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THE UNIVERSITY OF ALBERTA

THE INFLUENCE OF PHYSICAL ACTIVITY ON SELECTED PSYCHOLOGICAL VARIABLES

by 🗶

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS STUDIES

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EDMONTON, ALBERTA

SPRING 1987

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CONNIE ELLEN MCDONALD

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PSYCHOLOGICAL VARIABLES

DEGREE FOR WHICH THESIS WAS PRESENTED MASTER OF ARTS

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PERMANENT ADDRESS:

202 31 Saddleback Row Edminter allerta 765 4n1.4

DATED april 6 19 87

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled THE INFLUENCE OF PHYSICAL ACTIVITY ON SELECTED PSYCHOLOGICAL VARIABLES submitted by CONNIE ELLEN McDONALD in partial fulfilment of the requirements for the

degree of MASTER OF ARTS.

Supervisor

4-11-6 Date ...



The effect of two types of group exercise classes (aerobic and non-aerobic) was compared on changes in mood-state in sedentary females. The subjects were 43 females from the staff and student population at the University of Alberta. The two exercise groups were compared to a non-exercising control group on mood state changes before and after a nine-week training program. The results indicate there was a statistically significant change from time 1 to time 2 on 5 of 8 mood state variables. There was no evidence of a group effect or a group by time effect. On 3 of 8 variables, a non-statistically significant change occurred in the expected direction with the two exercise groups improving, while the control group showed no improvement. The short-term effect of exercise on mood state was also measured by

Abstract

assessing mood state in the two exercise groups before and after a single exercise class. Results indicate that a statistically significant improvement on 6 of 7 mood state variables occurred after involvement in a single exercise class.

I would like to thank Dr. M. F. R. Smith for his guidance and confidence in me throughout this endeavor. I am honored to be a student of his.

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| Chapter | | Pag |
|------------|------------------------------------|---------------------------------------|
| ì I. Intr | oduction | ••••• |
| Α. | Background | |
| В. | Statement of the Problem | ••••• |
| с. | Hypothesis | |
| - | Definition of Terms | |
| Ε. | Limitations | |
| II. Rev | view of Literature | • • • • • • • |
| Α. | Case Studies | |
| B. | Before-After Non-Randomized Design | |
| С. | Before-After Randomized Design | |
| D . | | |
| III. Me | thods and Procedures | 1 |
| ά Α. | Subjects | 2 |
| В. | Measures | |
| | Beck Depression Inventory (BDI) | ړي: 2 |
| | Profile of Mood States (POMS) | |
| | Life Events Survey (LES) | |
| | Aerobic Capacity | |
| | Qualitative Data | · · · · · · |
| ° C | Design | , , , , , , , , , , , , , , , , , , , |
| D. | Treatments | |
| | Aerobic Exercise Group | |
| | Stretch and Tone Group | |
| | Control Group | |
| Е. | Procedures | |
| | | |
| F. | Statistical Analysis | |

| | A. Summary of Results: Experiment #1 | 130 |
|--|--------------------------------------|-----------------|
| рл Полония | | |
| | Drop-Outs | |
| 1 | Qualitative Data | 41 |
| | B. Summary of Results: Experiment #2 | 42 |
| | C. Summary of Results: Experiment #3 | 48 |
| V. | . Discussion | 53 |
| Ì | A. Experiment #1 | 53 |
| | B. Experiment #2* | |
| | C. Experiment #3 | |
| | | |
| VI. | Summary and Recommendations | |
| · · · · · · · · · · · · · · · · · · · | A. Summary | 58 |
| | B. Recommendations | 58 |
| Refer | ences | _. 60 |
| Apper | ndices | 63 |
| • | | • |
| | | • |
| | | |
| • | \sim | |
| | | |
| | | |
| | | |
| | 2 | |
| | 2 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| Table | Description | Page |
|----------|---|---------------|
| 1 | Summary of Reviewed Literature | 17 . e |
| 2, | Characteristics of Subjects in Experiment #1 | 31 |
| 3 | Summary of Results for Experiment #1 | 32 |
| 4 | Probability Levels in Experiment #1 | 35 |
| 5 | Summary of Graph Results for Experiment #1 | 40 |
| 6 | Drop-Out Data for Experiment #1 | 41 |
| 7 | Theme Categories for Qualitative Questionnaire from | |
| | Experiment #1 | 43 |
| 8 | Characteristics of Subjects in Experiment #2 | 44 |
| 9 | Summary of Results for Experiment #2 | 47 |
| 10 | Probability Levels in Experiment #2 | 48 |
| 11 | Characteristics of Subjects in Experiment #3 | 49 |
| | Summary of Results for Experiment #3 | 50 |

ix.

•

•

| 1Results of Aerobic Capacity for Experiment #1332Results of Beck Depression Inventory343Results of POMS Depression, Vigor, and Fatigue Subscales364Results of POMS Anger, Tension, and Confusion Subscales364Results of POMS Anger, Tension, and Confusion Subscales385Results of POMS Total Score for Experiment #1396Results of Experiment #246 | | Page | Description | igure | Fig |
|---|---------------|----------|--|-------|----------------|
| 3 Results of POMS Depression, Vigor, and Fatigue Subscales for Experiment #1 4 Results of POMS Anger, Tension, and Confusion Subscales for Experiment #1 5 Results of POMS Total Score for Experiment #1 6 Results of Experiment #2 | • • | 33 | Results of Aerobic Capacity for Experiment #1 | 1 | |
| for Experiment #1364Results of POMS Anger, Tension, and Confusion Subscales for Experiment #1385Results of POMS Total Score for Experiment #1396Results of Experiment #246 | | 34 | Results of Beck Depression Inventory | 2 | |
| 4 Results of POMS Anger, Tension, and Confusion Subscales for Experiment #1 5 Results of POMS Total Score for Experiment #1 6 Results of Experiment #2 46 | | .• | Results of POMS Depression, Vigor, and Fatigue Subscales | 3 | |
| for Experiment #1385Results of POMS Total Score for Experiment #1396Results of Experiment #246 | | . 36 | for Experiment #1 | | 1 |
| 5Results of POMS Total Score for Experiment #1396Results of Experiment #246 | • | • • • | Results of POMS Anger, Tension, and Confusion Subscales | 4 | 1 - 1 - |
| 6 Results of Experiment #2 46 | at yn +a ≥ | 38 | for Experiment #1 | . * | |
| | | 39 | Results of POMS Total Score for Experiment #1 | 5 | Ę |
| | | 46 | Results of Experiment #2 | ,6 | , (|
| 7 / Results of Experiment #3 52 | , I , | 52 | Results of Experiment #3 | 7 | - |

書

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I. Introduction

A. Background

Many health professionals, exercise enthusiasts, and psychotherapists believe that physical activity may have beneficial psychological effects. The potential role of physical activity in contributing to mental and emotional functioning is also of substantial interest in current research (Blumenthal et al., 1982; Brown et al., 1978; Ewing & Scott, 1984; Folkins, 1976; Griest et al., 1978; Hayden & Allen, 1984; Hilyer & Mitchell, 1979; Hughes, 1984; Hughes et al., 1986; Jasnoski & Holmes, 1981; Lichtman & Poser, 1983; Lion, 1978; McCann & Holmes, 1984; Monahan, 1986; Moreau, 1981; Morgan, 1985; Weinstein & Meyers, 1983; and Wilfley & Kunce, 1986).

Physical exercise is proposed to influence psychological functioning by such psychosocial factors as:

1. An increase in a sense of mastery. According to Hilyer (1979), physical activity engenders in the exerciser "an increased sense of control over self and the environment" (p. 434). A sense of accomplishment is a natural accompaniment to the feeling of having mastered a positive habit or skill.

2. An improvement in body image due to somatic changes such as a decrease in body fat and an increase in fitness which often accompany a systematic involvement in physical activity.

3. Diversion or distraction away from worrying thoughts while engaged in physical activity. Hughes (1984) states that "cognitive diversion has been proposed to mediate the anti-anxiety and antidepressant effects of exercise because subjects find it difficult to reminate about their problems when they are exercising" (p. 74). This time-out provides a rest from workying and depression.

4. Social interaction or camaraderie that occurs in group exercise situations. Moreau (1981) was particularly concerned with the possible confounding influence of the effect of social interaction on the mediation of aerobic exercise and depression. People who have a low level of social interaction may benefit greatly from becoming involved in regular group exercise programs. The proposed positive effects of exercise may also operate through physiological changes that might occur. Two predominant theories in this area include the endorphin and central amine hypotheses. The theory that exercising results in a release of endorphins (opiates) in the brain which accounts for the positive change in mood state lacks empirical evidence (Markoff et al., 1982). 2

Exercise has also been hypothesized to stimulate central amine responses such as the release of the neuro-transmitters serotonin, dopamine, and norepinephrine. Many treatments for depression, including anti-depressant medication, electro-convulsive shock therapy, and sleep deprivation enhance synaptic transmission of these neuro-transmitters (Ransford, 1982). While some animal research supports this viewpoint, Ransford states that

present statements that single out norepinephrine, dopamine, or serotonin as the crucial amine may be premature or over-simplified. Many more psychological and physiological studies must be performed in order to verify _ and quantify this relationship. (p. 1)

The role of physical activity in enhancing psychological functioning could be beneficial from both a clinical and a non-clinical viewpoint. Clinically, the use of exercise as an adjunct to psychotherapy in the alleviation of mood and personality dysfunction may have several advantages. These may include:

 The non-pharmaceutical nature of exercise results in fewer negative side effects than pharmacological interventions.

Exercise is relatively inexpensive when compared to medical interventions.

3. Exercise has positive physiological side effects when practiced with due caution. Even if no psychological improvement occurs as a result of physical exercise, the physiological improvement may render the intervention useful.

As well as being helpful for clinical application, exercise may also improve psychological functioning in mentally healthy people. The focus of this study is on the non-clinical application of exercise to the 'normal' population.

Although a great deal of research has been done on the influence of exercise on psychological variables, few studies have been conducted to compare modes of exercise. The purpose of this study was to compare two types of exercise, aerobic and non-aerobic, on changes in mood state in females.

B, Statement of the Problem

The purpose of this study was to investigate the following research questions:

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1. What is the difference in depression and mood state scores between an aerobic exercise group, a non-aerobic exercise group (flexibility and muscular endurance), and a control group, after a nine-week training period?

2. What is the difference in mood state scores between an aerobic exercise group and a non-aerobic exercise group when measured before and after an exercise class?

Question one is hereafter referred to as Experiment #1. Question two was broken down into Experiment #2 which was conducted on the day of the first exercise class for both groups, and Experiment #3 which was conducted on the day of the last exercise class for both groups.

C. Hypothesis

1. Both the aerobic and non-aerobic exercise groups will show an improvement in depression and mood state over the nine weeks of training in Experiment #1. The control group will not improve. There will be no difference between the two exercise groups.

2. Both the aerobic and non-aerobic exercise groups will show an improvement in mood state as measured before and after a single exercise class in Experiments #2 and #3. There will be no difference between the two exercise groups.

D. Definition of Terms

Theoretical (T) and Operational (O)

Aerobic Capacity:

(Fox & Mathews, 1981)

(O) As measured by the 8 minute modified Astrand submaximal bicycle protocol

Aerobic Exercise Group:

(O) Exercise classes emphasizing improvement in aerobic

. (T) The ability of the body to transport and utilize oxygen

capacity

Depression

(O) As measured by the Beck Depression Inventory (BDI), short form

Life-Change: Mood States: (O) As measured by the Life Events Survey (LES)(O) As measured by the Profile of Mood State's (POMS)Inventory

<u>Non-Aerobic Exercise Group</u>:(O) Referred to as the 'Stretch and Tone' group, these group classes consisted of flexibility and muscular endurance exercises.

E. Limitations

1. The use of a submaximal predictive test for aerobic capacity is not as accurate as a maximal Vo, test. Time and financial constraints were the primary reasons for choosing a submaximal test.

2. The number of subjects in each of the three groups is relatively small. This affects the power of the statistics to predict outcome. Unfortunately, the number of drop-outs in the study was beyond the researcher's control.

3. Experiments #2 and #3 do not have control groups. This weakens the applicability of the results as there is no control for the passage of time and test-retest effects. The test-retest effect would be demonstrated by an improvement in post-test scores in the control group due to the effect of the attention paid to the subjects by an experimenter.

4. The control group for Experiment #1 is not a true control group due to the non-random nature of assignment. Members of the control group were sedentary females who had no intention of beginning an exercise program.

II. Review of Literature

The review of literature pertinent to this study has been divided into several categories dependent upon the type of research design employed in the study. The categories include: Case studies, Before-After Non-Randomized Design, and Before-After Randomized Design. A summary of the review is provided in Table 1.

A, Case Studies

Blue (1979) conducted a nine week jogging program with two former inpatients at a psychiatric hospital after eight weeks of psychotherapy failed to alleviate their depression. The two subjects, one male and one female, jogged two to three times per week at the clinic. The male's depression scores on the Zung scale were reduced to mild from moderate, and the female from moderate to minimal at the conclusion of the study.

B. Before-After Non-Randomized Design

In the first phase of the Brown et al. (1978) Study, 96 women (mean age 19) and 71 men (mean age 24) chose one of nine conditions. Eight of the conditions were some type of physical activity; the ninth was a non-exercise control group. Three of the physical activities were competitive inter-varsity sport teams (wrestling, tennis, and softball). The other activities were all individual jogging programs that took place at various times throughout the year. Subjects completed the Zung Depression Scale, the Eysenck Personality Inventory, and Human Figure Drawings prior to and upon completion of the study.

All of the subjects exercised an average of 30 minutes a day, three days a week for ten weeks. The team players were supervised; the joggers were not supervised. Depression scores decreased significantly with wrestling, jogging, and to a lesser degree with tennis. There was no change in depression in the softball team members or the non-exercise control group. These results support the hypothesis that exercise has an antidepressant effect. However, the changes in fitness level as a result of the ten-week exercise intervention were measured by taking resting pulse rates, which is an extremely weak index of changes in aerobic functioning. This makes it difficult to

determine whether the changes in the depression scores were related to an actual change in aerobic capacity or to participation in the 10 week program. It is interesting to note that the softball team showed no change in their depression scores. This might indicate that social interaction was not a factor in this particular study.

In phase two of the same study, 561 university students chose to jog three or five times per week or to refrain from exercise for a ten week period (n=64). One hundred and one of the students were clinically depressed. Subjects completed a 12 minute Cooper run, the MMPI-Depression Scale, a confidential health questionnaire, the Activation-Deactivation Adjective Checklist, and a multifactor adjective checklist, plus the three inventories used in phase one. The results indicate that jogging for three or five days a week for a ten week period was associated with significant reductions in the depression scores of both the depressed subjects and the nondepressed exercise group. The subjects who did not exercise during the same interval had virutally unchanged scores. The authors of the study fail to report changes in the aerobic capacity scores as well as changes in the other inventories employed. It is also not known whether the joggers exercised alone, or in small groups. Therefore, the effects of social interaction are impossible to determine.

Jasnoski and Holmes (198,1) attempted to determine: whether initial levels of aerobic fitness were related to differences in personality; whether participating in an aerobic training program was related to changes in personality independent of changes in aerobic fitness; and whether changes in aerobic fitness were related to changes in personality. The subjects were 103 female undergraduates (mean age 20), enrolled in a 15 week aerobics program. Cattell's 16 Personality Factors, a Self-Rating Depression Scale, the Type A Personality Survey, and the Cooper 12 minute test of aerobic capacity, were administered prior to and following the 15 week exercise program. The group aerobic training sessions consisted of a one hour session, two times per week, plus additional individual aerobic exercise to total 30 aerobic points per week. The results indicated that initial levels of aerobic fitness, participation in an aerobic fitness training program, and changes in aerobic fitness were consistently related to reports of more positive personality functioning. Initial levels of fitness were related to greater self-assurance and emotional stability and less depression and pretentiousness. Participation in the training program was related to increased self-assurance, imagination and easy-goingness, and less inhibitions and indications of coronary prone personality. Improvements in fitness were related to increased self-assurance, increased liberalness, and decreased_tension. The identification of personality change as a result of exercise, independent of changes in fitness level is of particular interest. Many of the studies conducted in this area fail to control for the participation or social interaction factor. This study demonstrates that such an effect does exist, and could provide a competing hypothesis in studies that fails to control for the effect.

