at $p > .05$); and between the detached and compliant means, significant at $p < .05$. These statistics strongly suggest that small business owner/managers are generally less likely to have predominantly compliant interpersonal disposition than either aggressive or detached.

Since small business entrepreneurs are required to interact closely and continuously with employees, and frequently with customers, and build satisfactory relationships with all such persons, it is no doubt generally accepted that compliant interpersonal orientation is the more appropriate mode for achieving this end. The negative correlation of compliant orientation scores with affective reaction and the strong positive correlation of the latter with the quality of entrepreneurial performance clearly suggests that the compliant mode (incorporating dependence, need for affection and conformity, acute sensitivity to others' requirements and lack of personal ambition and drive) is not appropriate to the demands of the entrepreneurial role. Loyalty and devotion from employees, resulting in *esprit de corps* and commitment, are either not engendered by a compliant interpersonal mode or are factors less significant for successful entrepreneurship than others which tend to be developed out of aggressive and detached modes of interpersonal response. These findings offer support for the Collins and Moore (1970) thesis about the transactional model of entrepreneurial interactions.

Hypothesis 3 is supported by the data in this study.

Hypothesis 3(a)

Aggressive interpersonal orientation and affective reaction are significantly and positively correlated.

From the data compiled this hypothesis is supported. The χ^2 statistic associated with Table G3(a) is 244.9370, and with 80 df this is highly significant at $p < .001$. The two variables are clearly not independent - there is substantial statistical association between them. Aggressive interpersonal response scores are correlated with those for affective reaction ($r = .7724$), this correlation being highly significant at $p < .001$ (Figure H3a). The variance is .5966 (almost 60% of the variance in affective reaction scores being predictable from variance in aggressive interpersonal orientation scores), and the SEE 13.2043 (representing 19.42% of the total range of affective reaction scores).

These data support the proposition that specific attitudes, values, capacities and dispositions associated with aggressive interpersonal response patterns are generally associated with an individual's stress coping ability and disposition. Whatever causal relationships may exist between particular aggressive orientation needs, reactions and strategies (Section 2.42) and the individual's capacity and inclination to cope with role stress have not been empirically examined in this study. Possibly the relationships suggested here may provoke further research.

The hypothesis is confirmed from the above evidence.

Hypothesis 3(b)

Compliant interpersonal orientation and affective reaction are significantly and negatively correlated.

For the crosstabulated data presented in Table G3b χ^2 = 113.3523. With 80 df this statistic is significant at p = .0072 but not significant at the level of p = .001 required in this study.

The scattergram (Figure H3b) illustrates the negative relationship. Scores on these two variables are correlated -.4446, such co-efficient being highly significant at $p < .001$. The co-efficient of determination from the correlated data is .1976, around one fifth of the variance in affective reaction scores being predictable from a knowledge of the variance in compliant interpersonal response scores. The SEE of 18.6211 is equal to 27.38% of the full range of affective reaction scores.

The data compiled, and statistics derived therefrom, support the hypothesis that compliant interpersonal response patterns and the capacity/propensity to cope with entrepreneurial role stress are significantly and inversely related.

Hypothesis 3(c)

Detached interpersonal orientation and affective reaction are significantly and positively correlated.

Data in, and statistics calculated from, Table G3c indicate a strong relationship between detached interpersonal response scores and affective reaction scores (χ^2 = 218.0311; 70 df; highly significant at $p < .001$).

Figure H3c data and related statistics confirm the above assertion, with r = .5530, being highly significant at $p < .001$. The variance r^2 = .3058, and the SEE = 17.3202 (being 25.47% of the total range of affective reaction scores).

There is a highly significant relationship between these two variables, and in the predicted direction. The hypothesis is accepted from the data compiled.

Hypothesis 4

The more appropriate an entrepreneur's role perception the more favourable will be his affective reaction to the demands and stresses of that role.

It has been suggested that veridical perception of the requirements of whatever role one performs is a prerequisite to the determination of instrumental activity. Without such appropriate role perception the direction of work oriented activity may be dysfunctional to the attainment of goals or aspirations. It is clear to the author, after involvement in an intensive interviewing programme, that substantial numbers of small business founders have either no accurate idea of what mode of activity will be required of them in initiating and directing the operations of the new venture, or else they have an inaccurate or imbalanced perception of that role. In both cases, without the necessary realistic understanding of how to effectively undertake the many and varied aspects of the management of a new business venture, for the maximum benefit of that venture, the total situation can generate stress that will be intolerable to the majority of individuals involved. Instrumental (i.e. goal-directed) behavior

refers not only to techniques of small business management, but also to the attitudes, expectations and inclinations which form part of the individual's motivational base. The frustration and, ultimately, despair, resulting from the failure of unrealistic expectations to materialise, is a fertile source of psychological stress.

This study has investigated a crucial aspect of total role perception - the "inner-other-directed" dimension. The features of inner-directed role perception have been proposed as vitally relevant to the entrepreneurial role, and are outlined in Section 2.43.

Data relating to Hypotheses 4(a) and 4(b) (discussed below) demonstrate that inner-directed role perception correlated positively with favourable affective reaction to entrepreneurial role stress, and that other-directed role perception correlated negatively with affective reaction. Inner-directed role perception scores also correlated .7225 with performance scores, indicating that such a perception is appropriate to the achievement of entrepreneurial goals (defined in this study as the profitable continuation of the business). By contrast, other-directed role perception scores correlated -.4283 with performance scores, and are therefore regarded as the inappropriate aspect of the dimension.

On the basis of the data assembled, and the acceptance of Hypotheses 4(a) and 4(b) (discussion following), Hypothesis 4 is accepted.

Hypothesis 4(a)

An entrepreneur's predisposition for inner-directed behavior and his affective reaction are significantly and positively correlated.

From the data in Table G4a χ^2 = 192.0334, which, with 50 df, is highly significant at $p < .001$. The null hypothesis, of independence, is rejected. The same inference is derived from Figure H4a data, since r = .6783 and is highly significant at $p < .001$. For these two variables r^2 = .4601 and the SEE = 15.2746 (being 22.46% of the range of affective reaction scores).

From the data produced there is very significant association between the possession of an inner-directed perception of the entrepreneurial role and the capacity/propensity to operate effectively in spite of the stress of that role. An assumption included in this assertion is that one's perception of the mode of behavior required for success in any given role generally results in activity based on that perception. In other words, small business owner/managers with realistic role perception are assumed to be sufficiently rational to undertake activity seen as instrumental to their goal attainment. This assumption is supported by the fact that scores on inner-directed role perception are highly correlated with business performance scores. It is also suggested that affective reaction is the intervening variable in the chain.

The hypothesis is accepted.

Hypothesis 4(b)

Other-directed behavioral inclination and affective reaction are significantly and negatively correlated.

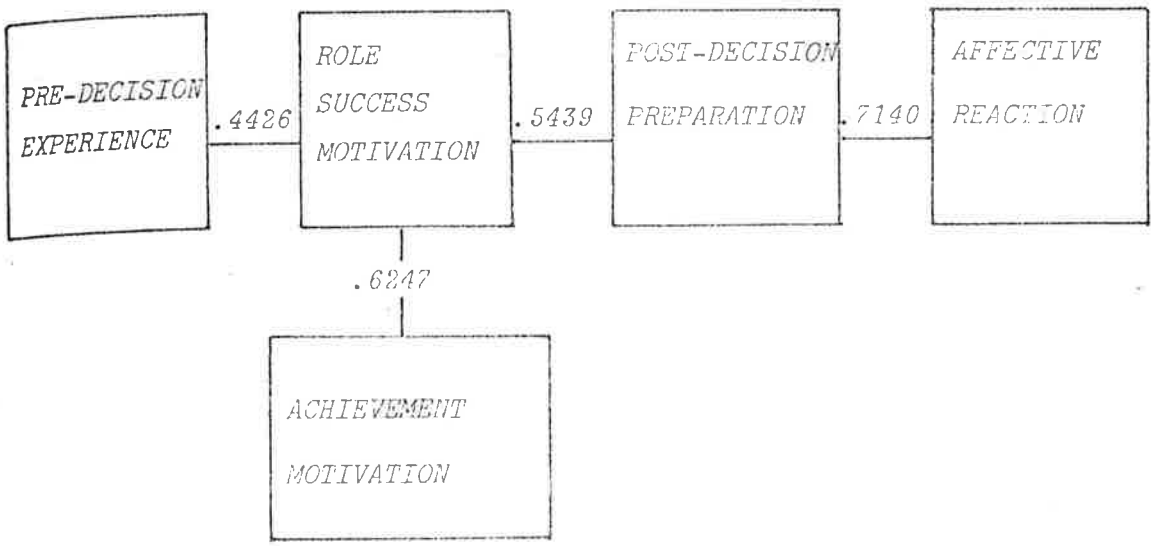
From Table G4b χ^2 = 102.2283, which is highly significant at $p < .001$ with 50 df. The two variables are not independent. The two sets of scores are correlated at -.4589 ($p < .001$) as indicated in Figure H4b. The variance is .2106 and the SEE 18.4706 (27.16% of the range of affective reaction scores).

It was predicted that the inclination to perceive the entrepreneurial role as requiring other-directed behavior would be inversely associated with the capacity and propensity to cope with the stress of that role. This prediction is supported by the data from this study, and the relationship is significant, as hypothesised.

PROPOSITION C

An entrepreneur's pattern of work-related experience, together with his level of achievement motivation, influences the depth of his commitment to, and motivation for success in, that role. These factors, in turn, relate to the extent of his specific post-decision preparation, and, consequently, his affective reaction.

Data relating to Hypotheses 5, 6, 7 and 8 and analysis thereof (on following pages) demonstrate the series of highly significant relationships illustrated below:



The degree of relationship indicated in this chain of variables strongly suggests that affective reaction is significantly associated with, and probably influenced by experiential/preparatory factors and their interacting motivational bases.

The conclusion must be drawn that adequate, relevant preparation for the operations or functions of the entrepreneurial role is crucial for a favourable affective reaction to the stress of that role. The explanation would seem to be that inadequate, inappropriate and inbalanced experience and preparation do not equip the entrepreneur for coping with the many and varied role demands he must face and satisfy. Such deficiencies act as stressors in themselves, and further exacerbate an already stressful situation.

Further empirical evidence of the relative importance of various aspects of experience and preparation is discussed below (see Hypotheses 24 to 46).

Proposition C is accepted from the data assembled in this study.

Hypothesis 5

The longer and more relevant an entrepreneur's total pre-decision work-related experience, the higher will be his expressed role success motivation.

Table G5 indicates a positive relationship between total pre-decision work-related experience (i.e. duration and relevance of occupational, managerial and ownership experience) and expressed motivation to succeed in the entrepreneurial role. This relationship is highly significant at $p < .001$, with $\chi^2 = 63.7402$ and 24 df. These two variables are clearly not independent.

Data from Figure H5 resulted in $r = .4426$ which is highly significant at $p < .001$. The co-efficient of determination (r^2) is .1959 and the SEE 2.3422 (being 19.52% of the total range of MOTIVATE scores).

It has been suggested that the strength of one's desire to succeed in a chosen role is partly a function of his commitment (in time, effort, finance and other resources) to that role. It is therefore reasonable to assume that the extent of any of these role investments may be an index of the degree of motivation an individual will have to succeed in his chosen role. Given the acceptance of this assumption,

the small business founder with substantial and relevant experience, will have developed a loyalty to (affection for?) his trade or profession, and a pride in his personal skill or professional expertise therein. While such loyalty may not be to an employer (as possibly evidenced by the act of severance of employment and the initiation of a new venture), combined with pride in competence it may well result in more intense motivation to succeed in that new venture and role. A further suggested causal factor, more relevant to the duration of experience than to its relevance, is the possibility that the longer one serves as employee the less opportunities there may be for challenge, promotion, wage increments and upward mobility generally. The frustration of such restriction may well precipitate the decision to enter small business ownership, and the more intense the desire for emancipation, the greater the perceived need to succeed in the new role. The result of business failure to the individual who has reached middle age may be more traumatic than for the younger person who still has employment progress potential.

These suppositions were not investigated in this study, but the hypothesised relationship between the extent and relevance of the total work experience and expressed role success motivation was confirmed by the data compiled.

Hypothesis 6

Entrepreneurs with a high level of achievement motivation will express stronger role success motivation than those with lower n-Achievement.

The research literature has suggested that a strong base of general motivation to achieve may be manifest in sundry ways, and that the chosen means for satisfying such need will also be approached with considerable motivation. Among the characteristics of the high achiever (Section 2.414) are self-confidence, an urge to undertake energetic and innovative activity, and preference for, and, particularly, pursuit of entrepreneurial occupations (Section 2.4149). From the available fragmentary research evidence, it seems reasonable to postulate that the strength of a general disposition to succeed, overcome challenge and adversity, and meet standards of excellence, would carry over into a strong desire to succeed in activities perceived as instrumental in satisfying that need for achievement. Given this strong role success motivation, and realistic role perception, behavior rationally calculated as conducive to the attainment of objectives or aspirations is rather more likely to result.

Table G6 provides crosstabulated data illustrating the association between more general n-Achievement levels and more specific role success motivation. The χ^2 calculation for these data is 151.0736, which, with 36 df, is highly significant at $p < .001$.

The correlation of MOTIVATE with ACHMOTIV is .6247, (Figure H6) being highly significant at $p < .001$. The value of r^2 is .3903 and the SEE is 12.0331 (22.28% of the range of ACHMOTIV scores).

Sample entrepreneurs who have high levels of n-Achievement tend to express stronger motivation to succeed in the entrepreneurial role (specifically in the context of small business ownership) than do those with lower achievement motivation. The evidence from this study supports the hypothesis.

Hypothesis 7

The strength of an entrepreneur's expressed role success motivation and the extent and relevance of his specific post-decision preparation are significantly and positively correlated.

As stated in the discussion on the preceding hypothesis, given that an individual has developed a strong motivation to enter and succeed in a particular role, it is likely that he will act in as rational a manner as possible to ensure that he attains the role success he seeks (Georgopoulos, Mahoney and Jones, 1957; Vroom, 1964). The individual whose motivation is sufficiently high will be stimulated to engage in activity perceived as enhancing the likelihood of success. It was therefore postulated that aspiring entrepreneurs with strong role success motivation would be more likely to undertake extensive and relevant post-decision preparation aimed at ensuring a rational, deliberate and propitious entry to small business ownership by the elimination and/or reduction of problems specific to the intended venture.

Crosstabulated data relating to these two variables (Table G7) produced $\chi^2 = 92.4197$, which, with 16 df, is highly significant at $p < .001$. The correlation of MOTIVATE with POSTPREP (Figure H7) is .5439, which is highly significant at $p < .001$. For these data $r^2 = .2958$ and the SEE = 2.1919 (13.70% of the range of POSTPREP scores).

On the basis of these data, the hypothesis is accepted.

Hypothesis 8

The longer and more relevant an individual's post-decision preparation, the more propitious will be his affective reaction to the stress inherent in the role of independent entrepreneur.

As indicated in Section 2.45, psychological stress is particularly prevalent when individuals are attempting to cope with new and unfamiliar role demands. The early stages in the life of a new business venture represent such a situation, and both published data (Dun and Bradstreet, 1970) and the author's survey of business failures (Section 1.5 and Appendix E) confirm the significantly greater failure rate during the first months and years of the life of new firms. These data are consistent with the contention that inability to cope with the intense stress generated during the formative stage of a new business is related, *inter alia*, to the extent of specific preparation for the new role. The proposition is that stress can be significantly alleviated, thereby enhancing survival prospects, by a rational, carefully planned and prepared entry to business ownership. Conversely the impact of role stress in its various forms, can be exacerbated by failure to prepare adequately before entry to the role. A period of specific preparation is regarded as a vital factor in small business success because of its association with affective reaction to stress.

The χ^2 measure calculated from the data in Table G8 is 193.2892, which is highly significant at $p < .001$ (40 df). The correlation co-efficient associated with Figure H8 is .7140, also significant at the same level. The co-efficient of determination is .5097 and the SEE 14.5557 (21.41% of the range of REACTION scores).

These data warrant confirmation of the hypothesis.

PROPOSITION D

A third group of factors which relate to an individual's ability and propensity for coping with entrepreneurial role stress include concurrent role obligations. The more demanding and stressful an individual's concurrent role obligations, the more unfavourable will be his affective reaction to work-role stress.

Three specific concurrent roles have been tested for their relationship with affective reaction. The data indicate that the impact of multiple job holding on affective reaction to entrepreneurial role stress is more pronounced (r = -.3219) than the effect of marital/parental obligations (r = .2537) and involvement in club or community activities (r = -.0347).

On the basis of these and supporting figures (in the following discussion on Hypotheses 9, 10 and 11) the proposition is accepted. It is noteworthy that the degree of measured relationship between each of the variables in this group and affective reaction is not as pronounced as are the relationships between either the personality variables or those in the experiential/preparatory group and affective reaction.

Hypothesis 9

Entrepreneurs who are involved in club, association and community service activities are more likely than those not thus involved to have favourable affective reaction to the stress of the entrepreneurial role.

The reasons why many small business owners seek or maintain club,

association or community service activities are many and varied. Some regard such involvement as a natural outreach of their business activity and a means of promoting the latter. Others seek a complete break from work and a chance to alleviate the effects of stress. Others have more complex motives. Because of this diversity and range of objectives for such non-business activity, no attempt was made in this study to offer hypotheses about the impact of various aspects of club and other similar involvement on affective reaction to entrepreneurial role stress. Although data was collected on the hours per week of involvement in such activities, no discernible relationship between this and either affective reaction or business performance was evident.

It was assumed that the majority of entrepreneurs who had undertaken club, association or service activity had done so for relaxation and recreation purposes, and that, unless such involvement resulted in excessive absence, such activities were therapeutic in their effect on the individual. Therefore the above hypothesis is proffered, although the causal inference is somewhat tenuous.

Affective reaction scores were crosstabulated against membership/non-membership of owner/managers (Table G9), the resulting χ^2 value being 13.6800, which, with 10 df, is significant at $p = .1881$. At the level of significance required in this study ($p = .001$) these two variables are independent of each other.

This assertion is supported by the data illustrated in Figure H9. The two variables correlated -.0347, such co-efficient being significant at $p = .5855$. The variance is .0012 and the SEE 20.7760 (30.55% of the

range of REACTION scores). These data indicate no relationship between membership in organisations and affective reaction to entrepreneurial role stress. The hypothesis is therefore rejected.

Hypothesis 10

The extent of an individual's other employment obligations and his affective reaction to the stress of his entrepreneurial role are significantly and negatively correlated.

