A study explored whether mature age students' conspicuous academic success could be partially explained by motivation. It compared motives of a sample of mature "graduate mothers" to those of a sample of mature age "student mothers" who had interrupted a program of study. The 117 graduate participants were randomly chosen from a sample of 25- to 71-year-old female graduates with children from four Australian universities; 118 women were in the sample who had discontinued a course of study at three universities. A modified version of the revised Maslin Continuing Education Women Motives Questionnaire was completed by both samples. To compare motivation of the two samples (graduates and interrupters), a series of analyses were performed using scale scores as the dependent variables and sample membership with each of the predictor variables (age, marital status, etc.) as independent variables. Possible interactions between sample and each predictor variable were explored. Findings indicated significant interactions were found between sample membership and the two variables marital status and family hostility. The sample main effect was found to be significant when the analysis included type of secondary school attended. The strongest single predictor of motivation was previous level of education, with age, marital separation as a precursor of return to study, and family life cycle stage all being significantly related to motivation regardless of sample membership. (YLB)
Over the last two decades there has been a worldwide increase in the number of mature age students, many of whom are women. Popular stereotypes of mature age students have not always been positive - the mature age student has been viewed as likely to already have a degree and to therefore be depriving a younger student of the chance of a first degree. Also expressed is the fear that long absence from study and/or admission to university under special entry provisions may mean an inability to benefit from tertiary education (Currie and Baldock, 1989).

However, the research has shown that these perceptions of mature age students are not accurate (Currie and Baldock, 1989). Australian research by West, Hore, Eaton & Kermond (1986) has shown that, in reality, mature age students come from a wide range of previous educational backgrounds and experience considerable academic and career success. This is also true of student mothers as research on mature age female students with children (Burns, Scott, Cooney & Gleeson, 1988) has shown. Mothers' academic performance was above that of mature age students in general and they reported greater increases in ability and life satisfaction.

Why do mature age students perform so well? The student mothers' explanation of their superior performance was that they were 'more motivated'. Common sense explanations by university staff also depicted the mothers as having higher levels of motivation (Burns et al, 1988). This study aims to explore the posited relationship between motivation and success at study, as defined by successful completion of a course of study and subsequent graduation.

Where previous studies have addressed motivation for study it has most often been by simply asking research participants why they returned to university. Attempts to develop more refined measures of motivation or to quantify it have been rarer (Boshier, 1971; Boshier & Collins, 1985). The relationship between motivation for study and other variables such as previous educational experience, age, family life cycle stage or marital status has also not often been explored.

The instrument chosen to measure motivation for the current research was based on Maslin's (1978) Continuing Education Women Motives Questionnaire, a seventy item scale designed specifically for use with mature age women. Maslin administered the questionnaire to a sample of 250 American mature age women students and used the data to derive eight motivational factors and eight motivational types. Clayton and Smith (1987) later administered a 65 item version of Maslin's scale to a further 100 American mature age women students. Factor analysis of their data yielded 8 factors which were, however, somewhat different to Maslin's. The 8 new factors were named Self-improvement, Self-actualisation, Vocational, Role, Family, Social, Humanitarian and Knowledge. These were used to derive 8 motivational types. How the various scales related to demographic variables was not reported.

The current research explores the question of whether mature age students' conspicuous academic success can be at least partially explained by motivation by comparing the motives of a sample of mature 'graduate mothers' to those from a sample of mature age 'student mothers' who had interrupted a program of study.
The Graduate Sample.

The graduate participants were randomly selected from a sample of 25 to 71 year old mature age female graduates with children from four Australian universities who had previously participated in a study of their university and post-university experiences. Included were questions on sources of support and stress during study and satisfaction with previous and current employment, as were items about changes in marital status and whether these had been related to the decision to commence study.

Participants' mode of entry was classified using West et al.'s (1986) five way typology - previous graduates, undertaking another degree (recyclers), those with sub-degree professional qualifications (up-graders), early school leavers on special entrance programs, matriculants who had not proceeded immediately to university (deferrers) and those who had discontinued a previous course of study (discontinuers).

A modified version of the revised Maslin scale, containing 64 items, was used. Items remained substantially the same except for some slight changes in terminology to make wording more appropriate for Australian conditions (for example substituting 'university' for 'college'). The same 5 point scale of agreement was used (1 = not important, 5 = very important). Copies were sent by post to 150 participants who had consented to further involvement in the study and 117 usable questionnaires were returned. The composition of the subsequent sample closely matched that of the original graduate study. Mean age was 42, with a range of 32 to 66 years. Mean number of children was 2.5, range 1 to 5 and ages of children ranged from infants to adults of 30 or more years of age. Fifteen percent of the women had preschool aged children and another 15% had youngest children who were aged 18 years or more. The remaining women (70%) had youngest children who were school aged.