A matched control group was provided to control for the passage of time in the Blumenthal et al. study (1982). Sixteen subjects (11 women, 5 men) with a mean age of 45.1 years who registered for a 10 week adult fitness program participated in the study. The Profile of Mood States (POMS), the State-Trait Anxiety Inventory (STAI), a Retrospective Change Questionnaire, and a treadmill test were given to all subjects before and after the 10 week aerobic program. The exercise group met three times a week for 45 minutes of continuous walking or jogging to 70-85% of each subject's maximum heart rate.

The results indicate a significant decrease in Tension and Fatigue, an increase in Vigor, and a nonsignificant decrease in depression on the POMS in the exercise group. The trait and state anxiety scores of the exercise group were reduced significantly, while the control group showed no improvement.

The Retrospective Questionnaire results show that 66% of the exercise group indicated that their health improved, compared to only 16% of the controls. Sixty-one percent of the exercise group felt an enhanced sense of personal achievement, compared to only 27% of the controls. There was no significant change in sleep, eating patterns, or social life. Although a selection bias could account for the difference observed between the two groups, the results are nonetheless acceptable within the limitations of the design. Random assignment to the treatment and control conditions is desirable but not always feasible.

One of the few studies available that focuses on the short-term effects of exercise was done by Lichtman and Poser (1983). Thirty-two participants (male and female) enrolled in a physical exercise class at the 'Y' were compared to an equivalent group of adults (mean age 25 years) who were enrolled in a hobby class offered by a community college. The participants of the experiment were randomly selected from within each self-selected class. Subjects were administered the Nowlis Mood Scale, Profile of Mood States (POMS), and the Stroop Colour and Word Test before and after their involvement in either the vigorous aerobic exercise class or the hobby class. The results of the Nowlis Mood Scale indicate that the exercise group felt significantly more elated, less sad, less serious or engaged in thought, less fatigued, less depressed, and more relaxed than the hobby group after involvement in the class. There were no significant differences as measured by the POMS scale. The results may have been confounded by the self selection of the participants to the groups, and by the fact that the exercise group attended a mean of 2.6 classes per week, whereas the hobby group attended a mean of only 1.5 classes per week. The selection factor is observed in the pre-test differences between the groups. The hobby group emerged as significantly more sad, angry, depressed, and engaged in thought than the exercise group before as well as after their hobby class. This may indicate that there are motivational and affective differences between individuals who choose to be involved in exercise as opposed to hobbies. Random assignment of the subjects to condition assists in controlling the bias of self-selection.

Wilfley and Kunce (1986) evaluated the physical and psychological benefits of an eight-week individualized exercise program for 83 "normal" adults. The subjects were not randomly selected as they were already signed up for an exercise program and agreed to take the psychological tests for research purposes. There was no control group involved in the study. The subjects were administered the Profile of Mood State inventory and the Physical Self-Concept subscale of the Tennessee Self-Concept Scale prior to and upon completion of the eight-week training program. Subjects trained for one hour, three times a week for eight weeks. The results indicate that statistically significant changes occurred in 4 of the 11 variables following completion of the exercise program. This included an increase in fitness and physical self-concept, and a decrease in the tension subscale of the Profile of Mood State inventory. While the other variables changed in a favorable direction, the changes were not statistically significant.

The absence of a control group and the non-random selection of subjects weakens this study.

Hayden and Allen (1984) conducted a study to overcome the methodological limitation of a failure to evaluate outcome through converging methods of measurement. Although they criticized the previous literature for a failure to randomly assign subjects to treatment, they followed a similar quasi-experimental design. The purpose of their investigation was to determine whether the beneficial effects generally reported by participants in various types of aerobic exercise are corroborated by knowledgeable informants. The 24 male and 74 female undergraduate volunteers self-selected into one of three groups: a) a sedentary group of 30 people, b) 34 active non-runners who exercised regularly, and c) 34 committed runners. The mean age of the subjects was 18.7 years. Prior to beginning the study, subjects filled out the State-Trait Anxiety Inventory (STAI), the Beck Depression Inventory (BDI), and a 48-item Committment to Running Questionnaire.

During the next seven days, the subjects kept à detailed log of the physical activity they engaged in. The senior author visited one knowledgeable informant nominated by the subject. The informant was asked to complete the measures as they believed the subject would, and to estimate the subject's typical level of exercise activity using the current week as an anchor.

The results indicate that runners were only distinguishable from active non-runners on those variables that pertained directly to running (i.e., committment to running, aerebic points earned by running). There was no significant difference between the two groups in terms of overall level of exercise activity, anxiety, or depression, as rated by themselves or their informants. The two physically active groups differed significantly in a positive direction from their sedentary peers on all variables. Corroboration of these differences by the informants followed the same pattern, but was not quite as consistent. The correlation between aerobic points and lowered trait anxiety was -.60. Şelf-reported depression on the BDI correlated -.47 with aerobic points.

exercise enhances psychological functioning, the causal direction of the relationship

cannot be determined by the design of the study. It seems, however, that the subjective feelings of well-being associated with aerobic activity have observable social manifestations that are concurrently reported by roommates, spouses, and friends.

C. Before-After Randomized Design

A number of studies have investigated the relationship between aerobic exercise and pychological variables by employing the Before-After Randomized Design (Folkins, 1976; Griest, 1978; Hilyer, 1979; Moreau, 1981; Ewing, 1984; McCann, 1984; and Hughes, 1986). The random assignment of subjects to treatment and control groups enhances the internal validity of the study and should be done whenever feasible.

Folkins (1976) identified 40 males (age range 40-58) who were classified as high coronary risk subjects. They were matched by age, occupation, and risk factors, and assigned to either the exercise or control group.

The exercise group participated in three exercise sessions per week for 12 weeks. All subjects completed a treadmill test, the Anxiety and Depression scales from the Multiple Affect Adjective Checklist, as well as the self-confidence and personal adjustment scales on the Adjective Checklist prior to and upon completion of the study. Improvements in physical fitness were accompanied by significant improvements on two mood measures, anxiety and depression. No change was found on measures of adjustment, self-confidence, and body image. The control group showed no significant change on any of the psychological variables.

In one of the most often quoted studies, Griest et al. (1978) compared running as a treatment for moderate depression to two types of psychotherapy. Males (n=13) and females (n=15) between the ages of 18 and 30 were randomly assigned to either ten sessions of time-limited psychotherapy (n=9), which focuses on the immediate changes people can make to help themselves feel better; time-unlimited psychotherapy (n=7), which is usually insight-oriented, dynamic psychotherapy; or to running treatment (n=8).

The running group met two to three times per week and walked-jogged for 30-45 minutes. The time-limited psychotherapy consisted of ten sessions and the time-unlimited psychotherapy of a similar number. The measure of depression used by the investigator's was the symptom Checklist-90 for diagnosing minor depression. All of the subjects were classified as moderately depressed.

Six of the eight subjects who ran were essentially well within three weeks and remained well for the duration of the active treatment. These results compared favorably with those of patients in psychotherapy and persisted for at least one year in fellow-up.

It is interesting to note that this study was published without any indication of the statistical methods used to assess the results. The bias of the authors is obvious as they are all runners. However, they do state that running is not a panacea and may actually increase depression if running becomes too painful and too competitive. The authors speculate that there will be some depressed patients who don't respond to running therapy because they don't follow the proper treatment prescription, or because their depression is atypical or unresponsive to this treatment method.

Hilyer and Mitchell (1979) conducted a study to investigate the effect of running and running plus counselling on the self-concept of college students. The subjects were randomly selected from students registered for a required course in physical education. There were 77 males and 43 females with a mean age of 20 years.

After filling out the Tennessee Self-Concept Scale, subjects were randomly assigned to one of three groups; control, running only, running with counselling. The running and counselling group met three times a week for one hour for 10 weeks. The counselling group met for an additional hour each week. The Cooper 12-minute walk-run test of aerobic capacity was given to both experimental groups. The counselling consisted of dealing with the interpersonal relationships that had developed within the group, discussing the problems and feelings encountered in the running program, goal-setting, and reinforcement of positive behavior, i.e., exercise and enjoyment of exercise.

The data for the study was divided into a high and low self-concept group. Both groups improved significantly in fitness scores. The greatest level of significant change in self-concept occurred among students in the low self-concept running/counselling group. This was followed by the low self-concept running group. The difference in the self-concept scores between the low self-concept running group and the control group were not significant. This supports the hypothesis that running plus counselling is more effective than running without counselling in changing the self-concept of college students with low self-concepts.

The short-term effect of aerobic exercise upon affect and cognition was investigated by Ewing and Scott (1984). The 52 subjects (26 men and 26 women) were recruited and randomly assigned to either treadmill running or a non-exercising control group. The Profile of Mood States was used to assess the subjects' moods. Cognition was assessed by Rorschach and Holtzman inkblots. All subjects completed the psychological measures prior to being assigned to the exercise or control group. The exercise group jogged on the treadmill for approximately 10 minutes. Both groups were readministered the psychological tests half-way through the exercise session and 30 minutes after the exercise session. Results indicated that the exercise and control groups did not differ significantly in their overall scores for negative mood items during any stage of the study. When the positive mood items were analyzed, the exercise group produced a steady and significant increase in their scores while the control subjects showed a nonsignificant decrease in positive mood scores. The two groups did not differ on positive mood scores at pre-test. The exercise and control groups did not differ significantly on any of the measures of cognitive state during any of the experimental stages:

Moreau (1981) compared jogging as a treatment for non-clinical depression to a waiting list control, cognitive therapy and a naturalist program. The purpose of the naturalist program was to allow social interaction, an opportunity to learn about the outdoors, and a chance to be involved in a structured program that would not improve cardiovascular fitness.

Forty-eight housewives who were mildly depressed were randomly assigned to one of the four conditions. The groups were matched on their initial depression scores of the Beck Depression Inventory and their fitness scores on the bioycle ergometer test. Each of the three treatment groups met for exactly the same number of hours (19) for a duration of eight weeks. The exercise group followed a walk-jog program designed to progressively improve cardiovascular fitness. The results indicated that jogging was <u>not</u> significantly more beneficial than cognitive therapy, than a field naturalist program, or even than membership in a waiting list control condition in alleviating depressive symptomology in a group of housewives. Moreau concluded that despite the results, the study did not provide conclusive evidence for the ineffectiveness of jogging in alleviating depression. The results were attributed to drop out levels in the field naturalist group, the poor quality of the leader of the cognitive therapy group, and the fact that the women weren't terribly unfit to begin with,

McCann and Holmes (1984) hypothesized that participation in a program of strenuous aerobic exercise would lessen depression in 43 women undergraduate students classified as mildly depressed by the Beck Depression Inventory. Subjects were randomly assigned to one of three conditions; aerobic exercise, relaxation training, or waiting-list control group.

The exercise group met twice weekly for one hour of walking/jogging in a group exercise class. The relaxation group was taught progressive muscle relaxation and instructed to practice 15-20 minutes/day, four days per week. All subjects completed the Cooper 12 minute walk-run test of aerobic capacity. The study was conducted for 10 weeks.

Analysis of the data indicated that the aerobic group improved significantly in aerobic capacity and decreased significantly in depression over both the relaxation and control group. There were no reliable differences between the latter two groups.

This study is one of the strongest designs published but its claims are somewhat exaggerated. It is still not known whether it is changes in aerobic capacity or involvement in a structured activity with an opportunity for social interaction that produced the resultant improvements in depression. Ideally, the relaxation group should have met for the same number of classes etc., as the aerobic exercise group. This would provide the much needed control for the competing hypothesis of social interaction.

Hughes et al. (1986) examined the effect of beginning an exercise program on the mood of sedentary men who were free of psychopathology. The fourteen male subjects were randomly assigned to a control or exercise period for 12 weeks, entered a four-week 'wash out" period, and then entered the opposite condition for a second 12 weeks. The exercise consisted of five one-hour sessions per week of moderate intensity and was non-social in nature. Subjects were administered the POMS prior to and immediately following each condition. Data analysis indicates that the exercise group did <u>not</u> show a statistically significant improvement in VO₂ max despite the training program. As well, neither total mood disturbance nor any of the sub-scales of the POMS improved more during the exercise period than during the control period.

Despite the random assignment of subjects, to condition the small number involved in this study (n=14) weakens the reliability of the statistical analysis (repeated measures analysis of variance). Although Hughes et al. conclude that beginning an exercise program produces minimal psychological benefits, it is possible that with a higher number the authors would have found the expected increase in VO₂ max in the exercise group as well as a difference between the two conditions on the POMS.

D. Summary

Much of the research conducted in the area of the relationship between aerobic exercise and psychological variables suffers from methodological faults. The two most common faults are: a) a failure to randomly assign subjects to groups and b) neglecting to provide a control group for the passage of time and social interaction.

Although most of the studies reviewed provide supporting evidence for the hypothesis that aerobic exercise enhances psychological well-being, the evidence is slightly less convincing in the randomized-control group studies. The random assignment of subjects to conditions is essential to the internal validity of research in this area. The self-selection factor is demonstrated by Lichtman and Poser (1983) who found a statistically significant difference between the exercise and hobby group at pre-test. The difference may be due to motivational and affective differences between individuals who choose to be involved in exercise as opposed to hobbies. Self-selection of

A 'true' control group is also an important methodological consideration. A non-exercising control group that is randomly assigned is important for controlling for the passage of time. Without this control, it would be unknown whether an improvement in the treatment group occurred as a result of the intervention or as a result of the simple passage of time.

In addition, a control group is needed to control for the competing hypothesis of social interaction. This group should meet for the same duration, frequency, and length of time as the exercising treatment group. The purpose of this group is to provide the same degree of social interaction that the exercise group receives. Without this control, any improvements the exercising group exhibits could be due to either social interaction or as a result of participating in physical exercise. Jasnoski and Holmes (1981) found that when initial fitness levels and improvement in fitness were disregarded, significant personality changes as a result of participating in the study occurred. Unfortunately, a control group was not included in the study.

All of the reviewed non-randomized studies show a significant increase in psychological functioning as a result of participating in physical activity (Blue, 1979; Brown et al. 1978; Jasnoski & Holmes, 1981; Blumenthal et al. 1982; Lichtman & Poser, 1983; Wilfley & Kunce, 1986; and Hayderl & Allen, 1984). While this evidence is convincing, it should be accepted within the methodological limitations of the studies.

Of the seven randomized studies reviewed, five of seven authors reported a significant improvement in psychological variables after involvement in physical activity (Folkins, 1976; Griest et al., 1978; Hilyer & Mitchell, 1979; Ewing & Scott, 1984; and McCann & Holmes, 1984). Only one of the studies provided both of the necessary control groups. McCann and Holmes (1984) provided a relaxation group in addition to the aerobic exercise group and the control group. However, the relaxation group was not a valid control as they met for a shorter duration and frequency than the exercise group.

Moreau (1981) made an excellent attempt to satisfy the rigors of experimental validity by randomly assigning subjects to one of four conditions: wait-list control, cognitive psychotherapy, naturalist program, and a walk-jog program. All groups (except control) met for 19 hours over 8 weeks. It was found that jogging was no more beneficial than psychotherapy, a naturalist program, or the control group for alleviating mild depression. Moreau feels that the results were contaminated by poor quality of leadership in the psychotherapy condition, a high drop-out rate in the naturalist program,

and the fact that the subjects were physically fit prior to the beginning of the study.

