professional encounter is made more complex by the high degree of risk frequently attached to the non-purchase of the service and the sensitive, intimate and confidential nature of the problem. This results in the purchase of a large degree of trust by clients of the professional firm.

The adaptation of organizations to environmental contingencies may be seen as evolutionary or revolutionary, and organizations may enact their own environmental domain, depending on the availability of an environmental space and the dominant competencies within the organization. The degree of information transfer among populations as well as within the constituents of a given population will also influence the speed of change within a population where this is driven by rapid changes in technology.

Research into typologies of strategies and archetypes of organizational adaptation have been done on industrial organizations. Porter's (1980) generic typology suggests that there are three basic strategic options in the face of industrial market environments: one in which the organization is a cost leader, one where the organization differentiates itself in some way, and the third in which either of the above two strategies is applied to a specific group of clients or customers, a specific service or product offering or a specific geographic region.

As shown in Chapter 3, Miles and Snow (1978) have generated a typology of four organizational strategies in which organizations are represented along a continuum of their adaptation to innovation, which was shown to bear selected similarities to the Porter typology.

Bleeke (1983) added to the understanding of organizational behaviour after deregulation by suggesting that developments at that juncture result in certain consequences, namely new product or service combinations, the arrival of new low cost producers and the intensified arrival of new technology. This results in a repositioning of firms which were previously regulated into the following groups: firms which offer a selected service or a service to a selected client segment; firms which broaden their distribution channel or their range of services; firms which remain where they were; and new low-cost entrants into the market.

According to Schmenner (1986) service industries may survive by either becoming less labour intensive, with less customization and less client interaction, or by remaining highly customized with a high client interaction. These two options correspond respectively

to the cost leadership and differentiation options of the Porter model. Shostack (1987) maintains that service strategies may be repositioned to either an increased or reduced complexity or to divergence. These alternatives also correspond to the options suggested by Porter. Finally, Maister (1985) contributed to the understanding of the culture of professional service organizations in is description of a certain type of successful rofessional organization.

The interactive perspective of organizational adaptation to various environmental contingencies by Hrebiniak and Joyce (1985) results in a four-part typology of organizational populations which reflects the four alternative combinations of environmental determinism and strategic choice. If the strategic choice model of Child (1972) is integrated with this model as an additional dimension, the profile of the top management team - in terms of its demographics, personal background, perceptions of the environment and its values - results in another set of variables.

According to the model proposed by Hrebiniak and Joyce (1985), the four quadrants represent the following possible alternatives:

The first quadrant 1 represents the combination of high environmental determination and low strategic choice, theoretically representing organizations which operate under conditions of competitive markets but with limited options. It represents the population-ecology model with a natural selection approach to adaptation. This quadrant would include both small organizations which sell commodity-type products or services and large organizations with undifferentiated products or services. It represents the cost leadership type of

strategy of the Porter (1980) model and the defender type of strategy of the Miles and Snow (1978) model.

The second quadrant represents high environmental determinism with high strategic choice, where differentiated choice has been made and adaptation is within environmental constraints. This represents the situation of large organizations in highly regulated industries. Differentiated or focused niches may be chosen within the constraints through advertising, lobbying and marketing. It was suggested that professional organizations may be found in significant numbers in this quadrant. This represents the differentiation and focus strategies of the Porter (1980) typology, or analyser strategy of the Miles and Snow (1978) typology.

The third quadrant represents low environmental determination and high strategic choice, with adaptation by design. Differentiated or focused choice may be made. Organizations in this situation enjoy power over others in their task environment, and innovations and proactive behaviour are easier. They also represent the differentiation and focus strategies of the Porter (1980) typology, but are the prospector types of the Miles and Snow (1978) typology. This quadrant represents the position of many professional firms prior to greater environmental determination. It was suggested that some professional organizations may fall into this type of situation by virtue of their having been proactive enough to sustain a high choice or niche position in the face of increasing environmental determination.

The fourth quadrant represents low environmental determination and low strategic choice. These organizations work under placid environmental conditions

and their strategies appear to be of the unstable reactor type with no clear membership of any strategic group.

As was suggested in the development of the model, Child proposed that the profile of the top management team would have an influence on strategic choice. It was not known what this influence would be on the model. Although Hambrick and Mason (1984) made some propositions regarding the influence of this profile on strategic choice, there was no empirical evidence for the validity of these propositions. Therefore the integration of these two models, that of Hrebiniak and Joyce (1985) and that of Child (1972), was approached inductively without any specific hypotheses or propositions to test, but with only a set of general expectations as to the outcome of the research process.

The inductive approach taken in the research and the expectations created by the theory, were synthesized in a process of pattern-fitting to arrive at the final findings of the research.

8.3 Discussion of the research results in relation to the theory

The research results have been discussed in Chapters 6 and 7, and the final typology consisting of five configurations of organizational, strategic and top management characteristics has been described. The resemblance to the theory of these five types, and the deviations from the expectations, are considered below.

Theory had suggested that a four part typology of organizations could exist under the contingencies of high or low environmental determination, and high or low strategic choice.

Strategic choice was defined in Chapter 3 as both the clear articulation of specific choices or intended strategy by the top management team, and the realized strategy which is reflected in the image of the organization. This will be found in the image factors and in the additional strategy variables. The organizational environment is defined as being largely enacted by the organization and its members, and therefore the extent of the environmental determination will be articulated in the strength of the perceptions of environmental uncertainty by the top management team.

Discussion of each group

The empirical enquiry found five broad configurations, four of which could be associated with three of the four quadrants of the theoretical typology of Hrebiniak and Joyce (1985), and a fifth which moved into a third dimension above a particular cell in the two-dimensional theoretical typology. The demographic characteristics of each of these five configurations, their effectiveness and the extent of their industrialization, are discussed below in relation to the theory. In particular the propositions of Hambrick and Mason (1984) regarding the contributions of the demographic profiles of top management are discussed. A brief summary of their characteristics as outlined in Chapter 7 precedes this discussion and places it in perspective.

The first or sentient group of organizations had a rather neutral image overall. Relative to the other groups, they were perceived to be less competent at delivering a good-quality service, they had only slightly broadly-based services and were less reputable and innovative than firms in other groups. These characteristics are associated with the description of the fourth quadrant of the Hrebiniak and Joyce (1985) model in the following respects.

They exhibit a cost leadership type of strategy since they do not appear to have differentiated themselves in terms of providing quality service and appear to have a high percentage of standard services. In this respect some of them therefore sell what were described as commodity-type services.

Their structure reflects a relatively high number of branches and high gearing with human resources. Since it appears that this group have not geared up through the use of technology as much as organizations in other groups, they appear to be less able to free up their resources to provide a high-quality service. Their low boundary-spanning behaviour is also indicative of low co-operation with other organizations and consequently a rather closed outlook.

This group includes three medical organizations which provide standard pathology and radiology services, three legal organizations which provide standard legal services, an accounting organization which has not differentiated itself strongly in any way, and the architectural organization with the largest number of branches. This appears to confirm the description of the first quadrant of the theoretical model.

The demographic profile of the top management team in these firms shows them to be slightly younger than the management team of the other groups; to have had more work experience in the academic sector; to give more lectures; and to have had less work experience in other organizations than was the case in other groups. They do not socialize with their clients as much as managers in organizations from other groups or attend as many overseas conferences, but spend more time working. This appears to suggest that they are also therefore less industrialized than other groups.

Hambrick and Mason (1984) suggested that the degree of peripheral functional experience of the top management team would be positively related to the degree of unrelated diversification of the firm. This seems to be the case with the top management team of this group, since they appear to be characterized by less work experience in other organizations and offer a standard range of services.

The authors also suggested that the years of inside service by top managers would be negatively related to the strategic choices involving new terrain such as product innovation and unrelated diversification. The tenure of the top management team of this group was fairly neutral, being slightly on the high side relative to organizations in other groups. However, as was stated earlier, the average age of this group was slightly lower than that of some other groups, which would explain why their functional experience was limited to one organization.

The perceptions of the environment by the top management of these organizations show a high uncertainty of the politico-economic factor, but less uncertainty of the

known factors and of competition relative to the top management of organizations in the other groups. It appears that they are comfortable with that part of the environment which they know and do not have much competition to contend with, but experience uncertainty regarding the politico-economic factor of the environment.

The values of the top management team of these organizations show a high importance for interpersonal skills and strength, but exhibit low importance of leadership qualities and credibility. The importance of interpersonal skills is probably a reflection of the high gearing and the time spent on lecturing, as well as a reflection of the importance placed on such values by the partners of the three legal organizations in this group. It may be that the low importance of leadership reflects the influence of the more democratic attitude towards leadership of the three legal organizations in this group. Organizations with a large number of branches and with high people gearing probably need a more autocratic leadership. If the values of leadership were to be rated higher in importance, this group of organizations might be able to move from the rather negative position in which they find themselves relative to organizations in the other groups and to their environment.

The descriptive attributes of this group confirm a diversity of management styles, and also a diversity of attitudes to commercialism and entrepreneurialism. These attributes do not therefore act as discriminating variables for organizations in this groups.

The overall characteristics of the organizations in this group tend to confirm their association with the fourth quadrant of the Hrebiniak and Joyce (1985) model, and do not have any equivalent in the Porter (1980) or the Miles and Snow (1978) typology. Organizations in this group are the least industrialized and are also not perceived to be effective.

The image of the capable group of organizations is one of providing a competent quality service, being broad based and innovative but less reputable than organizations in the other groups. This group of organizations therefore exhibit a diversity of strategies, which indicates a greater degree of strategic choice, with differentiated or focused niches being chosen. They further exhibit the second highest percentage of non-standard services and a fairly high number of branches, but fewer than the organizations in the sentient group, indicating that they offer a variety of services and have some large organizations within their population. They have relatively low people-gearing, but high research and development and boundary-spanning.

This strategic and structural profile categorizes this group of organizations as those who have successfully repositioned themselves in terms of increased diversity. They are also the most industrialized and most effective group of organizations as measured on the dimensions of the proposed model of these two constructs.

The profile of the top management team of this group of organizations indicates that they are of the younger age group, with less experience in the public sector but the highest experience in other organizations, compared to the other groups.

They also socialize with clients, work hard and attend overseas conferences to some degree. They do not have as much experience in the academic environment or give lectures to the extent that the organizations in the sentient group do.

The proposition of Hambrick and Mason (1984), that top managers of a younger age will be associated with a greater inclination to pursue risky strategies, appears to be true of organizations in this group. The group is associated with a low mean age and with a high research and development activity, and the highest degree of innovation. Further, the high level of experience in organizations other than their own is associated with a high degree of non-standard services, showing that the proposition regarding this association is also present in this group of organizations.

Hambrick and Mason (1984) contended that years of inside service by top managers will be negatively related to strategic choices involving new terrain. Since the tenure of the top managers in this group of organizations is not high relative to that of the organizations in the other groups, and the image of these organizations is that of innovation and high research and development activity, the converse of this theoretical proposition is shown to be true for this group.

The awareness of the three factors of environmental uncertainty by organizations in this group were high in all cases, indicating that the environment which they enact appears to be highly deterministic. Another theoretical proposition put by Hambrick and Mason (1984) was that in discontinuous environments, management team heterogeneity would be positively

associated with profitability, while in stable environments team homogeneity would be positively associated with profitability.

Although profitability figures were not available for the professional organizations in this study, the organizations in this group were judged to be the most effective. If the correlation between high profitability and organizational effectiveness is correct for these measures of organizational effectiveness, then this group may be stated to be the most profitable. As was mentioned in Chapter 7, it was found from the post-coding of the interview information that internally diverse cultures were an attribute of organizations in this group. It would therefore seem to be the case that in organizations in this group, operating as they do in conditions of high environmental determination and therefore high turbulence, this positive association is true.

The values of this group of organizations showed credibility and strength to be of more importance than in all other organizations, while interpersonal skills were rated as less important relative to the organizations in the other groups.

Because of their internal diversity, the organizations in this group require co-operation and teamwork in order to be effective. As a consequence of this diversity they have become accustomed to dealing with a diverse team of partners and clients, which may explain low importance rating of interpersonal skills.

The characteristic of being business-oriented is another factor which may also explain the lower importance of interpersonal skills, since these organizations may place more value on the attributes of competence and efficiency than good relationships. However the lower importance of interpersonal skills is rather surprising in view of the higher image of providing a quality service. The high importance of credibility is also not associated with the corresponding image of being reputable and it may explain why this group of values is highly desirable to this group of organizations.

Since this group of organizations represent the analyzers of the Miles and Snow (1978) typology, they operate in two types of product and market domains, one which is relatively stable and the other changing. They have formalized structures and processes which allow them to operate routinely and efficiently. They also watch the prospectors closely and where the strategies of these organizations are successful they copy them quickly. However, since there were no organizations which could be associated with the third quadrant where the prospectors would be found, the organizations in this group may be regarded as the more adventurous of the professional organizations.

Nine of the fourteen organizations in this capable group were from the construction and building profession and, as has been suggested before, the type of industry concerned may influence the positioning of this group of organizations. The organizations in this group were both highly industrialized and effective.

The organizations in this group also correspond to the third type in the Bleeke (1985) typology, which develop new high-fee services, identify new client segments,

serve specific market needs and grow aggressively through targeted competition. Bleeke further describes the style as being creative and flexible, its structure being centralized with targeted functional departments, with emphasis on marketing information and creative planning, and with a service orientation.

The image of the reputable group of organizations is one of being reputable and of delivering a moderate service. They have a negative image of innovation relative to organizations in the other groups.

There is, therefore, a degree of strategic choice. They have a high number of branches but a relatively low people gearing. In this respect they differ somewhat from the organizations in the sentient group, which also have a relatively high number of branches but have a high people gearing. This is probably a result of greater investment in technology by the organizations in the reputable group. Since there are a number of large accounting and engineering organizations among the group, this is understandable. There is also a relatively small positive degree of diversification from standard services, a low level of research and development, and boundary-spanning behaviour.

The perceptions of the members of these organizations show a neutral level of uncertainty overall, which indicates a positioning in the middle of the continuum between high and low environmental determination. This may be a reflection of their relatively larger size and, in the case of the organizations from the accounting professions, their international links may provide a sense of security.

Like the organizations in the capable group, the demographic profile of the top management team of organizations in the reputable group shows a relatively low age and low experience in both the academic and public sectors. They are also similar to the capable group in that they tend to socialize with clients and attend overseas conferences relatively more than organizations from other groups and in fact even more so than organizations in the capable group. At the same time, they exhibit a higher tenure than organizations in the latter group.

The values of the organizations in the reputable group are somewhat more positive than those in the capable group, and are particularly strong on interpersonal skills. Contrary to expectations, although the importance of credibility is high, it is not as high as may have been expected for the image of being reputable. This group of values does, however, appear to have some reflection in the image.

The high tenure which is associated with a stable environment is, according to Hambrick and Mason (1984), positively associated with profitability and growth. This group of organizations was found to be highly effective, although less industrialized than the capable group. This effectiveness may be associated with profitability, albeit in a more stable environment.

Of the eighteen organizations in this group, twelve are accounting and legal organizations from the commercial sector, and five are large consulting engineering firms. It is possible that once again the industry type may have a modifying influence on the level of environmental determination and that the large consulting engineering

organizations in this reputable group also act in a way more similar to the accounting profession or vice versa, relative to other organizations in the same profession.

They appear also to resemble the national distribution firms of the Bleeke (1983) typology, which are described as being established but alert and responsive, with a strongly supported decentralized network structure, and an emphasis on marketing and planning systems.

The qualitative inputs about the reputable group of organizations confirm their conservative, ethical and professional image. They are inclined to have a more dominant and less mixed identity than the capable group, which suggests a greater group heterogeneity and cohesiveness. Hambrick and Mason (1984) have suggested that in stable environments, such as the one in which this reputable group operates, group heterogeneity will be positively associated with profitability. Once again, if there is a positive correlation between organizational effectiveness and profitability, this proposition appear to be true, since these organizations were perceived to be effective, but not as industrialized as those in the capable group.

The small uneven group consisted of three architectural organizations and one medical organization. They are seen by themselves and by their clients and other groups as delivering a poorer quality service relative to the organizations in the other groups, but have a positive image of innovation. They also exhibit the highest percentage of non-standard services and research and development, and the lowest number of branches relative to the organizations in the other groups. This indicates a geographically focused, niche strategy with a wide diversity of services, which

resembles the community firms of the Bleeke (1983) model. Bleeke describes these organizations as entrepreneurial but stable, the structure being centralized with entrepreneurial control, emphasis on productivity and with a broad service capability towards a loyal client base. To confirm this further, their values reflect a high importance of a service orientation.

Since their perceptions of the environment indicate the largest amount of uncertainty relative to the organizations in the other groups as well as a relatively low degree of choice it can be assumed that these organizations can be regarded as the equivalent of the first quadrant in the model described by Hrebiniak and Joyce which they describe as containing small organizations. Although they exhibit an image of being innovative, this may be due to the fact that three of the four members of this group are architectural organizations. Adaptation by this uneven group of organizations is by natural selection and they cannot sustain a lasting competitive advantage in this position.

The average age of the top management team of organizations in the uneven group is higher than that of the management teams of organizations in the other groups. This may explain their rather tenuous position in this quadrant and is not surprising since research by Child (1974) has suggested that youthful managers are associated with attempting the new and taking unprecedented risks. These findings have also been confirmed by other researchers. The tenure of the top management team of these organizations is also higher; they also spend more time working and give more lectures but do not attend overseas conferences. They do not

socialize as much with clients as the top managers of organizations in other groups, which may explain the lower image of delivering a quality service, although their top managers ascribe a high importance to a service orientation.

This group of organizations is industrialized and is perceived to be effective, but less so than the organizations in the capable and reputable groups. This slightly lower effectiveness may be a consequence of the organizations' low strategic choice or their risk-averse nature, which may affect their ability to function as effectively as other organizations.

It is interesting to note that three of the four organizations in this group are from the architectural profession. The qualitative evidence about these organizations confirmed that they had a democratic management style, ran their practices as businesses and had flat organic structures with both internal and external teamwork and co-operation, similar to the organizations in the capable group.

Since the four organizations in the amorphous group have no clearly positive image, it is assumed that they have limited strategic choice. Added to this was a negative perception of uncertainty in the environment, which suggested that environmental determination was low. This group of organizations was therefore classified in the fourth quadrant, in which there is undifferentiated choice and adaptation by choice. The environment is described as placid for these organizations, which are said to be of the unstable reactor type of the Miles and Snow (1978) typology where there is no clear membership of any strategic group.

The profile of the values of organizations in this group, similarly to those of the sentient group, does not show a service orientation as highly important, which may also contribute to the lack of effectiveness of the organizations in these two groups. Another similarity is that five of the eight medical organizations surveyed belong to these two groups, indicating that most of the organizations in this profession can be categorized into one of the two groups in this quadrant. The high age of management, and experience in the public sector and academic environment were also characteristic of the amorphous group, high academic experience also being shared with organizations in the sentient group.

The qualitative information regarding the organizations in this group indicates an exclusive cultural identity, while that of organizations in the capable group showed mixed cultural identities. It appears that this attribute of a dominant cultural identity does not lend itself to effectiveness in professional organizations in this type of environment. Although Hambrick and Mason (1984) made the proposition that group homogeneity would be positively associated with profitability in stable environments, it is likely that other incidental factors mitigated against the possibility of a positive effect of group homogeneity in these four organizations. It may be that those organizations which have a mixed identity are perceived to be more effective because they more accurately reflect the multi-cultural nature of the South African environment and are therefore more in equilibrium with their enacted environment.

In common with the organizations in the sentient group, the four organizations in the amorphous group also exhibited somewhat nebulous and conflicting attributes.

This is likely to be due to the low strategic choice exercised by the top management team of these organizations, which may once again be a consequence of the experience in the public sector and academic environment.

The personal interviews with these four organizations revealed that two of them were regarded as mavericks by their colleagues. One medical organization, for instance, expressed a goal of becoming a listed company on the Johannesburg Stock Exchange within five years, a highly unorthodox goal for a professional organization. In this respect they could also have been classified as the outsiders of the sample.

Summary

In summary, three archetypes of organization, strategy and top management profile appear to be effective. Thirty-two out of forty-eight of the professional organizations in this survey appear to belong to two of these groups. These are the large and effective groups, which appear to have exercised a degree of strategic choice in the face of their enacted environments. There are a number of professional organizations which are in the cost leadership position but none which are highly innovative and risk-taking, while most of the medical organizations appear to be in a rather precarious position in a fifth group. By comparison, Miles and Snow (1978) mentioned that fifteen of the twenty-seven organizations in their study were analyzers, while five were classified as prospectors, five as defenders and two as reactors.

The similarity between the five archetypes found in this study and those in the Miles and Snow typology can be depicted along a continuum representing the diffusion of innovation as follows in Figure 8.1. The five archetypes are arranged from left to right in order of increasing perceived environmental determination. The assumption is made that this represents a progressively increasing level of uncertainty which organizations in the groups have to contend with.

Amorphous	Sentient	Reputable	Capable	Uneven
Group 5	Group 1	Group 3	Group 2	Group 4
(PEU -0.69	-0.30	-0.09	0.28	0.79)
Reactor	Defender	Analyzer	Prospector (?)	

Figure 8.1
Archetypes of organizations as diffusion of innovation

One may regard the uneven group as equivalent to the prospectors, the capable group as equivalent to the analyzers, the sentient group as equivalent to the defenders and the reputable group as equivalent to the reactors.

The rather large reputable group, with eighteen members, could be regarded as consisting of a group of organizations which appear to have moved from the low choice position and be undecided as to which way they should move next. Although they appear to be both comfortable and effective in their position in the environment which they have enacted, they rely largely

on their reputation as ethical professionals to be effective. These are the conservative, traditional professional organizations and include a number of large accounting and engineering organizations as well as some legal organizations.

It appears that this is an effective position from which to operate for a large number of professional organizations, particularly in the commercial industry and the uncertain South African environment where clients look to their professional consultants to reduce their risk and uncertainty.

However it was shown from the attributes of service quality elicited during interviews that clients of professional organizations in South Africa expect their professional consultants to be more risk-taking, innovative, flexible, decisive and co-operative, while retaining their professional ethic. These attributes correspond to a large extent to those of the capable group, and the large number of organizations in this group indicate that these alternative options to those in the reputable group are equally effective and possibly more desirable. These are the professional organizations with a more business orientation.

Schmenner (1986) suggested that professional service organizations, along with other service organizations, could survive and prosper by becoming less labour intensive with less customization and client interaction. This option did not appear to be one which this sample of professional service organizations followed. Although the sentient group did display elements of this option, largely because of the technological nature of the pathology and radiology firms and the standard legal services which had been

automated in the sample of organizations in this group, it did not appear to be one of the effective options as yet in the South African environment.

Professional organizations which exhibited most elements of the Maister model were found in the reputable and, to a lesser extent the capable groups, and to an even lesser degree in the uneven group, as has been described. It is now evident that the Maister model is not the only effective option open to professional service organizations but it does appear to be a formula which works well.

The results of this research pose the question of whether all the effective options have been elicited in the sample surveyed. There is the possibility that those professional organizations which did not take part in this research were of a particular group with some common characteristics, and which may constitute yet another effective option. This could only be checked with further research using the same technique.

It is also possible that the other demographic variables and additional strategic variables which did not contribute to discriminating between the groups in this sample may well have a greater influence in another sample.

There have been a number of environmental changes since the field research for this thesis was done, and there have also been a number of mergers among professional organizations, particularly between organizations in the accounting profession. Changes in the international connections of these organizations have also taken place and the influence of such changes may well have affected the adaptation of the organizations to these changes.

Some comments on the individual professions

It is interesting to note that, contained among the more innovative organizations in the capable group with high strategic choice and the uneven group with low strategic choice, were eight of the nine organizations from the architectural profession. This finding is interesting in view of the innovative nature of this profession.

Two organizations from the quantity surveying profession were found in the capable group, while one was classified in the reputable group. Apart from two organizations in the engineering profession which appeared in the amorphous group and two in the capable group, the rest of the organizations from the engineering profession were found in the reputable group. These were the larger engineering organizations with a wide geographic distribution.

Two of the organizations from the legal profession were found in the sentient group, two in the capable group and five in the reputable group. The reputable group contained seven of the nine organizations from the accounting profession, while one was found in the capable group and one in the sentient group.

It is likewise interesting to note that most of the organizations in the medical profession operate from a position of low strategic choice. This is probably a reflection of the power and influence of commerce over the radiology and pathology specializations which frequently function within private hospitals, as well as the limited options in determining fees.

8.4 Proposition testing and generation

Three broad expectations were set out in Chapter 3 which were arrived at as a result of the theoretical models. In this section, these three propositions are examined in the light of the empirical findings of this research, and a further set of propositions flowing from the research is also generated.