That the entrepreneurial role is physically, mentally and emotionally demanding is attested by practically all who participate. Those individuals who operate as entrepreneurs in a part-time capacity and who carry the additional responsibilities of a second job, it is suggested, would lack the motivation, time, and physical and mental energy to cope effectively with the many and varied demands on the entrepreneurial role.

Table G10 indicates the more auspicious affective reaction of those entrepreneurs who held no other job. From these data $\chi^2 = 86.4378$, which, with 50 df, is highly significant at $p < .005$ (calculated significance level = .0011). MULTIJOB scores correlated with those for REACTION at $r = -.3219$ (Figure H10), this co-efficient being highly significant at $p < .001$ and in the predicted direction. The variance is .1036 and the SEE 19.6817 (28.94% of the full range of REACTION scores).

The two variables are significantly associated, and the hypothesis is supported by the data produced in this study.

Hypothesis 11

Entrepreneurs demonstrating auspicious affective reaction to the stresses of their role tend to be happily married with moderate domestic responsibilities and adequate family support and encouragement.

It is suggested that effective performance in any one role is partly a function of the extent of commitments in other roles. Probably the two most significant roles in life are those of worker and spouse/parent. Since this study is concerned with correlates of effective entrepreneurial (i.e. work) performance, the question of how far the marital/parental roles influence this work performance is of interest. It is therefore postulated that the extent of marital and family support and encouragement one receives is a factor of some significance in the prediction of the quality of entrepreneurial performance. Such support may come in a variety of ways, including the provision of a comfortable stress free domestic situation, and assistance in the business by one's spouse. Clearly excessive involvement in the latter may prejudice the likelihood of the former mode of support.

The χ^2 value associated with Table G11 data is 77.7587, which is significant at $p = .0613$ (60 df), thereby failing to reach the level of significance required in this study. The correlation of MARISTAT with REACTION (Figure H11) is .2537 which is highly significant at $p < .001$. Variance is .0643 and SEE 20.1085 (29.57% of the range of REACTION scores).

The hypothesis is accepted from the data assembled in this study.

6.4 SECONDARY HYPOTHESES

All tables and figures referred to in the following discussion are located in Appendices G and H respectively.

6.41 PERSONALITY CHARACTERISTICS

6.411 Achievement Motivation

Hypothesis 12

Protestant entrepreneurs tend to have higher achievement motivation than do entrepreneurs with other religious affiliations.

Table G12: $\chi^2 = 49.6216$; 27 df; significant at $p = .005$

Figure H12: $r = -.3577$; significant at $p < .001$

From these statistics and the data in Table G12 and Figure H12, the conclusion is that Protestant entrepreneurs recorded higher n-Achievement scores than did those with any other religious affiliation, and the relationship is highly significant. Such conclusion validates McClelland's support for Weber's thesis, and the former's contention that

> it seems reasonable enough to interpret Weber's argument for the connection between Protestantism and the rise of capitalism in terms of a revolution in the family, leading to more sons with strong internalized achievement drives.
> (McClelland, 1961, p.49)

The data produced in this study justify the acceptance of this hypothesis.

Hypothesis 13

Entrepreneurs with high achievement motivation are more likely to have experienced demanding but fair parental expectations and discipline, and satisfying, supportive home life than those with lower n-Achievement.

Table G13a: $\chi^2 = 134.9773$; 36 df; significant at $p < .001$

Figure H13a: $r = .6534$; significant at $p < .001$

(ACHMOTIV crosstabulated and correlated with PAREXPEC)

Table G13b: $\chi^2 = 183.9487$; 45 df; significant at $p < .001$

Figure H13b: $r = .7318$; significant at $p < .001$

(ACHMOTIV crosstabulated and correlated with FAMIBACK)

The association between achievement motivation and the propensity to follow entrepreneurial pursuits has been empirically established as early child rearing practices, particularly as these relate to achievement training and early expectations of independence (Winterbottom, 1953, 1958). Table G13a and Figure H13a, and the statistics derived therefrom, indicate a strong relationship between the level of n-Achievement among the sample owners and the extent of fair discipline and parental expectations, and good relations with their fathers, which they reported as having experienced during childhood.

When scores on family occupational and geographical mobility (FAMMOBIL) are combined with those of PAREXPEC (the resulting variable being labelled FAMIBACK - family background) the relationship is even stronger. It has been assumed that family mobility is related to parental expectation of independence in their children (see Hypothesis 15). Both sets of data confirm the hypothesis, the relationships being highly significant.

Hypothesis 14

Entrepreneurs with high achievement motivation are more likely to come from middle class (socio-economic status) families than those with lower n-Achievement.

Table G14: $\chi^2 = 93.2413$; 45 df; significant at $p < .001$

Figure H14: $r = .1593$; significant at $p < .02$ ($p = .0117$)

There is no recognisable unanimity in the research literature about the social and economic origins of entrepreneurs. Collins and Moore (1970, p.18) indicated that the fathers of 36% of the 80 entrepreneurs in their sample were either skilled or unskilled labourers, or classified as "other", 19% were broadly categorised as executive or professional, and the remaining 44% were farmers or owners of small business. Research by Mills (1951) and Lipset and Bendix (1954) produced similar findings. In contrast, Crockett (1962) tested and confirmed the hypothesis that entrepreneurs with high n-Achievement tended to have more upward social/occupational mobility, suggesting that the majority of such persons originate in families regarded as having lower socio-economic status.

Following the evidence from McClelland (1961, 1965) that early childhood training in mastery and independence tends to derive more from parents who themselves have these characteristics than from those who lack them, and that individuals with high n-Achievement are more likely to gravitate towards those occupations where such needs can be most readily gratified, it was hypothesised that high n-Achievement persons who enter entrepreneurial ranks tend to come from middle class families. Table G14, in particular, illustrates the fact that, in this study, high

n-Achievement scores are associated predominantly with mid-range scores on family socio-economic-status. The relatively low correlation co-efficient confirms this pattern. From these data the hypothesis is accepted.

Hypothesis 15

Entrepreneurs with high achievement motivation tend to come from families that are occupationally and geographically mobile.

Table G15: $\chi^2 = 150.2637$; 63 df; significant at $p < .001$

Figure H15: $r = .6345$; significant at $p < .001$

The strong association evident between these two variables indicates that high achievement motivated entrepreneurs, in this sample, experienced substantial geographical re-location during childhood. Such movement, it is suggested, is a correlate of independence and mastery training of childhood, since persons involved in re-location experience disruption of *status quo* and are thrust into new and unfamiliar situations where self-reliance and mastery of novel role demands become essential for coping with the new environment. Such persons would possibly have less reticence about leaving the security of paid employment and moving into the relatively unfamiliar and new role of entrepreneur, should circumstances be appropriate.

Hence it was predicted that entrepreneurs with high levels of achievement motivation would tend to be above "average" on family mobility scores, for the reasons outlined. The data justified acceptance of the hypothesis.

Hypothesis 16

Entrepreneurs with high achievement motivation will be more likely to have undertaken significant and relevant post-decision preparation than those who have lower achievement motivation.

Table G16: $\chi^2 = 191.5302$; 36 df; significant at $p < .001$

Figure H16: $r = .6992$; significant at $p < .001$

It was hypothesised and confirmed above that entrepreneurs with high n-Achievement would express stronger role success motivation than those with lower achievement drive (Hypothesis 6), the suggested possible basis of this association being the link between general and specific motivations, the latter being related to perceived instrumental activity. It was therefore postulated that a high level of specific motivation to succeed in a role which is perceived as instrumental to general needs satisfaction would lead to activity to ensure that success. That hypothesis was also accepted (see Hypothesis 7).

The present hypothesis re-inforces the two associated predictions, and is supported by the data summarised above. Various characteristics of high n-Achievement behavior could be suggested as possible causal factors, including long-range time perspective, organisational ability and a propensity for energetic activity.

Hypothesis 17

Entrepreneurs with high achievement motivation will tend to have undertaken longer and more relevant formal education than those with lower n-Achievement.

Table G17: $\chi^2 = 111.1623$; 54 df; significant at $p < .001$

Figure H17: $r = .3692$; significant at $p < .001$

Scores on EDUTOTAL were arrived at by summing education duration (i.e. level attained) and relevance scores. Various possible relationships involving these two variables will be discussed below (Hypotheses 50 to 57 inclusive). Collins and Moore (1970) have suggested that entrepreneurs have a tendency to react against authority and institutional situations, and hence finish their formal schooling rather earlier than individuals who later follow careers as employed executives. Unfortunately these authors did not relate their data to subsequent entrepreneurial success. Both Mayer and Goldstein (1961) and Hoad and Rosko (1964) have provided evidence suggesting that total educational experience is associated with the ability to survive as a small business owner, but the findings are not conclusive. The possibility of achievement motivation operating here, as an intervening variable, was postulated, and the data produced adequately confirm this hypothesis.

Hypothesis 18

The higher an individual's level of n-Achievement the better the quality of his performance in the role of independent entrepreneur in a small firm.

Table G18: $\chi^2 = 338.5280$; 81 df; significant at $p < .001$

Figure H18: $r = .8343$; significant at $p < .001$

The evidence from this study clearly supports this hypothesis and identifies n-Achievement as a personality dimension highly significant in the prediction of entrepreneurial effectiveness as defined and assessed here. The model underlying this empirical study offers certain intervening variables through which n-Achievement may feasibly function. The consistently high statistical relationship between this variable and all other relevant variables in the model justifies the conclusion that n-Achievement has a vital influence on the criterion variable here being investigated.

Further research into the various characteristics of achievement oriented behavior is warranted because of their likely association with, and possible influence on many aspects of entrepreneurial behavior. This hypothesis is accepted from the data collected and the computations made therefrom.

Hypothesis 19

The level of an entrepreneur's achievement motivation and his compliant interpersonal orientation are significantly and negatively correlated.

Table G19: $\chi^2 = 116.9958$; 72 df; significant at $p < .001$

Figure H19: $r = -.4035$; significant at $p < .001$

Previous research has implicitly indicated that high n-Achievement is more associated with task-oriented activity than with people-orientation (e.g. French, 1956), although no known specific research conclusions are available. Achievement motivated behavior does not appear to match the behavioral correlates of compliant interpersonal orientation, and the above hypothesis has expressed this assertion.

The hypothesis is supported by the data, the two variables demonstrating a highly significant inverse relationship.

Hypothesis 20

The level of an entrepreneur's achievement motivation and his aggressive interpersonal orientation are significantly and positively correlated.

Table G20: $\chi^2 = 285.0595$; 72 df; significant at $p < .001$

Figure H20: $r = .7628$; significant at $p < .001$

Dissection and analysis of achievement oriented behavior, and of that emanating from each of Horney's (1945) three basic interpersonal response patterns, has suggested a similarity between the characteristics of n-Achievement and those of aggressively oriented interpersonal behavior (Section 2.42). No empirical evidence of this suggested relationship is available and since the literature on achievement motivation is deficient in discussion of associated modes of interpersonal responses, the above hypothesis was framed to determine and clarify any possible relationship.

The data produced evidence of a highly significant relationship, and the hypothesis is thereby confirmed.

Hypothesis 21

The level of an entrepreneur's achievement motivation and his detached interpersonal orientation are significantly and positively correlated.

Table G21: $\chi^2 = 175.8813$; 63 df; significant at $p < .001$

Figure H21: $r = .5873$; significant at $p < .001$

In the analysis of n-Achievement characteristics, and those associated with Horney's (1945) taxonomy of interpersonal response traits, the relationship between the behavioral manifestations of the detached mode of interpersonal orientation and of n-Achievement was observed. The above hypothesis was designed to test this possible relationship, and the data compiled confirm the hypothesis. There is a highly significant relationship between these two variables.

The conclusion from a review of the discussion on Hypotheses 19, 20 and 21 is that high n-Achievement entrepreneurs tend to possess aggressive and detached patterns of relating to, and coping with, interpersonal demands, rather than compliant modes of response. As indicated in Section 2.45, the consistent application of an inappropriate mode of interpersonal response is stress evoking, and this, in turn, may decrease entrepreneurial effectiveness. Given the strong relationship between achievement motivation and successful entrepreneurial performance in small business (Hypothesis 18) the assumption can reasonably be made that aggressive and detached modes of interpersonal orientation are associated with superior levels of performance in the entrepreneurial role, and

that the compliant mode of response is inappropriate to that end.

Hypothesis 22

The level of an entrepreneur's achievement motivation and his predisposition for inner-directed behavior are significantly and positively correlated.

Table G22: $\chi^2 = 189.2902$; 45 df; significant at $p < 001$

Figure H22: $r = .6573$; significant at $p < .001$

Empirically it has been shown that appropriate perception of role expectations is an essential correlate of effective task performance (Section 2.43). Further, it has been suggested that there is some degree of affinity between the behavioral output of inner-directed role perception and that of aggressive/detached interpersonal orientation, and consequently of high achievement motivation, but no empirical evidence of these suggested associations has been previously available. The hypothesised relationship is confirmed by the data in this study.

Hypothesis 23

The level of an entrepreneur's achievement motivation and his predisposition for other-directed behavior are significantly and negatively correlated.

Table G23: $\chi^2 = 81.7568$; 45 df; significant at $p < .001$

Figure H23: $r = -.4523$; significant at $p < .001$

As a corollary of the preceding hypothesis it was postulated that

n-Achievement level and propensity for other-directed behavior are inversely related. This hypothesis is supported by the data from the study - the relationship is inverse and significant.

The conclusion is that inner-directed role perception has behavioral correlates similar to those associated with high achievement motivation. Having confirmed that n-Achievement and the quality of entrepreneurial role performance (in a small firm) are significantly related (Hypothesis 18), that a predisposition for inner-directed behavior and propitious affective reaction are also significantly related (Hypothesis 4(a)) and that affective reaction and entrepreneurial performance are likewise related (Hypothesis 1), the logical conclusion is that inner-directed behavior (and its antecedent - role perception) are significant correlates of entrepreneurial success, as measured in this study. Conversely, other-directed role perception is inappropriate to effective entrepreneurship.

6.412 *Interpersonal Response Traits*

Hypotheses 19, 20, 21 and 63 include interpersonal response traits as a variable.

6.413 *Role Perception (Inner-Other-Direction)*

Hypotheses 22, 23, 45, 57 and 63 include inner-directed and/or other-directed orientation as a variable.

6.414 *Role Success Motivation*

Hypotheses 24, 27, 31, 34, 38, 41, 47, 50 and 53 include role success motivation as a variable.

6.415 *Affective Reaction*

Hypotheses 25, 28, 32, 35, 39, 42, 48, 51, 54, 58, 60 and 62 include affective reaction as a variable.

6.42 PATTERNS OF EXPERIENCE AND PREPARATION

6.421 *Occupational Experience*

Hypothesis 24

The longer the duration of an entrepreneur's occupational experience the stronger will be his expressed role success motivation.

Table G24: $\chi^2 = 26.6183$; 20 df; significant at $p < .2$

Figure H24: $r = .1860$; significant at $p < .005$

In Section 2.44 it was suggested that the strength of a person's desire to succeed in a chosen role will be related to his role commitment, which, in turn, is a function of his investment (time, effort and other resources) in that role. It was then deemed feasible that the extent of an individual's occupational, trade or professional experience would be related (by transfer) to the strength of his desire to succeed in the role of entrepreneur. It was expected that this role success motivation would be stronger when the occupational experience was

relevant to the work of the present business, and this postulate is tested in Hypothesis 27.

The hypothesised association between duration of occupational experience and strength of expressed role success motivation was found to exist, but it lacked the significance required in this study. The correlated data produced a co-efficient significant at $p < .005$, and consequently the hypothesis is not accepted at the requisite level of significance.

Hypothesis 25

The longer the duration of an entrepreneur's occupational experience the more propitious will be his affective reaction to the stress of his present role.

Table G25: $\chi^2 = 65.6740$; 50 df; significant at $p < .1$

Figure H25: $r = .2794$; significant at $p < .001$

Analysis of the potential causes of work-role stress (Section 2.45) has indicated that the ability to meet role expectations is an important factor. One facet of this ability to perform in a role is competence in the operational, technical or functional requirements of that role. Inexperience and incompetence in any role are logically associated, the latter being a potential antecedent of frustration, anxiety and similar dysfunctional affective reactions.

Although it is hypothesised below that relevance of occupational experience is more pertinent than duration of that experience, as a correlate of role stress and, hence, entrepreneurial performance

(Hypothesis 30), Hypothesis 25 predicts that duration of occupational experience is significantly associated with affective reaction. The evidence supports this hypothesis, despite the significance of the crosstabulated data being less than the required level of .001.

Hypothesis 26

The longer the duration of an entrepreneur's occupational experience the better the quality of his performance in his present role.

Table G26: $\chi^2 = 74.0788$; 45 df; significant at $p < .005$

Figure H26: $r = .3281$; significant at $p < .001$

This hypothesis is intended to support the possibility of a causal link between duration of occupational experience, the degree of technical competence gained, the propitiousness of affective reaction (Hypothesis 25), and the quality of entrepreneurial performance. The hypothesis is accepted on the basis of the data compiled.

Hypothesis 27

The more relevant an entrepreneur's occupational experience to his present role the stronger will be his expressed role success motivation.

Table G27: $\chi^2 = 50.9494$; 20 df; significant at $p < .001$

Figure H27: $r = .4062$; significant at $p < .001$

As stated in the discussion on Hypothesis 24, it is predicted that the relevance of an entrepreneur's occupational experience (as distinct from its duration) and the strength of his expressed desire to succeed

in his entrepreneurial role are significantly related. Given a moderate to high level of n-Achievement, the entrepreneur is more likely to pursue activity perceived as instrumental to the satisfaction of his needs, and therefore the probable similarity between the nature of occupational experience and type of work undertaken by the entrepreneur's firm.

From the data summarised above, the relationship between these two variables is highly significant and the hypothesis is therefore accepted.

Hypothesis 28

The more relevant an entrepreneur's occupational experience to his present role the more propitious will be his affective reaction to the stress of that role.

Table G28: $\chi^2 = 167.1877$; 50 df; significant at $p < .001$

Figure H28: $r = .6597$; significant at $p < .001$

To the extent that work role competence is a factor with the potential for alleviating stress deriving from role expectations, and duration of experience is associated with affective reaction to stress (Hypothesis 25), it is here predicted that relevance of occupational experience will similarly correlate with affective reaction to entrepreneurial role stress. Such prediction is confirmed by the data from this study.

Hypothesis 29

The more relevant an entrepreneur's occupational experience to his present role the better the quality of his performance in that role.