Hughes et al. (1986), using a randomized cross-over design, found no significant improvement in either VO, max or mood state in the exercise group after 12 weeks of training. The low number of subjects (n=7) in each condition was possibly a contributing factor in the statistically insignificant results.

16

Overall, the evidence supports the hypothesis that psychological functioning improves with physical activity, both short-term (Lichtman & Poser, 1983; and Ewing & Scott, 1984); and long-term (Blue, 1979; Brown et al., 1978; Jasnoski & Holmes, 1981; Blumenthal et al., 1982; Wilfley & Kunce, 1986; Hayden & Allen, 1984; Folkins, 1976; Griest et al., 1978; Hilyer & Mitchell, 1979; and McCanp & Holmes, 1984).

| Table 1 | | • • | | • |
|-----------------------------|---|--|---|--|
| Summary of Studies Con | ducted on the Effect of Ex | Summary of Studies Conducted on the Effect of Exericse on Psychological Variables | iables | |
| Study | Population | Design | Measures | Outcome |
| Blue (1979) | 2 former psychiatric inpatients living in a half-way house | Case study nine weeks of jogging. 2-3x/week | Zung depression scale | Male - scores changed from moderate to mild Female - scores changed from moderate to minimal |
| Brown et al. (1978) | 561 university students 101 were clinically depressed | Self-selected into jogging 5×/ week or controi tor 10 weeks | MMPI - depression scale Activation - Deactivation Adjective Checklist Zung Depression Scale Eysenck Personality Inventory Human Figure Drawings | significant reduction in depression scores of both depressed & non-depressed exercise group. No change in control group. |
| Jasnoski & Holmes (1981) | 103 femate undergraduates | Tested students who self-selected into 15-week aerobic exercise program (2x1 week) | Catell's 16 P-F Type A Survey Self-Rating Depression Scale | Participation in the program, disregarding changes in fitness level, resulted in increased self-assurance and easy-goingness, and decreased indications of coronary prone personality. |

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| Blumenthal et al. (1982) 16 subjects, 11 wome & 5 men (1983) 32 males & females enrolled in exercise class at Y compared to equivalent group of adults enrolled in a hobby class Niffley & Kunce (1986) 83 adults, non-psychiatric sample |
|---|
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|---------|--|--|--|
| | No report of statistical analysis of data. Descriptive results indicate running is as effective as psychotherapy for treatment of depression. | Significant increase in self-concept among students classed as low self-concept with running/counselling treatment, followd by low self-concept running group. No change in high self-concept groups or control group. | No difference between- groups on negative mood items during any stage of study: Exercise group had significant increase in positive mood items while control group decreased. No change on cognitive measures. |
| | Symptom Checklist - 90 | Tennessee Self-Concept Scale | POMS Rorschach & Holtzman blots |
| | Random assignment of subjects to: 1. 10 sessions of time-limited psychothrapy (n=9) 2. 10 sessions of dynamic psychotherapy (n=7) 3. Running 2-3x / week for 10 weeks (n=8) | Random assignment of subjects to: 1. Running 3x / week for 10 weeks 2. Running/Counselling same plus one extra hour / week of group counselling 3. Control | Randomly assigned to either treadmill running (10 mins) or wait-list control. Measures taken pre, during, and 30 mins post-test. |
| | 13 males, 15 females (age 18-30) * All subjects classified as moderately depressed | 77 males, 43 females (mean agé 20) selected from students registered for a required course in physical education. | 26 men. 26 women recruited from university & community |
| | Griest et al. (1978) | Hilyer & Mitchell (1979) | Ewing & Scott (1984) |

| | | 21 |
|---|--|--|
| Jogging was not significantly more beneficial than psychotherapy, naturalist program, or control group. | Aerobic group improved significantly in aerobic capacity & depression over both groups. No difference between relaxation and control group. | No significant improvement in mood state for exercise group. for exercise group. |
| Beck Depression Inventory | Beck Depression Inventory | Se- |
| Randomly assigned to: 1. Wait-list control 2. Cognitive psychotherapy 3. Naturalist program 4. Walk-Jog program Treatment groups met for 19 hours over 8 weeks. | Randornly assigned to: 1. Aerobic exercise 2x/week (group) 2. Relaxation (individual) 4x/week 15-20 mins each time 3. Wait-list control Study was conducted for 10 weeks | Random assignment to aerobic exercise (moderate intensity & non-social) or control for 12 weeks, 4 weeks 'washout,' and cross-over to opposite condition. Subjects serveb as own control. |
| 48 housewives classified as mildly depressed | 43 females, undergraduate students classified as mildly depressed | 14 sedentary males, free of psychopathology |
| Moread (1981) | McCann & Holmes (1984) | Hughes et al. (1986) |

III. Methods and Procedures

A. Subjects

Forty-three sedentary female students and staff from the University of Alberta participated in the study. Age ranged from 17 - 63 years. The subjects were not pre-screened for depression or aerobic capacity. They were pre-screened for previous involvement in physical activity. Only sedentary females (little or no physical exercise in the last six months) were permitted to join the study.

B. Measures

Beck Depression Inventory (BDI)

The short form of the Beck Depression Inventory was utilized due to time restraints. Although the original 21 item version is usually used in research, the 13 item short form takes much less time to fill out and correlates .96 with the original version (Beck & Beck, 1972).

The short-form BDI consists of 13 items that address current affective, cognitive, motivational, and psychological symptoms of depression. Although it was designed to measure depth of depression conceptualized as a continuum in a psychiatric population, it has been found to be equally valid for the same purpose in the general adult population (Oliver & Simmons, 1984). Each item consists of four statements in decreasing severity. More than one statement may be selected for each item, although only the highest score is recorded. The maximum total is 39 points. Subjects' scores are categorized as none or minimal, mild, moderate, or severely depressed (See Appendix A for copy).

The reliability and validity of the original BDI are acceptable. Beck notes that "studies of the internal consistency and stability of the BDI indicate a high degree of reliability while comparisons between the scores on the inventory and the clinical judgements by diagnosticians indicate a high degree of validity" (Beck et al., 1961).

Profile of Mood States (POMS)

The Profile of Mood States (McNair, Lorr, & Droppleman, 1971) is a factor analytically derived inventory designed to measure six identifiable mood states: Depression-Dejection, Vigor-Activity, Fatigue-Inertia, Anger-Hostility, Tension-Anxiety, and Confusion-Bewilderment.

The POMS consists of 65 questions on a **5** point Likert scale. The scale ranges from 0, (NOT AT ALL) to 4, (EXTREMELY). The instructions for the response period can be varied from "How you have been feeling during the past week including today" to "How you feel right now."

The POMS is self-scoring and usually takes between 3-5 minutes for the subject to complete. Both the reliability and validity of the POMS are acceptable. The internal consistency is .90 (McNair et al., 1971). The test-retest reliability is .65. Although this score appears somewhat low, it is expected. Mood state fluctuates and therefore low test-retest reliability is desirable. The six factor analytic studies conducted in the development of the POMS were congruent across samples and different rating time periods therefore supporting validity. Research has also provided evidence for the predictive and construct validity of the POMS. However, most (5 of 6) of the studies used in the development of the POMS involved psychiatric outpatients. The POMS is recommended for use on a research basis for normal subjects age 18 or older but data on the internal consistency of a normal population is not well documented (McNair et al., 1971). See Appendix B for copy.

Life Events Survey (LES)

The Life Events Survey (Sarason I, Johnson & Siegel, 1978) consists of 47 life events such as marriage, death of a close friend, trouble with in-laws, etc.

A 7 point Likert scale with a range from extremely negative to extremely positive is used to score each item. The LES provides both positive and negative life-change scores. An additional list of 10 events relevant to students is included.

The LES was developed to measure the individual impact of a life event that occurred within the last year. See Appendix C for a copy.

Aerobic Capacity

Aerobic capacity was predicted by a submaximal bicycle test. The protocol used in this study was the 8 minute modified Astrancibike test conducted by the University of Alberta Fitness Testing Unit.

The protocol involves two four-minute segments of pedalling, performed consecutively. The first four minutes of pedalling is done at 60 revolutions per minute and a power output of 50-60 watts (300 kpm's x .1634 [correction factor]). The purpose of this stage is to raise the heart rate of the subject above 120 beats per minute.

The second four minutes of pedalling is performed at 60 rpm's at a workload sufficient to achieve steady state in the subject's heart rate.

Maximum aerobic capacity was predicted from the Astrand Nomogram (Astrand & Rodahl, 1977). The formula involves age of the subject, body weight, final heart rate at eight minutes, and the power output for the final four minutes.

Qualitative Data

1.

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Upon completion of the study, subjects responded in writing to the following questionnaire:

As a result of participating in the exercise classes, did you notice any changes in

the way you feel about yourself?

2. If yes, what sort of changes did you notice?

.3. If you noticed any changes, how significant do you feel they were?

The results of the questionnaire are analyzed in a non-statistical descriptive manner.

C. Design

| | Experiment #1 | i |
|---------------------------|--|---|
| | T ₁ (January) (<u>T, (April)</u> | |
| Group 1 • Aerobics | $S_1 - Sn$ | |
| Group 2, Stretch and Tone | S ₁ - Sn S ₁ - Sn | |
| Group 3 Control | S ₁ - Sn S ₁ - Sn | |
Independent Variables

1.

- Groups, at three levels;
 - a. Aerobic Exercise Group n = 7
 - b. Stretch and Tone Exercise Group n=12
 - c. Control Group n=6
- 2. Time, at two levels;
 - a. Pre-test, January 27, 1986
 - b. Post-test, April 4, 1986

Dependent Variables

- 1. Depression, measured by the BDI
- 2. Aerobic capacity, measured by the bicycle test
- 3. Depression, measured by the POMS
- 4. Vigor, measured by the POMS
- 5. Fatigue, measured by the POMS
- 6. Anger, measured by the POMS
- 7. Tension, measured by the POMS
- 8. Confusion, measured by the POMS
- 9. Profile of Mood State Total Score

Additional Measures

Life Events Survey and Qualitative Questionnaire.

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Experiment #2 and #3

| | | T, (before class) | T ₂ (after class) |
|-------|------------------------------|---------------------|------------------------------|
| Grou | o 1 Aerobics | S ₁ - Sn | S ₁ - Sn |
| Grou | o 2 Stretch and Tone | S ₁ ~ Sn | S ₁ - Sn |
| Indep | endent Variables | | |
| 1. | Groups, at two levels; | Experiment #2 | Experiment #3 |
| • | a. Aerobic Exercise group | n=12 | n=9 |
| | b. Stretch and Tone Exercise | group n=13 | n= 13 |
| 2. | Time, at two levels; | | |
| | a. Prestest, before class | | |
| | | | |

b. Post-test, after class

Dependent Variables

The six sub-scales of the POMS inventory

- 1. Depression
- 2. Vigor
- 3. Fatigue
- 4. Anger
- 5. Tension
- 6, Confusion

plus the Profile of Mood States Total Score.

D. Treatments

Aerobic Exercise Group

Subjects in this group met for 45 minutes twice weekly to participate in a group exercise class. Each class consisted of a warm-up, 15-25 minutes of cardiovascular activities, and a cooldown. The classes were conducted indoors and were accompanied by taped music. The subjects were asked to participate in at least one additional aerobic work-out per week on their own time. A guideline exercise protocol and a journal to record the activity were provided for each person.

26

Stretch and Tone Group

Subjects in this group met for 45 minutes twice weekly to participate in a group exercise class. Each class consisted of a warm-up, 15-25 minutes of muscular endurance and flexibility exercises, and a cool-down. The classes were conducted indoors and were accompanied by taped music. The subjects in this group were asked to refrain from aerobic activities for the duration of the nine-week study.

Control Group

Subjects in the control group participated in the pre and post test conditions but agreed to refrain from physical exercise for the duration of the study. The control group was not utilized in Experiments #2 and #3.

E. Procedures

1. A "Women in Exercise Research Study" ad was placed in the Campus Recreation Winter Program Guide and the Gateway newspaper. Posters advertising the study were placed in several buildings around campus. The ad read, "participants will be randomly assigned to either a beginner aerobics class or a beginner stretch and tone class (without aerobics). The purpose of the study is to compare the effect of the two different exercise classes on psychological variables. All subjects in the study will receive two free fitness tests, a copy of the results of the study, and a reduced participant fee (half the regular cost)."

2. Subjects for the control group for Experiment #1 were recruited from campus. The control group was not randomly assigned as they had no intention of joining the exercise classes. They agreed to the pre and post-testing and to remain inactive for the duration of the study.

3. Subjects who joined the study were allowed to choose either M-W or T-TH from 1:00 - 1:45 P.M. as their exercise class. Once all subjects had joined, the researcher randomly assigned M-W as the aerobics group and T-TH as the stretch and tone group.

4. The same instructor taught both exercise classes. The classes were conducted at the same location, time of day, and frequency per week.

5. Subjects in the exercise classes were charged a \$25.00 non-refundable fee to help cover the cost of fitness testing and class instruction.

6. Three separate experiments were conducted on the subjects. For ease of understanding, each experiment will be described separately.

7. In Experiment #1, subjects in the aerobic, stretch and tone, and control groups completed the following:

a. the bicycle test to predict aerobic capacity

Beck Depréssion Inventory (BDI)

c. Profile of Mood States Inventory (POMS)

d. Life Events Survey (LES)

b.

e. Qualitative Questionnaire (QQ)

f. Physical Activity Readiness Questionnaire (PAR-Q) and Biographical Data.

The PAR-Q, biographical data, and bicycle test were completed prior to the start of the study.

Ten minutes before the start of the <u>first</u> exercise class, the subjects in the exercise treatment groups filled out the Beck Depression Inventory and the Profile of Mood States Inventory,

The subjects were then informed as to which exercise group they would be participating in. The control group filled out the BDI and POMS on the same days as the exercise groups.

The two exercise groups trained for nine weeks, from January 27 - April 4, 1986.

Ten minutes before the start of the <u>last</u> exercise class, the subjects in the exercise treatment groups filled out the BDI and POMS.

The control subjects filled out the BDI and POMS on the same days as the exercise groups.

Subjects from all three groups reported for a post bicycle test. Each subject completed a Life Events Survey and the subjects in the two exercise groups were asked to complete the Qualitative Questionnaire.

A letter thanking the subjects and explaining the hypothesis of the study was given to each person upon completion of the bicycle test.

8. In Experiment #2, subjects in the aerobic and stretch and tone group completed the Profile of Mood States Inventory.

The POMS was administered prior to the first exercise class and immediately following the first exercise class. (The POMS in the pre-test is the same as the POMS #1 for Experiment #1.)

Subjects were not aware they would be asked to complete the POMS at the end of the class. There was no control group for Experiment #2.

9. In Experiment #3, subjects in the aerobic and stretch and tone group completed the POMS inventory before and after the last exercise class. The POMS in the before-class test is the same POMS used as POMS #2 in Experiment #1.

The subjects were not aware they would be asked to complete the POMS at the end of the exercise class. There was no control group for Experiment #3. 10. Experiment #2 and #3 were treated as separate experiments although they were conducted on the same subject pool. The number of subjects from Experiment #2, who also completed Experiment #3 is low. The aerobic group had eight subjects who completed both Experiment #2 and #3. The stretch and tone group had only five subjects who completed both Experiment #2 and #3. The stretch and tone group had only five attendance fluctuations and to a problem that many of the subjects in the 'stretch and tone group in Experiment #2 incorrectly filled out the POMS inventory thus rendering the data unusable.