Proposition 1

It can be expected that there will be three clearly identifiable strategic, organizational and top management team archetypes or gestalts applicable to the environmental adaptation of professional organizations, also to their effectiveness and the extent of their industrialization. These will be similar to the types suggested by Porter (1980), Miles and Snow (1978), Bleeke (1985) and Hrebiniak and Joyce (1985), but with the modifications as proposed in Chapter 3. It is possible that a fourth group will be present which does not have a clearly defined identity, in which some professions organizations may fall.

From the preceding discussion in this Chapter, it is seen that this first proposition was largely sustained, but a further, fifth category was necessary - yielding an alternative typology of five organizational, strategic and top management team profiles. The intricacy of the circumstances affecting the professional organizations clearly allowed for a large number of organizations to function effectively on their reputation, forming a fifth group.

Proposition 2

This second proposition was that the effectiveness of the above archetypes in professional organizations will be determined by a number of factors, some of which will be generated by the research process. Organizational effectiveness will need to combine different approaches to the estimation of this concept.

As it turned out, the research process generated twelve variables which were used as a measure of organizational effectiveness. This model appeared to be a satisfactory proxy for an exhaustive measure of this construct, since it showed that there were indeed three groups of organizational adaptation open to professional organizations which proved to be effective, while two groups were found to be less effective.

Proposition 3

The characteristics of the established archetypes will be identifiable with stages in the process of industrialization as defined above, i.e. a higher value placed on knowledge, change being valued as progress, social flexibility, a higher value placed on achievement, instead of traditional values and a belief in hard work.

This proposition was also proved true as it was found that there were definite differences between the adaptation of the different the groups of professional organization as measured by the variables chosen for this construct.

This research has shown that many of the propositions which had been suggested by previous theoreticians are likely to be true for professional service organizations. In particular the contributions to the theoretical expectations of this research by the typologies of Porter (1980), Miles and Snow (1978), Bleeke (1983), Hrebiniak and Joyce (1985), Child (1972) and Hambrick and Mason (1984) have proved to be very enlightening in attempting to arrive at archetypes of professional service organizations, their strategies, and the profile of the top management team in the face of the specific South African environmental circumstances.

In addition, some new hypotheses may be generated as a consequence of the findings of the research. These hypotheses may provide other researchers with the opportunity to explore aspects of these organizations further.

The first three hypotheses relate to the adaptation of professional organizations to the South African environment.

We saw in section 7.6 that large professional service organizations in the South African environment basically operate effectively on the basis of their professional reputation. This would be Hypothesis 1.

Similarly in the above-mentioned section, in the archetype represented by the capable group, a high percentage of non-standard services in professional service organizations was associated with organizational effectiveness. This amounts to Hypothesis 2.

We also saw a high technology gearing associated with organizational effectiveness in professional service organizations in this section, which is therefore **Hypothesis 3.**

The remaining eleven hypotheses are mainly related to the influence of the demographic variables on the archetype of adaptation, an area about which there was the least empirical evidence in the theory.

A democratic management style in professional service organizations (as identified during the discussion with top management as described in section 7.4) was found to be positively associated with greater strategic choice. This constitutes **Hypothesis 4.**

In the same section it was also found that a democratic management style was associated with high innovation in professional service organizations, therefore providing **Hypothesis 5.**

Similarly this analysis showed that a cultural diversity within a professional service organization matched with a cultural diversity in the environment was found to be positively associated with greater effectiveness, thus contributing to **Hypothesis 6.**

It was found that a strong value system was positively associated with cultural uniformity in professional service organizations, which is therefore **Hypothesis 7.**

A high tenure by the top management team was found to be associated with organizational effectiveness in professional organizations, providing **Hypothesis 8.**

Hypothesis 9 consisted of the findings that a high experience in the public sector was positively associated with a less effective professional organization.

Similarly, Hypothesis 10 is deduced from the findings that a high experience in the academic environment is positively associated with a less effective professional organization.

A high experience with other organizations is positively associated with effective professional service organizations, making up Hypothesis 11.

Hypothesis 12 is derived from the finding that socialization with clients was found to be positively associated with effective professional service organizations.

A strong service orientation in the values of the top management team of professional service organizations was positively associated with organizational effectiveness, which contributes Hypothesis 13.

The final hypothesis, Hypothesis 14, stems from the finding that a high degree of industrialization was not necessarily positively associated with organizational effectiveness.

These propositions could be empirically tested on a different sample of professional organizations, as well as on a sample of organizations who are regarded as "non-professional" but competitive with the professional organizations. It may also be of interest to test these hypotheses on industrial organizations. To the extent that the range of professional organizations considered

in this thesis are indicative of the population from which they were drawn - as was argued in Chapter 4, section 4.5.3 - they may be taken as tentative guidelines for the assessment of features bearing on effective professional organizations.

CHAPTER 9

CONCLUSIONS AND RECOMMENDATIONS

9.1 Introduction

This chapter, like all Gaul, consists of three parts. Some conclusions were drawn from the findings of the research relative to the original research problem and research objectives as stated in Chapter 1. As a consequence of these conclusions, certain aspects are highlighted and recommendations made which could be of value to professional service organizations in the South African milieu. These are listed in the second part of this chapter.

Since this has been a pioneering enquiry into professional service organizations it could not possibly have covered every aspect of these organizations or all contexts. One of the main purposes of the research was initially envisaged as being the opening-up of further avenues for research. These areas are discussed as a closing section of this dissertation to provide suggestions for further research.

9.2 Conclusions of the research in relation to the research problem and research objectives

One of the research problems stated at the outset was the absence of an empirically researched integrated model of strategy, organization and profile of the top management team which could be used as a guideline for the management of professional service organizations in the South African environment.

This project accordingly aimed to establish such an integrated typology. This has been accomplished through the synthesis of a number of variables together with case-study and qualitative material into five archetypes, embracing organizations, their strategies and aspects of the profiles of the top management team. One hopes that this has provided the foundation for the representation of professional organizations as rich, dynamic patterns of association rather than rigid, static entities.

In the history of scientific thought universal theories and general laws were regarded as the paths to a better understanding of the universe. Scientists increasingly developed the tendency towards fragmentation in research in their endeavours to understand entities in more detail. As Prigogine and Stengers,(1984) noted, one of the most highly developed skills in contemporary Western civilization is dissection: the splitting up of problems into their smallest possible components. We are good at it. So good, we often forget to put the pieces back together again.

More recently there has been a trend towards theories which embrace wholeness, commonalities, processes and the synthesis of seemingly opposite or unrelated

concepts into dynamic unfolding patterns. These concepts of collectivities or archetypes have been represented, for example, by Jung's (1959) theories of collective unconsciousness and four personality archetypes, as used in the basis of Chorn's (1987) typology of organization, strategy and culture. Sheldrake's (1981, 1988) theory of collective memory and morphic resonance is similar in concept to that of Jung, showing the convergence of theories between the humanities and the sciences. Von Franz (1985) has taken this concept further in his proposed universal archetypal structures.

This dissertation has attempted to represent the integrated typologies as representative of a holistic set of attributes, characteristic of a particular phase in an unfolding pattern. A five-way typology has emerged as the pattern of professional service organizations in the South African environment. It may be that the five groups represent a transitory configuration and there might be sub-groups within the typology as there are in Porter's (1980) typology. Longitudinal research may well reveal other archetypes and a more stable number of groups may emerge at a later evolutionary phase as professional service organizations adapt over time to the environmental changes with which they interface.

Co-operative strategies have been discussed in detail in Chapter 6. I would suggested that this type of organizational form may increasingly occur as professional service organizations operate in knowledge, information and technology driven environments and may emerge as semi-permanent forms in the short term.

The danger of co-operative strategies for the professions is the decreased independence in the case of joint ventures with stronger parent organizations not bound by the constraints of professional ethics and liability. The possibility of total loss of control of their independence by the professions, as international legislative changes and pressures from technology and software suppliers suggest, cannot be excluded. It appears that organizations from the medical profession are already experiencing the consequences of this loss of independence in South Africa. This may well extend to corporate control of other professions.

In the light of the increased globalization of markets leading to mergers and vertical integration, these defensive co-operative strategies may be the intermediate organizational form which will allow professional service organizations to retain their role as the ethical and moral watchdogs of society - rather than being incorporated in the general commercial environment.

However, if the independent professional organizations are swallowed up by financially powerful corporate raiders, their role in society may well be replaced by the individual "masters of technology" as the information age pervades South Africa as well. The increased trend towards the empowerment of the individual as has been seen in delegative management styles, and the devolution of power in political and organizational life, may contribute to an acceleration of this process.

The second objective of the research was the derivation and testing of a model for the determination of organizational effectiveness for professional service

organizations. This model would recognize the limitations of any single method, whether quantitative or qualitative, and not purport to be the single solution to the problem.

The model which was derived drew upon an interpretive perspective of organizational effectiveness, since the variables were generated by the research process rather than pre-determined, and was used for all further proposition testing. It may well be that this model does not fully represent true organizational effectiveness, since no quantitative information was available. Further research would therefore be useful, into the correlation between objective and subjective methods of determining organizational effectiveness, particularly in the absence of available information such as for professional service organizations.

The third leg of the research was the representation of the professional service organizations along a continuum representing an increased intensity of industrialization as defined by specific variables. The relationship between the extent of industrialization and organizational effectiveness was demonstrated for the five groups, and it was shown that a high or low industrialization was not necessarily associated with organizational effectiveness and that a greater degree of industrialization might be more effective within a certain industry structure. The dynamics of each industry may well effectively control the extent of industrialization which each profession can effectively sustain while remaining effective.

9.3 Recommendations for professional service organizations in South Africa

In the light of the research findings recommendations are made from two perspectives, namely, that of the external environment and the manner in which professional service organizations could adapt internally to respond to these external changes.

External

The research findings suggest that two major sources of environmental uncertainty were perceived by professional service organizations in South Africa; the politico-economic situation and competition. The regular monitoring of trends in these two areas in particular may be useful in managing these perceptions and deciding which strategic directions to follow in the future.

As competition increases in intensity and the costs of competing become higher, professional service organizations could attempt to develop and sustain a market-driven orientation in which market changes and genuine client needs are constantly monitored and addressed.

Professional service organizations would accordingly be required to nurture a flexible, supportive and responsive climate within their organizations which would encourage creative, innovative thinking and client service. By empowering all organization members and creating a climate where loyalty and teamwork can be fostered, a unity of spirit through greater shared values can be directed towards organizational goals.

In anticipation of market needs, on-going service development and the refinement and enhancement of existing services to match client requirements needs to be performed. The utilization of technology and information services where possible for this service enhancement would provide added value to client service.

While keeping the immediate South African environment their first priority, professional service organizations may cultivate a broader African perspective, while thinking and acting in a global context.

It may well be opportune for the professional organizations in the reputable group, who currently maintain an effective adaptation to their environment through their reputation as highly professional organizations, to examine possible alternatives which are in line with the expectations of their clients as expressed in the attributes of service quality for each profession.

Internal

The findings of the research and their relevance to the theoretical base have pointed to a number of issues germane to the management of professional organizations in the short term. Although the enquiry has been exploratory regarding the understanding of professional service organizations, the particular markets in which they operate and how they position themselves in the specific South African environment to achieve effectiveness, certain factors can be highlighted which might act as guidelines for their management.

Professional service organizations appear to follow the pattern of other fragmented industries, with a few large organizations offering multiple areas of specialization to large corporate clients, and complemented by smaller organizations which specialize in certain market niches.

The medium-sized organizations with no particular market strength or differentiated service are particularly vulnerable, and may either become targets for take-overs as further consolidation occurs within the industries in which the professions operate, or fragment into smaller units to service smaller market niches. The research highlighted the effectiveness of organizations with one of the above formulae and the relative ineffectiveness of organizations which offer a high percentage of standard, general services.

As organizations become bigger the trend away from the participative, consensus type of management style typical of equal partnerships was observed and a benevolent or autocratic dictatorship emerged. The legal profession, in keeping with its sense of justice and equality, tends to retain a democratic style of management as long as possible, but inevitably some form of leadership evolves as these organizations grow. This stage of organizational development may precipitate a series crises and organizations may be better prepared for the consequences if they are aware that this is a natural process in the evolutionary growth of organizations.

Although the study of the culture of professional service organizations was not one of the objectives of this research, certain of the personal values of the top management team emerged as contributing variables to the configurations of these organizations. It would appear

that in the selection of partner material and new members of the organization, such personal values as ambition and imagination as well as entrepreneurial qualities should be sought, apart from technical competencies and reliability, if organizations wish effectively to provide uncertainty-reducing service to clients.

In view of the trend towards more mergers, joint ventures, and co-operative strategies among professional organizations, strategic reflections on the values of organizational members who will work together could highlight areas of potential friction and conflict.

The articulation and monitoring of clearly defined intended strategies in the form of goals and objectives, as well as the shared values, which support these strategies, may highlight areas for improvement. The perceptions of organizational members may likewise be monitored for deviation from previous rank orders to identify areas of common concern.

The composite index of organizational effectiveness in professional firms may be used as a "best estimate" and related to other quantitative measures of determining the success or otherwise of professional firms. This measure may also be extended to include other variables if this is found to be necessary.

All the above suggestions will necessitate changes in the organizations. Accordingly, Prigogine and Stengers (1984) offer the reminder that both chance and structural determination operate in tandem. Change occurs when fluctuations force an existing system into a state of non-equilibrium and threaten its structure. The organization approaches a critical moment, equivalent to

the cusp of a catastrophe graph (Zeeman, 1976), when it is impossible to determine in advance the next stage of the system. At this point chance nudges the system downwards along a new path of development, after which determinate factors for consideration take over again. The positions of the professional organizations in relation to their enacted environments was assumed to be under conditions of relative equilibrium; however the effect which some state of non-equilibrium may have should be borne in mind.

Professional organizations contemplating a planned change in direction may wish to adopt an integrated perspective of the organization, and, when looking at changes in strategic direction, systems, structure or culture, evaluate the interrelationships between all these systems and the consequences of changes on each other. Similarly some speculative estimation of the impact of second order, revolutionary changes on these interrelated systems may be made and contingency plans prepared.

9.4 Recommendations for future research

One of the major consequences of exploratory research is the multitude of other avenues for future research which are opened up. Since this has been an initial probe into the arena of the professional service organization, and embraces only limited aspects, the results have naturally suggested numerous further explorations. These could build on the present findings, and could lead to a better understanding of how this type of organization functions and how it could effectively counter environmental challenges.

The theory base from which the theoretical model of this research was derived consisted of three streams of research and thought: organization theory, strategic typologies and the upper echelons or top management team. The fact that previous research in these three areas offered very little insight into the applicability of the theories to service industries in general, and professional service organizations in particular, was the stimulus for this research inquiry.

First, some improvements may be made in the methodology which may result in more conclusive findings, particularly in the profiles of the top management team. A more satisfactory response may be found if future investigation were confined to the executive committee of the professional organizations only, and not to all the partners of the firms.

A further investigation into the external validity of the scales developed, as well as the composite index of organizational effectiveness, could be undertaken in other professions. The results may vary depending on the type of environment and more specific scales may need to be developed for other professions.

More specific scales for each profession or each strategic and organization type may result in more satisfactory results in this area.

The configurations of variables contributing to the archetypes or gestalts, which constitute the strategic typology demonstrated in this project, could be confirmed in a first world, developed country, where a larger population of firms exists, the firms are larger,

and more partners are found in each firm. This could be extended to include a comparison between firms of different size and between different types of professions.

Are South Africa's environmental conditions really so unique, or are there other countries where similar situations exist? A comparison with professional firms in another intermediates developed country, such as Chile, Brazil, Israel or Singapore, could be undertaken and might produce different results.

An investigation into the strategies adopted by the smaller professional firms not included in this study may prove very interesting, particularly the values which these individuals and smaller partnerships have. Are they more entrepreneurial and possibly therefore more risk-taking, and do professionals with a lower risk profile join larger firms for security reasons?

In the South African context, the shortcomings and relevance of the educational system, the consequent socialization of the professionally qualified people, and the standards and norms contained within the current codes of practice of the professions would constitute a very important research project. The research process revealed very little evidence of professional partners who were not of the white and male. In view of this skew racial distribution, and the desperate shortages of professionals in society, the above research may highlight future directions for the professions to consider.

Research which investigates the informal leadership system which might exist within the highly fragmented group containing smaller professional firms, may reveal an interesting sub-type of co-operative strategy. One small professional service organization may adopt the leadership role in a particular geographic area and set the norms and values for another in the group. It has been suggested by medical aid administrators that such a system exists, and further exploration of this type of "quasi"-organization may make a useful contribution to organization theory.

The extension of the research into other service industries, particularly those related to the professions studied in this research and which operate in the same industries, would be very useful, since it would prove the external generalizability of the findings of this research. The following plausible enquiries come to mind:

a) A research study which compared the findings for the accounting and legal professions in this study to firms such as merchant banking, stockbroking and trust companies.

b) Similarly, a comparison between the professions in the building and construction industries in this study with property development companies, construction companies and project management companies.

This research did not explicitly examine the cultures of professional service organizations. A comprehensive research study of this area could include a clearer articulation of individual organizational values and perceptions, as well as the explication of assumptions

and beliefs which may underlie these values and perceptions. A clearer distinction could be made between the various levels of values in the cascade of values discussed in Chapter 3, and presumably levels of assumptions, beliefs and perceptions. These could be operationalized, their strength and intensity measured relative to organizational effectiveness,and the effects and relevance of strong cultures at various stages of organizational development could be examined.

The personal attributes of the upper echelons, such as locus of control, risk propensity, tolerance for ambiguity, cognitive style and aptitudes could bring other dimensions into the configuration of variables. Extension of the research to these attributes of the non-partners of professional organizations, such as the managers and directors of, for example, the consulting divisions of accounting firms, may provide a valuable avenue for enquiry.

The major limitation of this doctoral research was the dimension of time. Longitudinal research would reveal the unfolding trends and patterns which are missing from this thesis. It has previously been suggested that this might reveal many or fewer configurations at a later stage, particularly in view of the fact that a substantial number of professional service organizations appeared to be "stuck-in-the-middle", not clearly belonging to a specific strategic group.

Various aspects of organization theory suggest further investigation into professional service organizations. Examples are the effects of various structures and technologies, as well as the effects of self-management and loosely coupled links on organizational effectiveness.

The area of co-operative strategies is sparsely represented in research literature and presents numerous opportunities for investigation. In view of the trend in the service and knowledge industries, where this form of organization is particularly prevalent, such a research direction would contribute to knowledge of this form of organization and perhaps establish its strength and the extent of its stability.

Finally, the model of service quality which was generated through the interviews of clients of the professions could be validated and used as a scale for the measurement of service quality, with modifications for each profession. The methods used in the reduction of the risk and uncertainty perceived by clients, and the specific behaviours of the two parties in the service encounter, could provide further areas for research.

9.5 Conclusions

Professional service organizations would benefit positively from further contributions to the knowledge of their organizations through more research projects of this nature. This could be achieved through co-operation between the professions and academic researchers who could be involved in further refining and extending the directions and methods followed in this research.

The extension of these themes to include other related service organizations would broaden the base of theoretical knowledge on this growing sector of industry throughout the world. The five-way, three-dimensional, taxonomy developed here, in the way it simultaneously synthesizes and moves beyond important models in the

literature on the basis of quantitative and qualitative information, about an appreciable number of South African professional service organizations, is presented as a first step in such a research program.

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APPENDIX 1

Interview schedule for senior partners to generate themes (Section 4.5.4)

APPENDIX 1

INTERVIEW SCHEDULE

1. **SIZE:**

STAFF:

1.1 How is the firm structured?
1.2 What is the total number of people in the firm?
1.3 How many full partners in the firm?
1.4 How many junior partners/assistants (next level)?
1.5 How many technical staff on the next level?
1.6 How many administrative staff?

BRANCH OFFICES:

1.5 How many offices are there in Southern Africa?
1.6 Where are they located?
1.7 Does your firm have offices overseas?
1.8 Where?
1.9 If the firm has an association with another firm overseas, what type of association is it?

2. **MANAGEMENT:**

2.1 Who makes the decisions about the firm's management?
2.2 How often does the policy committee meet?
2.3 How often is the committee selected?
2.4 By whom?

3. **SERVICES: DIVERSITY:**

3.1 What range of professional services does the firm offer?
3.2 What percentage of the firm's fee income is derived from the traditional, standard professional service?

4. SERVICES: COMPLEXITY:

4.3 Does the firm have a separate company or joint venture with another firm through which it offers different services (not related to the internal running of the firm, i.e. pension fund, financing company)?
4.4 Is this inside South Africa or overseas or in an adjoining country?

5. MANAGEMENT STYLE:

5.1 How would you describe the management style of the firm?

6. TECHNOLOGY:

6.1 Has your firm invested heavily in computer technology?
6.2 Would you say that you were the leaders in your profession in the use of computer technology?
6.3 What advantages have you experienced as a consequence of this investment?

7. STRATEGY:

7.1 How would you describe your firm's strategy? i.e. what types of clients, services, markets and specific goals does the firm have?
7.2 Please describe any changes and developments in these strategies which the firm has undergone during the past five years.
7.3 Has this been accompanied by any increased profitability?

8. CULTURE:

8.1 What would you say is the culture of the firm? i.e. what would you say are the important values of the firm?
8.2 Have these values become more sharply defined over the past five years?

9. **HUMAN RESOURCE POLICY:**

9.1 Please list what you consider to be desirable personal values or attributes for partners of your firm.
9.2 What is the recruitment policy of the firm?
9.3 What is the further in-house training procedure for employees of partner quality?
9.4 How soon are employees given responsibility for major assignments?
9.5 How does the reward system work?
9.6 What is the firm's policy regarding the profession as a whole and professional organizations?

10. **ENVIRONMENTAL INFLUENCES:**

10.1 What factors in the firm's environment are specifically important to the firm's operations?
10.2 Which of these factors have become more important in the past five years?

APPENDIX 2

Questionnaire towards development of scales
(Section 4.5.4 (c))

APPENDIX 2

DEVELOPMENT OF SCALES FOR QUESTIONNAIRES

INSTRUCTION SHEET

During previous interviews, values of partners and environmental factors affecting professional firms have been generated. Please rate the importance of the factors mentioned by placing a cross in the appropriate space to indicate the extent of your agreement with the importance of the values and environmental factors to your firm. This will enable me to arive at a shorter list for the final questionnaire. The following code applies -

-2 = strongly disagree
-1 = disagree
0 = nether agree nor disagree
+1 = agree
+2 = strongly agree

Example:

	-2	-1	0	+1	+2
honesty					X
cost of computer technology		X			
club membership			X		

These questionnaires are anonymous, so your opinions will not be identifiable to me when returned; only your profession is identifiable.

Thank you for your co-operation.

Faith Botha

VALUES OF PARTNERS

	-2	-1	0	+1	+2
energetic					
management skills					
open-minded					
academic excellence					
honesty					
teamwork					
hard working					
religious					
courteous					
show initiative					
delegative					
attention to detail					
a happy home life					
str. g personality					
broad vision					
good spouse					
conservative					
self-disciplined					
common sense					
leadership qualities					
bring in w.rk					

	-2	-1	0	+1	+2
set priorities					
moral values					
enthusiasm					
wide range of interests					
nice people					
be a star					
methodical					
loyalty					
humanity					
experienced					
motivated					
interpersonal skills					
enjoy a challenge					
an eye for beauty					
competence					
service oriented					
unselfish					
integrity					
all rounder					
old					

	-2	-1	0	+1	+2
insight					
sensitive					
good judgement					
credibility					
optimistic					
persuasive					
well connected					
tolerant					
compassionate					

ENVIRONMENTAL FACTORS

	-2	-1	0	+1	+2
external political pressures (sanctions, disinvestments) internal political turmoil (reform, unrest)					
changes in legislation affecting the professions professions and industry					
exchange rates					
inflation rates					
interest rates					
taxation rates					
economic recession					
emigration of professionals					
increased urbanization					
decline of the work ethic					
decline in respect for authority					
competition from firms in same profession					
competition from other professions					
range of services required by clients					
innovation in type of services required					
decrease in quality of professional services					
increased client knowledge					
clients more critical and demanding					

	-2	-1	0	+1	+2
clients resort to litigation					
increased demand for existing services					
increased demand for new services					
decreased quantity of professionals					
decreased quality of professionals					
decreased quantity of technical staff					
decreased quality of technical staff					
rapid changes in technology					
increased cost of technology					
scarcity of technical staff					
disinvestment by suppliers of technology					
fee system is less flexible					
fee not commensurate with level of risk					
profit margins becoming smaller					

If any environmental factors have been left out, please write them in the open spaces provided and rate them as well.