Table G29: $\chi^2 = 191.1851$; 45 df; significant at $p < .001$

Figure H29: $r = .7146$; significant at $p < .001$

As with Hypothesis 26, this supposition is structured to investigate the probability of a causal sequence from relevance of occupational experience, through role competence and affective reaction (Hypothesis 28) to the quality of entrepreneurial performance.

The data indicate a highly significant relationship between relevance of occupational experience and the quality of performance in the entrepreneurial role. The hypothesis is therefore accepted. This conclusion is contrary to that reached by Mayer and Goldstein (1961, p.104) in the only other known empirical study of the relationship between these two variables.

Hypothesis 30

Relevance of occupational experience is a more significant factor than the duration of that experience in the prediction of the quality of entrepreneurial performance.

Table G26: $\chi^2 = 74.0788$; 45 df; significant at $p < .005$

G29: $\chi^2 = 191.1851$; 45 df; significant at $p < .001$

Figure H26: $r = .3281$; significant at $p < .001$

H29: $r = .7146$; significant at $p < .001$

This hypothesis explores the probability of the relevance of pre-decision occupational experience being a more significant predictor of entrepreneurial effectiveness than the duration of that experience. The justification for such a proposition rests on the contention that the more similar the occupational experience is to the type of work being undertaken in the present business, the more familiar the entrepreneur will be with that work, and hence, the greater will be his technical competence in that field of work. The duration of experience is assumed not to be as vital a component of competence as the relevance of that experience.

The crosstabulated data (Tables G26 and G29) indicate that the χ^2 statistic associated with OCCUPREL (Table G29) is more highly significant than that associated with OCCUPDUR. Both correlation co-efficients (from Figures H26 and H29) are highly significant at $p < .001$, but a two-tailed t test indicated that the difference between them is highly significant at the .001 level ($t = 7.6025$). Comparison of the correlations between OCCUPDUR with affective reaction (.2794) and between OCCUPREL with affective reaction (.6597) implicitly confirms the above conclusion. This hypothesis is thereby accepted.

6.422 *Managerial Experience*

Hypothesis 31

The longer the duration of an entrepreneur's managerial experience the stronger will be his expressed role success motivation.

Table G31: $\chi^2 = 57.9287$; 20 df; significant at $p < .001$

Figure H31: $r = .3018$; significant at $p < .001$

The justification for this hypothesis is substantially that outlined for Hypothesis 24, in that role commitment is partly a function of the past investment of time and effort, and that such commitment would readily transfer to any new role which uses the previous experience invested in. Such is the case with an individual who has managerial experience and enters the role of independent entrepreneur. It was therefore predicted that the longer an individual's managerial experience the more highly motivated he would be (for the reason suggested above) to succeed in the role of entrepreneur. This hypothesis is supported by the data from the study and accepted at the required level of significance.

Hypothesis 32

The longer the duration of an entrepreneur's managerial experience the more propitious will be his affective reaction to the stress of his present role.

Table G32: $\chi^2 = 155.5531$; 50 df; significant at $p < .001$

Figure H32: $r = .5786$; significant at $p < .001$

Following the discussion on Hypothesis 25, a further facet of the ability to perform competently in the role of small business entrepreneur is the process of management in all its forms. As previously stated, this aspect of the entrepreneurial role is a most significant one, and incompetence therein (deriving from lack of adequate experience) will be a fertile source of frustration and psychological stress (Section 2.452),

thereby reducing the probability of effective performance.

The proposition that the duration of pre-decision managerial experience and the entrepreneur's stress coping capacity/propensity are significantly related is confirmed by the data summarised above. The hypothesis is therefore accepted.

Hypothesis 33

The longer the duration of an entrepreneur's managerial experience the better the quality of his performance in his present role.

Table G33: $\chi^2 = 124.4555$; 45 df; significant at $p < .001$

Figure H33: $r = .5765$; significant at $p < .001$

As with Hypothesis 26 this hypothesis is included in the hope that a convincing causal sequence may be identified between duration of managerial experience, the degree of role competence, the propitiousness of affective reaction (Hypothesis 32) and, consequently, the quality of entrepreneurial performance.

The data indicate a highly significant relationship and the hypothesis is thereby accepted. This conclusion supports that of Hoad and Rosko (1964) on this matter.

Hypothesis 34

The more relevant an entrepreneur's managerial experience to his present role the stronger will be his expressed role success motivation.

Table G34: $\chi^2 = 104.9897$; 20 df; significant at $p < .001$

Figure H34: $r = .4561$; significant at $p < .001$

The inclusion of this hypothesis is justified on the same grounds as those for Hypothesis 27 - for persons with high n-Achievement the pursuit of activity perceived as instrumental to goal attainment will probably result in a degree of similarity between the type of pre-decision managerial experience and the kind of managerial functions required in the entrepreneurial role undertaken. Given this similarity there is predicted a stronger role success motivation. The data compiled in this study, and summarised above, justify the acceptance of the hypothesis.

Hypothesis 35

The more relevant an entrepreneur's managerial experience to his present role the more propitious will be his affective reaction to the stress of that role.

Table G35: $\chi^2 = 187.7071$; 50 df; significant at $p < .001$

Figure H35: $r = .7109$; significant at $p < .001$

Given that the entrepreneurial role involves the full range of managerial processes, including supervision of employed personnel, the more relevant the individual's experience in these areas the greater his familiarity with these processes, and the stronger the probability that he will be able to perform effectively and thereby avoid many of the frustrations and stress evoking situations that confront those not so experienced. The data indicate a significant relationship and the hypothesis is therefore accepted.

Hypothesis 36

The more relevant an entrepreneur's managerial experience to his present role the better the quality of his performance in that role.

Table G36: $\chi^2 = 176.4510$; 45 df; significant at $p < .001$

Figure H36: $r = .6703$; significant at $p < .001$

The confirmation of this hypothesis strongly suggests a causal sequence from the relevance of experience in a most important facet of the entrepreneurial role to successful performance in that role. Further, it provides empirical affirmation of the popular contention that managerial inexperience and incompetence are the primary "causes" of small business failure (Dun and Bradstreet, 1970).

Hypothesis 37

Relevance of managerial experience is a more significant factor than the duration of that experience in the prediction of the quality of entrepreneurial performance.

Table G33: $\chi^2 = 124.4555$; 45 df; significant at $p < .001$

G36: $\chi^2 = 176.4510$; 45 df; significant at $p < .001$

Figure H33: $r = .5765$; significant at $p < .001$

H36: $r = .6703$; significant at $p < .001$

For the same reasons expressed for Hypothesis 30 it is here predicted that relevance of a particular area of essential experience is a more pertinent factor than the duration of that experience. Both aspects of experience are correlated significantly with various dependent

variables (*viz:* role success motivation, affective reaction and entrepreneurial performance) but the assessment of the relative strengths of the respective associations with entrepreneurial effectiveness is important to the purposes of this study.

The statistics produced from the crosstabulated data in Tables G33 and G36 do not answer the question implicit in the hypothesis. Both correlation co-efficients (from Figures H33 and H36) are highly significant at $p < .001$ but a two-tailed t test indicated that the difference between them is not significant at the same level ($t = .9298$).

The hypothesis is therefore not supported by the available data. Relevance of managerial experience is not significantly superior to duration of that experience as a predictor of entrepreneurial effectiveness.

6.423 *Entrepreneurial Experience*

Hypothesis 38

The longer the duration of an entrepreneur's previous ownership experience the stronger will be his expressed role success motivation.

Table G38: $\chi^2 = 44.1628$; 16 df; significant at $p < .001$

Figure H38: $r = .2616$; significant at $p < .001$

Discussion on Hypotheses 24 and 31 relates to the justification of this hypothesis and need not be repeated here. The suggested relationship between these two variables may be somewhat more tenuous than is the case with previous occupational (Hypothesis 24) and previous managerial

(Hypothesis 31) experience, since it is here postulated that owners who have previously been in business for themselves will be motivated to succeed in this venture according to the extent of their previous ownership experience. Therefore this hypothesis is exploratory rather than soundly based on previous research or deductive logic. The data indicate a highly significant relationship and the hypothesis is accepted.

Hypothesis 39

The longer the duration of an entrepreneur's previous ownership experience the more propitious will be his affective reaction to the stress of his present role.

Table G39: $\chi^2 = 76.1234$; 40 df; significant at $p < .001$

Figure H39: $r = .3035$; significant at $p < .001$

The rationale for the inclusion of this hypothesis is substantially that used for Hypotheses 25 and 32. As the extent of both occupational and managerial experience were postulated and shown to relate to the absence of dysfunctional affective reaction in the entrepreneurial role, likewise the duration of experience as a previous small business owner/manager is predicted to have a similar relationship with affective reaction. Various aspects of experience, deemed necessary for effective performance in the entrepreneurial role, may be gained from previous ownership experience but not from either occupational or managerial experience alone. In particular, the ability to perform effectively as the sole or joint risk-bearer (a role expectation with cogent psychological implications) could not reasonably be attributable to experience as an employee. The data strongly support the hypothesis

which is therefore accepted.

Hypothesis 40

The longer the duration of an entrepreneur's previous ownership experience the better the quality of his performance in his present role.

Table G40: $\chi^2 = 53.5624$; 36 df; significant at $p < .05$

Figure H40: $r = .2838$; significant at $p < .001$

Following the commentary on Hypotheses 26 and 33 the probability of a causal chain is enhanced by empirical support for this hypothesis.

Hoad and Rosko (1964, p.93) investigated the relationship between the amount of experience as an owner/manager (in any business) and subsequent success/failure ratings, but their findings were most inconclusive. The data from the present study indicate a highly significant relationship between these two variables and the hypothesis is accepted.

Hypothesis 41

The more relevant an entrepreneur's previous ownership experience to his present role the stronger will be his expressed role success motivation.

Table G41: $\chi^2 = 37.1559$; 24 df; significant at $p < .05$

Figure H41: $r = .2125$; significant at $p < .001$

Previously discussed rationale for Hypotheses 27 and 34 also apply to this hypothesis. The data indicate a strong positive relationship, suggesting that the greater the similarity between the previously owned firm and the current venture the stronger will be the motivation to succeed in the latter. The hypothesis is supported by the data compiled and is therefore accepted.

Hypothesis 42

The more relevant an entrepreneur's previous ownership experience to his present role the more propitious will be his affective reaction to the stress of that role.

Table G42: $\chi^2 = 87.4319$; 60 df; significant at $p < .02$

Figure H42: $r = .3004$; significant at $p < .001$

It is predicted that the greater familiarity with the total role of entrepreneur provided by previous ownership experience in a similar business venture will be associated with a significant diminution of perceived role stress. This hypothesis is accepted on the basis of the data summarised above.

Hypothesis 43

The more relevant an entrepreneur's previous ownership experience to his present role the better the quality of his performance in that role.

Table G43: $\chi^2 = 81.4488$; 54 df; significant at $p < .01$

Figure H43: $r = .2792$; significant at $p < .001$

The purpose of this hypothesis, like that of Hypotheses 29 and 36, is to strengthen the possibility of causal inference by demonstrating a sequence of related variables within the model underlying this study. By including role success motivation and affective reaction as intervening variables (both having been measured and shown to be statistically associated with each other and, respectively, with the two variables in this hypothesis), the probability of a causal sequence is enhanced. The hypothesis is supported by the data and is therefore accepted.

Hypothesis 44

Relevance of previous ownership experience is a more significant factor than the duration of that experience in the prediction of the quality of entrepreneurial performance.

Table G40: $\chi^2 = 53.5624$; 36 df; significant at $p < .05$

G43: $\chi^2 = 81.4488$; 54 df; significant at $p < .01$

Figure H40: $r = .2838$; significant at $p < .001$

H43: $r = .2792$; significant at $p < .001$

As with Hypotheses 30 and 37 the postulate here proffered is that relevance of a particular type of experience is a more pertinent factor than the duration of that experience in the prediction of entrepreneurial effectiveness.

The data compiled and presented in Tables G40 and G43 suggest that relevance of ownership experience may be the more significant factor when the two χ^2 values are compared. The two correlation co-efficients are very similar and both are significant at the required level. A

two-tailed t test indicates that the difference between the two co-efficients is not significant at $p = .001$ ($t = .1490$).

From this evidence the hypothesis is not accepted. It has not been shown that relevance of previous ownership experience is superior to duration of that experience as a predictor of entrepreneurial effectiveness.

6.424 *Total Pre-Decision Experience*

Hypothesis 45

The longer and more relevant an entrepreneur's total pre-decision experience the more appropriate will be his role perception.

Table G45a: $\chi^2 = 81.1742$; 30 df; significant at $p < .001$

Figure H45a: $r = .5054$; significant at $p < .001$

(PREXPERE crosstabulated and correlated with IODINNER)

Table G45b: $\chi^2 = 81.9399$; 30 df; significant at $p < .001$

Figure H45b: $r = -.4473$; significant at $p < .001$

(PREXPERE crosstabulated and correlated with IODOTHER)

As discussed in Section 2.43, an appropriate perception of the requirements of any role is an essential prerequisite for effective functioning in that role. Role perception relates to direction of effort rather than the amount. Hypothesis 4 tested and confirmed the proposition that an inner-directed role perception is associated positively and significantly with affective reaction, which in turn is correlated with the quality of small business performance (Hypothesis 1). From this evidence it is accepted that inner-directed role

perception is more appropriate than other-directed role perception for independent entrepreneurship.

Both χ^2 values justify the rejection of the null hypothesis of independence at $p < .001$. The correlation between PREXPERE (the sum of duration and relevance of all three types of pre-decision experience) and IODINNER indicates a positive relationship, while the statistical association between PREXPERE and IODOTHER is negative. On this evidence the hypothesis is accepted.

Hypothesis 46

In an entrepreneur's total pre-decision work experience, previous ownership experience is a more significant factor than managerial experience, which in turn is more significant than occupational experience in the prediction of the quality of entrepreneurial performance.

Table G46a: $\chi^2 = 69.0327$; 36 df; significant at $p < .001$

Figure H46a: $r = .2889$; significant at $p < .001$

(PERFORMS crosstabulated and correlated with PREOWNER)

Table G46b: $\chi^2 = 170.9216$; 45 df; significant at $p < .001$

Figure H46b: $r = .6656$; significant at $p < .001$

(PERFORMS crosstabulated and correlated with PREMANAG)

Table G46c: $\chi^2 = 182.2839$; 45 df; significant at $p < .001$

Figure H46c: $r = .6624$; significant at $p < .001$

(PERFORMS crosstabulated and correlated with PREOCCUP)

The first segment of the hypothesis concerns the respective associations of PREOWNER and PREMANAG with PERFORMS. Both χ^2 values

and both correlation co-efficients are highly significant at $p \leq .001$, so a two-tailed t test was used, and indicated that the two co-efficients (.2889 and .6656) are significantly different at $p = .001$ ($t = 6.5379$). At this point it is concluded that previous managerial experience is more pertinent than previous ownership experience as a predicto of the quality of entrepreneurial performance. Therefore this part of the hypothesis is rejected.

The proposition that managerial experience is more significant than occupational experience in the prediction of entrepreneurial effectiveness is likewise not supported, as a two-tailed t test indicated that the difference between the two co-efficients (.6656 and .6624) is not significant at $p = .001$ ($t = .0886$).

The difference between the remaining pair of co-efficients (PERFORMS with PREOWNER and with PREOCCUP; respectively .2889 and .6624) is highly significant at $p = .001$, again using a two-tailed t test ($t = 6.693$). However the direction of the difference does not support the hypothesis.

To summarize the evidence - previous managerial experience has the most significant statistical association with PERFORMS, followed by previous occupational experience, but the difference between these two co-efficients is not significant. Both of these co-efficients are significantly different from the PERFORMS/PREOWNER co-efficient. Therefore the complete hypothesis is rejected.

6.425 *Post-Decision Preparation*

Hypothesis 16 includes post-decision preparation as a variable.

6.43 OTHER FACTORS

6.431 *Age of Entry to Ownership*

Hypothesis 47

Individuals who enter the entrepreneurial role between the ages of 30 and 39 years will have higher expressed role success motivation than those who do so at younger or older ages.

Table G47: $\chi^2 = 31.4781$; 20 df; significant at $p < .05$

Figure H47: $r = .0086$; significant at $p = .8929$

Observation of the scoring method used in Part D of the questionnaire (Section 5.5) indicates that the age category involved in this hypothesis results in an intermediate score (of 3) within the possible range of 1 to 6. Therefore any strong correlation would signify that either younger or older starting ages are associated with either high or low scores on the dependent variable. If such correlation were the case the hypothesis would have to be rejected.

Table G47 records the fact that 63.6% of those entrepreneurs in the sample who scored 15 or 16 for MOTIVATE (the top two scores possible) started their present business between 30 and 39 years of age, and 58.7% of the sample entrepreneurs who scored 12, 13 or 14 on the

MOTIVATE scale (from an actual range of 4 to 16) were also in that age group. The χ^2 value for these crosstabulated data is significant only at $p = .0492$, which fails to meet the level required. The extremely low correlation also suggests that higher scores on MOTIVATE were attributable to those in the sample who attained intermediate scores on AGESTART. The hypothesis is therefore accepted.

Hypothesis 48

Individuals who enter the entrepreneurial role between the ages of 30 and 39 years will have more favourable affective reaction to the stress of that role than those who do so at younger or older ages.

Table G48: $\chi^2 = 114.4838$; 50 df; significant at $p < .001$

Figure H48: $r = .1204$; significant at $p > .05$

The commentary on the scoring method used for AGESTART (see Hypothesis 47) is also applicable to this hypothesis.

Table G48 shows that the substantial majority of sample members who scored in the upper half of the full range of REACTION scores (i.e. above 60) started their present business while aged between 30 and 39 years. This pattern falls away markedly below the score of 60. The χ^2 value indicates significant dependence between age of starting business and affective reaction. However, the low correlation and its failure to reach the required significance level generally indicate that neither younger nor older owners gained high or low REACTION scores. Observation of Figure H48 also demonstrates that the majority of high REACTION scores (representing propitious affective reaction) are

attributable to those owners who were in the 30-39 year age group when starting the present business. This hypothesis is supported by the evidence summarised above.

Hypothesis 49

Individuals who enter the entrepreneurial role between the ages of 30 and 39 years will perform better as entrepreneurs than those who do so at younger or older ages.

Table G49: $\chi^2 = 119.7609$; 45 df; significant at $p < .001$

Figure H49: $r = .1100$; significant at $p < .1$

The statement relating to the AGESTART scoring procedure (see Hypothesis 47) is also applicable to this hypothesis.