It was therefore decided that it was not plausible to compare Experiment #2 and #3 but to treat them as separate experiments.

F. Statistical Analysis

The statistical analysis used was a two-way analysis of variance (ANOVA) with ' repeated measures on the dependent variables.

Experiment #1 was analyzed as a 3 (Groups) x 2 (Time) ANOVA with repeated measures on the dependent variables. A one-way ANOVA between groups with the Life Events Survey as the dependent variable was also completed.

Experiments #2 and #3 were analyzed as a 2 (Groups) x 2 (Time) ANOVA with repeated measures on the dependent variables.

The results of the three experiments will be discussed separately.

A. Summary of Results: Experiment #1

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Experiment #1 involved three groups (Aerobic, Stretch and Tone, and Control), measured at time 1 (January), and time 2 (April), and compared on changes in aerobic capacity and mood state. The subjects were females recruited from the University of Alberta campus. The hypothesis for Experiment #1 stated that both the aerobic and non-aerobic exercise group would show an improvement in depression and mood state over, the nine weeks of training with the control group showing no improvement.

The data for Experiment #1 was analyzed by a two-way analysis of variance procedure (ANOVA) involving 3 groups X 2 times, with repeated measures on the dependent variables,

Experiment #1 involved 25 subjects; Aerobics (n=7), Stretch and Tone (n=12), and Control (n=6). The Aerobics group was composed of 5 students (71%), 1 staff (14%), and 1 person classified as both staff-student. The Stretch and Tone group had 8 students (66%), 3 staff (25%), and 1 person who was retired (8%). The control group was made up of 5 students (83%) and 1 staff (17%). All three groups appear relatively similar in age, occupation, and attendance levels (See Table 2).

From the total n of 25 for Experiment #1, 18 subjects were storents (72%), 5 were staff (20%), and 2 were classified as other (8%).

There was no significant difference between the three groups on the Life Events Survey (LES) scores at the .05 level of probability. The LES was administered during the post-testing of all subjects for the purpose of determining the impact of life events over the past year.

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Table 3 provides a summary of the raw scores for the data collected in Experiment #1.

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| | mean age | occupation | mean attendance for |
|------------------|------------|---------------------|---------------------|
| | (years) | | fitness classes |
| | | | |
| Group 1 | 29,6 | 5/7 (71%) students | 87.1% |
| Aerobics | | 1/7 (14%) staff | |
| (n=7) | 1 | 1/7 (14%) both | : |
| Group 2 | 31,3 | 8/12 (66%) students | 83.3% . |
| Stretch and Tone | | 3/12 (25%) staff | |
| (n=12) | | 1/12 (8%) retired | · · · · |
| Group 3 | 26.7 | 5/6 (83%) students | N/A |
| Control | ο ' ' · | 1/6 (17%) staff | · · · |
| (n=6) | | | |

Characteristics of Subjects in Experiment #1

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Summary of Results for Experiment #1

| Variable. | Pre (. | lanuary) | Post (Ap | oril) |
|---------------------------------|--------|---------------|----------|--------------|
| A. Aerobic Capacity | Mean | S.E.M.+ | Mean | <u>S.E.M</u> |
| 1 Aerobics | 34.47 | 2,76 | 37.35 | 2,58 |
| 2, Stretch and Tone | 33.71 | 3,11 | 30,16 | 1.95 |
| 3. Control | 29.45 | 2.07 | 27.93 | <u>1.9</u> 8 |
| 3. Beck Depression Inventory | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M</u> |
| 1. Aerobics | 4.38 | 1.55 | 1,75 | .72 |
| 2. Stretch and Tone | 3,50 | 1,68 | 2.92 | 1,04 |
| 3. Control | 2.67 | .88 | 1.50 | .43 |
| C. POMS - depression | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M</u> |
| 1. Aerobics | 8.75 | 2,97 | 3.00 | .81 |
| 2. Stretch and Tone | 6.17 | 1.65 | 6.00 | 2.00 |
| 3. Control | 8.67 | 3.40 | 6,17 | 1.45 |
| D. POMS - vigor | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M</u> |
| 1. Aerobics | 15.50 | 2,17 | 16.40 | 1.82 |
| 2. Stretch and Tone | 14,50 | 1.59 | 15.92 | 1.46 |
| 3. Control | 16.33 | 1.98 | 15.50 | 2.25 |
| POMS - fatigue | Mean | <u>S.E.M.</u> | Mean | S.E.M |
| 1. Aerobics | 9.75 | 1.75 | 6.50 | 1.64 |
| 2. Stretch and Tone | 7.83 | 1.65 | 6.50 | 1.28 |
| 3. Control | 8.83 | 2.78 | 10.50 | 3.58 |
| POMS - anger | Mean | <u>S.E.M.</u> | Mean | S.E.M |
| 1. Aerobics | 9.75 | 2.39 | 2.50 | .49 |
| 2. Stretch and Tone | 5.60 | 1.30 | 3.33 | .97 |
| 3. Control | 10.50 | 3.26 | 7.33 | 1.69 |
| 5. POMS - tension | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M</u> |
| 1. Aerobics | 10.88 | 2.18 | 7.88 | 1:44 |
| 2. Stretch and Tone | 9.17 | 1.79 | 7.75 | 1.44 |
| 3. Control | 11.00 | 2.49 | . 11.67 | 1.41 |
| I. POMS - confusion | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M</u> |
| 1. Aerobics | 7.13 | 1.67 | 4.63 | .78 |
| 2. Stretch and Tone | 6.50 | 1.02 | 5.60 | 1.07 |
| 3. Control | 8.17 | 1.53 | 6.83 | 1.4 |
| POMS - total score | Mean | <u>S.E.M.</u> | Mean | S.E.M |
| 1. Aerobics | 30.76 | 11.23 | 8.13 | , 4.89 |
| 2. Stretch and Tone | 20.75 | 7.18 | 13.25 | 6.28 |
| 3. Control | 30.83 | 11.77 | 27,00 | 6.64 |

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* Standard Error of the Mean

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Figure 1. Results of Aerobic Capacity for Experiment #1

Aerobic capacity improved in the Aerobic group (34.47 to 37.35), and decreased in both the Stretch and Tone group (33.7 to 30.16) and the Control Group (29.45 to 27.93). Although the ANOVA procedure does not indicate a statistical significance for these changes (see Table 4), Figure 1 does illustrate the expected trends.



Figure 2. Results of the Beck Depression Inventory

Both the pre and post group means for the three groups on the BDI fall into the none or minimal category of depression. Despite this floor effect, the Aerobic, Stretch and Tone, and Control Group still showed a trend toward a decrease in the BDI scores after nine weeks of training (see Figure 2). The ANOVA procedure indicates this decrease to be statistically significant (p<.015) for all three groups (see Table 4).

Probability Levels in Experiment #1 from a Two-Way Anova with Repeated Measures

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| Aerobic Capacity Beck Depression | .162 | .572 | -130 |
|-------------------------------------|------|-------|--|
| Beck Depression | 4 | | and the second |
| · · · · · | .796 | .015* | .319 |
| Inventory | .826 | .035* | .208 |
| POMS-depression vigor | .937 | .644 | .658 |
| fatigue | .489 | .542 | .449 |
| anger | .059 | .003* | .263 |
| tension | .432 | 288 | .439 |
| confusion | .522 | .038* | .652 |
| total score | .451 | .036* | .297 |

* denotes significance

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The POMS depression scores indicate the Aerobic group evidenced the greatest improvement (8.75 to 3.00), with the Control group improving somewhat (8.67 to 6.17), and the Stretch and Tone group improving very little (6.17 to 6.00). These results are statistically significant at the p < .05 level. See Figure 3.

The POMS vigor scores show both of the exercise groups improving somewhat from time 1 to time 2 (Aerobics 15.50 to 16.40, Stretch and Tone 14.50 to 15.92), while the Control group was less vigorous at the end of the study than at the beginning (16.33 to 15.50). There was no statistical significance between groups.

The POMS fatigue scores show both the Aerobic group (9,75 to 6.50) and the Stretch and Tone, group (7.83 to 6.50) improving, while the Control group reported more fatigue at the end of the study than at the beginning (8.83 to 10.50). None of the POMS fatigue changes from pre to post was statistically significant.

The POMS anger scores indicate the Aerobic group showed the greatest decrease in anger (9.75 to 2.50) with both the Control (10.50 to 7.33) and Stretch and Tone groups (5.60 to 3.33) decreasing somewhat in anger over the nine-week study (see Figure 4). These results were statistically significant (p<.003):

The POMS tension scores indicate both of the exercise groups experienced a decrease in tension over time, with the Aerobic group decreasing from 10.88 to 7.88, and the Stretch and Tone group from 9.17 to 7.75, while the Control group demonstrated an increase from 11.00 to 11.67. There was no statistical significance between the three groups.

The POMS confusion scores show all three groups feeling slightly less confused at the end of the study than at the beginning. The Aerobic group improved from 7.13 to 4.63, the Stretch and Tone group from 6.50 to 5.60, and the Control group from 8.17 to 6.83. These changes from pre-test to post-test were significant for all three groups (p<.04).







The Aerobic group showed the greatest improvement in mood state from 30.76 to 8.13, with the Stretch and Tone group improving somewhat from 20.75 to 13.25. and the Control group improving very little from 30.83 to 27.00. These changes are statistically significant (p<.04) from time 1 to time 2.

Table 5 summarizes the direction of the change in the dependent variables from time 1 to time 2.

| | <u>.</u> | · · | | | | ······································ |
|--------------------------|-----------|---|----------|-----------|-------------|--|
| Variable | . | · <u>Aerobics</u> | Stretcha | nd Tone | . <u>Co</u> | ntrol |
| Aerobic Capacity | | 1 | | ↓ × | | Y |
| Beck Depression | | n an ∲ 186 în 1919 - An An An An 1919 - An An An An | | • | | |
| POMS-depression | 1 | | | ↓ · · · · | | |
| vigor fatigue | ж. ДС | | | Ţ ↓ | | |
| anger ,tension | | | | | | |
| confusion total score | | + | | | | |
| | | reased from T_1 creased from T | | | | |

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Drop-Outs

A number of subjects withdrew from the study for various reasons. Table 6

Drop-out Data for Experiment #1

| | Number enrolled Number completed | Difference |
|------------------|----------------------------------|------------|
| Aerobics | 16 7 | (-9) 56% |
| Stretch and Tone | 29 12 | (~17) 59% |
| Control | 8 6 | (-2) 25% |
| Total | 53 25 | (-28)* 53% |

The percentage of subjects who did not complete the study was 53% (n=28). Of the 28 subjects classified as incomplete, 20 dropped out of the study. The reason given for withdrawal fell into one of two categories; too busy, or illness/injury unrelated to the class. Nine women withdrew due to time constraints, and 11 due to an illness or injury that was <u>not</u> a result of participating in the classes. All of the drop-outs were contacted by telephone and asked "Did you leave because you were not enjoying the classes?". The overwhelming majority reported liking the classes and dropping out for reasons beyond their control.

Eight women are included in the drop-out data although they <u>did</u> complete the study. They are included as drop-outs because their data was incomplete or unusable. Due to a problem in the instructions to the subjects on filling out the POMS, several of the subjects filled it out incorrectly.

Qualitative Data

Twenty-two subjects from the Aerobic and Stretch and Tone groups responded to the following three questions:

1. As a result of participating in the exercise classes, did you notice any changes in the way you feel about yourself? 2. If yes, what sort of changes did you notice?

3. If you noticed any changes, how significant do you feel they were?

Table 7 summarizes the responses of the data collected from the three questions given to the subjects who participated in Experiment #1. The responses were divided into eight themes or categories. The number of persons whose comments apply to a particular category appears along the bottom of each category.

The key change in the Aerobic group seemed to be an increase in stamina or energy level. All of the other response categories were approximately equal. The Stretch and Tone group reported the key change to be improved weight control and muscle tone, both of which made them happier. One-third of the Stretch and Tone group also reported an increased energy level, as well as an increase in self-confidence. Five of seven members of the Aerobic group and 13 of 15 members of the Stretch and Tone group reported "feeling better about themselves" as a result of participating in the exercise classes.

The results of the questionnaire are discussed further in the next chapter.

B. Summary of Results: Experiment #2

Experiment #2 involved two groups (Aerobic, and Stretch and Tone), measured at time 1 (before the first fitness class of Experiment #1) and time 2 (immediately following the first fitness class of Experiment #1), and compared on changes in mood state as measured by the Profile of Mood State (POMS). The subjects were females recruited from the University of Alberta campus. The hypothesis for Experiment #2 stated that both the aerobic and hom aerobic exercise group would show an improvement in mood state as measured before and after a single exercise class. The data for Experiment #2 was analyzed by a two-way analysis of variance (ANOVA) procedure with repeated measures on the dependent variables.

| | improved ' weight loss - muscle tone | "lost weight" "more strength" "better tone" | 7 | "feel firmer" "improved muscle tone" "more "proud of increased muscle tone" definition" 7 |
|---|--|---|-------------------|--|
| | pride over in goal mastery w | "pleased "l about finally "r doing s something "t about my physical fitness" | 8 | "I had done something beneficial for myself" "felt good about in some type of exercise" d |
| | increased energy level | "feel less tired, have more energy" "increased stamina" "higher energy Jevel" | ۵ | "felt a little more vigorous" "felt more energy" "felt exhilerated after class sluggish" 5 |
| | better concentration | "better able to concentrate" "increase of awareness and concentration" | 7 | "more alert" |
| Experiment #1 | slept better | "slept a lot better" | | "needed less sleep to feel equally rested" |
| - | increased confidènce | "increased self- confidence" | - | "feit better about my ability to compare favorably with others in class" feit more self- acceptance |
| ive Questionna | more relaxed, happier | "friends think I'm more relaxed, happier" | 8 | "handle stress better" "relaxation immediately following class" "immediately after class - felt really good - relaxed, clear-headed" 3 |
| Table 7 Theme Categories for Qualitative Questionnaire from | feel better about yourself | "feel good about myself" I feel good all over" | 5-yes 2-unsure | "feit much better about myself" "feit good after each class" yes-13 sometimes-2 |
| Table 7 Theme Catego | | Group 1 Aerobic n=7 | number | Group 2 Stretch and 15 n= 15 |

| | mean age (years) | occupation |
|--------------------------------|------------------|--------------------------|
| Group 1 th Aerobics | , 30.8 | _ 9/ 12 \$175%) students |
| n= 12 | | 2/12 (17%) staff |
| • | | 1/18 (8%) both |
| Group 2 - Stretch and Tone | 32.6 | 8/13 (62%) students |
| n= 13 | | 4/13 (31%) staff |
| | - | 1/13 (8%) retired |
| | | |

Experiment #2 involved 25 subjects in one of two groups; Aerobics (n= 12) and Stretch and Tone (n= 13). The Aerobics group was composed of 9 students (75%), 2 γ staff (17%), and 1 subject classified as both student-staff. The Stretch and Tone group consisted of 8 students (62%), 4 staff (31%), and 1 subject who was retired. The two groups appear similiar in age and occupation (see Table 6). From the total number of 25 subjects in Experiment #2, 17 subjects were students (68%), 6 were staff (24%), and 2 were classified as other (8%).

Figure 6 demonstrates the dependent variables (POMS scores) changing in the predicted direction from time to time 2. Both of the exercise groups became significantly less; depressed (Aerobics 10.50 to 1.50, Stretch and Tone 7.23 to 2.70, p<.001), fatigued (Aerobics 10.67 to 6.33, Stretch and Tone 8.31 to 6.84, p<.01), angry (Aerobics 10.17 to 2.00, Stretch and Tone 7.08 to 2.00, p<.001), tense (Aerobics 11.60, to 5.17, Stretch and Tone 9.62 to 6.08, p<.001), and confused (Aerobics 7.33 to 3.00, Stretch and Tone 6.31 to 4.77, p<.001). A significant interaction effect was noted for the confusion scores for both groups. Although both groups decreased their confusion scores as a function of time (p<.001), the Aerobic group showed a statistically significant greater decrease in confusion than the Stretch and Tone group (p<.045). Both groups also demonstrated an increase in vigor with the Aerobic group going from 14.67 to 16.17 and the Stretch and Tone from 15.00 to 16.00 (not statistically significant).