Thank you for your co-operation

APPENDIX 3

Successful factor analysis to yield perceptions of environmental uncertainty scale (Section 4.5.4 (a))

APPENDIX 3

Successful factor analysis to yield perceptions of environmental uncertainty scale (Section 4.5.4 (a))

ROTATION METHOD: QUARTIMAX

ROTATED FACTOR PATTERN

	FACTOR8	FACTOR9	FACTOR10	FACTOR11	FACTOR12	FACTOR13
B1	0.15781	0.08249	-0.01572	-0.13144	0.02442	0.08132
B2	0.19015	0.04984	-0.20014	-0.04781	-0.04520	0.11531
B3	-0.10651	0.03306	0.12515	-0.07648	0.12837	0.00691
B4	0.43335	-0.20566	-0.02807	-0.27929	0.02291	-0.06020
B5	-0.16032	-0.00065	0.11036	0.06079	-0.26307	0.02506
B6	0.29679	0.24527	-0.16580	0.12236	0.04096	0.02085
B7	-0.05661	0.01560	-0.09816	-0.01967	0.23174	0.01653
B8	0.21033	0.04345	-0.04014	-0.01388	-0.03151	0.14936
B9	-0.20206	-0.24637	0.14621	0.21098	-0.10851	-0.05974
B10	0.13122	0.03024	-0.04333	0.45779	-0.08205	-0.07112
B11	0.26423	0.31890	0.09349	-0.03092	0.26718	0.02982
B12	0.13930	0.14209	0.06067	0.19943	0.60598	0.03827
B13	0.01824	-0.21304	0.40909	0.03632	0.48048	-0.26227
B14	-0.02881	-0.29705	-0.00518	0.08923	-0.08652	-0.00059
B15	0.01996	-0.09557	-0.10566	-0.12120	0.02205	0.05954
B16	0.04791	0.09031	-0.00565	-0.12479	0.10715	-0.01327
B17	0.13949	-0.04285	0.08198	0.09544	-0.04315	0.06984
B18	0.30866	0.04044	-0.06077	0.12682	0.04813	-0.21885
B19	0.40236	0.20197	0.14715	-0.21546	-0.15528	0.13302
B20	0.20028	0.66828	0.41417	0.05288	-0.04005	0.05777
B21	-0.11771	0.23769	0.05082	0.02360	0.13105	-0.07477
B22	-0.02984	-0.00654	0.90209	-0.03414	0.10249	0.02652
B23	-0.18594	0.03394	0.28640	0.19023	0.24781	-0.24427
B24	-0.13861	-0.07743	-0.09003	-0.19406	0.11218	0.50418
B25	-0.11844	0.16382	0.11310	0.03090	0.03870	-0.05469
B26	-0.02276	-0.03043	0.05827	0.38759	0.00862	-0.79183
B27	-0.05126	-0.08271	-0.03145	0.05146	0.05751	0.15583
B28	0.23503	0.03571	0.24239	-0.01767	-0.14117	0.13549
B29	-0.08695	0.24612	0.03503	0.03108	0.04127	-0.15270
B30	0.07210	0.04814	-0.14868	-0.01355	0.28318	0.27442
B31	0.86837	0.03467	-0.02331	0.16886	-0.01178	-0.04481
B32	-0.18985	0.03939	0.17091	0.01531	0.58935	0.11307
B33	0.13659	0.09221	-0.02574	0.86700	0.12681	0.19696
B34	-0.06099	0.73581	-0.23665	0.11747	0.09143	-0.09972

VARIANCE EXPLAINED BY EACH FACTOR

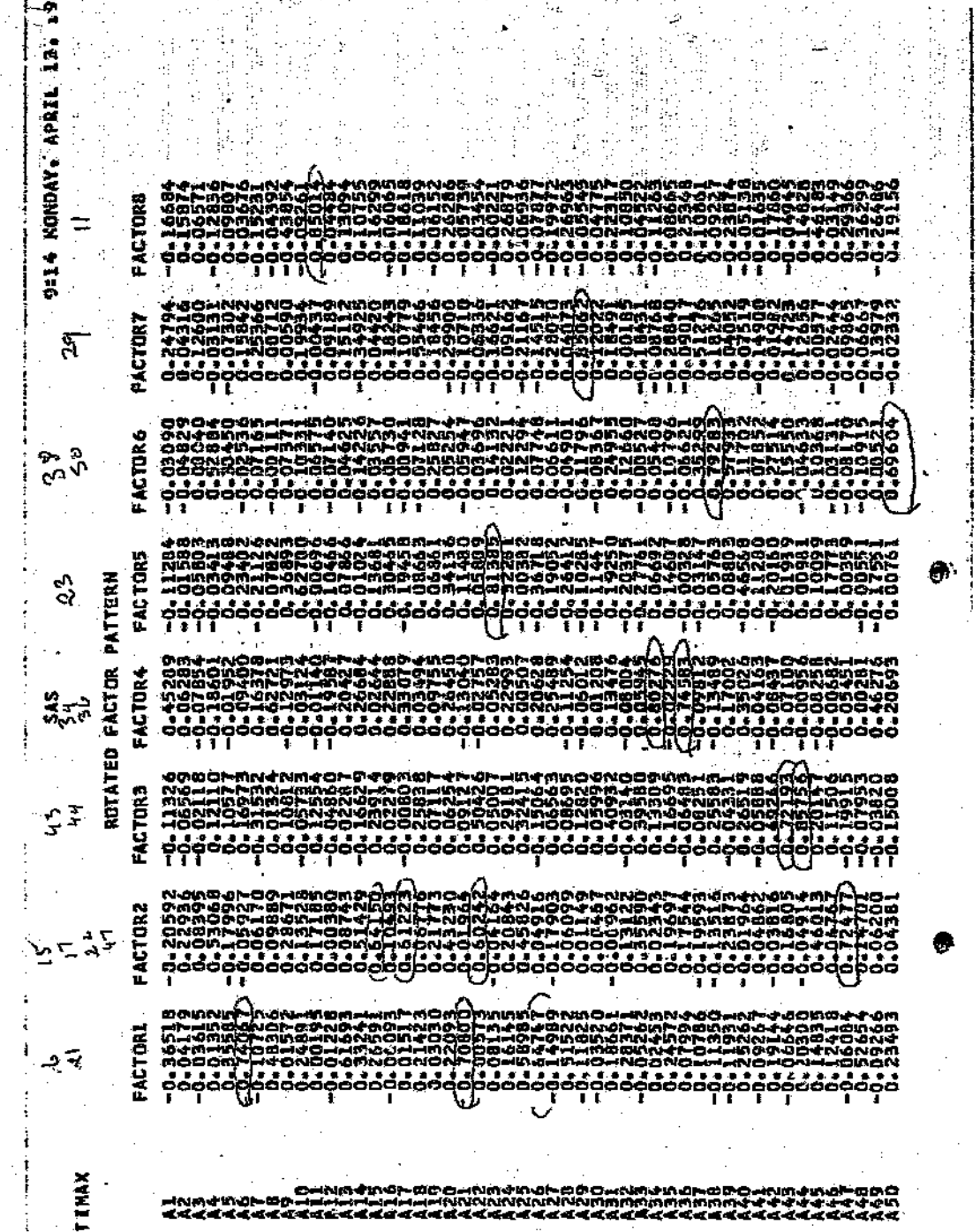
FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7	FACTOR8	FACTOR9	FACTOR10	FACTOR11	FACTOR12	FACTOR13
4.234228	2.767886	2.561223	2.332139	2.293879	2.053663	1.892101	1.855481	1.654792	1.617684	1.556514	1.462815	1.359467

FINAL COMMUNALITY ESTIMATES: TOTAL = 27.641874

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
0.755404	0.837919	0.772525	0.823121	0.766387	0.801210	0.760331	0.783804	0.901161	0.818582	0.790594	0.706860
B13	**B14**	**B15**	**B16**	**B17**	**B18**	**B19**	**B20**	**B21**	**B22**	**B23**	**B24**
0.823130	0.828199	0.849038	0.915554	0.948104	0.807243	0.783876	0.891012	0.735794	0.862111	0.660669	0.774167
B25	**B26**	**B27**	**B28**	**B29**	**B30**	**B31**	**B32**	**B33**	**B34**		
0.787094	0.892632	0.876364	0.841538	0.800193	0.779602	0.828083	0.746070	0.891693	0.837611		

APPENDIX 4

Unsuccessful factor analysis including scree test, to develop values scale (Section 4.5.4 (a))


9:14 MONDAY, APRIL 13, 1987
ROTATED FACTOR PATTERN
FACTOR1 FACTOR2 FACTOR3 FACTOR4 FACTOR5 FACTOR6 FACTOR7 FACTOR8
ROTATION METHOD= QUARTIMAX

SAS 9:14 MONDAY, APRIL 13, 1987

ROTATION METHOD: QUARTIMAX

3 19 35 46 30 41 27 32 12 2

ROTATED FACTOR PATTERN

	FACTOR9	FACTOR10	FACTOR11	FACTOR12	FACTOR13	FACTOR14	FACTOR15	FACTOR16
A1	-0.26851	0.00437	0.24681	-0.06725	-0.28270	0.03102	-0.01368	0.27741
A2	0.05426	0.01767	-0.00195	-0.07692	0.07278	-0.09232	-0.06083	0.81517
A3	0.85485	0.01412	0.10696	-0.07013	-0.07990	-0.05561	0.03562	0.05426
A4	-0.12964	-0.02545	-0.14811	-0.10509	0.02285	0.25242	0.00623	-0.10029
A5	-0.18547	0.03309	[illegible]	0.61956	0.04552	-0.19231	-0.18582	0.01397
A6	0.11382	-0.04417	[illegible]	-0.09285	-0.02830	-0.04053	-0.04665	-0.06245
A7	-0.53238	0.23054	0.24799	-0.05369	0.14181	0.19281	0.16000	0.02132
A8	-0.15670	-0.04583	0.04949	0.14015	0.01484	0.14636	-0.24277	-0.10008
A9	0.06635	0.29319	0.13811	0.35550	-0.26272	0.04550	0.05209	0.35881
A10	-0.15896	-0.08483	0.20954	-0.17454	0.33456	0.23321	-0.16779	-0.07968
A11	0.10974	0.03800	0.00039	0.08621	-0.03641	-0.04157	0.07060	0.13244
A12	-0.05162	0.05301	-0.03671	-0.03629	-0.06337	-0.06625	0.85280	0.08093
A13	-0.25856	-0.04031	-0.23911	-0.03865	-0.20194	-0.18973	0.06135	-0.29826
A14	0.04772	0.03344	0.03450	-0.05469	0.03861	0.19770	-0.27317	0.09600
A15	0.08128	0.29852	-0.11034	-0.11051	-0.10551	0.06437	0.20753	0.13493
A16	-0.18247	0.51424	-0.14889	-0.04150	0.50149	-0.06238	-0.01425	0.03449
A17	-0.18609	0.15618	-0.12811	-0.06609	0.19287	-0.05995	-0.09530	0.24416
A18	-0.07800	0.10808	0.26468	0.19504	-0.13998	0.08854	0.23733	-0.22032
A19	-0.00823	0.69737	0.17897	-0.11361	-0.21734	0.00[illegible]	0.12584	-0.17444
A20	0.12627	0.25942	-0.11359	0.15082	0.24123	0.06[illegible]	-0.20173	0.17004
A21	0.07172	0.17726	-0.06391	0.08502	-0.14679	0.21798	0.12840	0.22787
A22	0.17180	-0.22814	0.08997	-0.05304	-0.11329	-0.05964	0.15596	0.05877
A23	0.02727	0.14783	0.08602	-0.02229	0.13818	-0.07543	0.03449	0.00220
A24	0.20196	0.24579	0.32432	0.20904	-0.23709	-0.04966	-0.10097	-0.18950
A25	-0.14391	0.02788	-0.11770	0.17863	0.07895	-0.04549	0.13906	0.21596
A26	0.00979	0.01721	0.31247	-0.03575	0.15025	0.02567	0.09553	0.00315
A27	-0.03120	-0.12181	0.03560	-0.06336	0.02932	0.72445	0.01640	0.06106
A28	0.46520	-0.02768	-0.24760	0.01178	0.09301	-0.04179	-0.34402	-0.08369
A29	0.04243	0.02539	-0.16168	0.02188	-0.06480	0.06539	0.07138	0.14709
A30	-0.01877	-0.05388	0.15438	0.90215	-0.00854	0.11180	0.03535	-0.07989
A31	0.23129	0.06383	0.03343	0.23249	0.13598	0.09562	0.36771	0.12488
A32	-0.07627	0.04680	-0.01536	0.08813	0.14280	0.79520	-0.12583	-0.17146
A33	-0.09410	0.02506	0.24577	-0.29925	0.09993	0.27253	0.08482	-0.01934
A34	-0.06662	0.09308	0.25526	-0.23766	-0.08039	0.02590	-0.07871	0.10635
A35	-0.13301	0.58322	0.03408	0.08139	-0.02513	-0.09628	-0.03957	0.14663
A36	-0.00591	0.00030	-0.27777	0.13593	0.12519	0.02142	-0.02200	-0.03439
A37	0.31058	-0.09149	0.27895	0.18098	0.03156	0.15240	-0.33459	-0.04465
A38	0.05800	0.10973	-0.02683	-0.09046	-0.01280	-0.01203	-0.11566	0.07065
A39	0.04187	0.13827	0.19476	0.01743	0.39311	-0.15704	-0.05749	-0.07256
A40	-0.01907	-0.08477	-0.14130	0.06222	0.28116	0.29013	0.34032	-0.05600
A41	-0.05390	-0.11392	-0.04035	0.00496	0.80327	0.13034	-0.03800	0.04735
A42	0.14059	0.44716	0.16077	-0.02425	0.26131	0.01578	0.15860	0.22878
A43	0.09547	0.23832	0.00393	0.09838	-0.15440	0.06912	-0.18168	-0.03732
A44	-0.07352	-0.00996	0.04456	0.03254	0.02311	-0.05667	-0.00235	-0.07390
A45	0.02594	-0.10753	0.25976	-0.03063	-0.18830	-0.03884	-0.10313	0.44666
A46	0.05717	0.09451	0.84022	0.20131	-0.05398	-0.00692	-0.04501	0.04637
A47	0.09039	0.23351	0.25668	0.10126	0.13097	-0.16572	-0.07511	-0.01823
A48	0.06553	0.28392	0.15596	0.10909	-0.13578	0.17695	-0.24227	0.16210
A49	-0.48557	0.22770	-0.17722	0.34220	-0.06796	-0.16919	0.08915	-0.15046
A50	0.05700	-0.07775	-0.10291	0.23975	-0.04032	0.34745	0.14731	-0.06446

APPENDIX 5

Final partner questionnaire, including demographics, time management, perceptions of environmental uncertainty and values (Section 4.5.4 (a))

CODE

SECTION 1 :

FOR OFFICE USE ONLY

BIOGRAPHICAL DETAILS :

Age

Sex M F

EDUCATIONAL QUALIFICATIONS :(Graduate and Post-graduate)

DEGREE OR DIPLOMA	UNIVERSITY OR COLLEGE	YEAR QUALIFIED	E	A	B	C

OCCUPATIONAL HISTORY : (Since qualification)

FIRM OR INSTITUTION	POSITION	NO OF YEARS	X	1	2	3

TIME MANAGEMENT :

1. Please estimate the average number of hours per week spent on the following activities:

   a) Interacting with clients in a work situation

   b) Socialising with clients or prospective clients (social functions, sport, seminars, etc)

c) Performing management and/or administrative functions

d) Doing technical/professional work

2. Attendance of work-related conferences or seminars:

a) Number attended in South Africa during past 12 months

b) Number attended overseas during past 12 months

3. Professional Organisations and Educations:

a) Number of hours spent per month on professional organisations

b) Number of hours spent per month, lecturing on professional subjects

SECTION 2 :

PERCEPTIONS OF ENVIRONMENTAL UNCERTAINTY

Please indicate your perceptions of the uncertainty of the following environmental components, by ringing the appropriate number.

Highly predictable	1	2	3	4	5	6	7	Highly unpredictable

1. Political factors:								
a) Internal socio-political factors	1	2	3	4	5	6	7	
b) Government regulations affecting professions	1	2	3	4	5	6	7	
2. Economic factors: (Interest rates, tax rates, inflation)	1	2	3	4	5	6	7	
3. Technological development in the profession	1	2	3	4	5	6	7	
4. Competition:								
a) From professional firms	1	2	3	4	5	6	7	
b) From non-professional firms	1	2	3	4	5	6	7	
c) Nature of competition	1	2	3	4	5	6	7	
5. Human resources								
a) Supply of professional staff	1	2	3	4	5	6	7	
b) Quality of professional staff	1	2	3	4	5	6	7	
6. Client requirements								
a) Demand for existing services	1	2	3	4	5	6	7	
b) Demand for new services	1	2	3	4	5	6	7	
7. Level of Risk	1	2	3	4	5	6	7	

SECTION 3 :

VALUE SYSTEM :

Please indicate the extent of your agreement or disagreement with the importance of the following values for partners or directors of your firm by ringing the appropriate number:

Don't know/uncertain	0
Strongly disagree	1
Disagree	2
Neither agree nor disagree	3
Agree	4
Strongly agree	5

Adventurous	0	1	2	3	4	5	Loyal	0	1	2	3	4	5
Ambitious	0	1	2	3	4	5	Leadership qualities	0	1	2	3	4	5
Academic/ intellectual	0	1	2	3	4	5	Management skills	0	1	2	3	4	5
Broad vision	0	1	2	3	4	5	Methodical	0	1	2	3	4	5
Competent	0	1	2	3	4	5	Moral values	0	1	2	3	4	5
Compassionate	0	1	2	3	4	5	Nice people	0	1	2	3	4	5
Conservative	0	1	2	3	4	5	Positive/optimistic	0	1	2	3	4	5
Co-operative	0	1	2	3	4	5	Self-disciplined	0	1	2	3	4	5
Courteous	0	1	2	3	4	5	Sensitive	0	1	2	3	4	5
Experienced	0	1	2	3	4	5	Specific skill	0	1	2	3	4	5
Eye for beauty	0	1	2	3	4	5	Stable home life	0	1	2	3	4	5
Good judgement	0	1	2	3	4	5	Strong personality	0	1	2	3	4	5
Honesty	0	1	2	3	4	5	Supportive	0	1	2	3	4	5
Imaginative	0	1	2	3	4	5	Tolerant	0	1	2	3	4	5
Interpersonal skills	0	1	2	3	4	5	Religious	0	1	2	3	4	5
Broad Interests	0	1	2	3	4	5	Unselfish	0	1	2	3	4	5

APPENDIX 6

Final image questionnaire (Section 4.5.4 (b))

IMAGE STUDY QUESTIONNAIRE - INSTRUCTIONS

1. The Questionnaire is designed in the form of two words or descriptive phrases which have opposite meanings. (These represent the most common attributes of Professional Firms, established by interviewing professional people). The words or phrases are placed at opposite ends of seven equal sections, with the following meangings:

WORD/PHRASE A						WORD/PHRASE B
(1) : Extremely	(2) : Very	(3) : Slightly	(4) : Neither A Nor B	(5) : Slightly	(6) : Very	(7) : Extremely

2. On the next page is an alphabetical list of firms, with a code for each firm.

3. Please rate each firm you know well enough, by placing the appropriate code in the space provided, which best describes your perception of that firm for each of the descriptive phrases. (If you are a partner/director in one of the firms, please rate your own firm as well).

4. Please rate your expectations of your <u>ideal</u> firm, by placing an E. in the appropriate space for each descriptive phrase.

5. <u>EXAMPLE</u>:

If you think firm AB is <u>very</u> innovative, firm CB is slightly innovative and your ideal firm is <u>slightly</u> staid, your response would be:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
3.	<u>INNOVATIVE</u>:		AB	CB		E		<u>STAID</u>

(If the decription fits more than one firm, there should be sufficient space between the dots and below the line for at least six codes.

6. <u>RANKING</u>

When you have completed the rating, please <u>rank</u> the firms in order of success, as <u>you</u> perceive them. If you are a client, please indicate how frequently you use the services of the firm by placing one of the following numbers behind the name of the firm to indicate frequency:

(1) = Never, (2) = Seldom, (3) = Sometimes, (4) = Often, (5) = Exclusively.

7. OPTIONAL

A blank page is also provided if you wish to add any particular comments on any firm, which may not be covered by the questionnaire.

8. Confidentiality is assured as the questionnaire is coded only with the Profession and either Firmname. or Client or Contractor code but is otherwise Anonymous.

9. Kindly return the completed answersheet in the reply paid envelope before 15th October, 1987.

Thank you for your assistance.

LIST OF FIRMS	CODE
COOPERS AND LYBRAND	CO
DELOITTES, HASKINS AND SELLS	DH
ERNST AND WHINNEY	EW
FISHER HOFFMAN STRIDE	FS
KESSEL FEINSTEIN	KF
PEAT MARWICK	PM
SPENCER STEWARD	SS

CODE : [ ][ ]

IMAGE STUDY QUESTIONNAIRE

GENERAL IMAGE OF FIRM:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1. LARGE								SMALL
2. CONVENTIONAL								UNCONVENTIONAL
3. INNOVATIVE								STAID, STATIC
4. GOOD REPUTATION								POOR REPUTATION
5. UNETHICAL								ETHICAL
6. INCONSISTENT, UNSTABLE								STABLE, CONSISTENT
7. GROWING, GAINING MOMENTUM								DECLINING, LOSING MOMENTUM
8. LOW STANDARDS								HIGH STANDARDS
9. HAVE SPECIFIC LANGUAGE/CULTURAL IDENTITY								HAVE MIXED IDENTITY
10. STRONG, CAN TAKE OVER OTHERS								WEAK, VULNERABLE FOR TAKE OVER
11. NEW FIRM								OLD ESTABLISHED FIRM
12. A GROUP OF INDIVIDUALS								A UNIFORM, FIRM IDENTITY
13. WELL MANAGED								POORLY MANAGED
14. CONSERVATIVE								PROGRESSIVE
15. SPECIALISTS								GENERALISTS
	Extremely	Very	Slightly	Neither A Nor B	Slightly	Very	Extremely	

CODE : [. |]

IMAGE STUDY QUESTIONNAIRE

GENERAL IMAGE OF FIRM:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1. LARGE	:	:	:	:	:	:	:	SMALL
2. CONVENTIONAL	:	:	:	:	:	:	:	UNCONVENTIONAL
3. INNOVATIVE	:	:	:	:	:	:	:	STAID, STATIC
4. GOOD REPUTATION	:	:	:	:	:	:	:	POOR REPUTATION
5. UNETHICAL	:	:	:	:	:	:	:	ETHICAL
6. INCONSISTENT, UNSTABLE	:	:	:	:	:	:	:	STABLE, CONSISTENT
7. GROWING, GAINING MOMENTUM	:	:	:	:	:	:	:	DECLINING, LOSING MOMENTUM
8. LOW STANDARDS	:	:	:	:	:	:	:	HIGH STANDARDS
9. HAVE SPECIFIC LANGUAGE/CULTURAL IDENTITY	:	:	:	:	:	:	:	HAVE MIXED IDENTITY
10. STRONG, CAN TAKE OVER OTHERS	:	:	:	:	:	:	:	WEAK, VULNERABLE FOR TAKE OVER
11. NEW FIRM	:	:	:	:	:	:	:	OLD ESTABLISHED FIRM
12. A GROUP OF INDIVIDUALS	:	:	:	:	:	:	:	A UNIFORM, FIRM IDENTITY
13. WELL MANAGED	:	:	:	:	:	:	:	POORLY MANAGED
14. CONSERVATIVE	:	:	:	:	:	:	:	PROGRESSIVE
15. SPECIALISTS	:	:	:	:	:	:	:	GENERALISTS
	Extremely	Very	Slightly	Neither A Nor B	Slightly	Very	Extremely	

LEADERSHIP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
16. GOOD LEADERSHIP								POOR LEADERSHIP
17. AUTOCRATIC LEADERSHIP STYLE								DEMOCRATIC LEADERSHIP STYLE
18. PASSIVE LEADER								AGGRESSIVE LEADER
19. HIGH CREDIBILITY								LOW CREDIBILITY
20. LOW VISIBILITY								HIGH VISIBILITY
21. GOOD CONNECTION WITH CLIENTS								POOR CONNECTION WITH CLIENTS
22. SUCCESSION PROBLEM IF LEADER LEAVES								NO SUCCESSION PROBLEM IF LEADER LEAVES
23. INVOLVED IN THE PROFESSION (PROF. BODIES AND/OF TEACHING)								NOT INVOLVED IN THE PROFESSION

MARKETING

24. AGGRESSIVE MARKETERS								PASSIVE MARKETERS
25. NARROW, SPECIALIZED FOCUS OF SERVICES								WIDE RANGE OF SERVICES
26. WEAK CLIENT BASE								STRONG CLIENT BASE
27. WIDE GEOGRAPHIC DISTRIBUTION								LOCALIZED GEOGRAPHIC FOCUS
28. STRONG IN CERTAIN MARKETS								NO PARTICULAR MARKET STRENGTH
29. GIVE GOOD SERVICE								GIVE POOR SERVICE
30. ONE SPECIALIST SERVICE								MANY SPECIALIST SERVICES
	Extremely	Very	Slightly	Neither A Nor B	Slightly	Very	Extremely	

PEOPLE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
31. COMPETENT								INCOMPETENT
32. DEPTH OF EXPERTISE								SHALLOW EXPERTISE
33. GOOD TECHNICAL KNOWLEDGE								POOR TECHNICAL KNOWLEDGE
34. LOW MORALE								HIGH MORALE
35. POOR COMMUNICATORS								GOOD COMMUNICATORS
36. GOOD UNDERSTANDING OF BUSINESS								POOR UNDERSTANDING OF BUSINESS
37. HAVE LOST GOOD PEOPLE								HAVE GAINED GOOD PEOPLE
38. HAVE WELL-KNOWN 'STARS'								HAVE 'CLONES' (ALL FROM THE SAME MOULD)
	Extremely	Very	Slightly	Neither A Nor B	Slightly	Very	Extremely	

PLEASE EVALUATE THE SERVICES PROVIDED, BY PLACING THE APPROPRIATE NUMBER, IN THE BOX PROVIDED, FOR EACH FIRM, UNDER THE APPROPRIATE CODE

(1) = VERY POOR, (2) = POOR, (3) = AVERAGE, (4) = GOOD, (5) = VERY GOOD.

	a) KNOWLEDGE									b) COMPETENCE								
	E	AC	AA	CO	DH	EW	KF	PM	SS	E	AC	AA	CO	DH	EW	KF	PM	SS
39. AUDIT																		
40. TAX																		
41. MANAGEMENT CONSULTING SERVICES																		
a) INFORMATION MANAGEMENT CONSULTING																		
b) FINANCIAL MANAGEMENT CONSULTING																		
c) HUMAN RESOURCE CONSULTING																		
42. LISTINGS																		
43. LIQUIDATIONS																		
44. ESTATES																		
45. OTHER (SPECIFY)																		

RANK ORDER
(1 = MOST SUCCESSFUL)
(2 = SECOND MOST SUCCESFUL) ETC.