Table G49 and the statistics derived therefrom indicate that the two variables are not independent of each other. In the upper half of the range of PERFORMS scores a significant majority of owners can be identified as having started their present business while aged between 30 and 39 years. Although the χ^2 value indicates significant dependence between the two variables, the low correlation and the unacceptable significance level thereof, together with observation of the crosstabulated and correlated data support the conclusion that sample entrepreneurs with superior PERFORMS scores tend to have started their present business while aged between 30 and 39 years. The hypothesis is therefore accepted.

The general inference from Hypotheses 47, 48 and 49 is that the most

appropriate age for commencing business ownership is between 30 and 39 years. It is suggested that younger persons lack the necessary experience, while older ones become suspect in physical and mental energy and general motivation. These issues are discussed in Section 2.71.

6.432 *Education*

Hypothesis 17 includes total education as a variable.

Hypothesis 50

The longer the duration of an entrepreneur's formal education the stronger will be his expressed role success motivation.

Table G50: $\chi^2 = 64.4830$; 36 df; significant at $p < .005$

Figure H50: $r = .1575$; significant at $p < .02$

It has been tentatively suggested that the duration of education and the ability to survive as a small business owner/manager are related (Mayer and Goldstein, 1961; Hoad and Rosko, 1964 - see Section 2.72). No research is known to have investigated the possible effects of education on other likely intervening variables, to develop a convincing causal sequence. In seeking plausible rationale for the present hypothesis, apart from further testing of previous research findings, it was considered probable that there is no simple relationship between the two variables. The motivational factors associated with lengthy (and relevant) work experience of various kinds, are possibly also associated with the inclination to attain as high an

education as possible. Specifically, high n-Achievement, shown in this study to be significantly related to role success motivation (Hypothesis 6) and to total (duration and relevance scores summed) education (Hypothesis 17), is feasibly the logical antecedent variable. Such a proposition is recognised as being somewhat tenuous, and is contrary to the Collins and Moore (1970) thesis of entrepreneurs having attitudes opposed to authority and institutional roles, including formal schooling.

The data from this study do not adequately support the hypothesis, the correlation co-efficient being significant at $p = .0127$, the χ^2 value at $p = .0025$.

Hypothesis 51

The longer the duration of an entrepreneur's formal education the more propitious will be his affective reaction to the stress of his present role.

Table G51: $\chi^2 = 105.7438$; 90 df; significant at $p < .2$

Figure H51: $r = .1032$; significant at $p < .2$

As with the previous hypothesis, the logic leading to a possible causal sequence including the level of education attained by entrepreneurs and their ability to effectively cope with role stress, is rather superficial. This hypothesis is therefore exploratory in its purpose. While work experience and specific preparation (even if lacking somewhat in relevance) may develop a degree of competence in technical and other aspects of small business ownership and

management (such competence having the capacity to mitigate role stress) the competence deriving from a substantial formal education is not so obvious, except perhaps when such education reaches tertiary level.

The relationship demonstrated by the data from this sample is not sufficiently significant to warrant acceptance of the hypothesis, the χ^2 value being significant at $p = .1223$ and the correlation co-efficient at $p = .1035$. The hypothesis is rejected.

Hypothesis 52

The longer the duration of an entrepreneur's formal education the better the quality of his performance in his present role.

Table G52: $\chi^2 = 65.5413$; 81 df; significant at $p = .8924$

Figure H52: $r = .1269$; significant at $p < .05$

Predicted relationships between EDULEVEL and both expressed role success motivation and affective reaction have not been supported by the data compiled. Similarly the evidence pertaining to the hypothesised relationship between EDULEVEL and PERFORMS does not justify acceptance of this hypothesis at the significance level required, r being significant at $p = .045$.

The duration of an individual's formal education appears not to be a significant factor in the prediction of his motivation for, mental/emotional effectiveness in, and subsequent performance in, the role of independent entrepreneur in a small business. This conclusion is strengthened by the rejection of all three hypotheses using EDULEVEL

as a predictor variable. It is noted however that EDULEVEL provides a sufficiently significant increment to the multiple co-efficient of determination (see Table 6.2) to justify its inclusion in the multiple regression equation, where interaction between EDULEVEL and other variables was taken into account.

Hypothesis 53

The more relevant an entrepreneur's formal education to his present role the stronger will be his expressed role success motivation.

Table G53: $\chi^2 = 46.7073$; 16 df; significant at $p < .001$

Figure H53: $r = .3286$; significant at $p < .001$

The suggested introduction of n-Achievement as the antecedent variable in a possible causal sequence involving education, work experience and role success motivation (used as rationale for Hypothesis 50) is again proposed for the present hypothesis. An education, relevant to the requirements of business and entrepreneurial activity, probably is much more akin to the experience variable than is the duration of education.

The data suggest that entrepreneurs who have undertaken formal education relevant to the needs of their present role are more likely to express strong motivation to succeed in that role. It is quite possible that the specific motivation, probably deriving from a high level of achievement motivation, results in the potential entrepreneur undertaking education relevant to the perceived needs of his intended role. The relationship between the two variables is significant and the hypothesis is accepted.

Hypothesis 54

The more relevant an entrepreneur's formal education to his present role the more propitious will be his affective reaction to the stress of that role.

Table G54: $\chi^2 = 120.1411$; 40 df; significant at $p < .001$

Figure H54: $r = .5891$; significant at $p < .001$

It is postulated that a formal education which has a measure of relevance to the requirements of the entrepreneurial role will be associated with reduction in perceived role stress, through the suggested intervening variable of role competence.

The data from Table G54 and Figure H54, and the statistics derived therefrom, indicate a strong positive relationship between relevance of education and affective reaction to entrepreneurial role stress, such relationship being highly significant at $p < .001$. The hypothesis is accepted.

Hypothesis 55

The more relevant an entrepreneur's formal education to his present role the better the quality of his performance in that role.

Table G55: $\chi^2 = 115.2773$; 36 df; significant at $p < .001$

Figure H55: $r = .6084$; significant at $p < .001$

This proposition completes the suggested sequence of related variables with relevance of formal education as the predictor. The strong

relationship found to exist between EDURELEV and PERFORMS justifies the acceptance of this hypothesis and contributes to the plausibility of the suggested causal chain.

The series of strong statistical relationships evident in this group of three hypotheses encourages the conclusion that undertaking formal education which is relevant to the requirements of the role of small business entrepreneur significantly enhances one's performance in that role. While a possible causal sequence has been demonstrated in this study, further research is necessary to produce a more fruitful understanding of the true function of the formal education process in fitting individuals for specific work roles. The linking variable may well be proficiency in relevant skills, but this has not been empirically investigated.

Hypothesis 56

Relevance of formal education is a more significant factor than the duration of that education in the prediction of the quality of entrepreneurial performance.

Table G52: $\chi^2 = 65.5413$: 81 df: significant at $p = .8924$

G55: $\chi^2 = 115.2773$: 36 df: significant at $p < .001$

Figure H52: $r = .1269$; significant at $p < .05$

H55: $r = .6084$; significant at $p < .001$

It was noted in the discussion on Hypotheses 50 to 55 that the underlying rationale for hypothesised relationships involving relevance of formal education was more plausible than was the case where duration of that education was involved. The credibility of

work competence as an intervening variable was greater in the case of relevance of formal education.

As indicated above, the χ^2 value and correlation co-efficient applicable to education relevance (Table G55 and Figure H55) are more significant than those statistics relating to duration (Table G52 and Figure H52). To evaluate the observed difference between the two co-efficients, a two-tailed t test was used. The resulting t value was 7.5378, which is highly significant at $p = .001$. The two co-efficients are significantly different; the hypothesis is accepted.

Hypothesis 57

The longer and more relevant an entrepreneur's formal education the more realistic will be his role perception.

Table G57a: $\chi^2 = 53.7771$; 30 df; significant at $p < .005$

Figure H57a: $r = .3454$; significant at $p < .001$

(EDUTOTAL crosstabulated and correlated with IODINNER)

Table G57b: $\chi^2 = 35.9381$; 30 df; significant at $p = .2101$

Figure H57b: $r = -.1095$; significant at $p > .05$

(EDUTOTAL crosstabulated and correlated with IODOTHER)

It is here postulated that entrepreneurs who have undertaken lengthy and relevant formal education will tend to have inner-directed, rather than other-directed role perception. Hypotheses 1 and 4 have demonstrated that inner-directed role perception is the more appropriate for effective entrepreneurial performance.

This hypothesis is exploratory and its acceptance would indicate a need for further research into the matter of causality. The χ^2 value associated with IODINNER is noticeably more significant than that for IODOTHER. A two-tailed t test indicated the difference between the two correlation co-efficients to be significant at $p < .001$ ($t = 4.6126$). On this evidence the hypothesis is accepted.

6.433 *Physical Condition*

Hypothesis 58

Physical health and affective reaction to the stress of the entrepreneurial role are significantly and positively correlated.

Table G58: $\chi^2 = 117.6121$; 30 df; significant at $p < .001$

Figure H58: $r = .5759$; significant at $p < .001$

Section 2.73 suggested certain unsubstantiated propositions relating physical health with such factors as stress tolerance and quality of work. This hypothesis tests the possible relationship between the state of physical health and affective reaction. The data warrant confident acceptance of the hypothesis.

Hypothesis 59

Physical health and the quality of entrepreneurial performance are significantly and positively correlated.

Table G59: $\chi^2 = 132.1238$; 27 df; significant at $p < .001$

Figure H59: $r = .5743$; significant at $p < .001$

Hypothesis 58 demonstrated that physical health and effective coping with entrepreneurial role stress are significantly related, and the latter variable has been shown to be related to the quality of entrepreneurial performance (Hypothesis 1). The present hypothesis is intended to support Hypothesis 58 and the relationship is shown to be highly significant.

The hypothesis is accepted; there is clearly a strong association between physical well-being and the ability to perform successfully as a small business entrepreneur.

6.434 Sex

Hypothesis 60

Male entrepreneurs have a more favourable affective reaction to role stress than do female entrepreneurs.

Table G60: $\chi^2 = 4.9900$; 10 df; significant at $p = .8918$

Figure H60: $r = -.0461$; significant at $p = .4678$

Little is known of the respective capacities of males and females in business activities generally, or of their respective performances as small business owner/managers specifically. The above statistics indicate that the two variables are not related. Based on the scoring technique used (Males = 1, Females = 2) male entrepreneurs have slightly more propitious affective reaction, but the difference is negligible.

The hypothesis is rejected, as the evidence shows no distinction between male and female entrepreneurs in their capacity for stress coping.

Hypothesis 61

Male entrepreneurs tend to be more successful than females.

Table G61: $\chi^2 = 7.7414$; 9 df; significant at $p = .5604$

Figure H61: $r = -.0483$; significant at $p = .4467$

There is no evidence to warrant the support of this hypothesis. The conclusion from this study is that a person's sex, taken as an individual factor, has little effect on his or her potential for successful entrepreneurship. Rational entry to ownership, proper preparation, adequate and (especially) relevant experience are all factors which, when combined with appropriate personality traits and motivation, are related to success in small business, irrespective of sex.

6.435 *Religious Affiliation*

Hypothesis 12 includes religious affiliation as a variable.

Hypothesis 62

Protestant entrepreneurs have more favourable affective reaction to entrepreneurial role stress than Roman Catholic entrepreneurs.

Table G62: $\chi^2 = 64.8744$; 30 df; significant at $p < .001$

Figure H62: $r = -.3897$; significant at $p < .001$

Feasibly deriving from early childhood training associated with achievement orientation among parents, high levels of n-Achievement

have been shown empirically to be more prevalent in Protestants and Jews than in other religious and ethnic groups (Rosen, 1956, 1958 and 1959; McClelland, 1961). It has been demonstrated that Protestant entrepreneurs in this sample recorded higher n-Achievement scores than did non-Protestant entrepreneurs (Hypothesis 12). Also, a strong relationship between achievement motivation and affective reaction has been evoked in this study (Hypothesis 2). The relation of religious affiliation to quality of entrepreneurial performance has long been a controversial topic, with confused research evidence. Hypotheses 62, 63 and 64 are intended to investigate the pattern of possible sequential relationships involving religious affiliation as the antecedent variable.

The predicted association between Protestantism and the ability to effectively adapt to, and cope with, role stress as an entrepreneur, is supported by the data gathered in this study. Because of the scoring method used (Section 5.5) a negative correlation co-efficient supports the hypothesis. The relationship is highly significant and the hypothesis is accepted.

Hypothesis 63

Protestant entrepreneurs are more likely to have aggressive/detached interpersonal orientation and inner-directedness than Roman Catholic entrepreneurs.

Table G63a: $\chi^2 = 60.9241$; 24 df; significant at $p < .001$

Figure H63a: $r = -.3544$; significant at $p < .001$

(RELIGION crosstabulated and correlated with IRTAGGRE)

Table G63b: $\chi^2 = 24.8103$; 21 df; significant at $p = .2555$

Figure H63b: $r = -.1906$; significant at $p < .005$

(RELIGION crosstabulated and correlated with IRTDETAC)

Table G63c: $\chi^2 = 52.3102$; 15 df; significant at $p < .001$

Figure H63c: $r = -.3614$; significant at $p < .001$

(RELIGION crosstabulated and correlated with IODINNER)

This hypothesis explores the probability that Protestant entrepreneurs have other features that have been shown to be associated with high n-Achievement (Hypotheses 12, 19, 20, 21, 22, and 23). The three relevant contingency tables clearly indicate that the Protestant entrepreneurs in the sample tend to have stronger aggressive and detached interpersonal response patterns than do Catholics, and are more inner-directed in their role perception. It is noteworthy that the Jewish entrepreneurs are more like Protestants than Catholics in their scoring on these variables. The negative correlations (with the scoring method used (Section 5.5)) support the hypothesis. The co-efficients applicable to IRTAGGRE and IODINNER are significant at better than the required level, but that involving detached interpersonal response traits does not meet that level of significance. The hypothesis supported with the exception of the IRTDETAC component of interpersonal response traits.

Hypothesis 64

Protestant entrepreneurs are generally more successful than Roman Catholic entrepreneurs.

Table G64: $\chi^2 = 52.9736$; 27 df; significant at $p = .002$

Figure H64: $r = -.3973$; significant at $p < .001$

This hypothesis tests a controversial issue and is intended to substantiate the two previous predictions relating to religious affiliation. Table G64 indicates a strong degree of dependence between these two variables, and the correlation co-efficient supports this. The distribution of performance scores by Protestant entrepreneurs in the sample is heavily skewed in a negative direction, that for Jewish entrepreneurs is bi-modal, and for Catholics is slightly but positively skewed. The negative correlation co-efficient indicates the predicted relationship because of the scoring method used (Section 5.5), and the hypothesis is accepted at the required level of significance.

It seems clear, from the evidence in this study, that Protestant religious affiliation is associated quite significantly with superior performance as an independent entrepreneur, and with possession of personality dimensions shown to be propitious to such superior performance. Validation of the Winterbottom (1953, 1958) studies in the Australian context may permit more confident understanding of the origins of these relationships.

6.436 *Family Background*

Hypotheses 13, 14 and 15 include family background as a variable.

6.44 BUSINESS PERFORMANCE

Hypotheses 18, 26, 29, 30, 33, 36, 37, 40, 43, 44, 46, 49, 52, 56, 59, 61 and 64 include the quality of business performance (in the role of small business entrepreneur) as a variable.

CHAPTER 7 CONCLUSIONS AND IMPLICATIONS

This research study was founded on two related and conterminous objectives, and the structure of this thesis is a consequence of that fact. The primary objective, inherently more pragmatic than academic, was to develop a reliable and valid procedure by which the knowledge of an individual's relevant personal characteristics could be used to predict, at an acceptable level of confidence, that individual's potential as a successful small business (i.e. independent) entrepreneur. The practical justification for such a study is the fact that more than 90% of all business failures involve small firms in which the owner/manager is the only or joint controlling influence, and there is a serious lack of verifiable knowledge of the true causes of entrepreneurial failure.

The other objective underlying this study was the formulation of a model or conceptual framework to guide the empirical objective outlined above. To accomplish this purpose, a wide variety of plausible factors, drawn from a range of kindred disciplines, needed to be assembled, dissected and examined for their relevance to the study objectives, and synthesized into a manageable model. It was realised that the phenomenon of entrepreneurial effectiveness has multiple causes, and that to attempt to achieve the primary purpose of this study by evoking potential factors from only one discipline would be fruitless. Examination of the literature clearly indicated that contributions to the conceptual model should come from at least the realms of psychology, sociology, economics and business administration. The process of constructing the model has vindicated this trans-disciplinary strategy since much of the strength of sequential relationships among variables (hopefully giving rise to

more plausible causal inference) has involved variables from more than one of the disciplines drawn upon. In other words, it is obvious that the validity of a particular variable in the model may depend on its statistical relationship with antecedent or subsequent variables possibly deriving from another discipline. As an example, achievement motivation (from the realm of psychology) has strong statistical association with experiential and preparatory factors (suggested by research in business management). This rather complex interaction between variables indicates the need for further detailed investigation. Fortunately data exist on many more inter-relationships than have been hypothesised and examined in this study, and follow-up research is being planned. This will be a dividend from the author's programme of intensive data collection with a fairly large sample. This study could not, and did not, adequately investigate further combinations of suggested discriminatory and predictive variables. Of particular interest are the possible interactional effects among sets of variables.

7.1 THE PREDICTIVE MODEL

The confident acceptance of the Fundamental Proposition (Section 6.2) has justified the conclusion that the synthesis of a prediction model with pragmatic value was successfully achieved. The extent to which variance in the dependent variable has been explained by the variables included (R^2 = 90.015, with 18 variables placed in the regression equation) has demonstrated that prediction of small business performance at a high level of confidence is possible.

The actual inclusion of some, and non-inclusion of other variables in the step-wise multiple regression selection process was based on data exhibiting rather minute differentials. While such criteria are necessary in a computer routine using five decimal places for accuracy, a decision on which variables to include in a programme of prediction of individual potential for entrepreneurial success may well be based partially on other factors. For example, on the basis of simple correlations with the dependent variable, or involvement in a convincing sequence of significant relationships, a particular explanatory variable, omitted from the regression equation, could possibly be included in the testing procedures adopted.

Careful study of small business initiation and continuation has indicated at least two distinct phases in the early history of most ventures. Although these phases inevitably do merge, each has its own particular characteristics and problems. The *initiation* or formative stage, the start-up, is recognised as a creative act, requiring entrepreneurial behavior i.e. innovation, organisation, challenge confrontation, imaginative action, responsibility and an element of risk-taking. Once the venture is through this initial and usually most difficult stage, and is functioning as an *on-going* enterprise, there is generally a marked change in the predominant pattern of activity required of the owner/manager. There is, in this second stage, a real need for management of what has become, at least in part, routine-type administrative operations, if the viability of the venture is to be assured.