The most dramatic changes occurred in the total POMS scores. The total for the Aerobic group changed from 35.25 to 2.00. The Stretch and Tone group displayed a similar decrease from 23.54 to 7.46, indicating a strong improvement in mood state. These results are significant p<.001 (see Table 10). Both exercise groups exhibited a statistically significant improvement in mood state on 6 of 7 variables after participation in a single exercise class.

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Table 9 in.

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Summary of Results for Experiment #2

| /ariable | Pre (befor | e first class) | Post (after fi | rst class) |
|-----------------------|-------------|-------------------|----------------|--------------|
| A. POMS+ - depression | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M</u> |
| 1. Aerobics | 10.50 | [^] 2,29 | 1,50 🕚 | .71 |
| 2, Stretch and Tone | ·7.23 · | 1.74 | 2.70 | .65 |
| B. ROMS - vigor | Mean | <u>S.E.M.</u> | I VIODI I | <u>S.E.M</u> |
| 1. Aerobics | 14.67 | 1.52 | 16.17 | 1,13 |
| 2. Stretch and Tone | 15.00 | 1.85 | 16.00 | 1.5 |
| C, POMS - fatigue | Mean | <u>S.E.M.</u> | Mean | S.E.M |
| 1. Aerobics | 10.67 | 1,43 | 6.33 | -1,4 |
| 2. Stretch and Tone | 8.31 | 1.44 | 6.84 | 1.7 |
| D, POMS - anger | Mean | S.E.M. | Mean | <u>S.E.N</u> |
| 1. Aerobics | 10,17 | 1.58 | 2.00 | . 1.1 |
| 2. Stretch and Tone | 7.08 | 2.00 | 2.00 | ʻ 1`.O |
| E. POMS - tension | Mean | S.E.M. | Mean | <u>S.E.N</u> |
| 1. Aerobics | 11.60 | 1.73 | 5,17 | 1.2 |
| 2. Stretch and Tone | 9.62 | 1.45 | 6.08 | .9 |
| POMS - confusion | Mean | <u>S.E.M.</u> | Mean | S.E.N |
| 1. Aerobics | 7.33 | 1.29 | 3.00 | .6 |
| 2. Stretch and Tone | 6431 | 1.00 | 4.77 | .6 |
| G. POMS - total | <u>Mean</u> | <u>S.E.M.</u> | Mean | <u>S.E.N</u> |
| 1. Aerobics | 35.25 | 8.27 | 2.00 | 4.4 |
| 2. Stretch and Tone | 23.54 | 7.40 | 7.46 | 4.0 |

* Standard Error of the Mean + Profile of Mood State

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Summary of the Results of the ANOVA (2 groups x 2 times) for Experiment #2

| | Probability Levels | | | |
|--------------|--|---|--|--|
| Group Effect | Time Effect | Interaction | | |
| | | · · · · · | | |
| .527 | .001 * | . 120 | | |
| .966 | .230 | .807 | | |
| .633 | .011+ | .186 | | |
| .343 | .001+ | .290 | | |
| .733 | .001* | .239 | | |
| .747 | 001+ | · .045* | | |
| .684 | .001* | .077 | | |
| | .527 .966 .633 .343 .733 .747 | .527 .001* .966 .230 .633 .011* .343 .001* .733 .001* .747 .001* | | |

C. Summary of Results: Experiment #3

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Experiment #3 involved two groups (Aerobic, and Stretch and Tone), measured at time 1 (before the last fitness class of Experiment #1) and time 2 (immediately following the last fitness class of Experiment #1), and compared on changes in mood state as measured by the POMS. The subjects were females recruited from the University of Alberta campus. The hypothesis for Experiment #3 stated that both the aerobic and non-aerobic exercise group would show an improvement in mood state as measured before and after a single exercise class.

The data for Experiment #3 was analyzed by a two-way analysis of variance (ANOVA) procedure with repeated measures on the dependent variables.

Characteristics of Subjects in Experiment #3

| mean age (years) | occupation |
|---------------------------------|---------------------|
| Group 1 - Aerobics 30.2 | 6/9 (66%) students |
| n=9 | _ 2/9 (22%) staff |
| | 1/9 (11%) both |
| Group 2 - Stretch and Tone 31.4 | 9/13 (69%) students |
| n=13 | 3/13 (23%) staff |
| | 1/13 (8%) retired |

Experiment #3 involved 22 subjects in one of two groups; Aerobics (n=9) and Stretch and Tone (n=13). The Aerobics group had 6 students (66%), 2 staff (22%), and 1 subject classified as both student-staff (11%). The Stretch and Tone group had 9 students (69%), 3 staff (23%), and 1 subject who was retired. The two groups are similar in both mean age and occupation (see Table 11).

Figure 7 demonstrates the change in group means for the dependent variables from pre to post-test in Experiment #3. Both of the exercise groups became significantly less; depressed (p<.001), fatigued (p<.004), angry (p<.001), tense (p<.001), and confused (p<.001). There was also a significant change for both groups for the total score of the POMS from pre to post-test (p<.001). The total for the Aerobic group changed from 8.78 to -7.00. The Stretch and Tone group displayed a similar decrease from 10.92 to -0.31. Both exercise groups exhibited a statistically significant improvement in mood state on 6 of 7 variables after participation in a single exercise class.

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Summary of Results for Experiment #3 an gan ga

| Variable | Pre (before | ast class) | Post (after la | Post (after last class) | |
|-----------------------|-------------|-----------------|----------------|-------------------------|--|
| A. POMS+ - depression | Mean | <u>S.E.M.</u> * | Mean | <u>S.E.M.</u> | |
| 1. Aerobics | 2.89 | .68 | 0.33 | .33 | |
| 2. Stretch and Tone | 5.54 | 1.90 | 2:31 | 1.03 | |
| B. POMS - vigor | Mean | <u>S.E.M.</u> | <u>Mean</u> | <u>S.E.M.</u> | |
| 1. Aerobics | 16.33 | 1.46 | 15.56 | 1.54 | |
| 2. Stretch and Tone | 14.46 | -′ - 1.61 | 14.92 | 1.72 | |
| C. POMS - fatigue | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M.</u> | |
| 1. Aerobics | 7.22 | 1.29 | 3.11 | 1.23 | |
| 2. Stretch and Tone | 6.23 | 1.20 | 5.23 | 1,67 | |
| D. POMS - anger | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M.</u> | |
| 1. Aerobics | 3.11 | 1.1 | 0.67 | .44 | |
| 2. Stretch and Tone | 2.92 | .95 | 0.69 | .29 | |
| E. POMS - tension | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M.</u> | |
| 1. Aerobics | 7.00 | 1.43 | 2.11 | .48 | |
| 2. Stretch and Tone | 7.39 | 1.35 | 3.69 | .62 | |
| POMS - confusion | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M.</u> | |
| 1. Aerobics | 4.89 | .61 | 2.33 | | |
| 2. Stretch and Tone | 5.08 | 1.02 | 2.54 | .60 | |
| G. POMS - total | Mean | <u>S.E.M.</u> | Mean | <u>S.E.M.</u> | |
| 1. Aerobics | 8.78 | 4.03 | -7.00 | 2.2 | |
| 2. Stretch and Tone | 10.92 | 5.98 | -0.31 | 4.17 | |

+ Profile of Mood State + Standard Error of the Mean

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Summary of the Results of the ANOVA for Experiment #3

| <u>Variable</u> | Group Effect | Time Effect | Interaction | | |
|-------------------|--------------|-------------|-------------|-------|----------|
| POMS - depression | .201 | .001+ | • | .660 | |
| vigor | .537 | .902 | | .663 | |
| fatigue | .768 | .004* | | .063 | · · |
| anger | .931 | .001+ | • | .855 | 2 N 1 |
| tension | .408 | .001* | <u> </u> | .565 | • |
| confusion | .837 | ,001+ | - | .989 | |
| total score | .469 | .001* | | . 489 | |

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* denotes significance



V. Discussion

This study was undertaken to investigate the relationship between two types of physical exercise; group aerobic classes, and group muscular endurance and flexibility classes, on selected psychological variables. The results of the three experiments will be discussed separately.

A. Experiment #1

The results of this study indicate that there was no statistically significant improvement in the mood state (as measured by the POMS and the BDI) for the two exercise groups when compared to the control group after nine weeks of training. Overall, there was a statistically significant change from time 1 to time 2 on the BDI, the POMS depression, anger, confusion subscales, and the Total score of the POMS. There was no evidence of a group effect or a group by time effect.

However, several of the measures did show a trend in the expected direction. The aerobic capacity scores improved for the Aerobic group and decreased for both of the other groups. The vigor sub-scale of the POMS showed an improvement for both of the exercise groups and a decrease for the Control group. The same trend occurred for the fatigue sub-scale. The tension sub-scale showed both exercise groups becoming less tense while the control became marginally more tense from pre-test to post-test. While none of the results are statistically significant, they do tend to support the first hypothesis and previous research (Blumenthal et al.; 1982; Hayden & Allen, 1984; McCann & Holmes, 1984; and Wilfley & Kunce, 1986).

The data for this experiment is questionable due to the small number of subjects in the Aerobic group (n=7) and the Control group (n=6). The problems were twofold. Twenty women withdrew from the study due to time constraints (n=9), or to illness/injury unrelated to the study (n=11). The drop-out rate had a particularly negative effect on the number of subjects remaining in the Aerobic group. Eight women were classified as drop-outs although they completed the study. Due to errors in filling out the psychological inventories, or by failing to attend the final fitness test, the data from these subject was unacceptable.

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The marginal number of subjects involved in the study has a significant effect on the outcome of the statistical analysis of the data. Unfortunately, intervention studies involving human subjets are vulnerable to the unpredictability of human behavior which is beyond the experimenter's control.

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Another factor that may have influenced the results is the nature of the two measures used to collect psychological data, the Beck Depression Inventory and the Profile of Mood State inventory. Both inventories were designed to measure mood state, which by definition is a transitory, highly fluctuating variable. Although both of these measures may been used in previous studies (Blumenthal et al., 1982; Hayden & Allen, 1984; Hughes et al., 1986; McCann & Holmes, 1984; Moreau, 1981; and Wilfley & Kunce, 1986), they are better suited to measuring the short-term (immediately before and after) effect of exercise on mood state than to measuring long-term intervention. For example, the instructions on the BDI are to fill out the inventory 'as you are feeling right now.'

The instructions for the use of the POMS inventory can be varied. The authors state that "to meet the demands of a particular study, other time sets can be and have been used with the POMS. Shorter rating periods such as "Today;" "Right Now," and even "The Past Three Minutes" have been utilized successfully" (McNair, Lorr, and Droppleman,

The non-random selection of the Control group may also be a factor in the outcome of the study. Unknown to the researcher at the onset of the study, all of the subjects in the control group were involved in a mild intensity movement education course at the university. While the course did not involve a systematic physical training program, the emphasis in the course on experiencing various sports may have confounded the results.

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p. 5).

Given the methodological limitations in the study, the researcher feels strongly that the statistical analysis of results of this experiment should be accepted somewhat cautiously.

The analysis of the qualitative questionnaire filled out by the subjects in the two exercise groups revealed interesting data (see Table 6). Briefly, the results support the hypothesis that subjects would feel better as a result of a nine-week physical activity training program. The most common themes were: 'felt better about myself,' 'increased energy level,' 'increased self-acceptance,' and 'improved physical self.'

B. Experiment #2

Experiment #2 involved two groups (Aerobic, and Stretch and Tone), measured at time 1 (before the first fitness class of Experiment #1) and time 2 (immediately following the first fitness class of Experiment #1), and compared on changes in mood state as measured by the POMS inventory. The hypothesis of Experiment #2 stated that both the aerobic and non-aerobic exercise group would show an improvement in mood state as measured before and after a single exercise class.

The results of this experiment indicate that there was a statistically significant change from time 1 to time 2 on the depression, anger, tension, fatigue, and confusion subscales of the POMS. The two groups also improved on the vigor sub-scale of the POMS (not statistically significant). The most dramatic changes occurred in the Total POMS scores. The Total score for the Aerobic group improved from 35.25 to 2.00. The Stretch and Tone group displayed a similar decrease from 23.54 to 7.46, indicating a strong improvement in mood state. Both these results are statistically significant p<.001.

The changes in the group means from time 1 to time 2 in Experiment #2 support the hypothesis' that both of the exercise groups would show an improvement in mood state as measured before and after a single exercise class.

The short-term effect of exercise on mood state was investigated by Lichtman and Poser (1983) and Ewing and Scott (1984).

Ewing and Scott (1984) found that with 10 minutes of treadmill running, subjects who ran felt better (using the POMS as a measure) during and after the exercise than subjects who were randomly assigned to a wait-list control. Lichtman and Poser (1983) measured changes in mood state in adults who were enrolled in either a group exercise class or in various hobby classes at the YMCA (painting, photography, typing, automechanics, and nutrition). In this study, the POMS was administered prior to and upon completion of a single class. An initial difference between the two groups was found at pre-test, with the hobby group significantly more angry and depressed than the

exercise group. At post-test the exercise group was significantly less sad, fatigued, and depressed than the hobby group. The authors' cite the similar social setting and interaction available in the two groups as evidence that psychosocial factors do not operate as the sole reason for improvement in mood state in exercise studies.

It is possible that the results of Experiment #2 may be explained by the distraction or diversion hypothesis. Perhaps it is not the influence of exercise per se which influences the change in mood state but the opportunity to experience a 'time-out' from one's worries that results in an improved psychological mood. Since both exercise groups experienced a similar improvement in mood state, it is unlikely that the type of exercise (aerobic vs. muscular endurance and flexibility) influenced the change in mood state. One researcher who believes strongly that the type of exercise employed to improve mood state must be aerobic in nature is Dr. R. S. Brown. Dr. Brown, as quoted in Monahan (1986), says "the exercise must be aerobic" in order to achieve the enhanced mood state (p. 196). This may be true in long-term efforts to alleviate a clinical psychological condition with exercise. However, the results of Experiment #2, as well as Lichtman and Poser (1983), and Ewing and Scott (1984), indicate that in a non-clinical population, involvement in physical activity (regardless of initial fitness levels or changes in fitness levels in participants) may result in improvement in mood state. This data is important for people who may not exercise on a regular basis due to time constraints, physical health problems, or motivational difficulties. Often, the public is led to believe that it is only after a consistent, long-term physical training program that any improvement in psychological functioning will occur. This can be discouraging as well as a deterrant for many would-be exercisers. It is encouraging to note that the sedentary females in this study reported feeling significantly better after a single-exercise class. While it may be argued that they felt good primarily as a result of beginning a long-term (nine week) committment to exercise, the results of Experiment #3 shed another light on the hypothesis.

C. Experiment #3

Although Experiment #3 was essentially conducted on a different sample from Experiment #2 because of the drop-outs that occurred between the two, both experiments were conducted from the same subject pool of Experiment #1. The hypothesis of Experiment #3 stated that both the aerobic and non-aerobic exercise group would show an improvement in mood state as measured before and after a single exercise class.

The results of Experiment #3 are similar to those of Experiment #2. There was a statistically significant change on the depression, fatigue, anger, tension, and confusion subscales after participating in a single exercise class. The pre to post improvements on the Total score of the POMS were also statistically significant.