	FREQUENCY		FREQUENCY
1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

APPENDIX 7

Final strategy questionnaire (Section 4.5.4 (c))

CODE

STRUCTURE AND STRATEGY QUESTIONNAIRE

Please use information from 1986-1987 financial statements where necessary.

1. LABOUR INTENSITY:

Please supply the labour intensity index for your firm for 1986-1987, given as:

ANNUAL TOTAL SALARY BILL
ANNUAL TOTAL EXPENDITURE ON TECHNOLOGY

[where Salary Bill excludes remuneration of parthners and directors, and Expenditure on Technology includes Annual Lease figure and/or depreciation, on computers (mainframe and micro), word processors, telefax, CAD, CADD, automated diagnostic instrumentations, etc.]

2. ORGANISATION :

a) DIVERSITY INDEX: Please list the different categories of services provided at your firm, and the % of fee income derived from each category: e.g. Audit, Tax, MCS, OR Chem. Path., Histo, Micro, OR Civil, Electr, Mech., etc.

SERVICE	%

b) OFFICE RATIO: Please list the branch offices, (including head office) and number of direct competitors in each area: i.e. Firms you regard as competitors in your profession.

e.g. Port Elizabeth 4

Sandton 2

	OFFICE	NO
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

c) CUSTOMISATION :

i) What % of fee income is derived from standard, routine work?
(i.e. using the same work procedure) ____

ii) What % of fee income is derived from work requiring specialised, customised attention? ____

Using the scale below please encircle the appropriate number to indicate the following:

iii)

1	2	3	4	5

1) NEVER, 2) SELDOM, 3) SOMETIMES, 4) FREQUENTLY, 5) ALWAYS.

1) How often do you encounter the same kinds of client problems in your work?
1 2 3 4 5

2) To what extent are the decisions you make in working with clients dissimilar from one day to the next?
1 2 3 4 5

3) How often do you meet clients with problems you have never encountered before?
1 2 3 4 5

4) How often can the same procedures be used in solving client problems?
1 2 3 4 5

3. MARKETING ACTIVITY :

a) What % of your firm's expenses can be attributed to promotional costs (entertainment, firm brochures, etc)? ☐

b) If your firm is involved in presentations to clients or prospective clients, in order to acquire new business, what is your success rate (%)? ☐

c) Please tick the appropriate box, indicating which of the following situations apply to your firm:

i) Have you a full-time marketing/PR function (non-partner/director)

YES	NO

ii) Have you a full-time marketing/PR function (partner/director)

YES	NO

ii) If YES, please estimate the amount of time spent on new service development by your firm, as a percentage of the firm's total activity during the 1986-1987 year.

iii) If, as part of new service development, investment has been made in technology, what percentage does this constitute of the total expenditure on technology? (Bottom figure used in Question 1)

6. STRUCTURE :

Please tick which type of organisations your firm fits into:

Partnership without service company

Partnership with service company

Incorporated company without service company

Incorporated company with service company

Closed corporation without service company

Closed corporation with service company

Limited Company

7. ENVIRONMENTAL TRACKING :

Please rate the extent to which the following are used by your firm to get information, by circling the appropriate number:

NEVER USED	1	2	3	4	5	USED VERY FREQUENTLY

i)	Routine gathering of opinion from clients	1	2	3	4	5
ii)	Explicit monitoring of the action of competitors	1	2	3	4	5
iii)	Technological forecasting of industry trends	1	2	3	4	5
iv)	Special market research studies	1	2	3	4	5

iii) Have you a part-time marketing/PR function (partner/director)

YES	NO

iv) Use external marketing/PR consultant

YES	NO

v) Use external formalised marketing/PR consultant sporadically

YES	NO

vi) Have no part-time or full-time marketing activity

YES	NO

4. a) STAFF/PARTNER (DIRECTOR) RATIO :

Please give the ratio of the number of administrative or technical staff, and professional staff, to the number of partners/directors

b) STAFF TURNOVER :

Please indicate the staff turnover on each level of the organisation in the past year:

	Total No at end 1987	No left during 1986-1987	No joined 1986-1987
Partner/Directors:			
Professional/ Technical Staff:			
Administrative/ Clerical Staff:			

5. RESEARCH AND DEVELOPMENT :

i) Has your firm engaged in the development of any new service during the past year? (1986-1987)

YES	NO

8. BOUNDARY SPANNING :

My firm frequently discusses general strategic matters with senior partners/MD's of other firms in my profession at meetings, seminars. etc.	1	2	3	4	5	In my firm we prefer not to discuss general strategy matters with others.

APPENDIX 8

Selection of qualitative information from Institute of Contemporary History regarding the professions (Section 4.5.5 (b))

INSTITUUT VIR EIETYDSE GESKIEDENIS
Die Universiteit van die Oranje-Vrystaat

Bron nr 0 3 5 3 | Datum 8 7 0 7 2 4 2 6 7 | Onderwerp 1 1 6 | Knipsel nr 2 0 C 6

THE CITIZEN Jg..... Nr..... P. 70 Da 87 9 24

Civil engineers urged to be more dynamic

NM 30

THE embattled civil engineering contracting industry, faced with another year of little or no expansion, has been urged to adopt a more dynamic and imaginative outlook and initiate more "package deal" projects.

At the same time, they have been warned not to try and battle on with over-large structures but rather to cut back, further "rationalise" their organisations, and tender at realistic prices to make higher profits on, if necessary, a lower turnover.

Ken Lagaay, executive director of the SA Federation of Civil Engineering Contractors (Safcec), says in the 1986-87 annual report the industry's estimated turnover in the year was R2,9 billion compared to about R2,7 billion in the previous year.

While this was 7,5 percent higher in monetary terms, the industry's output in real terms was some 5 percent down. This was, however, only about half the decline in 1985-86.

"The continuing fall in output during the past year, albeit at a lower rate, indicates the effect which South Africa's low level of fixed investments, both by the public and private sector, is having on this industry," said Mr Lagaay.

Major new contracts were dominated by national roads and there was a persistent lack of new large industrial and other projects "which is not only of serious concern to the major contractors but, because of the spin-offs which such projects have in the form of smaller contracts and sub-contracts, also the industry at large."

The industry's total work force showed a marked decline from about 87 000 in the middle of 1986 to some 81 000 by the end of the year. There was a moderate recovery early in 1987, but this slowed in the second quarter and total employment in mid-1987 was around 85 000.

During the year there had been a great deal of talk about privatisation, said Mr Lagaay, but little or no action to reduce the large amount of construction still being undertaken in the public sector by its in-house units.

In general no significant growth or decline from the present tempo of construction was foreseen for the remainder of 1987-88.

There remained a need to expand the national infrastructure, but it was clear the state could not provide all the funds needed, he said. — Sapa.

TREFWOORDE
1 .....
2 .....
3 .....
4 .....
5 .....
6 .....
7 .....
8 .....
9 .....
10 .....

INSTITUUT VIR EIETYDSE GESKIEDENIS
Die Universiteit van die Oranje-Vrystaat

Bron nr 0 2 1 3 | Datum 85/11/16,320 | Onderwerp nr 176 | Knipsel nr 2695

The Star Jg..... Nr..... P..62..... Dat..85 11 16

Deregulation moves welcomed

By Frank Jeans

More and more professional ...lies linked to the building and ...nstruction industries welcome ...oves towards deregulation in ...ir disciplines, particularly so ... as fees are concerned.

And they have taken heart from ...ent announcement from the ...mpetition Board which sees the ...ed for freedom to compete on ...ofessional fees.

One group which has no doubt ...at a free market system is in the ...blic interest are the quantity ...rveyors and Mr Dennis Daugh...ty, a past president of the Asso...iation of Quantity Surveyors be...ieves clients should be able to ...nsult whatever professional they ...oose.

"There should be no constraint ... negotiations between parties — ...viously so long as standards are ...aintained," he says.

Mr Daugherty, senior partner of ...alters, Simpson & Harris (WS & H) emphasises that the abo...tion of the minimum fee system ...ould not mean a lowering of standards among quantity surveyors.

"Competition would be in the area of the service provided and not on discount fees," he says.

"Any move that would lead to the lowering of professional standards would be contrary to our code of practice."

Endorsing this view is Mr E Norman Harris, past president of the Royal Institution of Chartered Surveyors, who recently visited WS & H of which he is a partner.

"I believe competition should be on the basis of the service given rather than on cutting fees which is a marginal element of the total cost of any project," he says.

"The effect, however, upon the total cost of a project, which a poor service by a QS can give is far higher than any saving the client might make on fees.

"I could make my estimates far too high with lots of margins to give the contractor everything he wants. The client doesn't know and will be quite happy at the end because he hasn't overspent but really, I haven't given him any service at all."

Looking at the broader scope of the quantity surveyor, Mr Harris believes the time has come for contract documentation to be streamlined not merely because at present, it "bears the hallmark of a more leisurely, pen-wiping age but because it can no longer keep up with time scales demanded now".

"Professional manpower," he says, "can no longer be expended on the detailed measurement of items that aren't terribly important to the overall cost of a project."

He believes few professionals are geared to work at the right speed and all tend to blame planning and building regulations rather than their own shortcomings.

And he makes the point: "If a client has R1 million to spend and it takes a year to prepare pre-contract documents and two years to put up the building, inflation will effectively make that R1 million much less.

TREFWO
1 .....
2 .....
3 .....
4 .....
5 .....
6 .....
7 .....
8 .....
9 .....

APPENDIX 9

Example of company brochure (Section 4.5.5 (b))

Kessel

In the fast changing world in which we live, the ability to meet clients' needs presents a major challenge. This calls for a culture and philosophy that is far removed from the image of accountancy of only a decade ago.

It takes courage to be different. We believe that this difference is essential to meet the challenges that face our profession today. Our distinctive style has been developed through responding to the needs of people in business and industry.

The road to success calls for flair, innovation, quality and personal commitment at all levels. We need to seek new solutions to new problems. We need to look continually for new ideas and keep ahead of trends.

That's why from the senior partners down, the people of Kessel Feinstein are not only practical accountants, but are also creative, with the essential expertise and in-depth specialisation to service our blue chip portfolio of clients.

HH Horwath & Horwath
Chartered Accountants (S.A.)

KF Kessel Feinstein
Chartered Accountants (S.A.)

Audit, Accounting and Tax Divisions.
Johannesburg 12th Floor, Penmor Tower, 1 Rissik Street, Johannesburg, 2001, South Africa.
P.O. Box 6610, Johannesburg, 2000. Telephone: (011) 833-5900. Telex: 4-84136 SA. Cable: Horwintas.
Cape Town 4th Floor, Sanso Centre, 3 St. George's Street, Cape Town, 8001, South Africa.
P.O. Box 1550, Cape Town, 8000. Telephone: (021) 25-1268. Telex: 57-27986 SA. Cable: Horwintas.
Durban 3rd Floor, Durban Bay House, 333 Smith Street, Durban, 4001, South Africa.
P.O. Box 752, Durban, 4000. Telephone: (031) 304-2411. Telex: 6-22145 SA. Cable: Horwintas.

Management Consulting Division
Kessel Feinstein Horwath (Proprietary) Ltd.
11th Floor, Penmor Tower, 1 Rissik Street, Johannesburg, 2001, South Africa.
P.O. Box 6610, Johannesburg, 2000. Telephone: (011) 833-5955. Telex: 4-84136 SA. Cable: Horwintas.

Hotel, Catering, Tourism and Leisure Industries Consulting Division
Horwath & Horwath Southern Africa (Proprietary) Ltd.
11th Floor, Penmor Tower, 1 Rissik Street, Johannesburg, 2001, South Africa.
P.O. Box 6610, Johannesburg, 2000. Telephone: (011) 836-6100, 836-6001. Telex: 4-84136 SA.

Feinstein

IMAGES FROM AROUND THE WORLD

Kessel Feinstein is part of Horwath & Horwath International – HHI, an international partnership of accounting and management consultancy firms.

We have partner and correspondent firms in more than 70 countries throughout the world. The total network accounts for over 7 000 partners and staff and more than 200 offices.

In South Africa we have offices in Johannesburg, Cape Town and Durban, and clients across a broad spectrum of business and industry.

As a multi-national organisation, we can provide our clients with the contacts, resources, experience and know-how required to reach their personal and business objectives.

This means that we are able to offer advice in areas such as foreign exchange, international tax planning and management information systems. Not to mention all the specialised knowledge of local laws and customs of many lands which are available to members of our worldwide partnership.

OUR IMAGE TODAY AND TOMORROW

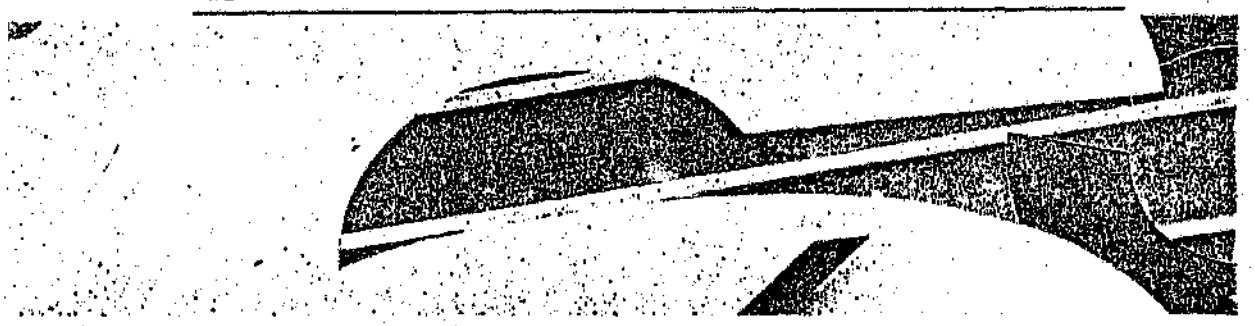
There are three basic facets to the image we have worked hard to create, and which we believe will pave the way to a bright future.

Firstly, there is our distinctiveness which is based on the innovative, creative thinking of our partners and staff. We have found that this is essential if we are to adapt to the ever-changing needs of society and business. However, entrepreneurial, innovative thinking cannot stand alone. It has to be tempered with the practical side of our business.

Secondly, we strive to attain a high degree of personal commitment in everything we do. We try to know our clients' business in such depth that we could be in partnership. How else can we anticipate our clients' needs and requirements.

Thirdly, the quality of our staff. All personnel are skilled professionals being either graduates or having professional qualifications. Our competence and integrity rests in their hands on a day to day basis, so we concentrate on quality. Quality auditing. Quality accounting. Quality tax services. Quality management services.

This thread of quality is the essence of our approach.



A WHOLE NEW WORLD OF SERVICES

AUDIT

Our clients look to us for extra insight we can give them based on our knowledge of commercial as well as financial matters. Our technique is Audit by Review of Risks and Objectives – ARRO.

We design an audit approach that is both efficient and cost effective. ARRO requires a high level of training and supervision by partners, managers and all staff, and is implemented in the following phases:

* Planning
* Analytical Review
* Evaluation of materiality levels
* Review of internal control and audit cycles
* Design of audit tests
* Reporting to management.

In this way, we provide management with an independent review of their business.

Computers are having an increasing impact on businesses of all sizes and the accounting profession has to keep pace.

We don't treat the computer as something isolated from the auditing approach, but rather as an integral part of our audit.

Our audit division makes use of the following sophisticated procedures:-

* Automated Information Management – AIM is a microcomputer software package which enables our staff to recall current figures and comparatives, make immediate adjustments and produce computerised audit working papers. This saves on valuable audit time.
* Computer-assisted Audit Technique – CAATS is a highly specialised computer procedure we use to test transactions and account balances. It is also used when extracting information from client files in areas such as debtors, creditors, stock costing and others.

TAXATION

Turning tax laws into a competitive advantage for a client is a highly specialised area where we can offer advice. We are experienced with tax practices here, and through our member firms, around the world.

Typical tax assignments involve advisi on the organisation of companies, close corporations, partnerships, mergers and acquisitions.

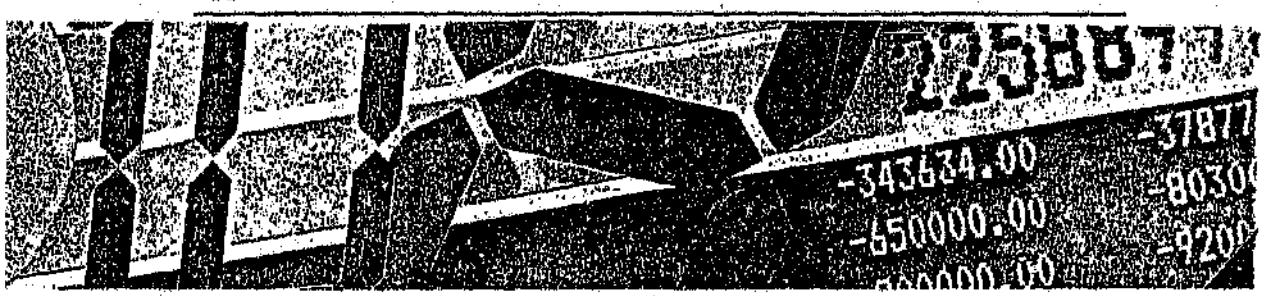
Assignments we have handled cover national and international tax and estate planning, tax shelters, trusts, the tax implications of life insurance, deferred compensation and benefit plans.

MANAGEMENT CONSULTANCY

Kessel Feinstein Horwath (Proprietary) Limited – KFH is one of our specialised companies with consultants who are expert in their own fields. This expertise covers such functions as computer consulting, organisational studies, facilities management financial modelling, software development, management information studies, profit improvement plans, feasibility studies, investigations, financial projection and project management.

Here are some typical assignments handled by KFH.

* Turnkey information system for a furniture manufacturer.



* Design and implementation of a corporate financial model for a multi-branch retailer.
* Project management of an automated photographic processing laboratory, including software design and management restructuring.
* Selection of Computer-Aided Draughting – CAD systems for architects.
* Facilities management of a large IBM System/38 site.
* Design and implementation of accounting systems for medical specialists including radiologists and anaesthetists.
* Implementation of real time integrated front-and-back office hotel computer systems.

LEISURE TIME CONSULTANCY

Tourism and leisure is now such an integral part of our economy that it has become a major industry. To handle this specialised business we formed Horwath & Horwath Southern Africa (Proprietary) Limited. This division offers a full range of consulting services to the hotel, tourism, leisure, gaming and catering industries.

Services provided include Tourism Development studies, Operational Consulting, Market Studies, Economic Viability Studies, Design and Installation of Accounting, Cost Control and Management Reporting Systems.

Our work in this field has also included:

* assessing market and economic feasibility of major hotel and resort complexes in a number of locations in Southern Africa and the Indian Ocean
* review of government treatment of hotels in relation to fiscal and other forms of incentives.

ACCOUNTING AND SMALL BUSINESS DIVISION

In this area of our practice our expertise is derived from a range of knowledge from different disciplines, which include the following:

* Computerised accounting services
* Small business consulting
* Investment management
* Valuations
* Secretarial services in respect of statutory records and returns
* Accounting services to close corporations.

ESTATES AND TRUSTS

We offer a wide range of services and expertise relating to the administration of trusts and deceased estates in South Africa and abroad.

TECHNICAL AND TRAINING

Accountancy is never static. There is a very serious commitment to training in practical terms. Partners are committed to allocating resources and ensuring that managers and qualified staff are released to lead training courses, attend seminars, assist with case studies and so keep everyone abreast of the latest developments.

APPENDIX 10

Selection of staff recruitment advertisements (Section 4.5.5 (b))

Sitting behind a desk was the last thing I wanted to do

All my friends agreed with me. We were going to choose careers that allowed us to live an adventurous life, full of challenges and excitement.

No dull, boring, routine work for us.

And in the end, that was why I chose accountancy as a career. It is a career that is full of challenges and excitement.

Even more, it offers prestige and a scope of career opportunities you will find hard to match in any other profession.

One of my 'Varsity friends has told me about some really big opportunities at one of the major international accountancy firms. If we join them, we can specialise in a wide range of fields. Business services, management consulting, taxation, liquidations or deceased estates. And they are looking for good people right now.

I phoned them right away for an appointment, that's been set up for tomorrow – one of the most important days in my life!

Coopers & Lybrand *(011) 836-3761*
Annuity House, Rissik Street, Jhb.

Advertising

CAs approach the D-Day

The day of reckoning for accountants is drawing near as the 11 500-odd members of the SA Institute of Chartered Accountants prepare to vote on the hotly contested issue of whether to allow professional advertising.

The accountancy firms are divided into two camps, with most large practices favouring an end to restrictions on advertising and most small practices favouring a toughening of the status quo which bans advertising and self-publicity. Many firms have nevertheless been circumventing the present ban by, for instance, their recruitment advertising (which has not been shy in identifying particular services) and by pushing specialist articles for publication (with clear acknowledgement to authorship) in the lay media.

At the end of this month, members will be sent two alternative drafts on which they will have to make up their minds by end July in a postal referendum. Current feeling is the switch to advertising will not get enough support to go through, though voting is expected to be close. In terms of the profession's regulations, points out Institute technical director Derrick Robson, a 75% majority is required.

Whatever the outcome, most accountants argue that the exisiting situation in which no direct advertising is taking place but in which "self-promotion" abounds is not satisfactory, says Robson. That is why alternative drafts will be mailed to CAs at the end of the month. One allows advertising, the

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ATTORNEYS or **ADVOCATES**

wishing to specialize in labour law and industrial relations.

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Taxation consulting today is a major growth area in the management services industry. The tax division of the international firm Arthur Andersen & Co. provides specialist training to young L.L.B.'s and C.A.'s who are committed to a career in

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This firm offers young professionals the opportunity to realise fully their creative and conceptual abilities. The environment is stimulating and progressive and is supported by a comprehensive training programme encompassing courses held locally and overseas. Assignments are varied, thus providing consultants maximum and diverse exposure to corporate taxation, individual tax, estate planning, G.S.T and customs duty.

Opportunities for young L.L.B.'s and C.A.'s now exist in the Cape Town, Durban and Johannesburg offices of the Firm.