From the author's observations of small business owner/managers in action, and study of tape-recorded interviews which ranged well

beyond the confines of the structured questionnaire, there appear to be four categories of individuals owning and managing their own business ventures. These groups are:

1. those who are effective entrepreneurs and small business managers,
2. those who are lacking in both areas,
3. those who have entrepreneurial ability and inclinations but are indifferent to, and/or unskilled in managerial activity, and
4. those who are efficient managers but do not have entrepreneurial talent.

Individuals in the first group are worthy of close study, since they will be found in most successful ventures, and can help greatly in our understanding and appreciation of the patterns of personal qualifications and characteristics associated with superior performance as a small business owner/manager. They represent the ideal or model. Unfortunately such individuals are few, probably less than 10% of the total population of small business owners in this country having this desirable combination of entrepreneurial and managerial capacities and propensities, and being able to recognise profitable potentials, assemble the necessary resources, guide the innovation to the point where it is a marketable reality, and effectively manage the on-going venture to growth and prosperity.

Owners in the second group, with neither type of ability or inclination, are those most deserving of assistance, but the majority are probably beyond help. Such persons, if aspiring to business ownership, ought not to be encouraged to do so, since they are seriously unsuited for the effective undertaking of both small

business formation and continuation, and are, in effect, practically doomed to fail before they start. For those already in business, failure is almost assure , since it is doubtful whether remedial action can offset their serious deficiencies.

The third group of small business owners has the ability and motivation to start new ventures but then lack the necessary broad managerial expertise and/or inclination to follow through and operate a viable and successful business enterprise. Urgent remedial action is necessary to train and develop the wide range of required skills and techniques for effective management of a small business. It is clearly recognised that the owner/manager of a small firm needs some expertise in, and understanding of, most, if not all, management processes, and be able to apply them to all functional areas appropriate to his particular firm. In the formative and most dangerous stage, when perceptive and skilful management is so critical for success, the small firm frequently cannot financially afford to employ specialized management services. Even when employment of managerial personnel (e.g. workshop foreman, sales supervisor, office manager, etc.) is necessary and financially possible, the owner/manager still ought to be able to understand and oversee the total operation. The possession of narrow and often unbalanced management experience and competence, such as is often the case with specialists who enter business ownership without fully appreciating the broader requirements (therefore having faulty role perception), is consistently cited as a significant cause of small business failure.

The final group encompasses the many thousands of small business owners who lack the necessary creativity, motivation, imagination and foresight to lift their ventures out of the ranks of the marginals and give them growth and vigour. These individuals, competent but non-entrepreneurial owner/managers, require stimulation and nurturing in the attitudes, motivation and propensities shown in this study to be associated with successful entrepreneurial activity. Such programmes of assistance are more difficult to develop and implement than those required for management training and education, but, as attested by the results of achievement motivation development programmes in various countries (McClelland and Winter, 1969), it is certainly possible.

This study is believed to have significant potential for assisting both existing and aspiring owner/managers from the latter two groups discussed above. The questionnaire used in this study, and described in Appendix C, requires some modification following the analysis of the data collected. Such analysis, detailed in Chapter 6 and summarised in this chapter, has suggested the deletion of certain variables for their lack of significant contribution to the prediction of entrepreneurial effectiveness. The resulting modified instrument should have both diagnostic and prognostic value, and following the identification of individual strengths and weaknesses in the various pertinent factors, the appropriate remedial action, whether managerial or entrepreneurial development, or both, may be specified. The creation of realistic, appropriate and effective training/educational programmes, in the places, and at the times most suitable to those requiring them, will, without doubt, call for considerable planning, organisation and funding. They will

necessarily involve agencies as widely divergent as institutions of higher education and trade, industrial and professional associations. Preparation of material for both group and individual use will require finance, skill and time, and can only be undertaken effectively by persons with balanced experience in educational technology and small business management. Using aids and material developed for use in other countries has definite advantages, but the real concern should be for relevance to the distinctive needs of *particular* industrial, trade and professional groups in *this* country. As a pre-requisite for any such programme of assistance or education, both the specific needs of the entrepreneurial role and general areas of weakness and deficiency need careful identification and delineation. The managerial processes required for effective small business operation are fairly well accepted, but in the entrepreneurial aspect considerable doubt and ignorance exist. It is hopefully anticipated that, with certain adaptation, the measuring instruments developed in this study, will be useful for ascertaining necessary entrepreneurial abilities and propensities, and identifying individual deficiencies therein. The need for further research is very clear, but the foundation has been established.

7.2 CONCLUSIONS RELATING TO GROUPS OF VARIABLES

This discussion briefly summarises the major conclusions derived from the empirical phase of this study. Some of the major statistical relationships are illustrated in Figure 7.1. The correlation matrix (Appendix I) provides all co-efficients.

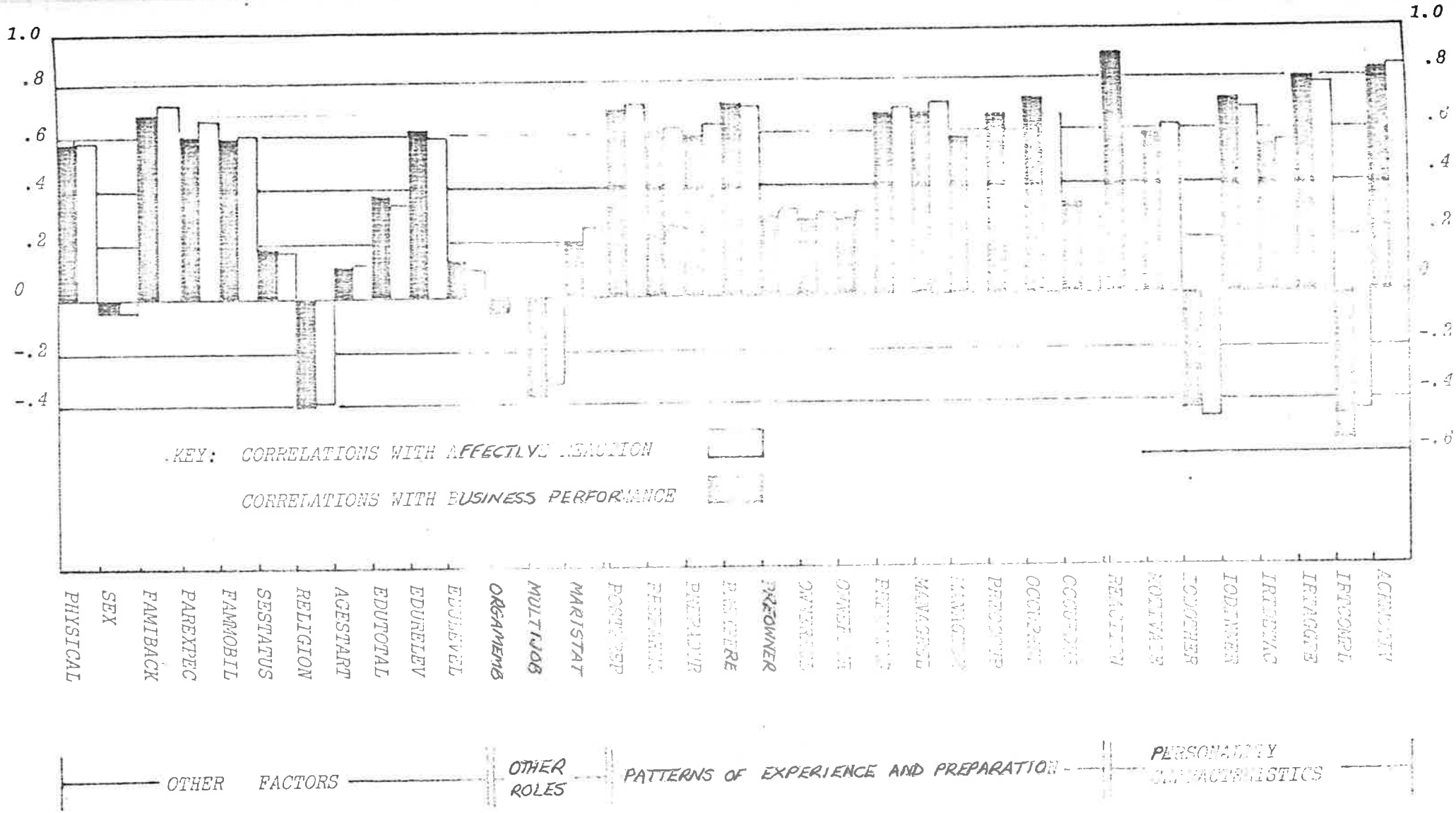


FIGURE 7.1 GRAPHICAL SUMMARY OF CORRELATIONS - ALL VARIABLES WITH PERFORMS AND REACTION

Personality Characteristics

It has been demonstrated that, in large measure, entrepreneurial effectiveness is associated with the possession of appropriate personality traits.

The highly significant statistical relationship between affective reaction and entrepreneurial effectiveness supports the conclusion that the true causes of small business success or failure are to be found in factors which influence the entrepreneur's capacity and propensity for operating effectively within a potentially stressful situation. That the role of independent entrepreneur can be very stress evoking is strongly indicated by empirical observation (in the author's interviewing programme, for example) and suggested in prior research (Section 2.45). Those individuals who have developed a certain configuration of personality characteristics and who, by design or otherwise, have attained an appropriate combination of relevant experience and veridical role perception have been shown to be able to cope with entrepreneurial role stress and perform effectively.

The impact of stressful situations is first manifest as deterioration in cognitive processes and as disturbed emotional reactions. As the role of independent entrepreneur makes as much, or more demand on mental/emotional activity as it does on physical behavior, the search for plausible explanatory variables centred primarily around those aspects of personal development which were either shown or assumed to be capable of affecting stress tolerance and behavioral adaptation thereto.

Achievement motivation, the general disposition to succeed, compete and achieve standards of excellence, was postulated as a major factor, in which was subsumed a number of characteristics, attitudes, capacities and propensities, each capable of affecting the quality of entrepreneurial activity. The strong statistical association between n-Achievement and affective reaction has indicated the possibility of causation - high achievement motivation providing the individual with both the capacity and inclination to function effectively within highly stressful entrepreneurial situations. This assertion is re-inforced by an almost identical statistical association between n-Achievement and the quality of small business performance, and significant correlations with a wide range of explanatory and dependent variables. It has been shown in this study that achievement motivation is significantly associated with:

1. Protestant affiliation and upbringing,
2. demanding but fair parental expectations and discipline, and a satisfying and supportive home life,
3. families of middle socio-economic-status,
4. families tending to be occupationally and geographically mobile,
5. significant and relevant specific post-decision preparation for business formation,
6. longer and more relevant formal education,
7. aggressive and detached (rather than compliant) interpersonal orientations, and
8. inner-directed (rather than other-directed) role perception.

As indicated in Section 2.451, one's ability to respond effectively to interpersonal demands is associated with stress tolerance. It has been shown in this study that an aggressive/detached mode of interpersonal response is the more appropriate orientation for

entrepreneurial effectiveness, and a compliant mode is not appropriate. Individual owners in this study who possessed predominantly aggressive or detached interpersonal orientations had more propitious affective reaction, had higher n-Achievement and also produced a superior performance in small business operation.

Testing hypotheses relating to role perception produced evidence that an inner-directed perception of the entrepreneurial role is more appropriate than an other-directed perception. This conclusion is implicitly congruent with those relating to n-Achievement and interpersonal response traits.

Finally, not only a strong general level of motivation to succeed is required, but also a strong specific motivation to succeed in whatever instrumental role is chosen as the means for satisfying the general need. Individual reasons for entering small business ownership may range from positive and optimistic at one extreme to rather negative and defensive at the other. The individual with high n-Achievement must also have a propitious attitude toward the specific role of independent entrepreneur to enhance his success potential. This assertion was confirmed in this study. A strong expressed role success motivation, as measured in this study, has significant statistical association with both length and relevance of occupational, managerial and ownership experience, age of entry to ownership, relevance of formal education and achievement motivation.

The fairly consistent and strong statistical associations evident between each of the personality factors proposed and a wide range

of other variables justifies the confident conclusion that such traits are significant explanatory factors in the prediction of entrepreneurial effectiveness. Such influence is all the stronger for the interactional effects of some personality variables on variables from other groups in the causal sequences suggested.

Patterns of Experience and Preparation

In general, measures of the relevance of various aspects of pre-ownership experience and preparation were shown to be more accurate predictors of both affective reaction and small business performance than were measures of duration of those aspects. The difference between the predictive-ability of relevance scores and duration scores was significant in the case of occupational experience, less so for managerial experience, and negligible in the case of both ownership experience and post-decision preparation. The confidence with which the insertion of *competence* as a plausible, although untested, intervening variable in possible causal chains, is greater where relevance of experience is the antecedent variable rather than duration.

On *prima facie* consideration, an unpredicted and surprising result was the relatively weak statistical association between both duration and relevance of previous ownership experience and affective reaction and small business performance respectively. It is concluded however that many owners of previously terminated business ventures (74.3% of which could be classified as failures) were performing no better in the present business, and that these persons still had personal and/or experiential deficiencies which were

proving as dysfunctional for the present business as they were for the former.

From this category of explanatory variables, relevant occupational, trade and professional experience was the most significant single predictor of both affective reaction and performance, followed in turn by relevance of managerial experience and relevance of post-decision preparation. Summing duration and relevance scores for each of occupational, managerial and ownership experience resulted in total scores (PREOCCUP, PREMANAG and PREOWNER, respectively) which were correlated no higher with either affective reaction or small business performance than were the individual relevance scores. However when post-decision preparation relevance and duration scores were summed there was an improvement in the statistical association with both affective reaction and performance.

In attempting to develop convincing causal sequences there were inevitably included both personality traits and experiential/ preparatory factors. This interaction has contributed to the strength of causal inference and has indicated the complexities of the correlates of effective entrepreneurial behavior. Much further research is clearly indicated to unravel the many inter-relationships which could not be adequately investigated in this study. Nevertheless, this analysis has demonstrated significant relationships involving various aspects of pre-decision experience and a wide range of other variables (Section 6.42), confirming that lengthy and (particularly) relevant experience is a vital correlate of small business success. The same conclusion may be stated for post-decision preparation.

Concurrent Role Obligations

Small business entrepreneurship is a very demanding role and owner/managers holding other jobs were shown in this study to be seriously jeopardising their chances of succeeding. As hypothesised, a supportive domestic role is important for entrepreneurial success, but the statistical relationship was not as significant as predicted. Active involvement in club, association or community service activities has little or no bearing on entrepreneurial success, according to the evidence produced in this study. In general, successful entrepreneurs seem to be able to handle the commitments of other concurrent roles in addition to their work role, except where such commitments become excessive. Possibly for some persons entrepreneurship itself is a means of escaping or mitigating stress from other roles, particularly the parent/spouse role.

Other Factors

As with experience and preparation, the relevance of formal education was superior to duration as a predictor of entrepreneurial effectiveness, and was statistically associated with a range of variables including role success motivation, affective reaction, inner-directed role perception and entrepreneurial effectiveness. Again, *competence* is suggested as the possible link. Age of starting business ownership is a significant factor, with 30 - 39 years as the most appropriate age range, being associated with role success motivation, affective reaction and small business performance. Protestants and Jews appear to have a decided advantage over Roman

Catholics in the entrepreneurial role, and the more successful entrepreneurs tended to come from middle-class families. As possible antecedents of achievement motivation, family mobility and fair parental expectations and encouragement are significant, both also being strongly associated with affective reaction and small business performance. Males and females appear to have equal potential, given the possession of other necessary qualifications and characteristics. Physical condition is an important factor with its potent effect on psychological stress tolerance.

Of the Other Factors investigated, the most significant, for the purpose of this study, were shown to be relevance of education, family background, age of entry to business ownership, physical well-being and religious affiliation. Despite their importance as explanatory variables some are quite beyond the ability of the individual to determine or influence, and they are *ipso facto* incapable of remedial action. They must remain as either propitious or delimiting factors.

7.3 FUTURE RESEARCH AND POLICY IMPLICATIONS

This study of Australian small business owner/managers has shown that, not only do individuals who manifest entrepreneurial propensity and talent have a number of characteristics in common, but there are also very real personality, biographical and experiential differences between successful, marginal and unsuccessful independent entrepreneurs.

The acceptability of the empirical data from which these conclusions have been drawn depends largely on the reliability and validity of the testing instruments used. While every effort has been made to determine the appropriateness of the questionnaire, it is clear that certain modification and refinement is required if the instrument is to have more universal applicability. In particular, the deletion of items pertaining to variables found not to be significant as predictors, some elaboration of scales relating to achievement motivation characteristics (risk attitude, as an example), and some improvement in wording, are all deemed necessary. While the potential of this testing instrument for diagnostic and prognostic analysis of existing and aspiring entrepreneurs respectively, appears to be promising, its promotion and acceptance by appropriate institutions may well present problems.

Many sectors of the total community have a genuine concern for the "quality" of entrepreneurs. Very often this concern is directed more at the elimination of those entrepreneurs with the least potential for success, whereas a more positive approach, which the author strongly supports, is to be able to identify those entrepreneurs who have a deficiency in one or more crucial characteristics or qualities, for the purpose of offering realistic assistance. Even though entrepreneurial research is still in an early and rather rudimentary stage of development, successful entrepreneurial identification (by the use of measurable and pragmatic variables, with the ability to discriminate) appears to be possible as a broader knowledge base and understanding of entrepreneurial behavior and characteristics becomes available.

There is, in this country, a current wave of interest in the welfare of small business and the people involved in, and dependent on them. Unfortunately the problem of how best to provide the help, so desperately needed in so many cases, is not clearly understood by those responsible for the planning and administration of programmes purported to assist small business. The consequence of this lack of knowledge about the intrinsic nature of the entrepreneurial role and the qualifications and characteristics which are associated with successful performance in small business, is that the strategies for small business assistance are, to a large degree, "shooting in the dark". Before public resources are wasted in piecemeal and superficial assistance programmes, often aimed at symptoms rather than basic causes, a greater awareness of available research findings is advocated. Possibly a large scale effort to encourage more relevant empirical research about Australian small business and entrepreneurs is necessary, to generate a realistic perception of their problems, needs, strengths and weaknesses. It is sincerely hoped that studies such as this may contribute to such a perception and, consequently, to the more effective application of scarce public resources to the rectification of a national problem and challenge.