Experiment #3 was conducted on the last day of a nine-week training program. Subjects in both groups were experienced in the exercise routines and had attended at least 80% of classes. The novelty of beginning an exercise program did not apparently affect the outcome of Experiment #3. Possibly the sense of accomplishment of having lasted the full nine weeks in the study may have accounted for the improved mood state following the last exercise class. This may have confounded the results of Experiment #3. The distraction or diversion hypothesis may also apply to Experiment #3. Both exercise groups may have feit an elevated mood state following the exercise class as a result of 'time-out' from their worries.

It was somewhat surprising to find the significant improvement in mood state in Experiment #3, Subjects in Experiment #3 were primarily students and Experiment #3 was conducted in the last week of classes in April which is a very stressful time for students. The researcher expected that the stress of studying would outweigh any positive benefits of exercising. It is encouraging to note that exercise was still beneficial in improving mood state, even under adverse conditions.

Unfortunately, a control group of non-exercising subjects was not utilized in Experiments #2 and #3.

VI, Summary and Recommendations

A. Summary

The purpose of this study was to determine the effect of two types of physical exercise (aerobic and muscular endurance / flexibility) on psychological mood state in sedentary females.

Forty-three sedentary female students and staff from the University of Alberta participated in the study. They were randomly assigned to either an Aerobics class or a Stretch and Tone class. Six of the subjects who had no intention of exercising acted as a control group.

The study looked at both the short-term and long-term effect of exercise on psychological functioning in females. The short-term effect was studied by measuring mood state changes before and after the first and last exercise class of the nine-week study. The long-term effect was measured by assessing the mood state and depression scores in the subjects prior to and immediately following a nine-week training program.

The results of the long-term study indicate that there was a statistically significant change from pre to post-test on 5 of 8 mood state variables. There was no evidence of a group effect or a group by time effect. The three other mood state variables showed a non-significant improvement for the two exercise groups and no improvement for the Control group. The results of a retrospective questionnaire indicate most subjects reported 'feeling better' about themselves after being involved in the exercise classes.

OThe short-term effects of exercise on mood state indicate a statistically significant improvement on 6 of 7 mood state variables after involvement in a single exercise class.

The results of both the short and long-term studies support the hypothesis that exercise has a positive influence on psychological functioning.

B. Recommendations

1. A randomly assigned control group should be used in future research of both a short-term and long-term nature.

2. A non-exercising treatment group should be included in long-term studies to control for the effects of social interaction in non-exercising subjects.

3. Further research to compare the effect of aerobic vs, non-aerobic exercise on mood state needs to be done to confirm the reliability of the data obtained in the present study.

4. Future studies could also be conducted to determine-if certain types of people could benefit more than others from an exercise intervention. Contrast groups could include different personality types or different depression disorders.

- Astrand, P, O., & Rodaul, K. (1977). Textbook of work physiology (2nd ed.). New York: McGraw-Hill Publishing.
- Beck, A. T., & Beck, R. W. (1972). Screening depressed patients in family practice, Post-Graduate Medicine, 52, 81-85.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. <u>Archives of General Psychiatry</u>, <u>4</u>, 561-571.
- Blue, R. F. (1979). Aerobic running as a treatment for moderate depression. <u>Perceptual</u> and Motor Skills, 48, 228.
- Blumenthal, J. A., Williams, R. S., Needels, T. L., & Wallace, A. G. (1982). Psychological changes accompany exercise in middle-aged adults. <u>Psychosomatic Medicine</u>, <u>44</u>, 529-535.
- Brown; R. S., Ramirez, D. E., Taub, J. M. (1978). The prescription of exercise for depression. The Physician and Sports Medicine, <u>6</u>, 34-40.
- Ewing, J. H., & Scott, D. G. (1984). Effects of aerobic exercise upon affect and cognition. Perception and Motor Skills, 59, 407-414.
- Folkins, C. H. (1976). Effects of physical training on mood. <u>Journal of Clinical</u> Psychology, <u>32</u>, 385-388.
- Fox, E. L., & Mathews, D. K. (1981). The Physiological Basis of Physical Education and Athletics. Third Edition. Saunders College Publishing, Philadelphia.
- Greist, J. H., Klein, M. H., Eischens, R. R., & Faris, J. T. (1978). Running out of depression. <u>The Physician and Sports Medicine</u>, <u>6</u>, 49-54.
- Hayden, R. M., & Allen, G. J. (1984). Relationship between aerobic exercise, anxiety, and depression: Convergent validation by knowledgeable informants. <u>Journal of Sports</u> <u>Medicine</u>, 24, 69-74.
- Hilyer, J. C., & Mitchell, W. (1979). Effect of systematic physical fitness training combined with counselling on the self-concept of college students. <u>Journal of</u> <u>Counseling Psychology</u>, <u>26</u>, 427-436.
- Hughes, J. R. (1984). Psychological effects of habitual aerobic exercise: A critical review. Preventive Medicine, 13, 66-78.
- Hughes, J. R., Casal, D. C., & Leon, A. S. (1986). Psychological effects of exercise: A
randomized cross-over trial. <u>Journal of Psychosomatic Research</u>, <u>30</u>, 355-360. Jasnoski, M. L., & Holmes, D. S. (1981). Influence of initial aerobic fitness, aerobic training, and changes in aerobic fitness on personality functioning. <u>Journal of</u> <u>Psychosomatic Research</u>, <u>25</u>, 553-556.

Lichtman, S., & Poser, E. G. (1983). The effects of exercise on mood and cognitive functioning. Journal of Psychosomatic Research, 27, 43-52.

Lion, L. S. (1978). Psychological effects of jogging: A preliminary study. <u>Perceptual and</u> <u>Motor Skills</u>, <u>47</u>, 1215-1218.

Markoff, R. A., Ryan, P., & Young, T. (1982). Endorphins and mood changes in long distance running. <u>Medicine and Science in Sports and Exercise</u>, <u>14</u>, 11-15.

McCann, L., & Holmes, D. (1984). The influence of aerobic exercise on depression. Journal of Personality and Social Psychology, <u>4</u>, 1142-1147.

McNair, D. M., Lorr, M., & Droppleman, L. F. (1971). Manual for the Profile of Mood States. San Diego: Educational and Industrial Testing Service.

Monahan, T. M. (1986). Exercise and depression: Swapping sweat for serenity? The Physician and Sports Medicine, <u>14</u>, 192-197.

Moreau, M. E. (1981). <u>The effectiveness of jogging as a treatment for depression</u>. Unpublished Doctoral Dissertation, Simon Fraser University, British Columbia.

Morgan, W. P. (1985). Affective beneficience of vigorous physical activity. Medicine and Science in Sports and Exercise, <u>17</u>, 94-100.

Oliver, J. M., & Simmons, M. E. (1984). Depression as measured by DSM-III and the BDI in an unselected adult population. <u>Journal of Consulting and Clinical Psychology</u>.

- Oliver, J. M., & Simmons, M. E. (1985). Affective disorders and depression as measured by the diagnostic interview schedule and the Beck Depression Inventory in an unselected adult population. <u>Journal of Clinical Psychology</u>, <u>41</u>, 469-476.
 - Ransford, C. P. (1982). A role for amines in the antidepressant effect of exercise: A review. Medicine and Science in Sports and Exercise, 14, 1-10.
 - Sarason, I. G., Johnson, J. H., & Siegal, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. <u>Journal of Consulting and</u> <u>Clinical Psychology</u>, <u>46</u>, 932-946.

Weinstein, W. S., & Meyers, A. W. (1983). Running as treatment for depression: Is it

worth it? <u>Journal of Sport Psychology</u>, <u>5</u>, 288-301. Wilfley, D., & Kunce, J. (1986). Differential physical and psychological effects of exercise. <u>Journal of Counseling Psychology</u>, <u>33</u>, 337-342.



| Append | lix A |
|---|---|
| | |
| Beck Depressio | on Inventory |
| | |
| Name | |
| | |
| 'INSTRUC | TIONS |
| | |
| On this questionnaire are groups of statements. Please read the | number beside the statement you have chosen. If several statements |
| entire group of statements of each | in the group seem to apply equally |
| category. Then pick out the one | well, circle each one. |
| statement in that group which best | Be sure to read all the statements. |
| describes the way you feel today, | in each group before making your |
| that is, right now! Circle the | choice. |
| | |
| A | Ε. |
| 3 I am so sad or unhappy that I | 3 I feel as though I am very |
| can't 'stand it. | bad or worthless. |
| 2 I am blue or sad all the time | 2 feel quite guilty. |
| and I can't snap out of it. | 1 I feel bad or unworthy a good |
| 1 I feel sad or blue. | part of the time. |
| 0 I do not feel sad. | 0 I don't feel particularly guilty. |
| · · · · · · · · · · · · · · · · · · · | |
| B. | |
| 3 I feel that the future is hopeless | 3 I hate myself. |
| 2 I feel I have nothing to look | 2 I am disgusted with myself. 1 I am disappointed in myself. |
| forward to. | 0 ^h don't feel disappointed in mysel |
| 1 I feel discouraged about the future. | o i don t reer disappointed in myser |
| 0 I am not particularly pessimistic | G. |
| or discouraged about the future. | 3 I would kill myself if I had |
| | the chance. |
| c | 2 I have definite plans about |
| 3 I feel I am a complete failure as | committing suicide. |
| a person (parent, husband, wife). | 1 feel would be better off dead. |
| 2 As I look back on my life, all I | 0 I don't have any thoughts of |
| can see is a lot of failures. | harming myself. |
| 1 I feel I have failed more than | |
| the average person. | Η. |
| 0 do not feel like a failure. | 3'I have tost all of my interest |
| | in other people and don't care |
| D. | about them at all. |
| 3 I am dissatisfied with everything. | 2 I have lost most of my interest |
| 2 don't get satisfaction out of | in other people and have little |
| anything anymore. | feeling for them. |
| 1 I don't enjoy things the way I | 1 I am less interested in other |
| used to. | • people than I used to be. |
| 0 1 am not particularly dissatisfied. | 0 I have not lost interest in other |
| | people. |

I. 3 I can't make any decisions at all anymore.

- 2 I have great difficulty in making decisions.
- 1 I try to put off making decisions.
- 0 I make decisions about as well as ever.
- , · ·
 - J 3 I feel that I am ugly or
 - repulsive-looking. 2 I feel that there are permanent
 - changes in my appearance and they make me look unattractive.
 - 1 I am worried that I am looking old or unattractive.
 - 0 I don't feel that I look any
 - worse than I used to.
- _ K.
 - 3 I can't do any work at all.
 - 2 I have to push myself very
 - hard to do anything.
 - 1 It takes extra effort to get
 - started at doing something.
 - '0 I can work about as well as

. . 6

before:

- L.
 - 3 I get too tired to do anything.
- 2 I get tired from doing anything. 1 I get tired more easily than
- I used to. 0 I don't get any more tired

- than usual:
- M.
- 3 I have no appetite at all anymore.
- 2 My appetite is much worse now.1 My appetite is not as good as it used to be.
- 0 My appetite is no worse than usual.

| | | | di D | • • | • | | at alaria alaria a |
|-------------|---|--------------|---------------------------------------|-----------|------------|---|--------------------------|
| | | | pendix B | • | • | | |
| | | Profile of | Moods S | tates | | | |
| Name | · | | · · · · · · · · · · · · · · · · · · · | | | 1. | |
| read | Instructions: Below is a list of each one carefully ght which best de | Then fill | in ONE : | space und | der the an | swer to | \mathbf{n} |
| | numbers refer to th 1 = Not at all 2 = A little 3 = Moderately 4 = Quite a bit 5 = Extremely | ese phrases | | | | | |
| 1. f | -riendly | 1 | 2 3 | 4 5 | | | а 1 |
| 2. | Tense 🖕 | 1 | 23 | 4 5 | • | بر | |
| 3. | Angry | 1 | 2 3 | 4 5 | | • | |
| 4. \ | Norn out | 1 | 2 3 | 4 5 | | | |
| 5. I | Jnhappy | 1 | 2 3 | 4 5 | | | |
| 6. (| Clear-headed | . 1 | 2 3 | 4 5 | | | |
| | _ively | 1 | 2 3 | 4 5 | | | • |
| Sec. Sec. | | | | | | | |
| • | Confused | | 23 | 4 5 | | a Ala an | |
| 9. 5 | borry for things dor | າ ອ 1 | 2 3 | 4 5 | | | ۵, |
| 10. 5 | bhaky . | 1 | 2 3 | 4 5 | | | |
| 11. 1 | istless | 1. 1. | 2 3 | 4 5 | | | |
| 12. F | eeved | 1 | 2 3 | 4 5 | | | |
| | Considerate | 1 | 2 3. | 4 5 | | | |
| 14. S | | | | | | | |
| | • | | 2 3 | 4 5 | | | |
| 15. 4 | | .1 | 23 | 4 5 | | | |
| 16. C |)n edge | 1 | 2 3 · | 4 5 | | | |
| 17. 0 | irouchy | 1 | 2 3 | 4 5 | | ٩ | |

| | | а 1 10 г. – С | · . · · | | | | 67 |
|-----------------|-----------------------|--------------------------|------------------|------------|------------|----------|--|
| Q 18. | Blue | 1 | 2 | 3 | 4 | 5 | |
| 19. | Energetic | 1 | 2 | 3 | 4 | 5 | |
| 20. | Panicky | 1 | 2 [.] , | 3 | 4 | 5 | |
| 21. | Hopeless | . 1 '' | 2 | 3 | 4 | 5 | |
| 22. | Relaxed | 1 | 2 | • 3 | 4 | 5 | |
| 23. | Unworthy | 1 | 2 | 3 | · 4 | 5 | |
| 24. | Spiteful | 1 | 2 | 3 | 4 . | 5 | |
| 25. | Sympathetic | .1 | 2 | 3 | 4 | 5 | |
| 26. | Uneasy | 1 | 2 | 3 | 4 | 5 | |
| 27. | Restless | 1 | 2 | 3 | 4 | 5 | |
| 28. | Unable to concentrate | 1 | 2 | 3 | 4 | 5 | |
| 29. | Fatigued | ` 1 | 2 | <i>"</i> 3 | 4 | 5 | |
| . 30. | Helpful | 1 | 2 | 3 | 4 | 5 | |
| , 31. | Annoyed | 1.5 . 1 .5 | 2 | 3 | 4 | 5 | |
| . 32. | Discouraged | - 1 | 2 | 3 | 4 | 5 | and a second second Second second second Second second |
| 33. | Resentful | i, | 2 | 3 | 4 | 5 | |
| . 34. | Nervous | 1 | 2 | 3 | 4 | 5 | |
| 35. | Lonely | • 1. | 2 | 3 | 4 | 5 | |
| 36. | Miserable | 1 | 2 | 3 | 4 | 5 | |
| 37. | Muddled | 1 | 2 | 3 | 4 | 5 | |
| | Cheerful | 1 | 2 | 3 | 4 | 5 | |
| 39. | Bitter | 1 | 2 | .3 | 4 | 5 | |
| . 40. | Exhausted | 1 | 2 | 3 | 4 | 5 | |
| (41. | Anxious | 1 () () | 2 | .3 | 4 | .5 | |
| 42. | Ready to fight | 1 | 2 | 3 | 4 | .5 | |
| 43. | Good natured | 1 | 2 | 3 | 4 | 5 | |
| | | a | | | 8 | | |