APPENDIX 11

Mean scores of items on the partner and image questionnaires by profession (Section 4.5.6 (b))

APPENDIX 11
(Section4.5.6(b))

SUMMARY OF PARTNER DATA

	Arch. (n=9)	Qt.Srv. (n=3)	Engin. (n=9)	Law (n=10)	Account (n=9)	Medic. (n=8)
Resp.Rate(%)	61.0	69.0	69.3	30.2	45.2	48.0
Mean Age(yrs	47.9	43.1	49.5	42.9	42.1	41.7
%Post Grad	28.7	16.1	32.0	18.7	14.5	100.0
%Overs.Educ	27.4	20.1	13.9	5.2	4.4	31.3
%EnglEduc.	48.4	62.2	51.2	39.2	71.4	10.4
%Afrik.Ed.	43.8	34.8	33.4	55.6	46.0	58.3
% Pub.S Exp	1.1	2.3	9.5	4.3	7.0	24.7
% Priv.S Ex.	1.7	6.2	3.6	2.7	5.9	0.0
% Academic	11.0	0.9	3.2	2.4	0.2	16.3
% Other Firm	20.2	31.3	11.1	11.0	11.8	5.2
% Own Firm	76.7	58.7	70.4	79.0	82.4	36.5
Cl. Work(hrs)	7.5	8.4	6.2	15.8	15.7	18.6
Cl. Social	4.7	4.1	4.9	2.6	3.9	1.4
Mgmt	15.8	12.7	11.6	7.8	10.3	8.4
Techn.Work	19.2	22.1	14.6	25.2	14.0	32.2
Total Time	47.2	47.3	48.0	51.3	43.8	55.7
LocalConf.	1.9	2.5	3.0	2.9	4.3	2.4
O/S Conf.	0.0	0.0	0.2	0.2	0.6	0.6
Prof. Ass.	1.4	3.0	3.5	4.9	3.2	2.2
Lect.	2.5	0.2	1.2	1.1	1.5	1.4
PEU:						
Soc.pol	4.55	4.52	4.89	5.08	4.79	5.39
Govt.Reg.	3.71	3.13	3.29	3.45	3.49	4.50
Economic	4.20	4.20	4.05	3.89	3.67	4.59
Technology	3.34	3.24	3.12	2.88	2.88	3.23
Compet.Prof	3.24	2.90	2.89	2.82	2.50	3.32
Compt.N-prof	4.14	4.03	4.12	3.96	3.56	3.91
Compt.Nature	3.76	3.33	3.79	3.43	3.48	3.24
Supply staff.	4.10	3.90	3.83	3.89	3.69	3.14
Quality staff	4.20	4.43	3.66	3.74	4.02	3.00
Demand exist	3.72	2.73	3.59	2.70	2.87	3.18
Demand new	4.10	3.87	4.36	3.88	3.69	3.77
Risk	4.46	4.00	3.99	3.94	3.81	4.10

	ARCH	QS	ENG	LAW	ACC	MED
Values:						
Adv.	3.9	3.8	3.7	3.4	3.4	3.8
Ambit.	4.1	4.1	4.1	4.0	4.1	4.0
Academ.	3.7	3.4	3.8	4.1	4.0	4.0
Br.Vis.	4.2	4.4	4.1	4.1	4.4	4.2
Compet.	4.6	4.7	4.7	4.8	4.7	4.7
Compass.	3.4	3.0	3.5	3.5	3.5	4.0
Conserv.	2.8	3.1	3.2	2.9	3.2	2.9
Co-oper.	4.2	4.5	4.2	4.3	4.0	4.4
Court.	4.1	4.3	4.3	4.4	4.3	4.4
Exper.	4.2	4.4	4.5	4.0	4.2	4.2
Judgmnt.	4.3	4.4	4.5	4.6	4.5	4.1
Imagin.	4.3	4.1	4.3	4.0	4.2	4.1
IP Skills.	4.0	4.3	4.3	4.0	4.2	4.1
Br.Inter.	3.6	3.3	3.7	3.3	3.6	3.7
Leadshp.	4.2	4.5	4.3	3.8	4.2	3.9
Mgmt.	4.1	4.6	4.0	3.6	4.2	4.1
Method.	3.7	4.2	3.9	3.9	4.0	3.8
Nice	3.8	3.6	3.5	3.8	3.7	3.8
Pos/Opt.	4.0	4.1	3.9	3.7	4.0	4.1
Self-Disc.	3.8	4.2	4.2	4.3	4.3	4.1
Sp.Skill.	3.9	3.8	3.9	4.1	3.7	4.2
Stable	3.9	3.8	3.9	3.7	3.7	3.9
Str.Pers.	4.0	4.0	3.8	3.6	3.8	3.8
Support.	4.1	4.0	3.7	3.9	3.9	4.1
Toler.	4.0	3.9	3.8	3.9	3.8	4.0
Unself.	3.8	3.8	3.7	3.7	3.4	3.6

SUMMARY OF IMAGE DATA

ARCHITECTS

	AR1	AR2	AR3	AR4	AR5	AR6	AR7	AR8	AR9
Large	2.3	2.7	2.5	4.0	2.2	3.5	3.0	3.8	1.0
Convent.	5.2	4.3	4.5	3.7	4.2	6.5	4.4	3.5	5.7
Innov.	2.4	2.3	2.8	3.0	2.2	1.5	2.4	2.3	2.3
Goodrep	1.8	1.7	2.5	3.5	3.3	1.5	3.8	6.3	2.3
Ethical	6.1	6.7	3.2	1.5	6.0	6.1	5.6	6.0	4.7
Stable	5.8	6.7	5.7	3.3	4.0	6.0	3.2	3.3	5.3
Growing	3.2	2.7	2.8	5.2	4.3	3.5	5.8	5.5	2.1
High Stand	6.1	6.3	5.5	2.6	4.7	3.1	3.2	5.8	5.7
Mixed ID	5.2	5.0	3.3	2.4	2.3	4.5	3.5	3.3	5.7
Strong	2.1	3.2	1.8	2.2	4.1	5.2	3.3	6.6	1.5
Old firm	6.2	7.0	6.9	5.8	5.0	4.6	2.4	5.3	6.8
Uniform ID	6.0	5.0	3.7	2.9	2.7	1.9	2.9	3.3	5.3
Well mngd	1.9	3.3	1.8	5.9	2.7	3.0	5.4	3.8	1.7
Conserv	6.0	4.7	4.8	2.6	4.3	6.5	2.2	4.5	6.0
Special	3.1	4.3	3.0	3.0	3.3	1.9	4.9	4.5	3.3
Good lead	2.1	1.6	2.2	5.7	3.6	2.5	3.2	4.7	4.3
Democr lead	3.0	2.5	4.5	4.2	3.7	2.4	3.3	4.8	4.3
Aggr.lead	6.1	4.7	5.5	2.2	4.6	2.6	4.2	4.0	6.3
High credib.	2.1	2.0	2.0	5.0	3.3	2.0	4.4	2.0	2.0
High visib	6.0	4.3	5.7	5.4	4.3	5.9	2.2	3.7	6.3
Goodconn	1.9	1.8	2.3	2.6	3.6	4.4	4.6	2.3	2.0
Success prob	3.0	3.6	4.7	4.8	3.4	1.9	2.8	4.8	3.7
Involved	5.9	5.8	3.2	5.3	2.9	1.8	2.2	6.0	2.0
Aggress mark	2.0	3.6	2.2	2.5	4.0	2.0	4.1	4.7	1.3
Narrow focus	5.8	6.7	5.8	5.2	6.3	5.0	6.3	4.8	6.3
Str cl base	4.9	6.3	6.0	2.3	4.7	1.8	2.2	5.5	6.6
Wide distrib	1.8	3.3	1.2	5.5	2.3	5.5	5.2	2.2	3.0
Str mark	2.0	2.6	2.5	4.8	2.6	2.5	2.0	2.7	2.3
Good serv	1.9	2.3	2.4	2.1	3.2	2.0	3.1	3.3	2.2
Many spec.	0.0	5.0	6.3	6.0	5.0	5.6	4.0	2.0	5.6
Competent	2.1	1.8	1.9	5.8	1.3	2.4	2.6	2.2	1.6
Depth exp.	2.0	1.7	1.3	3.8	2.0	3.1	3.8	1.8	2.6
Tech knowl	1.7	1.8	2.0	2.8	1.8	3.5	5.0	2.1	2.8
High morale	6.0	5.7	5.6	2.4	3.8	4.5	3.0	4.8	6.0
Good commu.	6.2	5.6	3.0	5.0	4.1	5.4	3.4	5.8	4.2
Good und bus	2.2	2.3	2.0	2.4	2.1	3.2	2.8	2.7	3.
Gained good	4.0	4.3	4.5	2.6	4.7	4.0	4.8	5.3	6.6
Well star	3.0	2.1	3.3	2.4	3.2	1.9	3.3	4.3	3.3

QUANTITY SURVEYORS

	QS1	QS2	QS3
Large	2.0	1.2	2.8
Convent.	4.3	4.5	3.8
Innov.	2.0	1.5	2.3
Goodrep	1.9	1.1	1.7
Ethical	6.5	6.3	6.6
Stable	6.0	6.4	6.1
Growing	2.4	2.3	5.4
High Stand	5.9	6.7	6.5
Mixed ID	4.9	6.1	4.2
Strong	1.5	1.2	2.6
Old firm	6.3	7.0	5.8
Uniform ID	5.9	6.2	5.6
Well mngd	2.1	2.2	2.6
Conserv	5.8	6.2	5.3
Special	4.7	2.5	2.3
Good lead	1.9	1.5	2.3
Democr lead	4.0	5.1	5.0
Aggr.lead	6.0	6.3	4.4
High credib	1.7	2.3	1.6
High visib	5.4	6.5	5.0
Goodconn	2.0	1.2	2.2
Success prob	3.2	5.1	5.8
Involved	1.4	1.6	4.6
Aggress mark	2.2	2.3	3.4
Narrow focus	6.7	6.7	6.3
Str cl base	6.1	6.7	6.4
Wide distrib	1.2	2.3	3.0
Str mark	2.2	1.5	2.5
Good serv	2.0	1.5	2.0
Many spec	6.0	6.3	6.0
Competent	1.6	1.7	1.7
Depth exp.	1.9	1.5	1.6
Tech knowl	1.7	1.3	1.5
High morale	5.2	5.5	4.8
Good commu.	4.5	4.5	5.0
Good und bus	1.7	2.0	2.6
Gained good	3.8	3.8	4.3
Well star	1.8	1.5	2.6

CONSULTING ENGINEERS

	EN1	EN2	EN3	EN4	EN5	EN6	EN7	EN8	EN9
Large	1.6	3.5	3.1	3.2	2.4	2.9	1.7	1.9	2.3
Convent.	4.3	4.0	2.3	4.9	2.8	3.5	3.3	3.5	2.8
Innov.	2.7	2.2	3.5	1.8	2.1	3.0	2.9	3.2	3.8
Goodrep	2.7	2.0	1.8	2.0	1.2	2.1	2.0	2.2	2.4
Ethical	4.3	6.3	6.7	6.1	6.2	4.6	6.1	4.5	5.2
Stable	5.4	6.4	4.3	5.1	6.1	5.6	5.4	5.6	5.6
Growing	3.3	3.3	3.7	4.0	2.6	3.5	3.8	3.3	3.4
High Stand	5.2	6.0	5.1	6.0	5.0	5.3	5.4	5.7	5.5
Mixed ID	2.4	3.3	2.6	5.8	5.9	3.9	3.5	4.3	3.9
Strong	2.1	4.0	3.6	2.9	1.9	2.9	2.5	2.2	2.7
Old firm	5.4	6.0	5.5	4.9	6.4	5.9	6.4	6.2	5.9
Uniform ID	4.8	5.2	3.0	5.6	5.6	4.1	4.5	4.1	4.4
Well mngd	2.7	2.9	2.4	1.9	1.8	2.6	3.2	2.5	2.8
Conserv	5.3	5.0	3.4	4.9	4.6	4.3	4.5	4.0	3.4
Special	3.4	3.5	2.8	1.0	4.6	3.3	4.0	2.9	3.4
Good lead	2.3	2.6	3.2	1.8	2.0	2.6	2.8	2.8	2.8
Democr lead	3.9	3.9	3.2	2.1	5.2	3.8	3.9	3.5	3.6
Aggr.lead	5.5	4.9	3.2	5.9	5.8	4.4	4.6	4.6	3.4
High credib	3.2	2.8	2.7	0.9	1.2	2.0	3.3	2.3	2.6
High visib	6.1	5.0	2.9	4.9	6.5	4.4	5.5	4.5	4.8
Goodconn	2.3	2.0	1.8	3.0	2.5	2.3	3.6	2.2	2.6
Success prob	4.6	5.5	2.3	2.2	6.0	3.2	4.8	4.0	4.2
Involved	3.4	3.7	3.2	6.2	2.0	2.6	2.5	3.1	3.0
Aggress mark	1.8	3.0	4.2	4.1	2.2	3.1	3.6	3.1	3.1
Narrow focus	6.1	5.5	4.5	2.0	6.6	4.5	5.6	4.6	4.7
Str cl base	5.9	5.9	3.3	4.9	5.9	4.8	5.2	5.4	4.1
Wide distrib	2.5	4.5	3.2	4.9	3.6	3.8	2.7	2.4	3.2
Str mark	2.3	3.0	3.0	1.2	2.4	2.2	2.9	1.8	2.4
Good serv	2.8	2.0	2.0	2.2	1.8	2.3	3.2	2.0	2.4
Many spec	6.1	6.5	4.5	2.5	5.4	4.5	5.1	4.5	5.3
Competent	2.2	2.3	1.5	2.2	1.8	2.1	2.6	2.2	2.5
Depth exp.	1.8	2.1	2.2	2.1	1.8	2.5	2.2	2.4	2.4
Tech knowl	1.9	2.1	2.2	2.1	1.8	2.2	2.2	2.0	2.4
High morale	5.0	6.1	2.8	5.1	6.0	4.7	4.8	4.7	4.4
Good commu.	4.3	2.3	3.3	5.0	3.8	3.5	4.0	3.6	4.0
Good und bus	2.6	2.8	2.8	1.2	2.7	3.1	3.3	2.7	3.3
Gained good	3.6	5.3	1.3	4.1	5.0	3.7	3.7	3.3	3.3
Well star	2.1	4.0	3.2	2.0	2.8	2.2	3.5	2.7	2.6

ATTORNEYS

	LA1	LA2	LA4	LA5	LA6	LA7	LA8	LA9	LA10
Large	1.1	3.5	2.8	1.4	3.2	1.2	2.2	2.3	1.3
Convent.	1.5	3.3	2.3	2.5	4.2	2.2	2.7	4.1	4.0
Innov.	2.4	2.2	2.7	2.1	2.2	4.1	3.3	2.4	2.2
Goodrep	1.2	4.2	1.9	1.6	2.3	1.1	1.3	1.4	1.4
Ethical	6.9	6.7	6.4	6.9	6.0	6.2	6.5	6.7	6.5
Stable	6.8	4.5	5.5	6.6	5.0	6.0	6.7	6.3	6.6
Growing	2.0	3.1	4.1	2.4	1.7	1.1	1.4	3.2	1.8
High Stand	6.9	2.5	6.1	6.5	5.4	5.5	6.6	6.5	6.7
Mixed ID	4.2	2.6	6.1	2.5	2.5	6.8	6.2	5.7	2.2
Strong	1.5	5.3	3.5	1.4	2.1	3.2	3.1	1.7	1.4
Old firm	6.7	5.8	6.8	6.9	1.7	6.8	6.7	6.5	7.0
Uniform ID	3.5	4.0	5.2	2.5	5.0	6.2	5.7	4.1	5.5
Well mngd	1.4	3.9	3.0	3.1	2.2	4.1	3.2	5.4	1.4
Conserv	2.1	4.6	3.1	4.1	5.3	4.2	3.4	5.2	6.2
Special	3.6	3.3	3.8	3.5	1.5	2.1	2.2	3.6	2.0
Good lead	3.0	4.2	3.9	2.6	2.3	5.1	1.8	3.5	1.8
Democr lead	6.5	4.7	4.8	5.0	5.6	6.7	3.2	4.2	5.3
Aggr.lead	6.6	2.7	4.1	1.5	4.6	1.6	6.2	5.3	5.5
High credib	1.4	2.8	2.4	1.6	2.2	1.3	1.4	1.5	2.7
High visib	5.8	3.4	2.8	6.7	5.7	3.2	6.2	5.8	6.3
Goodconn	2.0	4.4	2.9	3.2	2.3	3.1	3.8	2.0	1.7
Success prob	6.4	3.8	5.2	6.5	3.3	6.5	4.5	5.2	6.2
Involved	3.4	4.1	4.3	1.3	1.7	1.2	2.0	3.7	1.8
Aggress mark	3.6	5.6	5.8	3.6	3.2	4.5	4.2	5.0	3.3
Narrow focus	6.2	4.2	6.2	6.0	3.8	6.4	5.6	5.3	6.5
Str cl base	6.5	4.3	4.9	5.4	5.6	5.5	6.5	6.6	6.4
Wide distrib	3.2	3.5	4.2	5.9	2.3	2.3	3.6	6.2	2.8
Str mark	2.5	2.1	2.4	1.9	2.8	2.3	1.8	2.0	2.2
Good serv	1.5	2.6	2.0	2.3	2.1	2.0	1.4	1.8	1.5
Many spec	5.5	2.3	4.8	5.0	5.7	6.8	6.2	6.4	6.6
Competent	1.4	2.1	2.2	1.6	1.3	1.2	1.5	1.8	1.3
Depth exp.	1.5	2.2	2.4	2.3	2.1	2.2	1.6	2.0	1.2
Tech knowl	1.6	4.2	2.2	1.5	1.5	2.2	2.3	1.8	2.0
High morale	6.5	4.5	3.8	6.3	6.2	6.4	5.8	4.5	6.5
Good commu.	6.4	3.6	4.6	6.3	2.5	3.3	3.4	3.8	6.0
Good und bus	2.2	4.2	3.6	1.5	2.2	4.3	2.8	1.6	2.6
Gained good	1.2	3.8	3.3	5.1	5.2	2.3	4.3	3.2	4.3
Well star	3.1	3.2	3.6	1.3	2.3	3.3	2.0	3.0	2.3

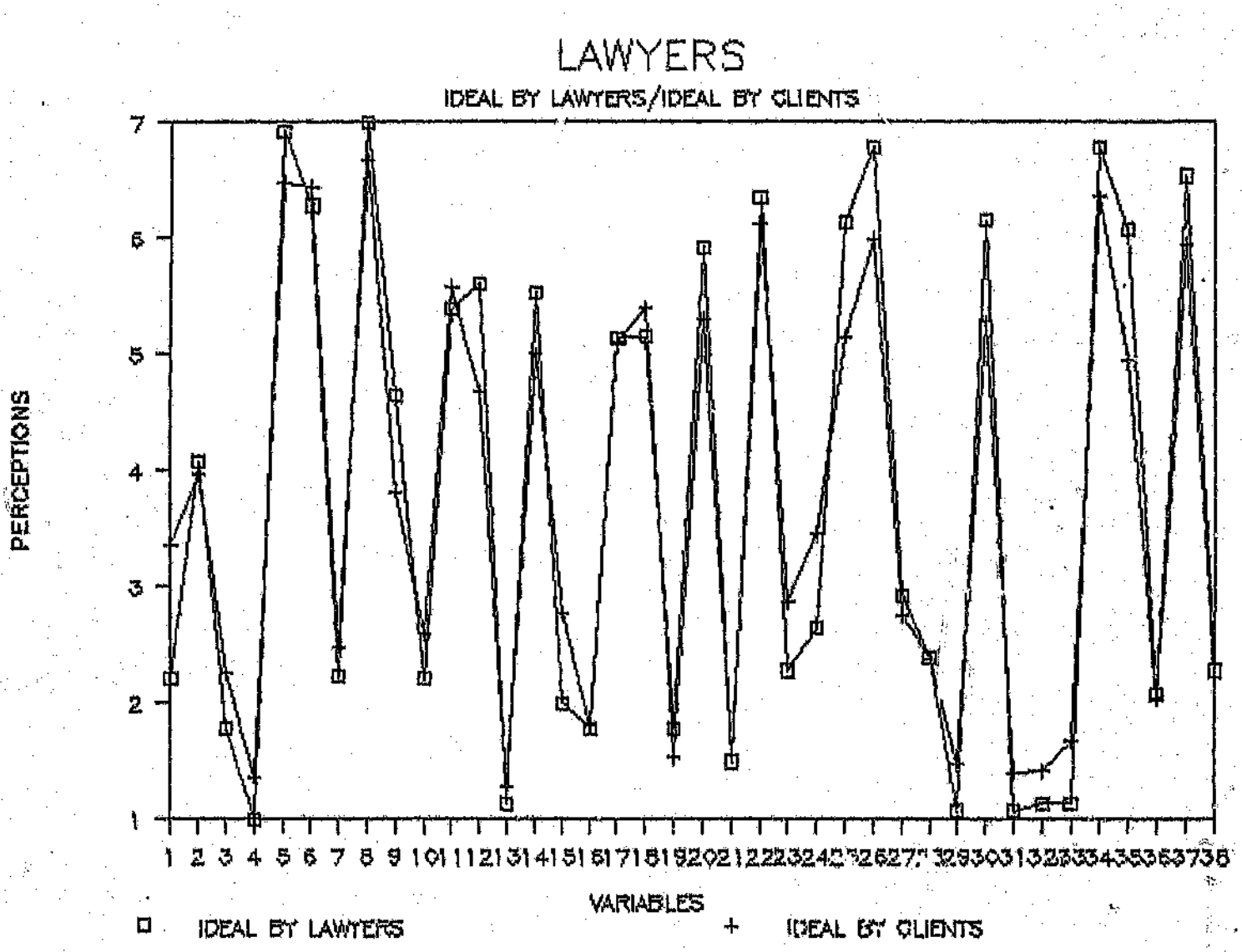
ACCOUNTANTS

	AC1	AC2	AC3	AC4	AC5	AC6	AC7	AC8	AC9
Large	1.8	1.5	2.2	1.7	2.1	3.0	1.9	2.4	3.7
Convent.	5.4	2.1	3.3	2.9	5.3	4.8	1.9	2.8	3.4
Innov.	2.6	3.3	2.2	2.1	1.7	1.5	1.3	3.4	4.4
Goodrep	1.8	1.4	1.6	1.3	1.7	1.1	1.2	1.8	3.0
Ethical	5.4	5.0	6.1	5.5	6.2	6.5	5.5	5.4	5.7
Stable	5.4	6.3	5.9	5.0	6.2	5.8	5.8	4.1	4.4
Growing	2.8	2.0	1.5	2.7	2.1	3.0	1.0	2.6	3.4
High Stand	5.4	6.1	6.4	5.3	6.6	6.5	5.5	6.5	5.0
Mixed ID	2.3	4.7	4.3	2.4	4.3	3.8	2.1	4.2	3.3
Strong	1.4	1.3	2.0	1.4	2.1	2.3	1.8	2.1	4.7
Old firm	3.4	6.3	5.6	6.0	5.3	5.0	5.4	5.2	3.4
Uniform ID	5.2	5.4	5.6	4.9	5.9	4.8	4.5	5.3	3.3
Well mngd	1.2	2.3	2.1	2.4	1.8	2.8	1.7	3.4	5.0
Conserv	3.8	3.0	4.6	4.3	6.2	6.3	5.1	4.4	4.6
Special	1.6	3.5	2.6	2.2	3.2	1.8	2.0	3.5	5.3
Good lead	1.6	1.9	2.2	2.6	1.8	2.5	1.5	3.0	5.0
Democr lead	1.1	3.9	3.0	3.3	5.9	4.5	4.6	1.9	4.2
Aggr.lead	3.4	4.5	5.2	4.3	6.2	3.4	4.4	3.7	4.2
High credib	1.3	1.3	1.6	1.6	1.7	1.2	1.3	1.9	3.2
High visib	6.2	4.1	4.9	4.8	6.2	6.5	4.8	3.9	3.3
Goodconn	2.1	2.2	2.3	1.9	2.1	1.3	1.4	2.3	2.5
Success prob	3.2	4.1	4.8	4.4	4.5	3.1	4.7	3.9	5.0
Involved	2.4	2.0	1.2	2.3	2.1	2.7	2.0	2.7	4.2
Aggress mark	1.2	3.5	2.8	2.4	1.8	2.1	2.1	4.1	4.1
Narrow focus	3.8	5.1	6.2	5.0	6.4	6.3	5.2	5.8	4.1
Str cl base	3.2	6.4	4.7	5.8	5.5	6.5	5.3	5.8	4.2
Wide distrib	4.0	1.5	1.7	1.9	2.2	2.0	1.9	2.1	3.1
Str mark	1.6	2.2	1.9	2.1	2.0	2.2	1.8	1.9	4.7
Good serv	2.0	1.6	1.9	1.7	2.0	1.2	1.2	2.2	2.7
Many spec	4.6	5.2	6.2	4.9	6.3	6.0	5.2	5.8	3.1
Competent	1.2	1.5	1.9	1.7	1.6	1.8	1.0	1.9	2.9
Depth exp.	1.4	2.3	1.8	1.6	1.8	1.8	1.1	2.3	4.3
Tech knowl	1.0	1.7	1.6	1.4	1.6	1.8	1.2	2.4	3.4
High morale	1.8	5.7	5.1	3.9	6.1	6.5	5.1	2.1	4.5
Good commu.	4.7	3.5	5.7	6.3	4.0	4.1	3.6	5.0	4.7
Good und bus	1.2	2.3	2.1	1.9	1.8	2.8	0.9	2.5	3.0
Gained good	0.6	3.1	4.1	2.5	3.7	3.8	4.3	3.0	3.7
Well star	1.1	2.6	2.3	2.4	1.9	1.5	1.9	2.4	4.1