Eighty four subjects were married and 33 were single. Of the singles 13 indicated that their divorce or separation had influenced their decision to return to study. A further 15 replied that their return to study had contributed to their relationship breakdown.

Twenty one percent were early school leavers, 35% were up-graders, 21% recyclers, 14% discontinuers and 9% had deferred entry to tertiary study. Forty had studied university A, 19 at university B, 18 at university C and 39 at university D. Eighty three percent had graduated from arts, humanities or education degrees, with only 7% studying in non-traditional areas - economics, management, law, science or technology.

As the sample differed from the two American ones by including only women who already had children when they commenced study and who had already graduated, it was decided as a first step to run an exploratory factor analysis on the Maslin scale.

A first solution including all factors with eigen values greater than one yielded eight factors, as in the US studies. However the last three factors had eigen values not much larger than one. Rotation of the eight components gave a solution with five well-defined and three ill-defined factors. The five factor solution was accordingly adopted. These five factors were somewhat different to those found in the US studies.

The first factor consisted of items that stressed learning and self improvement with a humanitarian flavour and was named Altruistic Self Development. The second, in contrast, consisted of items which suggested dissatisfaction with current life circumstances. It was named Compensatory.

The third factor contained vocational items but unlike the American Vocational factor it also included many items from the Family Advancement factor and was named accordingly Vocational/Family Advancement. Apparently for this sample of Australian mothers vocational advancement is seen as inseparable from improving the family's financial situation.

The fourth factor consisted of items which stressed role questioning and also the need to prove oneself, to self or to others and was named Role Questioning. The fifth factor was another self-development factor, stressing learning as a way to evaluate oneself and discover new potentials and was named Autonomous Self-development.

Scales were calculated from items which loaded .4 or higher on each factor; these were found to have fair to very good reliability (0.70 to 0.93).
The Interrupting Students.

To contact women who had discontinued a course of study a list of potential participants was obtained by contacting student administration at three universities who had participated in the graduate study - A, B and C. The institutions supplied the names and addresses of all female students who were aged 30 or more in 1988 and who had enrolled between 1983 and 1988 but discontinued without completing their course.

Potential participants were sent a letter outlining the purpose of the study and inviting them to fill in the enclosed questionnaire and return it reply paid to the researcher. University records do not indicate parental status so it was necessary to contact all mature age women. It was also anticipated that as potential respondents would be less willing to reveal the details of a discontinued program of study than graduates had been to discuss their successfully completed courses it would be necessary to over-sample to assure a reasonable sample size. Hence 950 questionnaires were sent out. The questionnaire was a modified version of that sent to the graduates and included the modified CEWQ.

Fourteen percent of the questionnaires were returned unopened and 130 were returned at least partially completed. Of these, 12 were unusable, either because they were returned too late, the respondent was childless, too little had been completed or responses were illegible. Final sample size was 118.

Age distribution was similar to the graduate sample with participants' ages ranging from 34 to 60, with a mean of 43. Interrupters had from one to nine children with a mean of 2.4 and were evenly distributed throughout the family life cycle, as measured by age of youngest child. However there was some difference between participants from the three institutions - women from B had no preschoolers and few adult children, with most having school aged children (92%). A relatively high percentage (41%) of C students had adult youngest children.

Fifteen percent of the sample had entered their discontinued course as early school leavers, 48% were attempting to up-grade a previous qualification, 27% wished to switch disciplines, 7% had discontinued from a previous tertiary course and 6% had qualified to enter tertiary study as school leavers but had deferred.

Thus total sample percentages show that there were fewer interrupters with low entry qualifications and more who were upgrading or broadening previous qualifications compared with the graduate mothers from the same institutions (Burns and Scott, 1993).

Discontinued courses were classified as arts/humanities/education, economics/business/ law or science/technology. Sixty six percent of participants had discontinued an arts/humanities/ education course, 15% had left a business course and 19% had discontinued a science/technology course. Ex-students from non-traditional courses are thus over-represented amongst the Interrupters. There were no significant differences in field of study between institutions with the exception that somewhat fewer students from B had left a science or technology course than had students from the other two universities.

Examination of figures for percentage of course completed shows that proportions of students leaving before enrolment, early in first year, later in first year or during second year were similar. Relatively few students left after completing two thirds or more of their course (6%). Distribution for for each institution was not significantly different, however relatively more C students (22%) withdrew without commencing study and no B students left very late in their course.

After preliminary analysis of the questionnaire data a number of 'typical' participants were selected to be part of a case study component of the research.

Motivation Compared.

A reliability analysis of the five motivation scales yielded alphas for the interrupters which were very close or identical to those from the graduates sample.