One of the very obvious questions which arises from a detailed discussion of, and investigation into, the personality structure and experiential antecedents of entrepreneurs, is whether it is possible to influence the supply of potentially successful entrepreneurs. Some factors suggested as relevant to this end are either impossible or morally indefensible. There remain, however, many factors, capable of measurement, analysis and manipulation, which can be combined into a valid entrepreneurial profile and thus

employed for predictive purposes. The implications of such a possibility to all those who either deal with, or become involved in small business ventures are obvious. An additional consequence of the means of entrepreneurial analysis should be that it will provide a frame of reference for the aspiring entrepreneur himself. Self-understanding is facilitative in the process of personal growth and should help alleviate the tragedy of small business failure.

One might speculate that, aided by the advancement of our understanding of the entrepreneurial role, the independent entrepreneur of the future may have a much greater potential for success than his predecessors could have ever realistically anticipated. The main danger in such advancement is that the essence of entrepreneurial behavior may be undermined. Significant reduction of risk, challenge and uncertainty in economic and business endeavour may so change the nature of the entrepreneurial role as to bring about "the extinction of the species". In all that is sought to be done to assist the independent entrepreneur, destruction of the very nature of the role itself and the driving forces behind entrepreneurial behavior, may be unwittingly brought about. Such an eventuality would prove economically and socially disastrous, and those responsible for assistance programmes will need to be made aware of the need to progress with caution and empathy.

If this study contributes at all to this ideal strategy, the author will have cause to be satisfied with his efforts.

APPENDIX A

PRE-TESTS OF N-ACHIEVEMENT SCALE

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1. *ITEM DISCRIMINATION*

(a) Findley Index

The Findley Index expresses item discrimination as a co-efficient which may vary from a maximum of unity to a minimum of zero. The index is calculated from a formula, viz:

$$F.I. = \frac{X - Y}{A}$$

where X = the number of correct responses to the test item in the Upper Group,

Y = the number of correct responses to the test item in the Lower Group,

A = the number of cases in the Upper Group,

Upper Group = the group obtaining highest scores on the total test (approximately 30% of total cases),

and Lower Group = the group obtaining lowest scores on the total test (approximately 30% of total cases).

For the purpose of calculating the Findley Index, with a non-dichotomous Likert-type scale, responses scoring 5 or 4 (indicative of high n-Achievement level on a 5 point scale) were regarded as correct.

N = 36 Upper Group = 12 Lower Group = 12

Method of Calculation:

	"Correct"			"Incorrect"		
Available Responses	5	4	3	2	1	
Upper Group Selection	8	3	1	-	-	12
Lower Group Selection	-	2	3	4	3	12

$$F.I. = \frac{X - Y}{A} = \frac{11 - 2}{12} = \frac{9}{12} = .75$$

Item	Findley Index	Accept	Item	Findley Index	Accept
1	.75	Yes	15	.42	No
2	.58	Yes	16	.42	No
3	.50	Yes	17	.58	Yes
4	.58	Yes	18	.33	No
5	.33	No	19	.42	No
6	.83	Yes	20	.42	No
7	.75	Yes	21	.58	Yes
8	.42	No	22	.50	Yes
9	.67	Yes	23	.33	No
10	.67	Yes	24	.75	Yes
11	.75	Yes	25	.42	No
12	.58	Yes	26	.58	Yes
13	.50	Yes	27	.58	Yes
14	.75	Yes	28	.42	No

(b) Guilford Phi ϕ Value

This procedure computes an index of item discrimination which can be tested statistically to see if the relationship found for any item differs significantly from chance.

N = 36 Upper Group = 12 Lower Group = 12

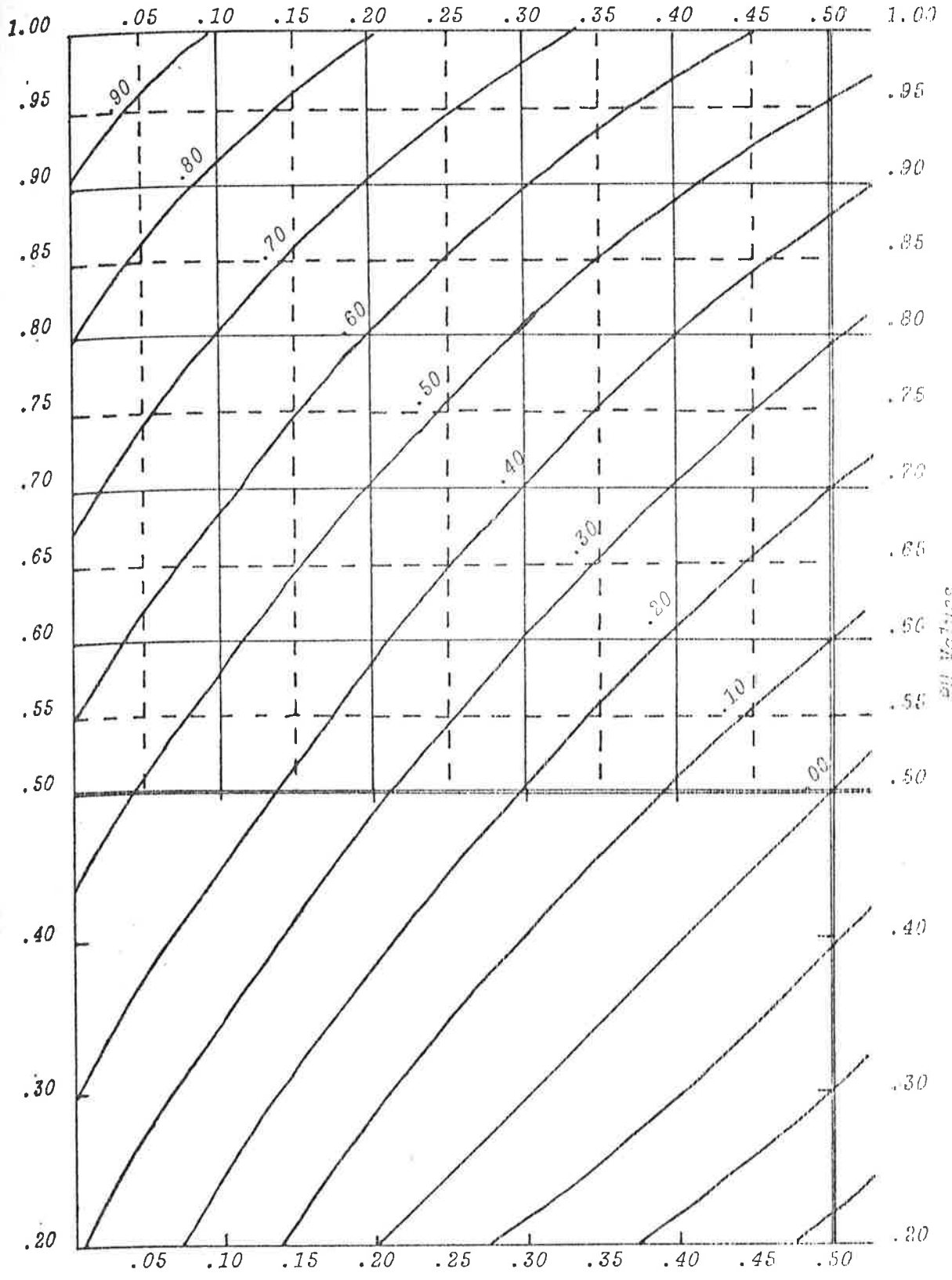
Method of Calculation (using Item 1 as an example):

	"Correct"			"Incorrect"		
Available Responses	5	4	3	2	1	
Upper Group Selection	8	3	1	-	-	12
Lower Group Selection	-	2	3	4	3	12

Proportion Correct in Upper Group = PU = 11/12 = .92
Proportion Correct in Lower Group = PL = 2/12 = .17

Reference to the Guilford Phi ϕ Chart (next page) for each item's PU and PL values provides relevant ϕ values. For PU = .92 and PL = .17, ϕ = .74. The probability of each ϕ value can be determined from the Table (see page 459). In using the Table, N = number of cases in Upper and Lower Groups = 24 (not total

GUILFORD PHI Ø VALUE CHART



PL Values

N of 36). With N = 24 and ϕ = .74, p = < .001. There is less than one chance in 1000 of obtaining figures of PU = .92 and PL = .17 by chance from equi-sized upper and lower groups. This is a significant difference. Item 1 has excellent discriminatory power.

TABLE FOR USE WITH GUILFORD PHI ϕ VALUE CHART

N	p = .05	p = .02	p = .01	p = .001
	ϕ	ϕ	ϕ	ϕ
20	.438	.520	.576	.736
25	.392	.465	.515	.658
30	.358	.425	.470	.601
35	.331	.393	.435	.556
40	.310	.368	.407	.520
45	.292	.347	.384	.490
50	.277	.329	.364	.465

Adapted from Guilford, 1941.

Summary of Guilford Phi ϕ Values

Item	PU	PL	ϕ	p	Sig. Diff.	Item	PU	PL	ϕ	p	Sig. Diff.
1	.92	.17	.74	<.001	Yes	15	.75	.33	.42	<.05	No
2	.83	.25	.58	<.01	Yes	16	.58	.17	.43	<.05	No
3	.75	.25	.49	<.02	No	17	.83	.25	.58	<.01	Yes
4	.92	.33	.60	<.01	Yes	18	.58	.25	.34	>.05	No
5	.83	.50	.35	>.05	No	19	.83	.42	.42	<.05	No
6	.92	.08	.82	<.001	Yes	20	.67	.25	.42	<.05	No
7	.92	.17	.74	<.001	Yes	21	.83	.25	.58	<.01	Yes
8	.92	.50	.45	<.05	No	22	.75	.25	.49	<.02	No
9	.92	.25	.68	<.001	Yes	23	.75	.42	.34	>.05	No
10	.83	.17	.65	<.001	Yes	24	.92	.17	.74	<.001	Yes
11	.83	.08	.74	<.001	Yes	25	.67	.25	.42	<.05	No
12	.75	.17	.58	<.01	Yes	26	.92	.33	.60	<.01	Yes
13	.83	.33	.50	<.02	No	27	.75	.17	.58	<.01	Yes
14	1.00	.25	.75	<.001	Yes	28	.58	.17	.43	<.05	No

(c) Selltiz, Jahoda, Deutsch and Cook Method

A method for calculating item discrimination, suggested by Selltiz *et al* (1965) works with upper and lower groups (based on total test scores) and involves the use of the mean score for each item from both groups. Item mean scores for Lower Group, substracted from item mean scores for Upper Group provides an indication of the discrimination power of each item. For this study, discrimination indices above2.00 mean scores were accepted, and those below 2.00 rejected as unacceptable.

Summary of Selltiz *et al* Discriminatory Power Indices

Item	Mean Score UGroup	LGroup	D.P.	Mean N=36	Accept	Item	Mean Score UGroup	LGroup	D.P.	N=36	Accept
1	4.62	2.01	2.61	3.17	Yes	15	3.37	1.99	1.38	2.63	No
2	4.36	2.31	2.05	3.46	Yes	16	3.91	1.96	1.95	2.59	No
3	4.25	2.37	1.88	2.74	No	17	4.74	2.61	2.13	3.60	Yes
4	4.36	2.27	2.09	3.09	Yes	18	3.83	2.16	1.67	2.83	No
5	3.57	2.74	0.83	3.29	No	19	3.36	2.01	1.35	2.87	No
6	4.47	1.40	3.07	3.41	Yes	20	3.69	1.93	1.56	2.66	No
7	4.55	1.93	2.62	2.98	Yes	21	4.92	2.87	2.05	3.86	Yes
8	4.09	2.41	1.68	2.78	No	22	4.16	2.26	1.90	2.83	No
9	4.36	1.87	2.49	3.27	Yes	23	3.27	2.14	1.13	2.67	No
10	4.71	2.36	2.35	3.06	Yes	24	4.63	1.97	2.66	3.72	Yes
11	4.78	2.17	2.61	3.17	Yes	25	3.96	2.15	1.81	2.87	No
12	4.83	2.56	2.27	3.48	Yes	26	4.27	2.26	2.01	3.55	Yes
13	3.96	2.17	1.69	2.90	No	27	4.55	2.37	2.18	3.59	Yes
14	4.63	2.21	2.42	3.37	Yes	28	3.89	2.06	1.83	2.77	No

On the basis of the results of the three indices used, the following initial n-Achievement test items were deemed unacceptable.

	Findley Index	Guilford Phi ϕ	Selltiz *et al*
Item	-	3	3
	5	5	5
	8	8	8
	-	13	13
	15	15	15
	16	16	16
	18	18	18
	19	19	19
	20	20	20
	-	22	22
	23	23	23
	25	25	25
	28	28	28

Of the original 28 items, the 13 listed above were deleted, leaving a 15 item scale which was then subjected to reliability and validity evaluation.

2. RELIABILITY - WHOLE SCALE AND INDIVIDUAL ITEMS

(a) Test-Retest (co-efficient of stability)

Person	X	Y	X^2	Y^2	XY
A	57	59	3249	3481	3363
B	62	60	3844	3600	3720
C	50	55	2500	3025	2750
D	63	63	3969	3969	3969
E	62	67	3844	4489	4154
F	65	67	4225	4489	4355
G	49	53	2401	2809	2597
H	65	62	4225	3844	4030
I	53	49	2809	2401	2597
J	60	63	3600	3969	3780
K	73	72	5329	5184	5256
L	48	51	2304	2601	2448
M	59	58	3481	3364	3422
N	59	62	3481	3844	3658
O	67	68	4489	4624	4556
P	55	59	3025	3481	3245
Q	66	65	4356	4225	4290
R	57	59	3249	3481	3363
S	69	71	4761	5041	4899
T	70	71	4900	5041	4970
	1209	1234	74041	76962	75422

The Pearson Product-Moment correlation co-efficient was calculated with:

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \underline{\underline{0.9360}} \quad \text{(co-efficient of stability)}$$

Test of Significance

$$t = r\sqrt{\frac{N-2}{1-r^2}}$$

$$= \underline{11.2816}$$

With 18 degrees of freedom, a t value of ± 3.922 is significant at the .001 level when a two-tailed test is used. The null hypothesis, that there is no correlation in the population, is

rejected at the .001 level of significance. An r = .936 with 18 df would occur by chance in less than one case in 1000.

(b) Split-Halves (co-efficient of internal consistency)

Person	Total Score Items 1-14	X Odds	Y Evens	X^2	Y^2	XY
A	55	27	28	729	784	756
B	60	31	29	961	841	899
C	49	25	24	625	576	600
D	61	32	29	1024	841	928
E	58	29	29	841	841	841
F	62	30	32	900	1024	960
G	48	22	26	484	676	572
H	62	32	30	1024	900	960
I	51	25	26	625	676	650
J	58	27	31	729	961	837
K	69	34	35	1157	1225	1190
L	47	24	23	576	529	552
M	56	27	29	729	841	783
N	56	26	30	676	900	780
O	63	30	33	900	1089	990
P	52	25	27	625	729	675
Q	63	32	31	1024	961	992
R	54	26	28	676	784	728
S	65	34	31	1156	961	1054
T	65	32	33	1024	1089	1056
		570	584	16484	17228	16803

The Pearson Product-Moment correlation co-efficient was calculated with:

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= 0.7811$$

$$\text{Test-length Correction} = \frac{2 \times .7811}{1 + .7811}$$

$$= \underline{\underline{0.8771}} \quad \text{(co-efficient of internal consistency)}$$

Test of Significance

$$t = r\sqrt{\frac{N - 2}{1 - r^2}}$$

$$= \underline{7.7481}$$

With 18 degrees of freedom, a t value of ± 3.992 is significant at the .001 level, using a two-tailed test.

(c) Kuder-Richardson 20 - Hoyt Variation (co-efficient of item homogeneity)

For the purpose of calculating the Kuder-Richardson 20 co-efficient of item homogeneity, the Hoyt computational method, using analysis of variance, was used, since it is somewhat more simple than the original formulation. For this particular statistic, it is advantageous to work with equal numbers of test items and subjects. Accordingly, the scores of the previously used last 5 subjects were dropped. As with the calculation of item discrimination indices those responses earning 5 or 4 (indicative of high n-Achievement) were scored as correct. The following table indicates correct (1) and incorrect (-) responses for the 15 subjects on the 15 items.