| | · . | 5 A. A. A. | (a. 1 | X | · | DO |
|---|--------------|---|--|----------|--|-----------------|
| | | | e de la constante Na constante de la constante de | | | |
| 44. Gloomy | 1 | 2 | , 3 | 4 | 5 | |
| | 4 | 2 | 3 | 4 | 5 | |
| 45. Desperate | . 1 | | | | | |
| 46. Sluggish | 1. | 2 | 3 | 4 | 5 | |
| 47. Rebellious | 1 | 2 | 3 | 4 | 5 | |
| 48. Helpless | 1 | 2 | 3 | 4 | 5 | |
| 49. Weary | .1 | 2 | 3 | 4 | 5 | |
| 50. Bewildered | | 2 | 3 | •4 | 5, | |
| | | 2 | | | | |
| 51. Alert | 1 | i i | 3 | 4 | 5 | |
| 52. Deceived | 1 | 2 | 3 | 4 | 5 | |
| 53. Furious | 1 . ' | 2 | 3 | 4 | 5 | |
| 54. Efficient | 1 | 2 | 3 | 4 | 5 | |
| 55. Trusting | 1 | 2 | 3 | 4 | 5 | |
| | . * | 1 | | | - | |
| 56 Full of pen | · 1 | 2 | 3 | 4 | . 5 | c_{2} |
| 56. Full of pep | 1 | 2 | 3 | | 5 | <i>E</i> 2 |
| 56. Full of pep 57. Bad-tempered | 1 | 2 | 3 | 4 | 5 | ڪ ي ا |
| | 1 1 1 | | Al di | | | • |
| 57. Bad-tempered | 1 1 1 | 2 | 3 | 4 | 5 | |
| 57. Bad-tempered 58. Worthless | n de de L | 2 | 3 3 | 4 | 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree | 1 | 2 2 2 | 3 3 3 | 4 4 | 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrified | 1 | 2 2 2 2 2 2 | 3 3 3 3 | 4 4 | 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrifled 62. Guilty | 1 | 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrified 62. Guilty 63. Vigorous | 1 | 2 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrifled 62. Guilty | 1 | 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrified 62. Guilty 63. Vigorous | 1 | 2 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrifled 62. Guilty 63. Vigorous 64. Uncertain about things | 1 | 2 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrifled 62. Guilty 63. Vigorous 64. Uncertain about things | 1 | 2 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrifled 62. Guilty 63. Vigorous 64. Uncertain about things | 1 | 2 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 5 5 5 5 | |
| 57. Bad-tempered 58. Worthless 59. Forgetful 60. Carefree 61. Terrifled 62. Guilty 63. Vigorous 64. Uncertain about things | 1 | 2 2 2 2 2 2 2 2 2 | 3 3 3 3 3 3 3 3 | 4 4 | 5 5 5 5 5 5 5 5 5 5 | |

Appendix C.

Life Events Survey

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. Please check those events which you have experienced in the recent past and indicate the time period during which you have experienced each event. Be sure that all check marks are directly across from the 'items they correspond to.

Also, for each item checked below; please indicate the extent to which you viewed the event as having either a positive or negative impact on your life at the time the event occurred. That is, indicate the type and extent of impact that the event had. A rating of -3 would indicate an extremely negative impact. A ration of 0 suggests no impact either positive or negative. A rating of +3 would indicate an extremely positive impact.

Section 1

e i

| с О 7 п | ס emely ative | Moderately negative | Some what negative | mpact | tly ive | Moderate)y positive | Extremely positive |
|---------------------------------------|---------------------|------------------------|-----------------------|----------|------------|------------------------|-----------------------|
| to to Event 6 mo 1 y |) työ | Moden | Some | Ň | Sligh | Mode | Extre posit |
| 1. Marriage | -3 | - 20 | -1 | 0 | +1 | +2 | +3 |
| 2. Detention in jail or | -3 | -2 [*] | -1 | 0 | +1 | +2 | +3 |
| comparable institution | | | ~_ | | | | $(1,1,\dots,1)$ |
| 3. Death of spouse | -3 | -2 | -1` | 0 | +1 | e +2 | +3 |
| 4. Major change in sleeping habits | -3. | •, -2 ° | -1 | 0 | +1 | +2 | +3 |
| '(much more or much less sleep) | | i hay | | | | | |
| 5. Death of close family member; | -3 | -2 | 1 | 0 | +1 | +2 | +3 |
| , a. Mother | -3 | -2 | 1 | 0 | +1 | +2 | +3 |
| b. Father | -3 | -2 | -1 | | +1 | +2 | +3 |
| c. Brother | ° −3 −3 | -2 | -1 | 0 | +1 | +2 | +3 |
| d. Sister | ⁺` -3 · | -2 -2 | -1 | 0 | +1. | +2 | +3 |
| e. Grandmother | -3 | -2 | | 0 | +1 | +2 | +3 |
| f. Grandfather | -3 -3 | -2 | -1 | 0 | +1. | +2 | (+3 ··· |
| g. Other (specify) | | -2 | -1 | 0 | . +1 | .+2 | +3 |
| 6. Major change in eating habits | -3 | -2 | .,-1 | 0 | ÷1 . | +2 | +3 |
| (much more or much less | · · · · · | | • | | • | | |
| food intake) | | | · · · | . | • • • | · · · · | a di se |
| 7. Foreclosure on mortgage or loan | -3 | -2 | . ' −1 ' | 0 | +1 | +2 | +3 |
| 8. Death of close friend | -3 | -2 | ∴_ -1 | 0 | +1 | +2 | +3 |
| 9. Outstanding personal achievement | -3 | -2 | ् भूते, | 0 | +1 | +2 | +3 |
| 10. Minor law violations (traffic | -3 | -2 | . – 1 | 0 | _ +1 | +2 | +3 |
| tickets, disturbing the peace) | | | | | | | |
| 11. Male: Wife/girlfriend's pregnancy | -3 | 2 | -1 | 0 | +1 | +2 | +3 |
| 12. Female: Pregnancy | -3 | -2 | -1 | 0. | +1 | +2 | +3 |
| 13. Changed work situation | -3 | -2 | -1 | 0 | +1 | +2 | +3 |
| (different work responsibility, | | | | | | | · · · |
| major change in working | | | | | | | |
| conditions, working hours, etc.) | | | | | | | |
| | | | | | | | |

| | | ح | | مد | • | <u>א</u> ר | | , |
|---|----------------------|-----------------|---------------------|-------------|----------------------|----------------------|--|-------------|
| | Extremely | Moderately | Somewhat | No impact | | tely | e <u>v</u> | |
| 0 7 | | 619 | | È | ₹ | era ive | e m ive | |
| | xtre ou | p p c | | | Slightly positive | Moderate positive | Extremel | |
| Event 6mo 1 y | ν <mark>, μ</mark> ε | Σž | | ž | S S | Σĝ | r ing g | |
| 14. New job | -3 | -2 | -1 | 0 | +1 | +2 | | ` .' |
| 15. Serious illness or injury of | ~0 | | | U | ÷ † | +2 | +3 | |
| close family member: | · · · · / | | i de la | | | 1.1 | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | |
| a. Father | 3 | -2 | 1 | 0 | +1. | +2 | +3 | |
| b. Mother | -3 | -2 | · ~1 | 0 | +1 | +2 | +3 | |
| c. Sister | -3 | -2 [,] | -1 | 0 | +1 | +2 | | |
| d. Brother | -3 | -2 | ' −1 | 0 | +1 | +2 ′ | +3 | |
| e. Grandfather | -3 | -2 | _i. −1 ⁺ | ۰0 | ±1 | +2 | +3 | |
| f. Grandmother | ~3 | -2 | - 1 | 0 | +1 | +2 | +3 | |
| g. Spouse | -3 | -2 | ' −1 | | <u>+</u> 1 | +2 | +3 - | |
| h. Other (specify) | -3 | -2 | 1 | 0 | +1 | +2 | . +3 ' | |
| 16. Sexual difficulties | ~3 | -2 | 1 | 0 | +1 | | | |
| 17. Trouble with employer (in | ,-3 | -2. | 1 . | 0, | +1 | +2 | +3, | |
| danger of losing job, being suspended, demoted, etc.) | | | | • | | | | |
| 18. Trouble with in-laws | -3 | -2 | • • | 0 | | .0 | . 0 | |
| 19. Major change in financial | -3 | -2 | -1 | 0 | °+1 +1 | _+2 _+2 | +3 | |
| status (a lot better off or | -5 | . ~~ | - ! | U | τ. | +2 | +3 | |
| a lot worse off) | | 1 | | | | | | |
| 20. Major change in closepess of | · -3 | ~2 | -1 | 0 | +1 | +2 | +3 | |
| family members (increased | | | • | | | | | |
| or decreased closeness) | | | • | | ÷ • | | 1 | |
| 21. Gaining a new family member | -3 | -2 | -1 | 0 | +1 | +2 | +3 | |
| (through birth, adoption, ; | | | | | | | х. т. | |
| family member moving in, etc.) | | 1.14 | i i | • | | · · · | • | • ' |
| 22. Change of residence / / | -3 | -2 | -1 | 0 | +1 | +2 | +3 | |
| 23. Marital separation from mate | -3 | -2 | -1 | 0 | +1 | +2 | °+3 | • ` |
| 24: Major change in church | -3 | -2 | ~1 | 0 | +1 | +2 | +3 | |
| activities (increased or | е | 1. A. A. | • | | | 5 m. | | |
| decreased attendance) | | | | | 1.1 | • | | ì |
| 25. Marital reconciliation with mate | -3 | -2 | | | | . +2. | | |
| 26. Major change in number of | -3 | -2 | 1 | 0 | +1 | +2 | +3 | |
| arguments with spouse (a lot more or a lot less arguments) | A Sec. | • | | | | | | |
| 27. Married male: Change in wife's | -3 | 2 | . 1 | 0 | | | | |
| work outside the home (beginning | - J | -2 | · -1 | U ' | τų | +2 | +3 | |
| work, ceasing work, changing to | 1. | i. | | · · | | 1 | la de la composición de la composición La composición de la c | 1 |
| a new job, etc.) | 10. I 1 | .• | | 1 | | 1 | - 19 - A. | |
| 28. Married female: Change in | -3 | -2 | -1 | 0 | +1 | , +2 [•] · | +3 | |
| husband's work (loss of job, | | | | - 14. - | | | | |
| beginning new job, retirement, | | • | | e An Ann | ¢ . | | | |
| etc.) | | | | | | | | |
| 29. Major change in usual type | -3: | -2 | =1 | 0 | +1 | +2 | +3 | |
| and/or amount of recreation | | | | | di de | | | · . |
| 30. Borrowing more than \$10,000 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | |
| (buying home, business, etc.) | | | | • | | | | 38°. |
| 31. Borrowing less than \$10,000 | -3 . | -2 | ;- 1 | 0 | +1 | +2 | +3 | |
| buying car, TV, getting | | | | | | | | , |
| school loan, etc.) | | • | | | | | | |
| | | V | | | | | | |

| | | n ya san Dina | > | | | | | 11 11 144 144 144 144 |
|---------|---|---|--|----------------------|--------------|----------------------|-----------------|--------------------------------------|
| | | Extremely negative | e e | Somewhat negative | act | Slightly positive | te | el |
| | 0.7 | ti v | era tiv | tix | . d . | t y ive | Moderate | Extremely positive |
| A | 07m to to | ga čt o | ode ga | ga g | | igh sit | sit | sit |
| | Event 6mo 1 y | ູ່ພິຊັ | Σ, č | Sc | ž | S od | Σ° α | ωã |
| | | | | | | | 1 | |
| | Being fired from job Male: Wife/girlfriend | -3 | -2 | -1 | 0 | +1' | +2 | +3 |
| | having abortion | -3 | -2 | ⊢1 1 | 0 3 | +1 | +2 | +3 |
| 34. | Female: Having abortion | -3 | -2 | -1 | 0 | +1 | +2 | +3 |
| | Major personal illness or | 3 | -2 | | 0 | | +2 | +3 |
| | injury | | . – | J. | · | | | |
| 36. | Major change in social | -3 | -2 | -1 | 0. | +1 | +2 | +3 |
| 1 | activities, e.g., parties, | | | i. | | | | · • . |
| • | movies, visiting increased | | | | | | .* | ĥ. |
| | or decreased participation) | · · · | 1 | ć, | | 1. 1. 1 | | |
| . 37. | Major change In living | -3 | -2 | -1 | 0 | +1 | +2 · | +3 |
| n e sta | conditions of family | ¥ 11 | | | | • | • | |
| | (building new home, remodeling, | | | | ы 19 | | , , | |
| I. | deteriorating of home, | | 1.4 | | , | | | |
| 20 | neighborhood, etc.) | - | - | | | | 1. <u>1.</u> 1. | |
| | Divorce | -3 | ~2 | -1 | 0 | +1 | +2. | |
| 39. | Serious injury or illness of close friend | ~3 | -2 | . – 1 | 0 | +1. | +2 | +3 |
| 40 | Retirement from work | 0 | | | ^ | | ' o | |
| | Son or daughter leaving home | -3 -3 | -2 | ∴- <u>1</u> , | 0 | +1 | +2 | |
| | (due to marniage, college, etc.) | . ~ປັ | -2 | . ~1 | 0 | +1 | +2 | +3 |
| 42 | Ending of formal schooling | -3 | . 0 | 1 | 0 | . 1 | | 0 |
| | Separation from spouse (due to | 3 ~3 | -2 -2 | -1 -1 | 0 | +1 | +2 +2 | +3 |
| | work, travel, etc.) | ~0 | · ~ . | | U ; | ነጥ ነ . | +4 | +3 |
| 44 | Engagement | -3 | -2 | _1 | 0 | +1 | +2 | +3 |
| | Breaking up with boyfriend/ | -3 | -2 | -1 | 0 | · +1·· | · +2 | +3 |
| | girlfriend | | · ••• | • | • . | , i | | - |
| 46. | Leaving home for the first time | -3 | -2 | -1 | 0 | -+1 ¹ | +2 | +3 |
| 47. | Reconciliation with boyfriend/ | ~3 | -2 | - 1 | 0 * | +1 | +2 | +3 |
| | girlfriend | e de la composición d | | | | | _ | |
| | er recent experiences which | | - | • | | | | . · · · |
| | e had an impact on your life. | | | 1.1 | | · · · · . | | |
| 48. | ····· | -3 | -2 | -1 | 0 | +1 | +2 | +3 |
| 49. | | -3 | -2 | 1 | 0 | . +1 ,. | +2 | +3 |
| 50. | | -3 | -2 | -1 | 0 | +1 | +2 | +3 |
| | | | | | | | | |
| Sec | tion_IIStudent only | | | · • | | | | • • • |
| | | 2 | | | 0 | | | |
| 51. | Beginning a new school | -3 | -2 | -1 | U | +1 | +2 | +3 |
| | experience at a higher | -3 | -2 | -1 | 0 | 1 | +2 | +3 |
| • | academic level (college, | | 6 | -, | | | ۲ ۲ | ÷ J |
| | graduate school, professional school, etc.) | | | 2010) 1940 | | | | |
| 52 | Changing to a new school at | -3 | -2 | _ 1 ' | 0 | +1 | +2 | +3 |
| JC. | same academic level (under- | . -0 | ~4 | - I | . V , | न । | 74 | , |
| | | | | | | | | هم . |
| 52 | | | | | | | | |
| ູ ວັວ. | | -3 | -2 | -1 | 0 | ₩I | +2 | +3 |
| | | | n de la composición de la comp | | | | | |
| | | | 0 | | | • | | |
| | | | | | | | | |
| 53. | graduate, graduate, etc.) Academic probation | -3 | -2 | -1 | 0 | +,1 | +2 | +3 |

Appendix D¹¹

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THANK-YOU, CM

PLEASE ANSWER THE FOLLOWING QUESTIONS. BE AS BRIEF OR AS IN-DEPTH AS YOU WANT.

1) AS A RESULT OF PARTICIPATING IN THE EXERCISE CLASSES, DID YOU NOTICE ANY CHANGES IN THE WAY YOU FEEL ABOUT YOURSELF?