To compare motivation of the two samples (graduates and interrupters) a series of MANOVAs were performed using scale scores as the dependent variables and sample membership with each of the predictor variables (age, marital status ans so on) as independent variables. Possible interactions between sample and each predictor variable were also explored. This technique allows for the effects of sample membership and each predictor variable to be examined together so that the significance of each as a predictor of motivation can be assessed.
A fuller discussion of the findings appears below but in summary significant interactions were found between sample membership and the two variables marital status and family hostility. The sample (graduates/interrupters) main effect was found to be significant when the analysis included of type of secondary school attended. The strongest single predictor of motivation was previous level of education, with age, marital separation as a precursor of return to study and family life cycle stage all being significantly related to motivation, regardless of sample membership. Dissatisfaction with job held before study also showed a tendency to predict motivation for return.

Previous Level of Education.

The results of these analyses demonstrated that the strongest predictor of motivation was previous level of education. Differences were found on the Compensatory, Role questioning and Autonomous Self Development motivations. On each of these scales the tendency was for those with lower levels of previous education to score higher than Up-graders and Recyclers. As relatively few interrupters came from low levels of previous education compared to the graduates this result suggests that, all things being equal, the higher level of motivation arising from lack of a tertiary qualification may aid successful completion of study.

Type of Secondary School Attended.

When influence of type of secondary school attended was investigated the sample (graduates/interrupters) main effect was found to be significant. However no univariate effects reached significance. Examination of the discriminant function statistics showed that this was the result of differences on the Role questioning and Autonomous Self Development scales where, with the exception of the women who had attended private schools, interrupters scored higher than graduates. Vocational/family advancement also discriminated somewhat between the groups with graduates scoring above interrupters except, again, for the women from private schools who were more similar to each other than to other sample members.

Age.

Age was a significant predictor of motivation with older women scoring lower on the Vocational/family advancement factor.

Marital Status.

An significant interaction was found between marital status and sample membership. Inspection of the results for the individual scales and discriminant function analysis revealed that Humanitarian Self Actualisation motivation accounts for the interaction. Married graduates are higher on this motivation than their single counterparts whilst single interrupters are higher than the married, and considerably higher than the single graduates. Vocational/family advancement motivation approached significance and when the two samples are considered together does differentiate between single and married mothers with the singles scoring significantly higher.

Change of Marital Status.

Marital separation as a precursor of return to study had a significant effect on motivation. This result was accounted for by a significant difference on Vocational/family advancement motivation - women who agreed that their separation had provoked them to return to study scored higher on this motivation. However, those participants who agreed that their studies had contributed to their marriage breakdowns were not significantly different in motivation to those who did not.

Family Life Cycle Stage.

A significant effect was found for age of child/family life cycle stage. When effects of family life cycle stage was explored, patterns of similarity and difference in motivation between the
samples paralleled those seen in the analysis by age. The significant difference was found on, again, the Vocational/family advancement scale - mothers of older children reported less Vocational/family advancement motivation. There was also a trend for Autonomous Self development motivation to increase with age of youngest child.

Family Support.

Family support was measured in a slightly different way in the Interrupter sample than in the graduates sample. Graduates were asked what had hindered them as students. Interrupters were asked specifically if family hostility and/or lack of support had contributed to their decision to leave study and these items were used as the measure of family support or lack of it. Analysis of motivation scale scores using sample by the family hostility item yielded a significant interaction. None of the univariate results for the interaction were significant however significant results were obtained for both the main effects - family hostility and sample. Discriminant function analysis suggested that the interaction was accounted for by differences on the Compensatory scale, with Role Questioning and Autonomous Self development contributing. Whilst graduates from unsupportive families were significantly higher only on the Compensatory scale, interrupters in a similar family situation were not. Interrupters with hostile families, in comparison, were the highest group on both Role questioning and Autonomous Self development.

Work Satisfaction and Career Potential of Previous Job.

Measures of motivation, controlling for job satisfaction showed few differences between the motivations of graduates and interrupters. Work satisfaction did not yield a significant multivariate effect but a significant univariate result was obtained on Compensatory such that again those whose previous jobs were not have satisfying scored higher. Participants from the interrupters sample reporting differing levels of career potential for their previous jobs do not differ significantly on Compensatory motivation, unlike the graduate sample where women with jobs with little or no career potential reported higher levels.

Individual Scale Items.

Trends in differences between the two samples emerged on three scales - Compensatory, Role questioning and Autonomous Self Development. Is there any consistent pattern of differences on the discrete items which compose these scales? To explore this possibility t-tests were run on all of the items which compose the three scales. A number of significant results were obtained.

Compensatory.