	DOCTORS							
	MD1	MD2	MD3	MD4	MD5	MD6	MD7	MD8
Large	4.1	1.5	1.6	5.2	2.8	5.1	2.6	1.3
Convent.	3.2	3.5	3.8	1.5	3.4	6.0	3.5	1.7
Innov.	2.2	1.6	1.3	2.3	3.4	2.4	2.6	3.5
Goodrep	2.3	2.5	1.6	3.2	2.9	3.2	1.5	3.5
Ethical	6.1	6.5	5.0	5.1	5.3	5.1	6.1	5.2
Stable	6.9	5.4	6.3	6.0	5.1	6.0	6.4	6.3
Growing	1.1	2.1	2.2	3.0	3.8	3.2	2.1	2.7
High Stand	6.1	6.2	6.3	6.0	5.3	6.0	6.5	5.3
Mixed ID	1.2	3.2	2.8	6.3	4.8	3.2	6.1	3.7
Strong	1.1	1.5	1.6	5.1	3.3	3.4	2.5	2.3
Old firm	1.3	6.2	5.8	2.1	5.7	6.2	6.5	6.6
Uniform ID	4.1	3.5	3.3	3.2	4.6	5.1	4.5	4.3
Well mngd	1.1	2.4	2.3	3.2	2.7	3.3	1.6	1.0
Conserv	6.8	4.5	5.5	5.2	3.7	6.2	5.5	3.4
Special	2.1	4.5	1.2	6.2	3.4	3.2	1.5	5.0
Good lead	3.0	2.4	2.3	3.2	3.1	3.2	2.5	2.3
Democr lead	6.7	3.2	6.1	2.1	3.9	2.2	5.1	5.3
Aggr.lead	6.8	5.5	5.0	3.2	4.4	6.1	5.5	4.7
High credib	2.2	2.3	2.0	3.2	3.1	3.3	1.5	1.7
High visib	6.5	6.2	4.3	5.2	4.1	6.1	4.1	4.3
Goodconn	1.2	2.1	2.3	3.0	4.1	2.2	2.5	2.6
Success prob	6.8	2.5	6.3	2.0	3.7	6.1	6.4	5.6
Involved	4.2	2.5	3.5	6.2	3.5	2.1	3.5	3.0
Aggress mark	1.1	2.5	2.2	3.0	3.7	2.9	5.2	5.5
Narrow focus	6.8	6.5	5.3	6.0	4.4	3.0	6.5	5.3
Str cl base	6.7	6.6	6.3	5.0	5.1	5.0	6.6	6.4
Wide distrib	1.6	1.2	2.5	5.5	4.4	6.0	3.2	3.0
Str mark	1.2	2.5	1.7	2.2	4.1	2.5	1.5	3.5
Good serv	2.4	1.4	1.7	2.2	3.4	3.0	2.5	2.7
Many spec	6.4	5.2	6.5	3.2	4.7	5.2	6.5	6.6
Competent	2.2	2.2	1.3	2.2	2.9	2.3	1.5	2.3
Depth exp.	2.0	2.2	1.3	3.2	2.8	2.0	1.5	2.1
Tech knowl	2.2	2.0	1.5	3.0	2.6	2.2	1.6	2.3
High morale	6.9	6.0	5.7	6.0	4.6	6.0	6.5	6.6
Good commu.	1.2	2.5	3.8	3.0	5.3	5.0	2.2	3.2
Good und bus	2.0	2.0	2.3	5.5	2.9	2.1	2.2	1.5
Gained good	4.5	5.6	6.3	6.2	3.7	4.1	6.1	5.0
Well star	4.0	3.5	2.5	3.0	2.7	2.1	1.8	3.5

APPENDIX 12

Graph displaying similarities of ideal image as perceived by clients and by professions (Section 4.5.6 (b))


LAWYERS
IDEAL BY LAWYERS/IDEAL BY CLIENTS
PERCEPTIONS
7
6
5
4
3
2
1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 32 33 34 35 36 37 38
VARIABLES
IDEAL BY LAWYERS
IDEAL BY CLIENTS

APPENDIX 13

Kruskall Wallis one way ANOVA
displaying similarities of actual image
(Section 4.5.6 (b))

APPENDIX I3.

KRUSKAL - WALLIS ONE WAY ANOVA DISPLAYING SIMILARITIES OF ACTUAL IMAGE

VARIABLE		F	PR >F	CHISQ	PR>CHISQ
I1	Large/Small	1.38	0.2470	5.70	0.3357
I2	Conventional/ Unconv.	3.12	0.0147	13.90	0.0162
I3	Innovative/ Static	1.22	0.3111	6.95	0.2241
I4	Good/poor reputation	4.53	0.0016	18.51	0.0024
I5	Ethical/ unethical	6.34	0.0001*	23.11	0.0003*
I6	Stable/ unstable	4.50	0.0017	16.89	0.0047
I7	Growing/ declining	4.40	0.0019	17.97	0.0030
I8	High/low standards	2.55	0.0376	12.28	0.0311
I9	Specific/ mixed ident.	0.73	0.6031	3.47	0.6275
I10	Strong/weak	3.16	0.0137	17.25	0.0041
I11	New/old firm	2.03	0.0879	16.34	0.0059
I12	Individual/ group	3.52	0.0078	14.07	0.0152
I13	Well/poorly managed	2.03	0.0874	10.29	0.0675
I14	Conservative/ progressive	1.68	0.1539	7.68	0.1746
I15	Specialist/ general	2.27	0.0594	10.58	0.0604
I16	Good/poor leadership	1.75	0.1377	8.37	0.1369
I17	Autocratic/ democratic	3.98	0.0037	14.62	0.0121
I18	Aggressive/ passive	2.41	0.0471	10.53	0.0615
I19	High/low credibility	5.87	0.0002*	23.37	0.0003*
I20	High/low visibility	1.84	0.1193	6.53	0.2580
I21	Good/poor connections	3.96	0.0039	18.71	0.0022

I22	Succession probl./no	1.90	0.1085	9.69	0.0846
I23	Yes/no prof. bodies	1.99	0.0938	11.28	0.0461
I24	Aggr./pass./ market	3.22	0.0126	12.64	0.0270
I25	Broad/narrow service	2.94	0.0197	13.01	0.0231
I26	Strong/weak client base	3.55	0.0074	14.17	0.0146
I27	Wide/local geography	4.75	0.0011	18.02	0.0029
I28	Yes/no markets	2.01	0.0905	10.14	0.0715
I29	Good/poor service	2.92	0.0203	12.28	0.0311
I30	One/many spec. services	3.20	0.0130	17.79	0.0032
I31	Competent/ Incompetent	3.30	0.0110	14.45	0.0130
I32	Deep/shallow expertise	1.52	0.1982	9.07	0.1064
I33	Good/poor tech. knowledge	3.44	0.0088	13.59	0.0184
I34	High/low morale	5.08	0.0007	17.84	0.0032
I35	Good/poor communications	1.48	0.2101	8.25	0.1429
I36	Good/poor bus. knowledge	2.96	0.0979	11.25	0.0466
I37	Lost/Gained people	2.69	0.0295	13.68	0 0178
I38	Stars/clones	1.64	0.1629	7.00	0.2206

APPENDIX 14

Correspondence analysis to test PEU scale (Section 5.3.2 (a))

APPENDIX 14

CORRESPONDENCE ANALYSIS TO TEST PEU SCALE

TRACE: 0.037854

AXIS	EIGEN VALUE	% TRACE	CUM. % TRACE
1	0.010312	27.2	27.2
2	0.008396	22.2	49.4
3	0.004191	11.1	60.5
4	0.003228	8.5	69.0
5	0.002991	7.9	76.9
6	0.002426	6.4	83.3
7	0.001914	5.1	88.4
8	0.001420	3.8	92.1

2 FACTOR SOLUTION

CO-ORDINATES FOR VARIABLES

VARIABLE	QUALITY	MASS	INERTIA
Internal socio-political	0.320	0.050	3.6
Government regulations	0.844	0.039	6.7
Economic factors	0.768	0.042	6.0
Technological development	0.263	0.033	3.2
Competition from professional	0.453	0.031	4.2
Competition from non-professonal	0.338	0.040	4.6
Nature of competition	0.365	0.037	2.5
Supply of professional staff	0.631	0.040	4.5
Quality of professional staff	0.542	0.040	5.4
Demand for existing services	0.201	0.033	4.7
Demand for new services	0.313	0.041	3.4
Level of risk	0.361	0.043	3.5

AXIS 1

VARIABLE	CO-ORD	SQ.COR	CONT(%)
Internal socio-political	0.093	0.318	4.2
Government regulations	0.230	0.801	19.8
Economic factors	0.201	0.760	16.7
Technological development	0.076	0.158	1.8
Competion from professional	0.116	0.261	4.0
Competition from non professional	-0.025	0.014	0.2
Nature of competition	-0.001	0.000	0.0
Supply of professional staff	-0.004	0.000	0.0
Quality of professional staff	-0.046	0.041	0.8
Demand for existing services	0.061	0.069	1.2
Demand for new services	-0.009	0.003	0.0
Level of risk	0.074	0.178	2.3

AXIS 2

VARIABLE	CO-ORD	SQ.COR	CONT(%)
Internal socio-political	0.008	0.003	0.0
Government regulations	0.053	0.043	1.3
Economic factors	-0.020	0.008	0.2
Technological development	-0.062	0.105	1.5
Competition from professional	-0.100	0.192	3.5
Competition from non-professional	-0.119	0.323	6.8
Nature of competition	-0.096	0.365	4.1
Supply of professional staff	-0.162	0.630	12.7
Quality of professional staff	-0.160	0.501	12.1
Demand for existing services	-0.084	0.132	2.8
Demand for new services	-0.099	0.310	4.8
Level of risk	-0.075	0.183	2.9

APPENDIX 15

Rotated factor pattern for factor analysis of PEU
(Section 5.3.2 (b))

APPENDIX 15

Rotated Factor Loadings

Variable	Factor1	Factor 2	Factor3	Factor4	Commonality
SOCPOL	-.15451	0.2293	0.8055	-0.0202	0.7255
GOVREG	0.2200	-.4499	0.7116	-0.0135	0.7574
ECONOMIC	0.3724	-.06640	0.7567	-.1484	0.7377
TECHNOLO	0.8172	0.0339	0.2205	0.0103	0.7176
COMPROF	0.8509	0.0949	0.1678	0.0160	0.7615
NONPROF	0.2627	0.6748	-.1518	-.1668	0.5753
COMPNAT	0.6984	0.0942	0.0036	0.3946	0.6524
SUPPSTAF	0.1723	0.7467	0.1301	0.0678	0.6087
QUALSTAF	-.2633	0.7984	0.1648	0.2928	0.8197
DEMEXIST	0.0769	-.0007	0.0742	0.8831	0.7914
DEMNEW	0.3408	0.3517	-.2578	0.4280	0.4894
RISK	0.2143	0.1473	0.6262	0.2892	0.5434

APPENDIX 16

Correspondence analysis to test value scale
(Section 5.3.3 (a))

APPENDIX 16

CORRESPONDENCE ANALYSIS TO TEST VALUE SCALE

FIRST ANALYSIS

TRACE 0.072132

AXIS	EIGEN VALUE	% TRACE	CUM % TRACE
1	0.02511	34.7	34.7
2	0.009752	13.5	48.2
3	0.004742	6.6	54.8
4	0.004144	5.7	60.5
5	0.003279	4.5	65.1
6	0.002871	4.0	69.0
7	0.002811	3.9	72.9
8	0.002499	3.5	76.4
9	0.002293	3.2	79.6
10	0.001908	2.6	82.2

2 FACTOR SOLUTION

CO-ORDINATES FOR VARIABLES

VARIABLE	QUALITY	MASS	INERTIA (%)
Adventurous	0.373	0.023	0.9
Ambitious	0.002	0.025	0.5
Academic	0.271	0.024	0.7
Broad Vision	0.536	0.026	0.6
Competent	0.189	0.029	0.3
Compassionate	0.101	0.022	0.7
Conservative	0.399	0.019	1.5
Co-operative	0.744	0.026	0.5
Courteous	0.027	0.026	0.3
Experienced	0.260	0.026	0.3
Eye for Beauty	0.731	0.019	2.0
Good Judgment	0.301	0.027	0.5
Honesty	0.841	0.030	0.6
Imaginative	0.575	0.026	0.5
IP Skills	0.360	0.025	0.3
Broad Interests	0.333	0.022	0.6
Loyalty	0.755	0.028	0.7
Leadership	0.385	0.026	0.3
Management	0.326	0.025	0.6
Methodical	0.393	0.025	0.3
Moral Values	0.601	0.027	0.5
Nice People	0.625	0.023	0.5
Positive	0.503	0.025	0.4
Self-disciplined	0.486	0.026	0.3

Sensitive	0.616	0.022	0.7
Specific skill	0.105	0.025	0.3
Stable Home	0.353	0.023	0.4
Strong Personality	0.372	0.024	0.6
Supportive	0.650	0.025	0.4
Tolerant	0.569	0.024	0.3
Religious	0.426	0.018	1.8
Unselfish	0.404	0.022	1.5

AXIS 1

VARIABLE	CO-ORD	SQ.COR	CONT (%)
Adventurous	0.053	0.101	0.3
Ambitious	-0.004	0.001	0.0
Academic	0.064	0.202	0.4
Broad Vision	0.087	0.476	0.8
Competent	0.030	0.144	0.1
Compassionate	0.038	0.060	0.1
Conservative	-0.028	0.013	0.1
Co-operative	0.095	0.732	1.0
Courteous	0.014	0.022	0.0
Experienced	0.011	0.015	0.0
Eye for Beauty	0.035	0.016	0.1
Good Judgment	0.064	0.297	0.4
Honesty	0.099	0.713	1.1
Imaginative	0.076	0.443	0.6
IP Skills	0.052	0.292	0.3
Broad Interests	0.030	0.045	0.1
Loyalty	0.117	0.747	1.5
Leadership	0.047	0.259	0.2
Management	0.060	0.220	0.4
Methodical	0.060	0.356	0.4
Moral Values	0.091	0.600	0.9
Nice People	0.095	0.568	0.8
Positive	0.067	0.423	0.4
Self-disciplined	0.062	0.482	0.4
Sensitive	0.082	0.289	0.6
Specific skill	0.030	0.099	0.1
Stable Home	0.020	0.031	0.0
Strong Personality	0.071	0.285	0.5
Supportive	0.088	0.641	0.8
Tolerant	0.048	0.280	0.2
Religious	0.130	0.231	1.2
Unselfish	0.139	0.404	1.7

AXIS 2

VARIABLE	CO-ORD	SQ.COR	CONT (%)
Adventurous	-0.088	0.273	1.8
Ambitious	0.003	0.001	0.0
Academic	0.037	0.069	0.3
Broad Vision	0.031	0.059	0.3

Competent	0.017	0.046	0.1
Compassionate	0.031	0.042	0.2
Conservative	-0.149	[illegible]	4.3
Co-operative	0.013	0.013	0.0
Courteous	0.007	0.006	0.0
Experienced	-0.083	0.245	0.5
Eye for Beauty	-0.230	0.715	10.4
Good Judgement	0.007	0.004	0.0
Honesty	0.042	0.127	0.5
Imaginative	-0.042	0.132	0.5
IP Skills	-0.025	0.068	0.2
Broad Interests	-0.077	0.288	1.4
Loyalty	0.012	0.008	0.0
Leadership	-0.033	0.125	0.3
Management	-0.042	0.105	0.4
Methodical	-0.019	0.037	0.1
Moral Values	0.004	0.001	0.0
Nice People	-0.030	0.057	0.2
Positive	-0.029	0.080	0.2
Self-disciplined	-0.005	0.004	0.0
Sensitive	-0.088	0.327	1.8
Specific Skill	-0.007	0.006	0.0
Stable Home	-0.064	0.323	1.0
Strong Personality	-0.039	0.087	0.4
Supportive	-0.011	0.009	0.0
Tolerant	-0.048	0.289	0.6
Religious	-0.119	0.196	2.7
Unselfish	0.003	0.000	0.0

SECOND ANALYSIS

TRACE 0.058449

AXIS	EI. VALUE	% TRACE	CUM % TRACE
1	0.016907	28.93	28.93
2	0.006502	11.12	40.05

2 FACTOR SOLUTION

CO-ORDINATES FOR VARIABLES

VARIABLE	QUALITY	MASS	INERTIA (%)
Adventurous	0.306	0.029	1.4
Ambitious	0.011	0.032	0.8
Academic	0.416	0.031	1.0
Broad Vision	0.721	0.033	0.9
Competent	0.326	0.037	0.4
Compassionate	0.095	0.028	1.1
Conservative	0.517	0.024	2.4
Courteous	0.033	0.034	0.5
Experienced	0.238	0.033	0.4
Good Judgment	0.298	0.035	0.8

Imaginative	0.615	0.034	0.8
IP Skills	0.460	0.033	0.5
Broad Interests	0.306	0.029	1.0
Leadership	0.383	0.033	0.5
Management	0.437	0.032	0.9
Methodical	0.479	0.031	0.6
Nice People	0.560	0.030	0.8
Positive	0.582	0.032	0.6
Self-disciplined	0.565	0.033	0.5
Specific Skill	0.154	0.032	0.5
Stable Home	0.317	0.030	0.6
Strong Personality	0.354	0.031	0.9
Supportive	0.612	0.032	0.6
Tolerant	0.660	0.031	0.4
Unselfish	0.568	0.029	1.9

AXIS 1

VARIABLE	CO-ORD	SQ.COR	CONT (%)
Adventurous	0.070	0.173	0.8
Ambitious	0.005	0.002	0.0
Academic	0.053	0.144	0.5
Broad Vision	0.086	0.470	1.5
Competent	0.035	0.186	0.3
Compassionate	0.023	0.023	0.1
Conservative	-0.006	0.001	0.0
Courteous	0.009	0.010	0.0
Experienced	0.026	0.084	0.1
Good Judgment	0.061	0.267	0.8
Imaginative	0.083	0.526	1.4
IP Skills	0.065	0.454	0.8
Broad Interests	0.045	0.103	0.3
Leadership	0.055	0.353	0.6
Management	0.083	0.416	1.3
Methodical	0.069	0.468	0.9
Nice People	0.094	0.557	1.5
Positive	0.077	0.571	1.1
Self-disciplined	0.068	0.562	0.9
Specific Skill	0.034	0.132	0.2
Stable Home	0.040	0.127	0.3
Strong Personality	0.078	0.345	1.1
Supportive	0.086	0.612	1.4
Tolerant	0.060	0.436	0.7
Unselfish	0.149	0.567	3.7

AXIS 2

VARIABLE	CO-ORD	SQ.COR	CONT (%)
Adventurous	-0.061	0.133	1.7
Ambitious	0.012	0.010	0.1
Academic	0.073	0.272	2.6
Broad Vision	0.063	0.251	2.0

Competent	0.030	0.139	0.5
Compassionate	0.041	0.072	0.7
Conservative	-0.171	0.516	11.0
Courteous	0.015	0.024	0.1
Experienced	-0.035	0.153	0.6
Good Judgment	0.021	0.032	0.2
Imaginative	-0.034	0.089	0.6
IP Skills	-0.008	0.006	0.0
Broad Interests	-0.064	0.203	1.8
Leadership	-0.016	0.030	0.1
Management	-0.019	0.021	0.2
Methodical	-0.011	0.011	0.1
Nice People	-0.008	0.004	0.0
Positive	-0.011	0.011	0.1
Self-disciplined	0.005	0.003	0.0
Specific Skill	0.014	0.022	0.1
Stable Home	-0.049	0.190	1.1
Strong Personality	-0.012	0.008	0.1
Supportive	-0.000	0.000	0.0
Tolerant	-0.043	0.224	0.9
Unselfish	0.008	0.002	0.0

APPENDIX 17

Rotated factor pattern for values scale
(Section 5.3.3 (b))

Rotated Factor Loadings

'ariable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Communality
'1	0.2448	-.5037	-.0675	-.0219	0.1771	0.8160
'2	0.2195	-.4064	0.3256	-.0969	0.2361	0.4038
'3	0.0251	0.0991	0.8962	-.1551	0.0837	0.8690
'4	0.3111	0.0312	0.1701	-.1961	0.2000	0.7988
'5	0.5506	0.2860	0.0597	-.2281	0.2817	0.6997
'6	0.3654	-.0677	0.1757	-.7772	0.1087	0.8279
'7	0.0019	-.1004	0.0137	0.0770	0.0766	0.7078
'8	0.8073	0.0371	0.1123	-.1922	-.2498	0.8432
'9	0.2383	-.1359	0.1756	-.0069	-.2145	0.8462
'10	-.0886	-.1115	0.4494	0.3185	-.4930	0.8204
'12	0.6206	-.0159	-.0486	0.0045	0.0206	0.6935
'14	0.7938	-.2588	0.0212	-.0319	0.0975	0.7929
'15	0.2958	-.1502	-.1178	-.2873	0.0445	0.7511
'16	0.1513	-.5538	-.1816	-.4791	-.0607	0.8140
'18	0.2310	-.1544	0.1225	0.1760	-.2006	0.8060
'19	0.0384	-.0617	0.1149	0.0568	0.8856	0.8114
'20	0.5312	-.2000	0.1166	0.0276	0.1374	0.7866
'22	0.8021	-.1144	-.0699	-.1564	0.1495	0.7822
'23	0.5538	-.5190	-.1626	-.2103	-.0385	0.7516
'24	0.6052	-.2467	0.2254	0.0820	0.1542	0.7939
'26	0.1872	-.1781	0.1317	-.5903	-.1731	0.6999
'27	0.0651	-.7355	0.0307	-.1666	0.1322	0.6430
'28	0.2045	-.6525	-.1104	0.1117	-.2453	0.6565
'29	0.7258	-.2658	0.0355	-.3527	-.0859	0.8088
'30	0.6175	-.5523	0.0582	0.0629	-.0414	0.8193
'32	0.7912	-.2376	0.0221	-.2392	0.0460	0.8040

Rotated Factor Loadings

ariable	Factor 6	Factor 7	Factor 8	Communality
1	0.0147	0.6015	-.3224	0.8160
2	0.0592	-.1251	-.0125	0.4038
3	-.1253	0.0081	0.0930	0.8690
4	-.7655	-.0679	-.0562	0.7988
5	-.2377	-.3106	0.1635	0.6997
6	-.1819	0.0317	0.0954	0.8279
7	0.0554	-.8170	-.1229	0.7078
8	-.2396	0.1085	0.0944	0.8432
9	0.1069	0.0465	0.7657	0.8462
10	-.2697	-.3783	0.1946	0.8204
12	-.1952	-.0851	0.5098	0.6935
14	-.2862	0.0392	-.0368	0.7929
15	-.5190	0.0788	0.5168	0.7511
16	-.2753	0.1698	0.3371	0.8140
18	-.7780	0.1077	0.1600	0.8060
19	-.0628	-.0383	-.0049	0.8114
20	-.1421	-.0378	0.6400	0.7866
22	-.0086	0.0879	0.2574	0.7822
23	-.3365	0.1016	0.0513	0.7516
24	-.0683	0.3214	0.4212	0.7939
26	0.4316	0.0963	0.2046	0.6999
27	0.0268	-.2041	0.0956	0.6430
28	-.2041	0.1733	0.1800	0.6565
29	-.0581	-.2641	0.0729	0.8088
30	0.2332	0.1484	0.2179	0.8193
32	-.1263	0.1079	0.1848	0.8040