The reliability of individual items (Kuder-Richardson 20 and Hoyt) was calculated with:

$$r_{tt} = \frac{Ve - Vr}{Ve} = \underline{\underline{0.7334}} \text{ (co-efficient of item homogeneity)}$$

where Ve = variance for subjects

Vr = variance for remainder sum of squares

	ITEMS																
Subjects	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	X	$\Sigma(X^2)$
A	-	1	1	-	-	1	1	-	1	1	1	1	1	1	1	11	121
B	-	1	1	-	-		1	-	1	1	1	-	1	1	1	10	100
C	-	-	1	1	-	-	1	1	-	-	-	-	-	-	1	5	25
D	1	1	1	-	-	-	1	-	1	1	1	1	1	1	1	11	121
E	-	-	-	1	1	-	-	1	1	1	-	1	-	-	-	6	36
F	-	1	1	1	1	1	1	1	-	1	1	1	-	1	1	12	144
G	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	225
H	1	1	-	1	1	1	-	1	1	-	-	-	1	-	-	8	64
I	-	-	1	-	1	-	1	-	-	1	-	1	1	-	-	6	36
J	1	1	1	-	1	1	1	1	-	1	1	1	1	1	1	13	169
K	1	1	1	-	1	1	1	-	-	1	1	1	1	1	1	13	169
L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	225
M	1	-	-	1	1	-	1	1	1	-	1	1	-	-	-	8	64
N	1	-	-	1	1	-	1	1	1	-	1	1	-	-	-	10	100
O	1	1	1	-	1	1	1	1	-	1	1	1	1	1		13	169
Y	9	11	12	9	10	10	13	9	8	12	10	12	10	10	11	156	1768
$\Sigma(Y^2)$	81	121	144	81	100	100	169	81	64	144	100	144	100	100	121	1650	

3. *CONSTRUCT VALIDITY*

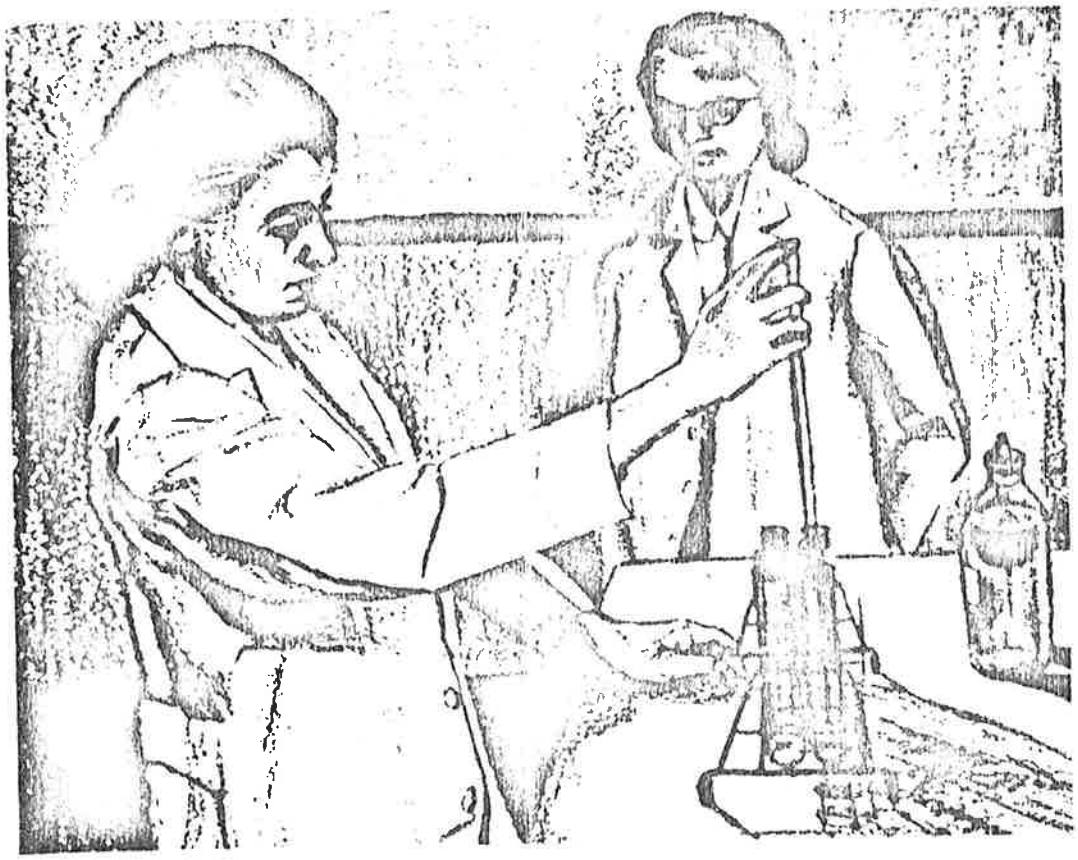
The McClelland thematic apperception test was administered to the same 20 small business owner/managers who participated in the reliability analysis. The six pictures used for this purpose are illustrated on the following pages. Since one of the alleged problems with the use of the TAT instrument is its reliability, it was decided to determine the inter-scorer reliability co-efficients of this particular series with local subjects. The three sets of scores (shown in the table following) were ranked and Spearman rank order *rho* (AB) = .5086, *rho* (BC) = .7289 and *rho* (AC) = .5575, were tested for significance with the following formula:

$$t = rho \sqrt{\frac{N - 2}{1 - rho^2}}$$

JUST LOOK AT THE PICTURE BRIEFLY (TEN TO FIFTEEN SECONDS), TURN THE PAGE, AND WRITE THE STORY IT SUGGESTS.

JUST LOOK AT THE PICTURE BRIEFLY (TEN TO FIFTEEN SECONDS), TURN THE PAGE, AND WRITE THE STORY IT SUGGESTS.

JUST LOOK AT THE PICTURE BRIEFLY (TEN TO FIFTEEN SECONDS), TURN THE PAGE, AND WRITE THE STORY IT SUGGESTS.



JUST LOOK AT THE PICTURE BRIEFLY (TEN TO FIFTEEN SECONDS), TURN THE PAGE, AND WRITE THE STORY IT SUGGESTS.

JUST LOOK AT THE PICTURE BRIEFLY (TEN TO FIFTEEN SECONDS), TURN THE PAGE, AND WRITE THE STORY IT SUGGESTS.

JUST LOOK AT THE PICTURE BRIEFLY (TEN TO FIFTEEN SECONDS), TURN THE PAGE, AND WRITE THE STORY IT SUGGESTS.

The three measures thus calculated were t (AB) = 2.5062, t (BC) = 4.5171 and t (AC) = 2.8491, and were significant at the .05, .001 and .02 levels respectively (with N = 20 and using non-directional two-tailed tests).

These statistics indicate that, in the Australian context, and with students who are also small business entrepreneurs, McClelland's TAT instrument has adequate inter-scorer reliability. This feature alone, however, did not justify its use with the main sample for this study.

INTER-SCORER RELIABILITY SCORES FOR McCLELLAND TAT

Subject	Raw Scores			Ranked Scores		
	A	B	C	A	B	C
A	14	21	18	16.5	7.5	10.5
B	14	17	12	16.5	14	17.5
C	10	14	15	19	18	15
D	21	23	18	7	5.5	10.5
E	16	23	21	12.5	5.5	5.5
F	24	17	21	5.5	14	5.5
G	6	14	10	20	18	20
H	29	24	20	3	3	8
I	15	10	12	14	20	17.5
J	19	16	13	9	16	16
K	32	26	27	1	1	1
L	17	14	11	10.5	18	19
M	20	17	24	8	14	3
N	14	20	17	16.5	9.5	12.5
O	14	21	19	16.5	7.5	9
P	16	19	21	12.5	11.5	5.5
Q	24	20	16	5.5	9.5	14
R	17	24	21	10.5	3	5.5
S	26	19	17	4	11.5	12.5
T	31	24	26	2	3	2

For the purpose of validating the author's 15 item n-Achievement scale against the McClelland TAT instrument (as criterion), the central or most common of the three TAT raw scores for each subject was used. The data so obtained is shown in the following

table:

Subject	Author X	McClelland Y	X^2	Y^2	XY
A	57	18	3249	324	1026
B	62	14	3844	196	868
C	50	14	2500	196	700
D	63	21	3969	441	1323
E	62	21	3844	441	1302
F	65	21	4225	441	1365
G	49	10	2401	100	490
H	65	24	4225	576	1560
I	53	12	2809	144	636
J	60	16	3600	256	960
K	73	27	5329	729	1971
L	48	14	2304	196	672
M	59	20	3481	400	1180
N	59	17	3481	289	1003
O	67	19	4489	361	1273
P	55	19	3025	361	1045
Q	66	20	4356	400	1320
R	57	21	3249	441	1197
S	69	19	4761	361	1311
T	70	26	4900	676	1820
	1,209	373	74,041	7,329	23,022

The Pearson Product-Moment correlation co-efficient was calculated with:

$$r = \frac{N\Sigma NY - \Sigma X\Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2}\ \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

$$= \underline{.7990}$$

Test of Significance

$$t = r\sqrt{\frac{N - 2}{1 - r^2}}$$

$$= \underline{5.6346}$$

With 18 degrees of freedom, a t value of ± 3.922 is significant at the .001 level, using a two-tailed test.

APPENDIX B

PRE-TESTS OF COHEN (1967) INTERPERSONAL RESPONSE TRAITS SCALE

Page

1. THE COHEN (1967) CAD SCALE 475

2. ITEM DISCRIMINATION
   (a) Findley Index 476
   (b) Guilford Phi ϕ Value 478

3. RELIABILITY - WHOLE SCALE
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   (b) Split-Halves (co-efficient of internal consistency) 482

1. *THE COHEN (1967) CAD SCALE*

The original 35 item instrument presented ten Compliant, 15 Aggressive and ten Detached items randomly, and used a six-point Likert-type response format. The items in their original sequence were:

1. Being free of emotional ties with others is:
2. Giving comfort to those in need of friends is:
3. The knowledge that most people would be fond of me at all times would be:
4. To refuse to give in to others in an argument seems:
5. Enjoying a good movie by myself is:
6. For me to pay little attention to what others think of me seems:
7. For me to be able to own an item before most of my friends are able to buy it would be:
8. Knowing that others are somewhat envious of me is:
9. To feel that I like everyone I know would be:
10. To be able to work hard while others are elsewhere having fun is:
11. Using pull to get ahead would be:
12. For me to have enough money or power to impress self-styled "big shots" would be:
13. Basing my life on duty to others is:
14. To work under tension would be:
15. If I could live all alone in a cabin in the woods or mountains it would be:
16. Punishing those who insult my honor is:
17. To give aid to the poor and underprivileged is:
18. Standing in the way of people who are too sure of themselves is:
19. Being free of social obligations is:
20. To have something good to say about everybody seems:
21. Telling a waiter when you have received inferior food is:
22. Planning to get along without others is:
23. To be able to spot and exploit weakness in others is:
24. A strong desire to surpass other's achievements seems:
25. Sharing my personal feelings with others would be:
26. To have the ability to blame others for their mistakes is:
27. For me to avoid situations where others can influence me would be:
28. Wanting to repay others' thoughtless actions with friendship is:
29. Having to compete with others for various rewards is:
30. If I knew that others paid very little attention to my affairs it would be:
31. To defend my rights by force would be:
32. Putting myself out to be considerate of others' feelings is:

33. Correcting people who express an ignorant belief is:
34. For me to work alone would be:
35. To be fair to people who do things which I consider wrong seems:

Cohen classified the items as follows:

Scale	Items
Compliant	2,3,9,13,17,20,25,28,32,35
Aggressive	4,7,8,11,12,14,16,18,21,23,24,26,29,31,33
Detached	1,5,6,10,15,19,22,27,30,34

2. *ITEM DISCRIMINATION*

(a) Findley Index

To assess item discrimination of this scale, items were grouped for analysis, after being administered in the same form as that used by Cohen (1967). Thus the criterion used was the total score for each sub-scale rather than the total score for the 35 items.

The non-dichotomous Likert-type response format, with six available responses, was scored as correct if the response was 6, 5 or 4 (indicating a strong orientation). Appendix A provides explanation of the procedure used to calculate this index.

N = 36 Upper Group = 12 Lower Group = 12

Method of Calculation (Using Item 1 - Detached orientation)

	Extremely Undesirable			Extremely Desirable			
Available Responses	1	2	3	4	5	6	
Upper Group Selection	-	-	2	2	3	5	12
Lower Group Selection	4	3	2	2	1	-	12
	"Incorrect"			"Correct"			

$$F.I. = \frac{X - Y}{A} = \frac{10 - 3}{12} = \frac{7}{12} = .58$$

Summary of Findley Indices:

Item	Findley Index	Accept	Item	Findley Index	Accept
Compliant Sub-scale					
2	.58	Yes	20	.75	Yes
3	.58	Yes	25	.75	Yes
9	.67	Yes	28	.75	Yes
13	.50	Yes	32	.67	Yes
17	.58	Yes	35	.67	Yes
Aggressive Sub-scale					
4	.67	Yes	21	.58	Yes
7	.67	Yes	23	.58	Yes
8	.58	Yes	24	.67	Yes
11	.75	Yes	26	.42	No
12	.67	Yes	29	.42	No
14	.50	?	31	.67	Yes
16	.25	No	33	.75	Yes
18	.25	No			
Detached Sub-scale					
1	.58	Yes	19	.58	Yes
5	.58	Yes	22	.58	Yes
6	.67	Yes	27	.58	Yes
10	.58	Yes	30	.58	Yes
15	.67	Yes	34	.67	Yes

This analysis indicated 10 acceptable items in the Compliant and Detached sub-scales and 11 in the Aggressive sub-scale.

(b) Guilford Phi ϕ Value

The procedure used is explained and the necessary tables are presented in Appendix A. For the analysis the items were again grouped into the three sub-scales.

Summary of Guilford Phi ϕ Value

Item	PU	PL	ϕ	p	Signif. Difference
Compliant Sub-scale					
2	.92	.33	.60	< .01	Yes
3	.83	.25	.57	< .01	Yes
9	.92	.25	.68	< .001	Yes
13	.92	.42	.52	< .01	Yes
17	.83	.25	.57	< .01	Yes
20	1.00	.25	.76	< .001	Yes
25	.92	.17	.75	< .001	Yes
28	.83	.08	.74	< .001	Yes
32	.92	.25	.68	< .001	Yes
35	.83	.17	.66	< .001	Yes
Aggressive Sub-scale					
4	.92	.25	.68	< .001	Yes
7	.83	.17	.66	< .001	Yes
8	.75	.17	.57	< .01	Yes
11	.92	.17	.75	< .001	Yes
12	.92	.25	.68	< .001	Yes
14	.83	.33	.49	< .02	?
16	.75	.50	.26	> .05	No
18	.67	.42	.25	> .05	No
21	.92	.33	.60	< .01	Yes
23	.83	.25	.57	< .01	Yes
24	.92	.25	.68	< .001	Yes
26	.83	.42	.42	< .05	No
29	.75	.33	.42	< .05	No
31	.83	.17	.66	< .001	Yes
33	1.00	.25	.76	< .001	Yes
Detached Sub-scale					
1	.75	.17	.57	< .01	Yes
5	.67	.08	.54	< .01	Yes
6	.75	.08	.67	< .001	Yes
10	.83	.25	.57	< .01	Yes
15	.83	.17	.66	< .001	Yes
19	.83	.25	.57	< .01	Yes
22	.83	.25	.57	< .01	Yes
27	.92	.42	.52	< .01	Yes
30	.92	.33	.60	< .01	Yes
34	.92	.25	.68	< .001	Yes

The Selltiz *et al* (1965) method of item discrimination was not used for the Cohen CAD scale, since results produced for the author's n-Achievement scale were similar to those for the two other methods.

All items in the Compliant and Detached sub-scales proved satisfactory discriminations, but four of the Aggressive sub-scale items were unacceptable. These and a further one (Item 14) were deleted, leaving three equal sized sub-scales, each with ten items.

3. RELIABILITY - WHOLE SCALE

(a) Test-Retest (co-efficient of stability)

Compliant Sub-scale

Subject	X	Y	X^2	Y^2	XY
A	43	40	1849	1600	1720
B	51	46	2601	2116	2346
C	23	27	529	729	621
D	40	41	1600	1681	1640
E	24	26	576	676	624
F	31	30	961	900	930
G	36	39	1296	1521	1404
H	44	47	1936	2209	2068
I	47	41	2209	1681	1927
J	54	52	2916	2704	2808
K	25	29	625	841	725
L	29	28	841	784	812
M	46	41	2116	1681	1886
N	47	51	2209	2601	2397
O	26	32	676	1024	832
P	41	43	1681	1849	1763
Q	50	51	2500	2601	2550
R	29	29	841	841	841
S	30	36	900	1296	1080
T	36	37	1296	1369	1332
	752	766	30158	30704	30306

The Pearson Product-Moment correlation co-efficient was calculated to be 0.9400, which proved statistically significant at the .001 level with a t test (t = 11.6889), 18 degrees of freedom and a two-tailed test.

Aggressive Sub-scale

Subject	X	Y	X^2	Y^2	XY
A	32	35	1024	1225	1120
B	34	36	1156	1296	1224
C	53	55	2809	3025	2915
D	32	33	1024	1089	1056
E	46	41	2116	1681	1886
F	51	54	2601	2916	2754
G	31	29	961	841	899
H	39	36	1521	1296	1404
I	37	44	1369	1936	1628
J	36	39	1296	1521	1404
K	51	54	2601	2916	2754
L	50	46	2500	2116	2300
M	40	34	1600	1156	1360
N	38	38	1444	1444	1444
O	49	53	2401	2809	2597
P	32	36	1024	1296	1152
Q	31	36	961	1296	1116
R	51	47	2601	2209	2397
S	47	49	2209	2401	2303
T	48	42	2304	1764	2016
	828	837	35522	36233	35729

The Pearson Product-Moment correlation co-efficient was calculated to be 0.8797, which proved statistically significant at the .001 level with a t test (t = 7.8491), 18 degrees of freedom and a two-tailed test.

Detached Sub-scale

Subject	X	Y	X^2	Y^2	XY
A	36	38	1296	1444	1368
B	39	37	1521	1369	1443
C	46	48	2116	2304	2208
D	34	36	1156	1296	1224
E	40	34	1600	1156	1360
F	44	47	1936	2209	2068
G	32	43	1024	1849	1376
H	41	45	1681	2025	1845
I	40	36	1600	1296	1440
J	41	37	1681	1369	1517
K	43	47	1849	2209	2021
L	41	44	1681	1936	1804
M	36	40	1296	1600	1440
N	37	38	1369	1444	1406
O	41	40	1681	1600	1640
P	34	35	1156	1225	1190
Q	39	40	1521	1600	1560
R	46	42	2116	1764	1932
S	40	40	1600	1600	1600
T	39	40	1521	1600	1560
	789	807	31401	32895	32002

The Pearson Product-Moment correlation co-efficient was calculated to be 0.5466, which proved statistically significant at the .02 level with a t test (t = 2.7694), 18 degrees of freedom and a two-tailed test.

(b) Split-Halves (co-efficient of internal consistency)

Compliant Sub-scale

Subject	X	Y	X^2	Y^2	XY
A	21	22	331	484	462
B	26	25	676	625	650
C	10	13	100	169	130
D	19	21	361	441	399
E	12	12	144	144	144
F	17	14	289	196	238
G	17	19	289	361	323
H	22	22	484	484	484
I	23	24	529	576	552
J	27	27	729	729	729
K	12	13	144	169	156
L	14	15	196	225	210
M	22	24	484	576	528
N	23	24	529	576	552
O	13	13	169	169	169
P	20	21	400	441	420
Q	25	25	625	625	625
R	14	15	196	225	210
S	15	15	225	225	225
T	17	19	289	361	323
	369	383	7299	7801	7529

The Pearson Product-Moment correlation co-efficient was calculated to be 0.9831 (after test-length correction), which proved statistically significant at the .001 level with a t test (t = 22.7883), 18 degrees of freedom and a two-tailed test.

Aggressive Sub-scale

Subject	X	Y	X^2	Y^2	XY
A	15	17	225	289	255
B	18	16	324	256	288
C	26	27	676	729	702
D	16	16	256	256	256
E	23	23	529	529	529
F	25	26	625	676	650
G	14	17	196	289	238
H	19	20	361	400	380
I	17	20	289	400	340
J	18	18	324	324	324
K	27	24	729	576	648
L	26	24	676	576	624
M	20	20	400	400	400
N	20	18	400	324	360
O	23	26	529	676	598
P	15	17	225	289	255
Q	15	16	225	256	240
R	24	27	576	729	648
S	23	24	529	576	552
T	25	23	625	529	575
	409	419	8719	9079	8862

The Pearson Product-Moment correlation co-efficient was calculated to be 0.9450 (after test-length correction), which proved statistically significant at the .001 level with a t test (t = 12.2567), 18 degrees of freedom and a two-tailed test.