Graduates and interrupters differed significantly on two items of the Compensatory scale - 'It is a way to take my mind off my personal troubles and concerns' and 'It is a way of compensating for lack of satisfaction in other aspects of my life'. On both the first item and the second (means=2.21,1.89) interrupters scored higher than graduates.

Role Questioning.

Inspection of all items of the scale revealed that interrupters scored higher than graduates on each one. One item distinguished significantly between the two groups - 'Going to college seems to be the thing to do for women like me'. Whilst neither graduates (1.07) not interrupters (1.2) endorsed this motive very strongly the later group rated it higher. Two other items showed trends towards significance - 'Study will help me gain a new perspective on my marital relationship' and 'Study will help me become someone who counts for something in the world's estimation'. On the first item - 'marital relationship', interrupters averaged 1.57 to graduates' 1.33. whilst on the second item - 'count for something' - interrupters scored a mean of 2.18 and graduates 1.87.
Autonomous Self Development.

Again the trend was for interrupters to score higher on most items. Two items distinguished significantly between the two groups. The first was 'It is a way of learning about subjects which interest me'. Interrupters scored a mean of 3.98 whilst graduates scored 3.28. On the second item, 'Study will help me discover a new life style, a whole new way to live' interrupters scored a mean of 2.1 and graduates 1.8.

DISCUSSION

The differences in motivation that appear between graduates and interrupters are interesting and subtle. Reasons for return to study grow out of personal history and current circumstances and vary in coherent ways with a number of educational and life cycle variables. Low levels of previous education gives the extra incentive of proving ones capacity by completing a degree, which those who had already completed degrees did not have. The relative lack of early school leavers and deferrers amongst the interrupters lends support to the importance of this motivation. However that levels of motivation amongst the previously degreeless were very similar whether they were graduates or interrupters suggests that more information is required if discontinuance is to be explained.

Several of the results of the analyses are in some ways counter-intuitive - women who have interrupted their studies are often higher on certain aspects of motivation than those who graduate. What appears to explain this is a 'mismatch' between types of motivation and personal resources. Items which discriminate between graduates and interrupters are those which suggest difficult personal circumstances, such as low self-regard, disappointment with life circumstances, and unsupportive or positively hostile families. Reasons interrupters give for return endorse study as way to take their minds off their troubles or to seek an escape from these difficulties, to help them decide, for instance, whether to stay in a difficult marriage, as is evidenced by their higher scores on the Role Questioning scale. Graduates with unsupportive families, on the other hand, seem to have already decided on study a definite course of action which help to make their lives more satisfying, as is reflected in their higher scores on the Compensatory scale.

Also associated with discontinuing a degree were higher or lower scores on Humanitarian Self Actualisation motivation when combined with certain circumstances. Married women who graduated were high on this motive, but so were unmarried women who did not graduate. It seems that idealistic motives are no hindrance to or are even helpful for scholarly success as long as ones personal resources are also adequate. To be motivated by altruism when one is struggling is not conducive to success, rather the ability to ask for and accept support from others is what is needed.

There is evidence that a possible secret of success was, for the graduates who were seeking escape from difficult spouses and hostile families, support found amongst fellow students and university personnel. Analyses conducted on the graduate sample only using a source-of-support measure showed that those who scored very high on compensatory motivation were very likely to have nominated fellow students and/or university staff as their main source of support (Scott, Burns and Cooney, 1992). Interrupters may not have been able to find similar support. Certainly, when asked what would have helped them to graduate, the interrupters' most frequent response was 'more support'. One single mother who had interrupted her correspondence studies summed it all up well, if sadly:

My hopes were high, my situation appalling and the institution a poor distance education centre. I feel that I've failed and there is a black mark against me forever. It increased the worthlessness I already felt.

Another interrupter, who had affirmed family hostility as a reason for discontinuing, remarked that she felt alienated from other (mostly school leaver) students because as the mother of a small baby she could not join in social activities with them and they did not understand her difficulties. In comparison a graduate who had suffered severe hostility from her husband eulogised the support to be found in the university coffee shop between lectures.
A mismatch between what is wanted from study and what the institution or particular course have
to offer may also predispose students to leaving. Studying for the love of it is not necessarily an
unqualified good - those who discontinued were higher on this motive than the graduates.
Perhaps the tendency to credentialism apparent in contemporary higher education was unpalatable
to those who would learn for the sake of it or perhaps an inclination to sheer love of learning makes the value of actually gaining a degree somewhat lower.
Mature age women students, even those who have children, are a heterogeneous group characterised by strong motivations to study which nonetheless vary according to previous education, age and life circumstances. Those whose life circumstances are the most difficult are likely to be both very motivated and vulnerable to leaving their studies before graduation. A flexible and sympathetic approach to course organisation that takes into account the life demands carried by students plus the development and publicising of support services for the most at-risk groups would improve chances of graduation.

REFERENCES.