APPENDIX 18

Rotated factor pattern to confirm reduced values scale
(Section 5.3.3 (b))

Rotated Factor Loadings

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Communality
ADVENTUR	0.3216	-.2533	-.4192	0.6604	-.2719	0.8602
AMBITIOU	-.0673	0.1387	0.1946	0.7779	0.2347	0.7435
BR.VISIO	0.1958	0.0774	-.0583	-.0267	0.2849	0.8207
COMPETEN	0.2016	-.0729	-.0760	0.1481	0.7921	0.7437
CO-OPERA	0.5209	0.1134	0.0832	-.0349	0.2291	0.7649
COURTEOU	0.0365	-.0053	0.8844	0.0701	-.0805	0.7970
EXPERIEN	0.2130	-.7039	0.1393	-.0779	0.3197	0.7212
GOODJUDG	0.2448	0.0702	0.1203	0.3113	-.0176	0.4356
IMAGINAT	0.7905	-.1560	0.0327	0.2723	-.0484	0.7627
IPSKILLS	0.3181	-.3783	0.3418	0.3592	0.1075	0.6286
BRINTERE	0.1802	-.6713	0.3095	0.0546	-.2883	0.7020
LEADERSH	0.1215	-.4975	0.0091	0.4045	0.2912	0.5928
METHODIC	0.5527	-.3395	0.3731	-.0249	0.0278	0.6630
NICEPEOP	0.6911	-.0759	0.1340	0.0067	0.0243	0.6962
POSITIVE	0.3770	-.3118	0.0633	-.0025	0.0269	0.6517
SELFDISC	0.6631	-.2142	0.0714	0.0617	0.1283	0.6862
STABLE	0.0832	-.7134	-.0550	-.0203	0.0151	0.6482
STRPERS	0.1598	-.3140	-.4014	-.0781	-.1959	0.6909
SUPPORT	0.6908	-.0917	-.0465	-.0909	0.2006	0.8147
TOLERANT	0.6995	-.5564	-.0399	-.0189	-.1579	0.8470
UNSELFIS	0.7526	-.0965	-.1128	0.0473	0.2398	0.6565

Rotated Factor Loadings

Variable	Factor 6	Communality
ADVENTUR	0.0832	0.8602
AMBITIOU	-.1361	0.7435
BR.VISIO	0.8313	0.8207
COMPETEN	0.2064	0.7437
CO-OPERA	0.6481	0.7649
COURTEOU	-.0463	0.7970
EXPERIEN	-.2293	0.7212
GOODJUDG	0.5089	0.4356
IMAGINAT	0.1698	0.7627
IPSKILLS	0.3563	0.6286
BRINTERE	0.1905	0.7020
LEADERSH	0.2863	0.5928
METHODIC	0.3188	0.6630
NICEPEOP	0.4407	0.6962
POSITIVE	0.6384	0.6517
SELFDISC	0.4187	0.6862
STABLE	0.0748	0.6482
STRPERS	0.6847	0.6909
SUPPORT	0.5246	0.8147
TOLERANT	0.0865	0.8470
UNSELFIS	0.0911	0.6565

APPENDIX 19

Correspondence analysis to test image scale
(Section 5.4.1)

APPENDIX 19

CORRESPONDENCE ANALYSIS TO TEST IMAGE SCALE

TRACE: 0.050685

AXIS	EIGEN VALUES	% TRACE	CUM % TRACE
1	0.014095	27.8	27.8
2	0.007142	14.1	41.9
3	0.004613	9.1	51.0
4	0.003726	7.4	58.4
5	0.003140	6.2	64.5
6	0.002585	5.1	69.6
7	0.002222	4.4	74.0
8	0.002007	4.0	78.0
9	0.001670	3.3	81.3
10	0.001430	2.8	84.1

2 FACTOR SOLUTION

CO-ORDINATES FOR VARIABLES

VARIABLE	QUALITY	MASS	INERTIA (%)
LARGE/SMALL	0.526	0.009	1.9
CONV/UNCONV	0.014	0.011	1.7
INNOV/STAID	0.088	0.009	1.3
GOOD/POOR REP.	0.472	0.008	1.9
UNETH/ETHICAL	0.239	0.018	0.9
UNSTAB/STABLE	0.562	0.018	0.9
GROWING/DECLIN	0.583	0.011	1.6
LOW/HIGH STAND	0.772	0.018	0.8
SPEC/MIXED ID	0.136	0.012	1.5
STRONG/WEAK	0.557	0.009	2.6
NEW/OLD FIRM	0.364	0.018	1.6
INDIV/GRP ID	0.409	0.015	1.0
WELL/POOR MANGD	0.646	0.009	1.6
CONS/PROGR.	0.187	0.014	1.1
SPEC/GENERAL	0.225	0.011	1.0
GOOD/POOR LEAD	0.624	0.009	1.9
AUTOCR/DEMOCR LD	0.410	0.012	2.3
PASS/AGGRES.	0.442	0.015	1.3
HIGH/LOW CREDIB	0.440	0.008	1.6
LOW/HIGH VISIB	0.306	0.016	1.0
GOOD/POOR CONNEC	0.474	0.008	1.0
SUCC/NO SUCC PROB	0.398	0.014	1.2
INV/NOT INV PROF	0.304	0.011	2.4
AGGR/PASS MARKET	0.457	0.011	1.6
NARROW/WIDE RANGE	0.230	0.017	0.9
WEAK/STR CL BASE	0.847	0.017	1.5
WIDE/LOCAL GEOGR	0.357	0.011	2.5
STR/WEAK MARKETS	0.266	0.008	0.9

GOOD/POOR SERVICE	0.495	0.008	0.4
ONE/MANY SPEC.	0.651	0.017	1.0
COMPETENT/INCOMP	0.399	0.007	1.2
DEEP/SHALLOW EXP	0.519	0.007	1.0
GOOD/POOR TECHN	0.510	0.007	1.2
LOW/HIGH MORALE	0.690	0.016	1.3
POOR/GOOD COMMUN	0.105	0.013	1.8
GOOD/POOR UND.BUS	0.257	0.009	1.0
LOST/GAINED PEOPL	0.397	0.012	1.4
STARS/CLONES	0.223	0.009	1.0

AXIS 1

VARIABLE	CO-ORD	SQ.COR	CONT(%)
LARGE/SMALL	-0.215	0.417	2.8
CONV/UNCONV	-0.031	0.013	0.1
INNOV/STAID	-0.005	0.000	0.0
GOOD/POOR REP.	-0.190	0.290	2.0
UNETH/ETHICAL	0.015	0.010	0.0
UNSTAB/STABLE	0.111	0.455	1.5
GROWING/DECLIN	-0.190	0.464	2.7
LOW/HIGH STAND	0.126	0.660	2.0
SPEC/MIXED ID	0.052	0.040	0.2
STRONG/WEAK	-0.219	0.337	3.2
NEW/OLD FIRM	0.108	0.268	1.5
INDIV/GRP ID	0.121	0.408	1.5
WELL/POOR MANGD	-0.225	0.550	3.2
CONS/PROGR.	0.083	0.178	0.7
SPEC/GENERAL	-0.065	0.092	0.3
GOOD/POOR LEAD	-0.241	0.562	3.9
AUTOCR/DEMOCR LD	0.123	0.155	1.3
PASS/AGGRES.	0.136	0.402	1.9
HIGH/LOW CREDIB	-0.190	0.341	2.0
LOW/HIGH VISIB	0.098	0.301	1.1
GOOD/POOR CONNEC	-0.153	0.392	1.4
SUCC/NO SUCC PROB	0.090	0.186	0.8
INV/NOT INV PROF	-0.050	0.021	0.2
AGGR/PASS MARKET	-0.074	0.073	0.4
NARROW/WIDE RANGE	0.059	0.134	0.4
WEAK/STR CL BASE	0.181	0.747	4.0
WIDE/LOCAL GEOGR	-0.159	0.225	2.0
STR/WEAK MARKETS	-0.086	0.143	0.4
GOOD/POOR SERVICE	-0.114	0.439	0.7
ONE/MANY SPEC.	0.132	0.561	2.1
COMPETENT/INCOMP	-0.167	0.328	1.4
DEEP/SHALLOW EXP	-0.180	0.487	1.7
GOOD/POOR TECHN	-0.195	0.459	2.0
LOW/HIGH MORALE	0.126	0.379	1.8
POOR/GOOD COMMUN	0.005	0.000	0.0
GOOD/POOR UND.BUS	-0.048	0.039	0.1
LOST/GAINED PEOPL	0.006	0.001	0.0
STARS/CLONES	0.008	0.001	0.0

AXIS 2

VARIABLE	CO-ORD	SQ.COR	CONT (%)
LARGE/SMALL	-0.110	0.110	1.4
CONV/UNCONV	0.011	0.002	0.0
INNOV/STAID	-0.078	0.088	0.8
GOOD/POOR REP.	-0.151	0.182	2.5
UNETH/ETHICAL	-0.074	0.229	1.4
GROWING/DECLIN	-0.097	0.120	1.4
LOW/HIGH STAND	-0.052	0.112	0.7
SPEC/MIXED ID	-0.080	0.096	1.0
STRONG/WEAK	-0.177	0.220	4.1
NEW/OLD FIRM	-0.065	0.096	1.1
INDIV/GRP ID	0.007	0.001	0.0
WELL/POOR MANGD	-0.094	0.096	1.1
CONS/PROGR.	-0.019	0.009	0.1
SPEC/GENERAL	-0.078	0.133	0.9
GOOD/POOR LEAD	-0.080	0.063	0.9
AUTOCR/DEMOCR LD	-0.157	0.255	4.2
PASS/AGGRES.	-0.043	0.041	0.4
HIGH/LOW CREDIB	-0.102	0.099	1.1
LOW/HIGH VISIB	-0.013	0.005	0.0
GOOD/POOR CONNEC	-0.070	0.081	0.6
SUCC/NO SUCC PROB	-0.096	0.212	1.7
INV/NOT INV PROF	-0.180	0.282	4.8
AGGR/PASS MARKET			
NARROW/WIDE RANGE			
WEAK/STR CL BASE			
WIDE/LOCAL GEOGR			
STR/WEAK MARKETS			
GOOD/POOR SERVICE			
ONE/MANY SPEC.			
COMPETENT/INCOMP			
DEEP/SHALLOW EXP			
GOOD/POOR TECHN			
LOW/HIGH MORALE			
POOR/GOOD COMMUN			
GOOD/POOR UND.BUS			
LOST/GAINED PEOPL			
STARS/CLONES			

APPENDIX 20

Rotated factor pattern of image scale
(Section 5.4.2)

ORTHOGONAL TRANSFORMATION MATRIX

	1	2	3	4	5	6	7
1	0.59656	-0.70065	-0.26917	0.24525	0.11989	-0.06062	-0.03368
2	0.67977	0.68957	-0.13556	0.29320	0.26293	-0.02209	0.12022
3	0.22115	-0.11412	0.93723	0.16454	0.16586	-0.13534	0.05837
4	0.28763	0.05860	0.10581	0.08812	-0.69815	0.23067	0.18675
5	-0.34380	-0.01564	-0.04585	0.70342	-0.15022	-0.56569	0.20515
6	-0.15487	0.00355	0.12811	0.57044	0.05836	0.58153	-0.54134
7	-0.17791	-0.12999	-0.09343	0.14750	0.23933	0.51630	0.77764

ROTATED FACTOR PATTERN

	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	FACTOR6	FACTOR7
M1	0.18464	0.08170	0.18614	0.07452	0.81834	-0.20342	0.01556
M2	-0.03867	0.04054	0.61030	-0.06433	0.13496	0.10679	-0.07589
M3	0.54065	-0.10239	0.61199	0.10868	0.02014	0.18984	0.17522
M4	0.74613	-0.32616	-0.08688	0.20562	0.19323	-0.09091	0.22846
M5	-0.19315	0.59040	-0.21737	-0.13127	0.01906	0.04541	-0.15378
M6	-0.28706	0.86921	0.01977	-0.22161	-0.03054	0.04904	-0.09607
M7	0.67079	-0.36371	-0.09416	0.25753	0.18019	0.21897	-0.14356
M8	-0.41774	0.77671	0.06885	-0.16974	0.01239	0.19574	-0.08297
M9	-0.04680	0.37616	0.13736	0.14162	0.15946	0.20894	-0.11109
M10	0.57261	-0.01871	-0.14205	0.20343	0.69289	0.00596	-0.03523
M11	0.19774	0.17798	-0.24205	-0.10956	-0.31974	0.61601	-0.11399
M12	-0.47025	0.26247	0.26102	0.09675	-0.19524	0.51575	0.14024
M13	0.74974	-0.37922	-0.12921	0.12959	0.09273	0.08758	-0.06245
M14	-0.20300	0.40159	0.81249	-0.03743	0.08535	-0.03011	-0.01471
M15	0.34009	-0.13557	-0.05480	0.70234	-0.07130	0.11938	-0.03338
M16	0.77774	-0.20223	-0.38864	0.04937	0.17819	-0.02234	-0.16322
M17	-0.06022	0.86304	0.06612	0.06630	0.04017	-0.02793	-0.00933
M18	-0.07454	0.53096	0.39458	-0.25303	-0.08148	0.42518	0.52619
M19	0.83819	-0.20675	0.05758	-0.00220	0.16144	0.00782	0.12402
M20	-0.11275	0.50349	0.61346	-0.30730	-0.51032	-0.00377	0.04705
M21	0.82260	-0.21565	-0.15950	0.08056	0.08190	-0.05824	0.01228
M22	-0.34069	0.15765	0.04345	0.08955	-0.08036	0.04066	-0.04487
M23	0.51989	-0.04686	-0.21573	0.19933	0.24941	0.01737	0.34227
M24	0.37282	0.24167	-0.69902	0.14691	0.24547	0.13652	-0.17260
M25	-0.12897	0.56574	0.19627	0.13785	-0.46086	0.11000	-0.18574
M26	-0.32526	0.73565	0.00989	-0.08891	-0.23833	0.29684	0.04410
M27	0.37965	0.08149	-0.05346	0.04914	0.36187	0.06858	-0.14894
M28	0.25096	0.07809	-0.05770	0.66219	0.27410	-0.07387	-0.17208
M29	0.78309	-0.33087	-0.01214	0.17981	-0.03818	-0.12375	-0.09895
M30	-0.19946	0.54584	0.19846	-0.10931	-0.47763	0.11144	-0.01062
M31	0.77823	-0.33256	-0.07512	0.28953	0.04821	-0.01686	0.04326
M32	0.55488	-0.41039	-0.07186	0.46806	0.02075	-0.25514	0.08059
M33	0.72642	-0.30507	-0.05846	0.49734	-0.00285	-0.19481	0.11187
M34	0.17694	0.94276	0.13619	-0.04659	0.02822	-0.05573	0.15435
M35	0.14489	0.36536	0.23229	-0.04058	0.01041	0.22402	-0.46729
M36	0.67745	-0.04976	-0.28058	0.15616	0.16302	0.05933	0.04206
M37	0.23208	0.74016	0.32308	0.08224	0.21903	-0.06066	0.11136
M38	0.34562	0.11006	-0.35904	0.68691	0.13181	-0.02850	0.22868

APPENDIX 21

Rotated factor pattern to confirm reduced image scale
(Section 5.4.2)

Rotated Factor Loadings

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Communality
GOODLEAD	0.6942	0.0427	-.4740	-.0717	-.0716	0.7380
GOODCONN	0.7448	-.0377	0.0868	0.0833	0.0246	0.7840
GOODSERV	0.7990	0.0611	-.0068	0.2693	0.2074	0.7592
DEPTHEXP	0.8289	-.0357	0.0446	0.2863	0.2946	0.8646
TECHKNOW	0.8620	-.0535	0.0954	0.3008	0.0668	0.8555
GROWING	0.4517	-.1884	0.0296	0.6362	-.0161	0.6933
AUTOCRLE	-.0181	0.5225	-.7163	-.0289	0.1159	0.8091
MANYSPEC	-.2051	0.8007	-.3103	-.0690	0.1963	0.8230
HIGHMORA	-.0624	0.8510	-.0248	0.0973	-.0160	0.7392
INNOVATI	0.2280	0.1324	0.0203	0.0745	0.8098	0.8168
GOODREPU	0.3949	-.1534	-.1066	0.7489	0.0903	0.7605
PROGRESS	0.0984	0.7157	0.0386	0.1316	-.4509	0.7989
AGGMARKE	0.1765	0.0403	-.0552	0.3393	0.2844	0.8532
ETHICAL	0.2168	0.6180	-.2737	0.2134	-.0167	0.7391
INVPROF	0.0546	0.0848	0.1823	0.7961	-.1061	0.7614
STRCERTM	0.4277	0.0388	-.2668	0.3886	0.5026	0.6600
WELLSTAR	0.1567	0.1707	-.1910	0.7244	0.3624	0.7470
SPECIALI	0.4170	0.1624	0.1649	0.4873	0.4571	0.6852
FOCUSSED	0.1940	0.7645	-.2192	0.0625	0.0955	0.6866
LANG/CUL	0.1994	0.5015	0.5158	-.0958	0.1603	0.7839
STABLE	-.0647	0.8862	0.0397	-.0827	-.0100	0.8166
UNIFORM	-.0890	0.7284	0.2229	-.1255	0.2116	0.6577

Rotated Factor Loadings

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Communality
GOODLEAD	0.6942	0.0427	-.4740	-.0717	-.0716	0.7380
GOODCONN	0.7448	-.0377	0.0868	0.0833	0.0246	0.7840
GOODSERV	0.7990	0.0611	-.0068	0.2693	0.2074	0.7592
DEPTHEXP	0.8289	-.0357	0.0446	0.2863	0.2946	0.8646
TECHKNOW	0.8620	-.0535	0.0954	0.3008	0.0668	0.8555
GROWING	0.4517	-.1884	0.0296	0.6362	-.0161	0.6933
AUTOCRLE	-.0181	0.5225	-.7163	-.0289	0.1159	0.8091
MANYSPEC	-.2051	0.8007	-.3103	-.0690	0.1963	0.8230
HIGHMORA	-.0624	0.8510	-.0248	0.0973	-.0160	0.7392
INNOVATI	0.2280	0.1324	0.0203	0.0745	0.8098	0.8168
GOODREPU	0.3949	-.1534	-.1066	0.7489	0.0903	0.7605
PROGRESS	0.0984	0.7157	0.0386	0.1316	-.4509	0.7989
AGGMARKE	0.1765	0.0403	-.0552	0.3393	0.2844	0.8532
ETHICAL	0.2168	0.6180	-.2737	0.2134	-.0167	0.7391
INVPROF	0.0546	0.0848	0.1823	0.7961	-.1061	0.7614
STRCERTM	0.4277	0.0388	-.2668	0.3886	0.5026	0.6600
WELLSTAR	0.1567	0.1707	-.1910	0.7244	0.3624	0.7470
SPECIALI	0.4170	0.1624	0.1649	0.4873	0.4571	0.6852
FOCUSSED	0.1940	0.7645	-.2192	0.0625	0.0955	0.6866
LANG/CUL	0.1994	0.5015	0.5158	-.0958	0.1603	0.7839
STABLE	-.0647	0.8862	0.0397	-.0827	-.0100	0.8166
UNIFORM	-.0890	0.7284	0.2229	-.1255	0.2116	0.6577

APPENDIX 22

Cluster analysis of factor scores of three PEU, four image and five values (Section 6.2.1)

----------Cluster Analysis----------

Date/Time 04-20-1991 18:31:59
Date Base Name D:\ncss\proffrm2
Description Merge of none and PROFFRIM CREATED 04-18-1991

Storing Cluster ID

No. of Clusters	Percent of Variation	
1	100.00	**********
2	91.02	**********
3	82.78	**********
4	75.63	**********
5	69.30	**********

Variable	Grp(1)	Grp (2)	Grp (3)	Grp (4)	Grp(5)
C75	.1427944	-.4232449	-.2303586	2.279835	-.475E-01
C76	.4063E-01	.4050169	-.448E-01	-.9040033	-.3930282
C78	.2739671	.6401209	-.7575399	-.1760114	.7965801
C79	.1939234	-.4054901	.2842586	-.2998187	.5206E01
C86	-1.067281	.2080715	-.215E-01	1.332828	.1702946
C87	-.6534641	.2644441	.6042E-01	.6628173	-.5533412
C88	.8173754	.3679639	-.317272	.2099639	-1.704863
C90	-.139868	.7936E-04	.7063E-01	1.187189	-1.225555
C92	.6122482	-.9326128	.4952868	-.1493323	-.398E-01
C93	-1.06463	.7226E-01	.1704914	.5961341	.5130109
C94	-.5581417	.3842986	.1692147	-.4540626	-.536173
C95	.451151	.1992108	.1644979	-.1043069	-2.235482

APPENDIX 23

Five cluster discriminant analyses of demographic variables (Section 6.2.2)

-Discriminant Analysis-

Date/Time 04-24-1991 21:14:27
Data Base Name D:\ncss\PROFFRM2
Description Merge of none and PROFFIRM created 04-18-1991

Group Counts Report

Group	Count
All	47
1	8
2	14
3	18
4	4
5	3

Classification Matrix

Classification Variable: C82
Indep. Var's AGE %PG %OS %ENGL %AFRIK %PUBLIC %PRIVATE %ACADEM. %OTHER %OWN CL.WORK CL.SOCIA MGMT TECHWORK TOTWORK CONFLOC CONFO/S PROF. LECTURES
Group Counts Table

	P(All)	P(1)	P(2)	P(3)	P(4)	P(5)
A(All)	47	8	16	17	3	3
A(1)	8	7	0	1	0	0
A(2)	14	0	13	1	0	0
A(3)	18	1	2	15	0	0
A(4)	4	0	1	0	3	0
A(5)	3	0	0	0	0	3

Percent reduction in class. error due to X's 84.0

Linear Discriminant Functions

Classification Variable: C82

Group	1	2	3	4	5
CONSTANT	-493.3729	-494.3432	-482.3561	-557.3636	-324.5033
AGE	11.17095	11.18219	10.97443	12.03188	9.405237
%PG	0.032288	.1412673	0.081884	.1762751	-.115987
%OS	-0.024285	-.1235205	-0.013899	-0.045714	0.067528
%ENGL	1.198468	1.069646	1.124535	1.148482	1.156328
%AFRIK	1.089511	.9587603	1.045579	1.107845	1.135705
%PUBLIC	-.3129949	-.6227953	-.5340657	-.6732849	.6392795
%PRIVATE	2.584455	2.004433	2.396819	2.209778	2.38335
%ACADEM.	.2487455	.2630654	0.035748	-.5011857	-0.065210
%OTHER	.4938371	.8289101	.5880593	.6320141	.2603717
%OWN	1.611684	1.741266	1.701513	1.799696	.9815904
CL.WORK	1.247855	.914126	1.232739	1.668121	1.174286
CL.SOCIA	7.484956	10.03453	8.58592	10.7123	6.17065
MGMT	-.6302457	-.4375658	-.1018141	.179731	-1.298601
TECHWORK	3.976894	4.227252	4.255657	5.20183	2.841552
TOTWORK	2.077014	1.892244	1.647757	1.023469	.8948436
CONFLOC	10.05606	10.22241	11.01842	12.01127	6.398831
CONFO/S	-3.437574	-2.937894	-2.378797	-3.136704	-6.230073
PROF.	-2.242186	-2.046976	-1.544955	-1.698433	-1.506518
LECTURES	3.811726	1.075354	1.592229	2.825589	5.669376

---Discriminant Analysis---

ate/Time 04-24-1991 21:14:39
ata Base Name D:\ncss\PROFFRM2
escription Merge of none and PROFFIRM created 04-18-1991

Variable Selection Report

lassification Variable: C82

N	Variable	R2-Ad	F-Val	F-Prob	R2-X's	IN	Variable	R2-Ad	F-Val	F-Prob	R2-X's
es	AGE	0.299	2.6	0.0644	0.6492	Yes	%PG	0.210	1.6	0.2072	0.7583
es	%OS	0.113	0.8	0.5574	0.8302	Yes	%ENGL	0.068	0.4	0.7792	0.9138
es	%AFRIK	0.114	0.8	0.5529	0.9105	Yes	%PUBLIC	0.389	3.8	0.0153	0.7515
es	%PRIVATE	0.221	1.7	0.1820	0.4075	Yes	%ACADEM.	0.291	2.5	0.0720	0.8302
es	%OTHER	0.387	3.8	0.0158	0.4528	Yes	%OWN	0.436	4.6	0.0065	0.6244
es	CL.WORK	0.206	1.6	0.2170	0.8108	Yes	CL.SOCIA	0.317	2.8	0.0495	0.6347
es	MGMT	0.249	2.0	0.1286	0.7319	Yes	TECHWORK	0.440	4.7	0.0060	0.8249
es	TOTWORK	0.437	4.7	0.0063	0.8811	Yes	CONFLOC	0.239	1.9	0.1465	0.5214
es	CONFO/S	0.340	3.1	0.0350	0.4693	Yes	PROF.	0.235	1.8	0.1537	0.2923
es	LECTURES	0.350	3.2	0.0296	0.5084						

verall Wilk's Lambda 0.0091

APPENDIX 24

ANOVA among demographic variables for five groups
(Section 6.2.2)