Detached Sub-scale

Subject	X	Y	X^2	Y^2	XY
A	18	18	324	324	324
B	20	19	400	361	380
C	24	22	576	484	528
D	17	17	289	289	289
E	19	21	361	441	399
F	21	23	441	529	483
G	16	16	256	256	256
H	20	21	400	441	420
I	19	21	361	441	399
J	20	21	400	441	420
K	20	23	400	529	460
L	20	21	400	441	420
M	18	18	324	324	324
N	19	18	361	324	342
O	19	22	361	484	418
P	16	18	256	324	288
Q	19	20	361	400	380
R	22	24	484	576	528
S	20	20	400	400	400
T	20	19	400	361	380
	387	402	7555	8170	7838

The Pearson Product-Moment correlation co-efficient was calculated to be 0.8657 (after test-length correction), which proved statistically significant at the .001 level with a t test (t = 7.3369), 18 degrees of freedom and a two-tailed test.

APPENDIX C

THE QUESTIONNAIRE

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SMALL BUSINESS QUESTIONNAIRE

PART A	BASIC DATA

1. Name(s) of Owner(s)

1.
2.
3.
4.

2. Name of Business .....

3. Business Address .....

4. Private Address(es)

1.
2.

5. Business Telephone

6. Private Telephone(s) 1. 2.

7. Type of Ownership

SOLE TRADER
PARTNERSHIP
PRIVATE COMPANY

8. Industrial Classification

ASIC Coding Number

PART B | EDUCATION

Level Completed

9. To what level were you educated? (tick highest level)

FINISHED PRIMARY ☐

HIGH SCHOOL TO YEAR -

ONE ☐ FOUR ☐

TWO ☐ FIVE ☐

THREE ☐ SIX ☐

TERTIARY LEVEL -

DID NOT GRADUATE ☐

CERTIFICATE ☐

DIPLOMA ☐

DEGREE ☐

Relevance to Present Work

10. Did you study any business subjects or courses (e.g. accounting, management, supervision, etc.) at any level of your education?

YES ☐ NO ☐

11. If YES to Question 11, to what level did you study business subjects or courses? (tick highest level)

TERTIARY ☐ SECONDARY ☐

12. Have you ever studied any technical subjects or courses relating to the type of work you are now doing (e.g. plumbing, electrical, salesmanship, etc.)? Exclude apprenticeship education from your answer.

YES ☐ NO ☐

13. What type of primary and secondary school did you attend during the majority of your formal schooling years?

GOVERNMENT SCHOOL ☐ NON-GOVERNMENT SCHOOL ☐

PART C | PRE-DECISION EXPERIENCE

Occupational (Trade or Professional) Experience

Duration

14. How many years' experience did you have, before starting this business, in the type of work you are now doing?

NONE	☐	6 TO 10 YEARS	☐
UNDER 2 YEARS	☐	11 TO 20 YEARS	☐
2 TO 5 YEARS	☐	OVER 20 YEARS	☐

Relevance to Present Work

15. Has your occupational, trade or professional experience (if any) been mainly the same as, or different from, the work you are now doing?

MAINLY THE SAME ☐ MAINLY DIFFERENT ☐

16. Have you completed an apprenticeship in the type of work you are now doing?

YES ☐ NO ☐

17. Has your occupational experience (similar to your present work) been recent (within three years of starting this business) or not very recent (not within three years prior to the start of this business)?

RECENT ☐ NOT RECENT ☐

18. What type of work (trade or profession) are you most experienced in?

☐

Salaried Managerial Experience

Duration

19. How many years' experience have you had, while working for someone else, as a manager of some kind?

NONE	☐	6 TO 10 YEARS	☐
UNDER 2 YEARS	☐	11 TO 20 YEARS	☐
2 TO 5 YEARS	☐	OVER 20 YEARS	☐

Relevance to Present Work

20. Has your management experience (if any) been similar to or different from the kind of management you are now doing as an owner/manager?

SIMILAR ☐ DIFFERENT ☐

21. Was your management experience (if any) within a firm which was the same as (or similar to) or rather different from your present firm?

SAME/SIMILAR ☐ DIFFERENT ☐

22. Has your management experience (if any) been recent (within three years prior to starting this business) or not recent (not within three years prior to starting this business)?

RECENT ☐ NOT RECENT ☐

23. What type(s) of management experience have you had?

SALES	☐	OFFICE/ACCOUNTING	☐	PRODUCTION	☐
PERSONNEL	☐	PURCHASING/STORES	☐	GENERAL	☐

24. In what type of firm has most of your management experience been gained?

☐

Ownership Experience

Duration

25. How many years' experience have you had as an owner/manager before you started this business?

NONE	☐	6 TO 10 YEARS	☐
UNDER 2 YEARS	☐	11 TO 20 YEARS	☐
2 TO 5 YEARS	☐	OVER 20 YEARS	☐

Relevance to Present Work

26. If you have previously owned and managed your own business, was the firm (or any of them) the same as, similar to, or rather different from this firm?

SAME ☐ SIMILAR ☐ DIFFERENT ☐

27. Has your previous ownership experience (if any) been recent (within three years prior to starting this business) or not recent (not within three years prior to starting this business)?

RECENT ☐ NOT RECENT ☐

28. How many previous businesses have you owned?

NONE ☐ ONE ☐ TWO ☐ THREE ☐ FOUR ☐
MORE THAN FOUR ☐

29. If you have previously owned a business, what was the main reason for its closure?

INSOLVENT/BANKRUPT	☐	UNPROFITABLE	☐	HEALTH	☐
PERSONAL PROBLEMS	☐	OTHER REASON	☐		

PART D | AGE OF ENTRY TO OWNERSHIP

30. How old were you when you started this business?

UNDER 20 YEARS	☐	40 TO 49 YEARS	☐
20 TO 29 YEARS	☐	50 TO 59 YEARS	☐
30 TO 39 YEARS	☐	60 YEARS OR MORE	☐

PART E | RELIGIOUS AFFILIATION

31. What is your religious affiliation?

PROTESTANT ☐ JEWISH ☐ CATHOLIC ☐ OTHER ☐

PART F | FAMILY BACKGROUND

Socio-economic Status

32. What is (or was) your father's main work?

EMPLOYEE - MANUAL/TECHNICAL ☐
PROFESSIONAL ☐
SELF-EMPLOYED (own business) ☐

33. How much formal schooling did your father have?

PRIMARY ONLY ☐ HIGH SCHOOL - TO YEAR 3 ☐
TERTIARY ☐ BEYOND YEAR 3 ☐

34. How would you describe your parents' financial position?

WEALTHY ☐ QUITE COMFORTABLE ☐ NOT VERY WELL OFF ☐

35. Did your parents live mainly in their own, or rented homes?

OWNED ☐ OWNED AND RENTED ☐ RENTED ☐

Family Mobility

36. Where were you born?

OVERSEAS ☐ OTHER AUSTRALIAN STATE ☐
WESTERN AUSTRALIA ☐

37. How many major moves (changing jobs and towns) have your parents made?

FIVE OR MORE ☐ FOUR ☐ THREE ☐

TWO ☐ ONE ONLY ☐ NONE ☐

Parental Expectation and Discipline

38. How would you describe your parents' discipline?

VERY STRICT ☐ FAIR/DEMOCRATIC ☐ WEAK ☐

39. Indicate your place in the family.

BROTHERS ☐ ☐ ☐ ☐ ☐ ☐

SISTERS ○ ○ ○ ○ ○ ○

(Use numbers to indicate place in family (eldest at left) of brothers and sisters and tick your place.)

40. Are (or were) any of your brothers, sisters, or other close relatives (not parents) in business for themselves?

YES ☐ NO ☐

41. While you were living at home did your mother ever hold a job (apart from home duties) for any reasonable time (say, 2 years, or longer)?

YES - IN OWN BUSINESS ☐

IN FAMILY BUSINESS ☐

AS EMPLOYEE ☐

NO ☐

42. How would you describe relations between your father and yourself?

VERY GOOD ☐ GOOD ☐ AVERAGE ☐ POOR ☐

VERY POOR ☑

PART G	PERSONALITY FACTORS

Some questions obviously susceptible to failure — eg 43.02, 43.11, 43.16

43. Achievement Motivation

Note: The columns of boxes, from the left, are:

A = ALWAYS
F = FREQUENTLY
S = SOMETIMES
R = RARELY
N = NEVER

Place a TICK in the box which indicates most accurately your response to each question.

There are no right or wrong answers!

		A	F	S	R	N
43.01	Do you like being personally responsible for solving difficult problems and completing difficult tasks?					
43.02	Do you think you can succeed at most things you attempt?					
43.03	Do you think and talk about what you hope to achieve?					
43.04	Do you like to know how well or how badly you are doing?					
43.05	Do you prefer to work with friends rather than with experts who may not be close friends?					
43.06	Do you find that associating with very successful people, who show much ambition, increases your desire to succeed?					
43.07	Do you accept challenges when the chances of winning (or succeeding) may not be good?					
43.08	Did your parents set high standards and expect you to measure up to them?					
43.09	Did your parents encourage you to take up worthwhile activities and interests?					
43.10	Do you like trying out new schemes or ideas, even if the chances of success may not be good?					
43.11	Does a person who believes he can succeed have more chance of being successful?					
43.12	Would you prefer being popular to being successful?					
43.13	Do you prefer to ask others to help you with difficult tasks, rather than tackle them by yourself?					

A F S R N

43.14 Would you work hard on a task that you enjoy doing, when you know it will bring no profit?

43.15 Do you feel comfortable when you have no work to do and you are forced to be inactive for, say, 2 or 3 days?

43.16 This question is aimed at finding out how you would feel about taking a financial risk in a business situation.

Suppose you are in business and you are offered an opportunity of investing in a deal where your own personal skill in business will largely determine whether you lose money or profit. Assume that you have funds to invest.

Indicate (by a TICK in the appropriate box) how much you would be willing to invest if the best result the deal can produce (with your skill) is a 50/50 chance of making $10,000 or losing your investment.

NIL ☐ $1000 ☐ $2000 ☐ $3000 ☐ $4000 ☐ $5000 ☐

$6000 ☐ $7000 ☐ $8000 ☐ $9000 ☐ $10000 ☐

43.17 Assuming exactly the same details as in the above Question, except that the deal (taking your own personal skill into account) has a 4:1 chance of making $10,000 profit or losing your investment. How much would you be willing to invest?

NIL ☐ $1000 ☐ $2000 ☐ $3000 ☐ $4000 ☐ $5000 ☐

$6000 ☐ $7000 ☐ $8000 ☐ $9000 ☐ $10000 ☐

43.18 Assume a similar situation, except that the deal (again with your business skill) now has a 1:4 chance of making $10,000 profit or losing your investment (i.e. one chance of profiting and four chances of losing). How much are you now prepared to invest?

NIL ☐ $1000 ☐ $2000 ☐ $3000 ☐ $4000 ☐ $5000 ☐

$6000 ☐ $7000 ☐ $8000 ☐ $9000 ☐ $10000 ☐

Note that some ques, eg 45, 46, 47, are susceptible to attendant failure & to face-saving rationalization!

PART H | ROLE SUCCESS MOTIVATION

44. Why did you want to own your own business?
What was the main reason?

- TO MAKE SOMETHING OF MYSELF (TO GET SOMEWHERE) ☐
- DESIRE TO BE INDEPENDENT AND USE OWN INITIATIVE ☐
- CONCERN FOR FUTURE SECURITY FOR SELF AND FAMILY ☐
- NO REAL FUTURE AS EMPLOYEE ☐
- BOREDOM IN WORKING FOR OTHERS ☐
- NEED WORK (EITHER OUT OF WORK OR FEAR OF SAME) ☐
- TO PROVIDE SUPPLEMENTARY INCOME ☐
- OTHER REASON ☐

45. How strong was your desire to become a small business owner rather than being an employee?

VERY STRONG ☐ STRONG ☐ NOT VERY STRONG ☐

46. How strongly do (or did) you feel the need to be successful in your own business?

VERY STRONGLY ☐ MODERATELY ☐ FAIR/INDIFFERENT ☐

47. What is (or was) your attitude about failing as a small business owner?

VERY UNDESIRABLE ☐ UNDESIRABLE ☐ INDIFFERENT ☐

PART I | POST-DECISION PREPARATION

Duration

48. How long after your definite decision to own your own business did you actually start or buy it?

UNDER 3 MONTHS	☐	1 TO 2 YEARS	☐
3 TO 6 MONTHS	☐	2 TO 5 YEARS	☐
6 TO 12 MONTHS	☐	OVER 5 YEARS	☐

Relevance

49. During the period between definitely deciding to own a business and actually starting operations did you gain any -

MANAGEMENT EXPERIENCE YES ☐ NO ☐

RELEVANT TRADE EXPERIENCE YES ☐ NO ☐

50. What proportion of the finance needed to start or buy the business came from your own funds (i.e. was not borrowed)?

LESS THAN 25% ☐ BETWEEN 25% and 50% ☐

BETWEEN 50% and 75% ☐ OVER 75% ☐

51. The total funds available to start the business were

ADEQUATE ☐ INADEQUATE ☐

52. The fact that you are (or were) in business as a(an) ..... is (or was)

DELIBERATE AND PLANNED ☐ DUE SOMEWHAT TO CHANCE ☐

53. Why did you choose to start business as a(an) ..... specifically?

☐

54. The fact that you are (or were) in business in this particular location is (or was)

DELIBERATE AND PLANNED ☐ DUE SOMEWHAT TO CHANCE ☐

55. Why did you choose this particular location?

☐

56. After you decided to go into business for yourself, how many knowledgeable people did you consult about any matter to do with buying and/or starting this particular business?

NONE ☐ 1 OR 2 ☐ 3 OR 4 ☐ 5 OR MORE ☐

57. If you did seek expert advice, what kind(s) of person(s) did you consult?

BANKER ☐ SOLICITOR ☐ MANAGEMENT CONSULTANT ☐
FRIEND IN BUSINESS ☐ ACCOUNTANT ☐ OTHER ☐

PART J | MULTIPLE JOB HOLDING

58. Do you have (or have you recently had) <u>any other job</u> or occupation in addition to your work in this business?

YES ☐ NO ☐

59. About <u>how many hours</u> each week are (or were) you involved in that other work?

NIL ☐ UNDER 5 HOURS ☐ 5 TO 10 HOURS ☐
10 TO 15 HOURS ☐ 15 TO 20 HOURS ☐ OVER 20 HOURS ☐

PART K | MEMBERSHIP IN OTHER ORGANISATIONS

60. Are you an active member of any type of club, association or society?

YES ☐ NO ☐

61. If YES, what type of organisation are you involved in?

SPORTING/SOCIAL ☐ POLITICAL ☐ SERVICE/WELFARE ☐

62. If YES to Question 60, are you currently (or recently) an office bearer or a committee member?

YES ☐ NO ☐

63. If YES to Question 60, what is your main reason for membership in the club, association or society?

RECREATION ☐ BUSINESS CONTACTS ☐ PRESTIGE/STATUS ☐
SENSE OF DUTY OR RESPONSIBILITY ☐

64. If YES to Question 60, do you think that your club activities and membership benefit your business in any way?

YES ☐ UNCERTAIN ☐ NO ☐

65. If YES to Question 60, approximately how many hours each week (on the average) would your club activities and responsibilities use up?

UNDER 1 HOUR ☐ 1 TO 3 HOURS ☐

3 TO 5 HOURS ☐ OVER 5 HOURS ☐

PART L | MARITAL STATUS AND FAMILY RESPONSIBILITY

66. Are you married? YES ☐ NO ☐

If YES to Question 66, answer Questions 67 to 69.
If NO, go straight to Question 70.

67. How many dependents, other than spouse, do you have at home?

☐ CHILDREN ☐ PARENTS ☐ OTHER ☐ TOTAL
(Write the numbers in the boxes)

68. Is your family life happy?

VERY ☐ AVERAGE ☐ NO ☐

Do you feel that, as a business owner/manager, you have the necessary support and encouragement from your family for the work you do?

FULL SUPPORT ☐ INDIFFERENT ☐ NO ☐

69. Is your spouse working -

IN HOME DUTIES ONLY ? ☐

HOME DUTIES AND PART-TIME HELP IN FAMILY BUSINESS ? ☐

HOME DUTIES AND OUTSIDE JOB ? ☐

PART M | SEX

70. MALE ☐ FEMALE ☐

PART N | PHYSICAL CONDITION

71. How frequently do you suffer illness which prevents you being at work?

FREQUENTLY ☐ SOMETIMES ☐ RARELY ☐

72. Describe how you usually feel.

FIT/ENERGETIC ☐ FAIRLY WELL ☐ TIRED/SLUGGISH ☐

PART O | PERSONALITY FACTORS

73. Interpersonal Response Traits

Set out below are 30 incomplete statements which describe a variety of possible situations. Each statement is followed by 6 blank boxes, the first being labelled EXTREMELY UNDESIRABLE and the last EXTREMELY DESIRABLE. There are no "right" or "wrong" answers". You are asked to express how you feel about each situation (in the incomplete statements) by placing a TICK in the appropriate box. Your first impulse to each situation is probably the more valid, so do not go back over your answers.

Example:	EXTREMELY UNDESIRABLE					EXTREMELY DESIRABLE
Asking a friend to lend you money is ...		✓				

The TICK placed in the box second from the left means that, for this person, the situation described is rather undesirable.

		EXTREMELY UNDESIRABLE					EXTREMELY DESIRABLE
73.01	Being free of emotional ties with others is ...						
73.02	Giving comfort to those in need of friends is ...						
73.03	To know that most people are fond of me at most times would be ...						
73.04	To refuse to give in to others in an argument seems ...						
73.05	Enjoying a good film by myself is ...						

		EXTREMELY UNDESIRABLE					EXTREMELY DESIRABLE
73.06	For me, to pay little attention to what others think of me seems ...						
73.07	For me to be able to own something before most of my friends can afford to do so would be ...						
73.08	Knowing that others are somewhat envious (jealous) of me is ...						
73.09	To feel that I like everyone I know would be ...						
73.10	To be able to work hard while others are elsewhere having fun is ...						
73.11	Using pull or influence to get ahead of a rival would be ...						
73.12	For me to have enough money to impress self-styled "big-shots" would be ...						
73.13	To be concerned about my duty to others is ...						
73.14	If I could live alone in an isolated place it would be ...						
73.15	To help the poor and under-privileged is ...						
73.16	Being free of social obligations would be						
73.17	To have something good to say about everyone seems ..						
73.18	Telling a waiter when you have received inferior food is ...						
73.19	Planning to get along without help from others is ...						
73.20	To be able to spot and exploit weakness in others would be ...						
73.21	A strong wish to better the achievements of others is ...						
73.22	Sharing my personal thoughts with others is ...						
73.23	For me to avoid situations where others can influence me would be ...						