ANOVA Between Demographics for Five groups

VARIABLE	SUM-SQUARES	MEAN SQUARE	F-RATIO	PROB >F
AGE	160.5401	40.13504	2.11	0.0964 *
%PG	8440.717	2110.179	1.90	0.1270
%OS	2192.014	548.0035	0.82	0.5179
%ENGL	2199.655	549.9137	0.55	0.7020
%AFRIK	2907.558	726.8896	0.70	0.5986
%PUBLIC	1704.571	426.1427	2.44	0.0616 *
%PRIVATE	89.3965	22.34912	0.38	0.8204
%ACAD	153.1752	38.29379	0.38	0.8204
% OTHER	1828.702	457.1754	3.67	0.0119 *
% OWN	7971.782	1992.945	6.04	0.0006 *
CLWORK	64.3568	16.08919	0.22	0.9231
CLSOCIAL	22224.86919	6.21729	2.47	0.0589 *
MGMT	146.4316	36.6078	1.11	0.3662
TECHWORK	586.6185	146.6546	1.80	0.1464
TOTWORK	1435.726	358.9316	3.32	0.0186 *
CONFLOC	20.7855	5.1963	2.62	0.0478
CONFOS	4.509	1.127	0.72	0.5797
PROF	49.6429	12.4107	1.45	0.2354
LECT	7.4689	1.8672	0.87	0.4874

APPENDIX 25

Correspondence analysis of five groups with demographic variables as supplementary variables (Section 6.2.2)

----------Correspondence Analysis----------
Date/Time 06-03-1991 13:12:15
Data Base Name D:\ncss\profsimp
Description Data base created at 08:12:16 on 05-29-1991

Eigenvalue Report

Variables: #1:#12

Coord	Eigenvalue	Percent Individual	Percent Cumulative	Histogram
1	0.02080146	42.81	42.81	
2	0.01984076	40.83	83.64	
3	0.00571170	11.75	95.40	
4	0.00223754	4.60	100.00	
Total	0.04859147			

Detail Report - Columns

Variables: #1:#12

Label	Wght	Coordinates F1	F2	F3	Contributions CTR1	CTR2	CTR3	Correlations COR1	COR2	COR3
ISQ	76	-232	308	-36	196	363	17	357	629	9
IBR	81	-71	136	-40	19	76	23	193	718	61
IREP	82	32	-27	123	4	3	215	43	30	636
IIN	87	-55	-40	-45	13	7	32	258	136	176
PRN	90	-76	-226	-36	25	230	21	99	878	23
PCOMP	85	4	-107	-42	0	49	27	1	836	132
PPE	63	232	89	-39	213	33	22	790	116	23
VSO	86	156	-118	1	101	60	0	638	361	0
VIP	86	-39	94	198	6	12	589	32	61	837
VLD	88	-163	-155	-5	112	106	0	525	473	1
VCR	80	-60	37	-56	14	6	44	348	133	300
VSTR	77	282	120	-27	297	56	10	818	147	7
DEMAGE	0	-168	-256	85	0	0	0	179	418	46
DEMPUB	0	-359	-3	110	0	0	0	638	0	60
DEMACAD	0	-50	85	57	0	0	0	16	46	21
DEMOTH	0	81	89	-233	0	0	0	14	113	781
DEMTEN	0	245	-17	-0	0	0	0	847	4	0
DEMSOC	0	102	35	-100	0	0	0	160	18	152
DEMTECH	0	260	-38	-85	0	0	0	842	18	89
DEMTOTT	0	270	13	-30	0	0	0	973	2	12
DEMOSC	0	-59	163	51	0	0	0	42	284	31
DEMLEC	0	232	-17	126	0	0	0	522	3	154

Note: All numbers were multiplied by 1000 .

Detail Report - Rows

Variables: #1:#12

Label	Wght	Coordinates G1	G2	G3	Contributions CTR1	CTR2	CTR3	Correlations COR1	COR2	COR3
GROUP 1	194	128	173	64	152	293	100	312	574	66
GROUP 2	213	-1	65	-140	0	45	733	0	176	820
GROUP 3	215	-9	50	61	1	27	142	7	194	296
GROUP 4	210	125	-242	6	158	618	1	211	787	1
GROUP 5	167	-293	-44	29	689	17	25	953	22	9

Note: All numbers were multiplied by 1000 .

APPENDIX 26

Unsuccessful discriminant analysis of strategy variables by groups (Section 6.2.3)

Discriminant Analysis

ate/Time 05-09-1991 09:57:06
ata Base Name D:\ncss\stratfiv
escription Data base created at 09:12:59 on 05-09-1991

Group Counts Report

roup	Count
11	33
	1
	4
	10
	10
	4
	4

Classification Matrix

lassification Variable: GROUPNO
ndep. Var's NOSERV TYPESERV BRANCHES CUSTOM STANDARD ROUTINE MARKPROM MARKSUC
ARKEXTE LABINTEN STAFF/PT PART/SEC %R&D R&D/TIME %TECHNOL ORGTYPE ENVIRTRA
OUNDSPA
roup Counts Table

	P(All)	P(0)	P(1)	P(2)	P(3)	P(4)	P(5)
(All)	33	2	4	10	9	4	4
(0)	1	1	0	0	0	0	0
(1)	4	0	4	0	0	0	0
(2)	10	1	0	8	1	0	0
(3)	10	0	0	2	8	0	0
(4)	4	0	0	0	0	4	0
(5)	4	0	0	0	0	0	4

ercent reduction in class. error due to X's 85.5

Linear Discriminant Functions

lassification Variable: GROUPNO

roup	0	1	2	3	4	5
ONSTANT	-103.3316	-79.30155	-95.23666	-89.43911	-71.55811	-97.86993
NOSERV	0.070374	-.8686498	-.1758574	.1546469	0.085055	-2.364835
TYPESERV	.2006442	.3035986	.3781236	.3316456	.1057674	.2808511
BRANCHES	-.4816009	-.2841294	-0.087033	-.1376531	-.2681775	.1736875
CUSTOM	.890424	.8682754	.948802	.9344426	.6982582	.8723793
STANDARD	.8210871	.7504231	.7243354	.7520376	.7198296	.7627054
ROUTINE	4.150012	2.99791	3.402851	3.409761	3.348263	2.108688
MARKPROM	-1.541418	-2.01533	-2.154968	-1.904903	.2460297	-1.846818
MARKSUCC	.2061789	0.058221	0.055652	0.014233	-0.043293	-.138991
MARKEXTE	-8.908196	-8.842852	-9.889493	-7.9368	-5.09138	-13.02775
LABINTEN	.8190919	.8087158	.8795874	.805903	.4935236	.9553723
STAFF/PT	3.603645	3.025166	3.264483	2.979404	1.813291	.957957
PART/SEC	-3.239041	-2.072059	-2.426913	-2.266241	-1.269223	1.041347
%R&D	10.28512	-1.834279	-.2347485	-2.2444	-.8137739	-13.89336
R&D/TIME	.3678184	.3614456	.652537	.4575299	.234115	.4547455
%TECHNOL	0.062138	.2107419	.2566997	.2577994	.1536655	.4748758
ORGTYPE	-.1625851	.8035806	-.4014852	0.074691	1.553323	3.688833
ENVIRTRA	1.84415	2.245532	2.339364	2.139374	1.537241	3.398334
BOUNDSPA	-0.065762	.2071986	1.041899	.0867181	1.420714	4.716929

Discriminant Analysis

ate/Time 05-09-1991 09:57:17
ata Base Name D:\ncss\stratfiv
escription Data base created at 09:12:59 on 05-09-1991

Variable Selection Report

lassification Variable: GROUPNO

N	Variable	R2-Ad	F-Val	F-Prob	R2-X's	IN	Variable	R2-Ad	F-Val	F-Prob	R2-X's
es	NOSERV	0.344	1.0	0.4413	0.4197	Yes	TYPESERV	0.351	1.1	0.4255	0.8558
es	BRANCHES	0.134	0.3	0.8965	0.6928	Yes	CUSTOM	0.236	0.6	0.6889	0.8368
es	STANDARD	0.046	0.1	0.9908	0.8335	Yes	ROUTINE	0.195	0.5	0.7816	0.4174
es	MARKPROM	0.417	1.4	0.2945	0.6916	Yes	MARKSUCC	0.466	1.7	0.2121	0.4567
es	MARKEXTE	0.387	1.3	0.3518	0.7236	Yes	LABINTEN	0.253	0.7	0.6511	0.5916
es	STAFF/PT	0.371	1.2	0.3842	0.9428	Yes	PART/SEC	0.434	1.5	0.2636	0.9091
es	%R&D	0.450	1.6	0.2374	0.4888	Yes	R&D/TIME	0.222	0.6	0.7219	0.6481
es	%TECHNOL	0.486	1.9	0.1832	0.5210	Yes	ORGTYPE	0.250	0.7	0.6585	0.5904
es	ENVIRTRA	0.368	1.2	0.3894	0.6140	Yes	BOUNDSPA	0.275	0.8	0.5985	0.6736

verall Wilk's Lambda 0.0135

APPENDIX 27

Successful discriminant analysis of strategy variables by type of profession (Section 6.2.3)

-Discriminant Analysis-

ate/Time 05-09-1991 09:59:32
ata Base Name D:\ncss\stratfiv
escription Data base created at 09:12:59 on 05-09-1991

Group Counts Report

coup	Count
11	33
	9
	2
	5
	5
	6
	6

Classification Matrix

lassification Variable: PROFTYPE
ndep. Var's NOSERV TYPESERV BRANCHES CUSTOM STANDARD ROUTINE MARKPROM MARKSUCC
ARKEXTE LABINTEN STAFF/PT PART/SEC %R&D R&D/TIME %TECHNOL ORGTYPE ENVIRTRA
OUNDSPA
roup Counts Table

	P(All)	P(1)	P(2)	P(3)	P(4)	P(5)	P(6)
(All)	33	9	2	5	5	6	6
(1)	9	9	0	0	0	0	0
(2)	2	0	2	0	0	0	0
(3)	5	0	0	5	0	0	0
(4)	5	0	0	0	5	0	0
(5)	6	0	0	0	0	6	0
(6)	6	0	0	0	0	0	6

ercent reduction in class. error due to X's 100.0

Linear Discriminant Functions

lassification Variable: PROFTYPE

roup	1	2	3	4	5	6
ONSTANT	-204.8828	-149.1304	-143.5781	-144.5274	-200.0692	-75.66983
OSERV	-.8871816	1.368359	-0.053279	-.8300601	-.5121123	-.4801817
YPESERV	2.253807	1.361612	1.609162	1.536028	2.028197	.4403845
RANCHES	-3.450706	-1.917842	-2.655797	-3.198741	-2.239189	-.3922198
USTOM	1.534348	1.03906	1.23911	1.394567	1.469812	.8317775
TANDARD	1.296476	1.070334	1.157593	1.134702	1.44642	.8986038
OUTINE	10.03394	7.335295	8.044508	8.837552	9.114633	4.047737
ARKPROM	-.8541077	0.004456	-1.229332	-.969364	-2.216279	-.4752167
ARKSUCC	.2144777	.1518243	.1951863	.1086985	.3926837	0.072814
ARKEXTE	-1.336462	5.253543	2.268605	-8.789865	6.683744	-1.883468
ABINTEN	2.159368	1.188259	1.63152	1.873599	1.489483	.4919236
TAFF/PT	9.4048	4.469696	6.595191	9.266238	6.155075	2.171298
ART/SEC	-9.767823	-4.58041	-6.974628	-10.31125	-5.250968	-1.051961
%R&D	6.12327	4.787596	-5.35657	10.34068	-15.33267	-6.251918
R&D/TIME	-1.552198	-1.678423	-1.625289	-.5947703	-2.322841	-.37447
%TECHNOL	-.1838671	.1840293	0.002947	-.2817513	0.011770	.1178106
ORGTYPE	-.1461741	-.7893064	.4059565	.7764888	-.7825443	1.168381
ENVIRTRA	.5237687	1.051162	1.212285	.6434267	0.043603	.8368637
OUNDSPA	-25.99809	-11.87534	-18.56222	-19.29194	-23.92785	-3.739769

-Discriminant Analysis-

)ate/Time 05-09-1991 09:59:42
)ata Base Name D:\ncss\stratfiv
)escription Data base created at 09:12:59 on 05-09-1991

Variable Selection Report

:lassification Variable: PROFTYPE

:N	Variable	R2-Ad	F-Val	F-Prob	R2-X's	IN	Variable	R2-Ad	F-Val	F-Prob	R2-X's
'es	NOSERV	0.242	0.6	0.6761	0.4197	Yes	TYPESERV	0.798	7.9	0.0030	0.8558
'es	BRANCHES	0.580	2.8	0.0808	0.6928	Yes	CUSTOM	0.419	1.4	0.2912	0.8368
'es	STANDARD	0.250	0.7	0.6571	0.8335	Yes	ROUTINE	0.510	2.1	0.1513	0.4174
'es	MARKPROM	0.232	0.6	0.6991	0.6916	Yes	MARKSUCC	0.403	1.4	0.3198	0.4567
'es	MARKEXTE	0.497	2.0	0.1679	0.7236	Yes	LABINTEN	0.501	2.0	0.1629	0.5916
'es	STAFF/PT	0.654	3.8	0.0351	0.9428	Yes	PART/SEC	0.675	4.2	0.0264	0.9091
'es	%R&D	0.598	3.0	0.0668	0.4888	Yes	R&D/TIME	0.543	2.4	0.1144	0.6481
'es	%TECHNOL	0.503	2.0	0.1603	0.5210	Yes	ORGTYPE	0.056	0.1	0.9850	0.5904
'es	ENVIRTRA	0.273	0.8	0.6029	0.6140	Yes	EQUIDSPA	0.687	4.4	0.0224	0.6736

)verall Wilk's Lambda 0.0002

APPENDIX 28

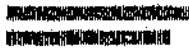
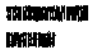
Correspondence analysis of five groups with strategy variables as supplementary variables (Section 6.2.3)

Correspondence Analysis

Date/Time 05-29-1991 10:47:50
Data Base Name D:profsimp
Description Data base created at 08:12:16 on 05-29-1991

Eigenvalue Report

Variables: #1:#12

Coord	Eigenvalue	Percent Individual	Percent Cumulative	Histogram
1	0.03161136	56.12	56.12	
2	0.01448751	25.72	81.84	
3	0.00686846	12.19	94.04	
4	0.00335953	5.96	100.00	
Total	0.05632686			

Detail Report - Columns

Variables: #1:#12

Label	Wght	Coordinates F1	F2	F3	Contributions CTR1	CTR2	CTR3	Correlati * COR1	COR2	COR3
ISG	65	-479	-209	-65	472	196	40	819	156	15
IBR	82	-43	-141	31	5	112	12	63	685	34
IREP	83	47	17	85	6	2	86	94	12	304
IIN	88	-30	37	-4	2	8	0	81	124	1
PKN	91	-77	206	-49	17	265	31	118	834	47
PCOMP	86	-1	83	-57	0	40	40	0	674	316
PPE	84	252	-95	-45	168	52	25	812	115	26
VSO	87	155	98	-55	66	57	38	630	252	79
VIP	87	36	-20	227	4	2	653	25	7	968
VLD	89	-152	142	13	65	123	2	533	461	4
VCR	81	-62	-63	-28	10	22	10	451	455	94
VSTR	78	274	-149	-74	185	119	63	707	208	52
SDIVERS	0	77	133	-190	0	0	0	92	270	549
SBRANCH	0	4	-272	83	0	0	0	0	796	74
SSTPART	0	138	-233	194	0	0	0	129	366	253
SSECPART	0	40	-168	296	0	0	0	9	163	505
SRD	0	161	45	-211	0	0	0	349	27	598
SBS	0	-296	7	12	0	0	0	542	0	1

Note: All numbers were multiplied by 1000 .

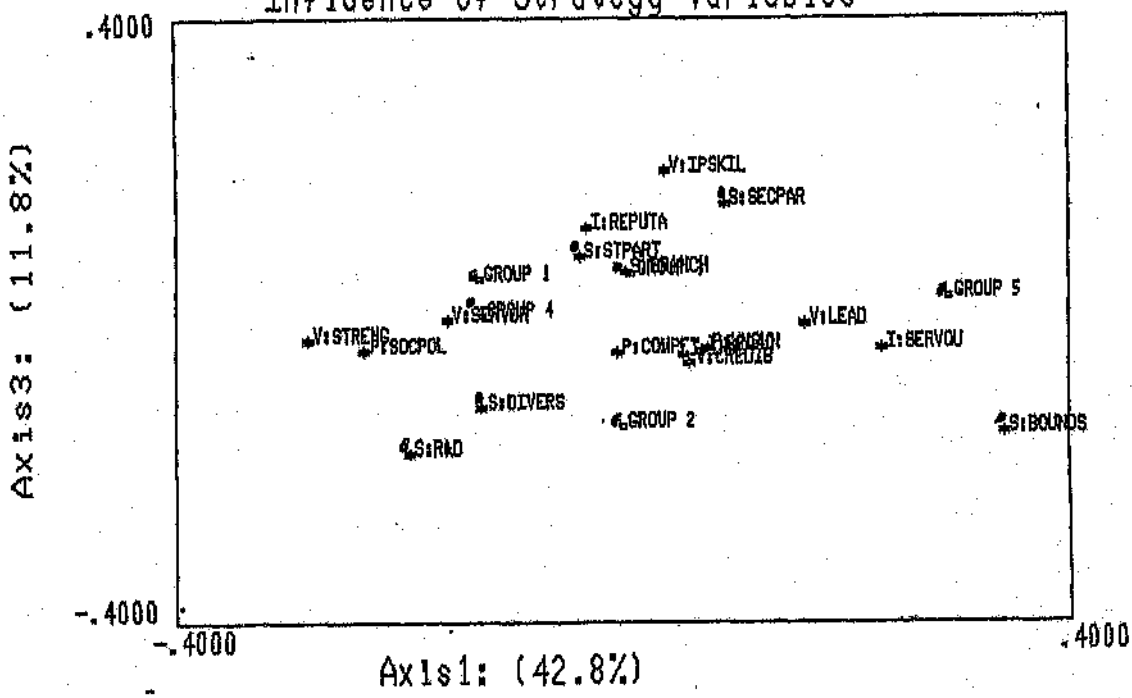
Detail Report - Rows

Variables: #1:#12

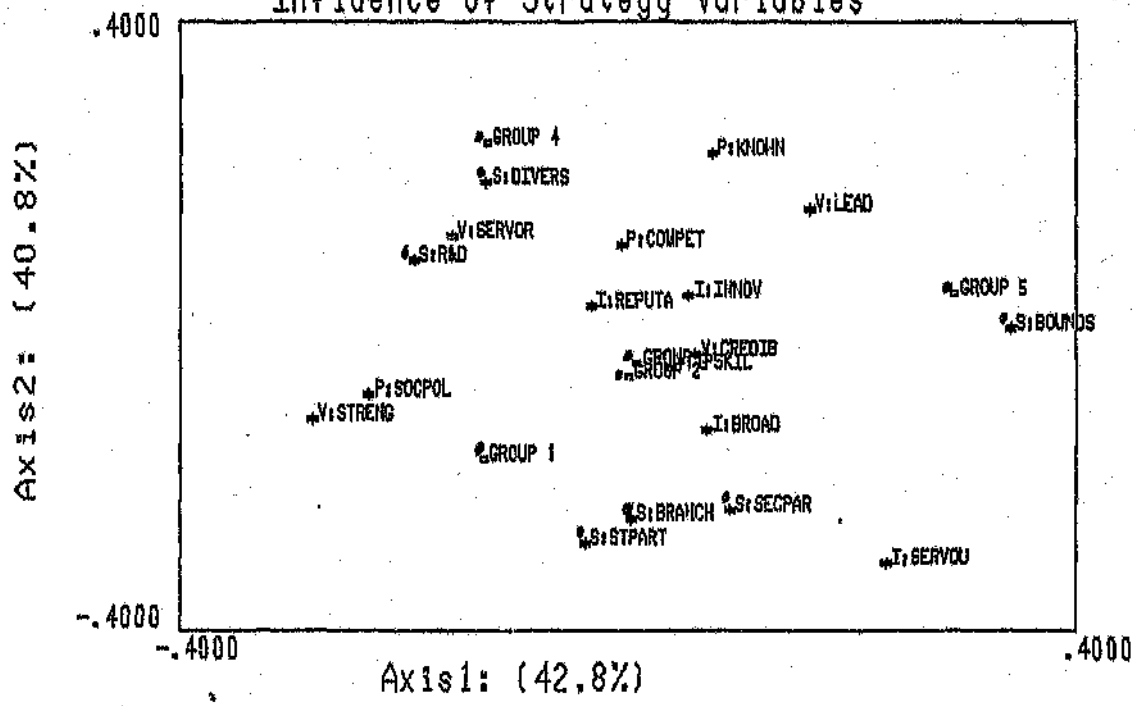
Label	Wght	Coordinates G1	G2	G3	Contributions CTR1	CTR2	CTR3	Correlations COR1	COR2	COR3
GROUP 1	185	245	-107	84	350	146	190	742	142	87
GROUP 2	216	-66	-93	-133	30	130	559	138	273	557
GROUP 3	218	-52	-67	30	19	68	29	148	244	49
GROUP 4	213	142	203	-37	136	602	41	323	654	21
GROUP 5	169	-295	68	86	464	54	180	856	46	72

Note: All numbers were multiplied by 1000 .

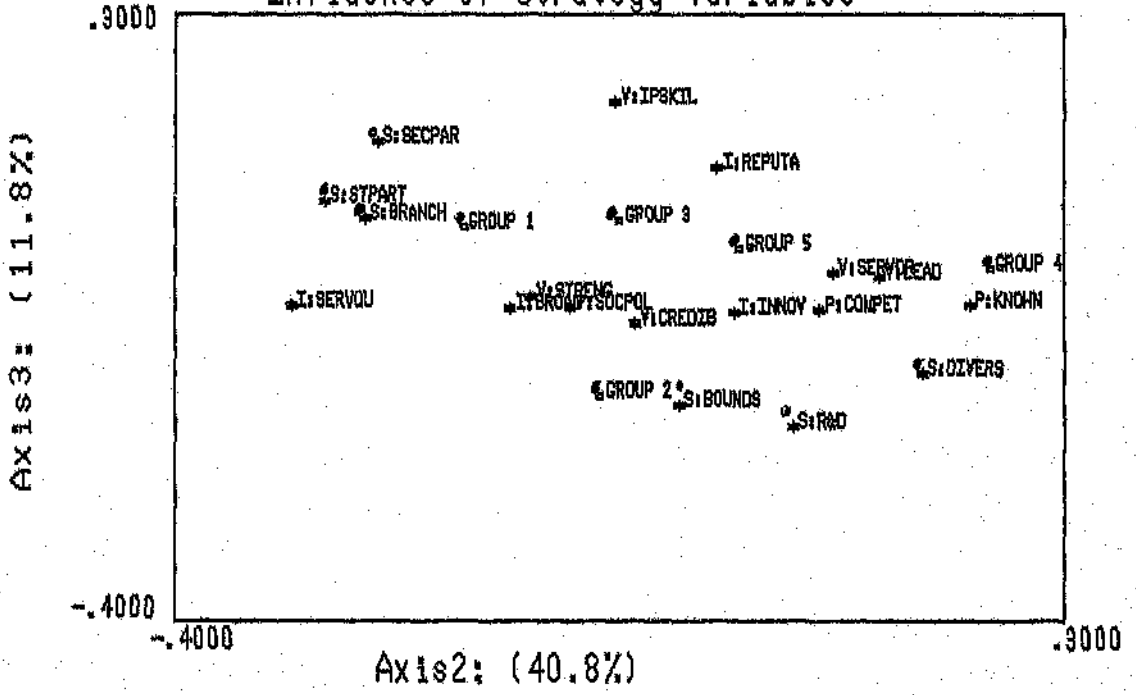
Appendix 28
Influence of Strategy Variables



Appendix 28
Influence of Strategy Variables



Appendix 28
Influence of Strategy Variables



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