2) IF YES, WHAT SORT OF CHANGES DID YOU NOTICE? .

(3) IF YOU NOTICED ANY CHANGES, HOW SIGNIFICANT DO YOU FEEL THEY WERE?

Appendix E

Anova Summary Tables

4

| Anova | Summary | Tables | Experiment | #1 | |
|-------|---------|--------|------------|----|-----|
| | | | | | • • |

| 4° | | | | | | 1 |
|--------|-----------------------------------|-----------------------------|-----------------------|-----------------------------|----------------|-------------------|
| | A | | Aerobic Cap | acity | | |
| 1 | Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| | . A Group ′ S-Within | ື່ 399.776 2218.305 | 2. 22. | 199.888 100.832 | 1.982 | 0.162 |
| | B Time AB B\$-Within | 6.055 82.628 405.258 | 1. 2. 22. | 6.055 41.314 18,421 / | 0.329 2.243 | 0.572 0.130 |
| | I . | L | | | | С |
| | | , | Beck Depression | Inventory | • | . 4 |
| * | Source | Sum of Squares | Degrees of Freedom | Mean Squares | , F Ratio | Probability |
| • | A Group S-Within | 11.977 599.313 | 2. 23. | 5,988 26.057 | 0.230 | 0.796 |
| | B Time AB BS-Within | 25.521 8.847 ° 84.813 | 1. 2. 23. | 25.521 4.424 3.688 | 6.921 1.200 | . 0.015* 0.319 |
| | 2 | | | | | |
| . n | | F | POMS - Depressio | n Subscale | • | ` |
| | Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| | A Group S-Within | 22.389 1335.000 | 2. 23. | 11.194 58.043 | 0:193 | Q.826 |
| | B T ime AB BS-Within | 94.452 62.908 430.333 | 1. 2. 23. | 94.452 31.454 18.710 | 5.048 1.681 | 0.035° 0.208 |
| | | | | • | | |
| | | | POMS ~ Fatigue | Subscale | - | .* |
| | Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| | A Group S-Within | 50.908 792.750 | 2. 23. | 25.454 34.467 | 0.738 | 0.489 |
| ۰ ۲ | B Time AB BS-Within | 11.342 49.129 681.750 | 1. 2. 23. | 11.342 24.564 29.641 | 0.383 0.829 | 0.542 0.449 |
| | • | • | • | | | |

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| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F. Ratio | Probability |
|-----------------------------|----------------------------|-----------------------|--------------------------|----------------|----------------|
| A Group S-Within | 5.516 975.316 | 2. 23. | 2.758 42,405 | 0.065 | 0.937 |
| , B Time AB BS-Within | 2.836 11.031 297.313 | 1. 2. 23. | 2.836 5.516 12.927 | 0.219 0.427 | 0.644 0.658 |

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| Source | • | Sum of Squares | Degrees of , Freedom | Mean Squares | F Ratio | Probability |
|-------------|--------------|--------------------|-------------------------|------------------|--------------------|-------------|
| A Gr S-W | oup ithin | 162.389 581.625 | 2. 23. | 81.194 25.288 | 3.211 | 0.059 |
| BTI | ne | 213.926 | 1. | 213.926 | 10.690 | 0.003* |
| AB | | 56.683 | 2. | 28,342 | ⁻ 1.416 | 0.263 |
| BS-W | 'ithin | 460.292 | 23, | 20.013 | | |

| а. - | POMS - | Tension | Subscale |
|---------|--------|---------|----------|
| | | | |

| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
|------------------|--------------------|-----------------------|-----------------|------------|-------------|
| A Group | 69.020 | 2. | 34.510 | 0.871 | 0.432 |
| S-Within | 910.879 | 23. | 39.603 | . ' | |
| B Time | 18.750 | 1. | 18.750 | 1,184 | 0.288 |
| AB | 27.055 | 2. | 13.527 | 0.854 | 0.439 |
| BS-Within | · / 364.125 | 23. | 15.832 | • | |

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POMS - Confusion Subscale

| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
|-----------|-------------------|------------------------------|-----------------|------------|-------------|
| A Group | 25.574 | ·· 2. | 12:787 | 0.668 | 0.522 |
| S-Within | 440.208 | 23. | 19.139 | | 1 |
| B Time | 30.083 | [•] 1. [•] | 30.083 | 4.868 | 0.038* |
| AB , | 5.387 | 2. | 2.693 | 0.436 | 0.652 |
| BS-Within | 142.125 | 23. | 6.179 | | |
| | POMS - | Total Score E: | vneriment O | 00 | ан. 1 |

| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
|-------------------------------|---------------------------------|------------------------|--------------------------------|----------------|-----------------|
| A Group S-Within | 1268.283 17693.855 | ⁶ 2. 23. | 634.142 769.298 | 0.824 | 0.451 |
| B Time AB BS-Within | 1537.559 793.781 7131.855 | 1. _2. _23. | +537.559 396.891 310.081 | 4.959 1.280 | 0.036* 0.297 |
| | | 20. | | ٤. | |

Anova Summary Tables Experiment #2

POMS - Depression Subscale

| | Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
|--------|---------------------------|------------------------------|-----------------------|-----------------------------|-----------------|------------------|
| | A Group S-Within | 13.458 750.462 | 1. 23. | 13.458 32.629 | 0.412 | 0.527 |
| · · | B Time AB BS-Within | 571.865 62.105 546.615 | 1. 1. 23. | 571.865 62.105 23.766 | 24.062 2.613 | 0.001 • 0.120 |

POMS - Vigor Subscale

| Source " | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability / | |
|-----------|-------------------|-----------------------|-----------------|------------|------------------|--|
| A Group | 0.088 | 1. | 0.088 | 0.002 | 0.966 | |
| S-Within | 1065.836 | 23. | 46.341 | | , | |
| B Time | 19.500 | 1. | 19,500 | 1.523 | 0.230 | |
| AB | 0.780 | 1. | 0.780 | 0.061 | 0.807 | |
| BS-Within | 294,500 | 23. | 12.804 | | | |

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POMS - Fatigue Subscale

| Source . | Sum of Squares | Degrees of Freedom | Mean Squares, | ⊢ ∏ Ratio | Probability |
|-------------|-------------------|-----------------------|------------------|--------------|---------------------------------|
| A Group | 10.634 | 1. | 10.634 | 0.234 | 0.633 |
| S-Within | 1046.846 | 23. | 45.515 | | - |
| B Time | 104.773 | 1. • | 104.773 | , 7.555 | 0.011 |
| AB • | 25.731 | 1. | 25.731 | 1.855 | 0.186 |
| BS-Within | 318,949 | ,23. | 13.867 | • | • |
| | • | 5 | | • • | |
| •• <u>;</u> | | • | 1 | . • . | |

| | | , , , , , , , , , , , , , , , , , , , | | • • • • • • • | 76 |
|---------------------------|------------------------------|---------------------------------------|-----------------------------|-----------------|----------------|
| | | POMS - Anger | Subscale | | |
| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| A Group S-Within | 29.785 731.295 | 1. 23. | 29.785 31.795 | 0.937 | 0.343 |
| B Time AB BS-Within | 547.225 29.785 583.295 | 1. 1. 23. | 547.225 29.785 25.361 | 21.578 1.174 | 0.001 0.290 |
| | A | | 1 | | • |

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POMS - Tension Subscale

| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability | • • • |
|---------------------------|------------------------------|-----------------------|-----------------------------|-----------------|----------------|-------------|
| A Group S-Within | 3.489 674.510 | 1. 23. | 3.489 29.327 | 0.119 | 0.733 | • |
| B Time AB BS-Within | 309.206 25.847 406.074 | 1. 1. • 23. | 309.206 25.847 17.655 | 17.513 1.464 | 0.001 0.239 | |

POMS - Confusion Subscale

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| Source | • | Sum of Squares | Degrees of Freedom | Mean <u>s</u> Squares | | F Ratio | Probability | • |
|---------------------------|--------------|------------------------------|-----------------------|----------------------------|-----|-----------------|-----------------|---|
| A Group S-Within | ` 、 ` | 1.725 370.795 | 1. 23. | 1.725 16.122 | ٠ | 0.107 | 0.747 | |
| B Time AB BS-Within | • | 107.571 24.371 124.949 | 1. 1. 23. | 107.571 24.371 5.433 | • | 19.801 4.486 | .0.001 0.045 | • |
| | • | | الم | • | · · | , , , | () | |

| Source | Sum of Squares | Degrees of Mean Freedom Squares | | Probability |
|---------------------------|---------------------------------|--|-----------------|----------------|
| A Group S-Within | 121.875 16470.125 | 1. 121.875 < 23. | 0.170 | 0.684 |
| B Time AB BS-Within | 7591.414 920.135 6182.590 | 1. 7591.414 1. 920.135 23. 268.808 | 28.241 3.423 | 0.001 0.077 |

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| | | Anova Sum | mary Tables | Experiment | #3 🖜 | • |
|----------------------------------|----------|----------------------------|-----------------------|--------------------------|-----------------|------------------|
| | с. * | POMS | 6 - Depressior | Subscale | | , |
| Source | | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| [–] A Group S-Withir |) | 56.853 649.624 | 1. 20. | 56.853 32.481 | 1.750 | 0.201 |
| B Time AB BS-Within | n | 89.031 1.212 121.265 | 1. 1. 20. | 89.031 1.212 6.063 | 14.684 0.200 | 0.001 • 0.660 |

 $(r_{i}) \in \mathcal{A}$

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| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
|---------------------------|---------------------------|-----------------------|--------------------------|----------------|----------------|
| A Group S-Within | 16.676 846.984 | 1. 20. | 16.676 42.349 | 0.394 | 0.537 |
| B Time AB BS-Within | 0.267 4.085 347.395 | 1. 1. 20. | 0.267 4.085 17.370 | 0.015 0.235 | 0.902 0.633 |

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| POMS - F | Fatique | Subscale |
|----------|---------|----------|
|----------|---------|----------|

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| Source | Sum of Squares | Degrees of Mean Freedom Squares | F Ratio | Probability |
|---------------------------|-----------------------------|---|-----------------|-----------------|
| A Group S-Within | 3.385 758.615 | 1. ⁶ 3.385 20. 37.931 | 0.089 | 0.768 |
| B Time AB BS-Within | 69.465 25.737 132.445 | 1. 69.465 1. 25.737 20. 6.622 | 10.490 3.887 | 0.004* 0.063 |
| | | | | N |

POMS - Anger Subscale

| • | | PC | MS – Anger | Subscale | | |
|-----|---------------------------|---------------------------|-----------------------|--------------------------|--|-----------------|
| • • | Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| | A Group S-Within | 0.070 183.316 | 1. 20. | 0.070 9.166 | 0.008 | 0.931 |
| C | B Time AB BS-Within | 58.121 0.122 71.265 | 1, 1. 20. | 58.121 0.122 3.563 | 16.311 0.034 | 0.001* 0.855 |
| | | | | | ng transformation Ng transformation | |

| | | | | | | 78 |
|----------|---------------------------|-----------------------------|-----------------------|----------------------------|-----------------|-----------------|
| | | PC | MS - Tension | Subscale | | • |
| • • • | Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
| • • | A. Group S-Within | 10.276 287.906 | 1. 20. | 10.276 14.395 | 0.714 | 0.408 |
| | B Time AB BS-Within | 195.807 3.808 222.829 | 1. 1. 20. | 195.807 3.808 11.141 | 17.575 0.342 | 0.001* 0.565 |

POMS - Confusion Subscale

| Source | Sum of Squares | Degrees of Freedom | Mean Squares | F Ratio | Probability |
|---------------------------|---------------------------|-----------------------|--------------------------|-----------------|-----------------|
| A Group S-Within | 0.411 190.316 | 1. 20. | 0.411 9.516 | 0.043 | 0.837 |
| B Time AB BS-Within | 69.001 0.001 70.727 | 1. 1. 20. | 69.001 0.001 3.536 | 19.512 0.000 | 0.001* 0.989 |

| | | | POMS - Tótal Score | € 100 m 1000 m 100 m 10 | |
|---------------------------------|---------------------------|--------------------------------|--|---|-----------------|
| n N | Source | Sum of Squares | Degrees of Mea Freedom Squa | - · · · · | Probability |
| | A Group S-Within | 207.684 7617.316 | 1. 207.68 20. 380.86 | | 0.469 |
| • • • • • • • | B Time AB BS-Within | 1939.705 54.977 2215.930 | 1. 1939.70 1. 54.97 20. 110.75 | 0.496 | 0.001* 0.489 |

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"Poor Man's King": The Reputation versus Reality of James V,

King of Scotland

Margaret Helen McIntyre

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF Master of Arts

Department of History

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Spring 1987

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THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Poor Man's King": The Reputation versus Reality of James V, King of Scotland, submitted by Margaret Helen McIntyre in partial fulfilment of the requirements for the degree of Master of Arts.

> Supervisor Manal 93 fet

Abstract

The reign of James V has long been overshadowed by those of his father and daughter, yet he was one of the strongest and most powerful of the Stewart kings. Because governmental institutions in sixteenth-century Scotland were not as highly developed as their European counterparts, the success of a king's reign depended upon the degree of cooperation which existed between the monarch and his magnates. The traditional view, expounded in virtually every historical account of James V's reign beginning with that of the sixteenth-century historian George Buchanan, up to and including that of Gordon Donaldson, concludes that James V alienated his nobles to such an extent that their hatred of him led to a refusal to fight the English at the battle of Solway Moss.

The governmental legislation of James V has received very little attention as a reflection of his abilities as a king. When the parliamentary statutes and council ordinances which were passed during the fourteen years of his personal rule are studied in detail, it becomes apparent that James V's social policy consistently strove towards strengthening the crown financially. He was an acquisitive king but this trait did not make him unpopular. On the contrary, he was a strong and determined monarch who, with the support of his magnates, consolidated royal authority, rebuilt dilapidated crown finances and financially exploited the papacy.

iv

Acknowledgements

This thesis would never have been completed without the help and guidance of John Langdon, Professor of Medieval British History at the University of Alberta. His kindness, enthusiasm, good humour and, above all, patience acted as a continual source of encouragement.

I also wish to express a deep gratitude to my parents . for their enduring support and forbearance....

1. 1 G



Note on Style

In giving dates, the Julian calendar has been used, with the year beginning at 1 January. In quotations, the original spelling has been maintained. Throughout, in the use of upper and lower case, the system of the Cambridge University Press has been followed, save in the matter of quotations.

vii

I. Introduction

The reign of James V has long been overshadowed by those of his father and daughter yet he was one of the strongest and most powerful of the Stewart kings. Because governmental institutions in sixteenth-century Scotland were not as highly developed as their European counterparts, the success of a king's reign depended upon the degree of cooperation which existed between the monarch and his magnates. The traditional view, expounded in virtually every historical account of James V's reign beginning with that of the sixteenth-century historian George Buchanan, up to and including that of Gordon Donaldson, concludes that James V alienated his nobles to such an extent that their hatred of him led to a refusal to fight the English at the battle of Solway Moss.

Only very recently has this attitude changed. Jenny Wormald, in Court, Kirk and Community, acknowledges The strength and success of James V, and the entire New History of Scotland series is a welcome departure from previous historiography which continually dwelt upon a struggle for power between the crown and its unruly, ambitious magnates. Parliamentary statutes and council ordinances passed during James V's personal rule' indicate that he was a strong and 'Although he was 'erected' in 1524 and again in 1526 with the symbols of sovereignty, in which royal authority was supposedly in his own hands, James V did not, in fact, begin his independent political career as king of Scotland until he escaped from the Douglases in May 1528. Throughout this thesis, therefore, 'personal rule' is used to describe the period during which James V was the sole authority in Scotland; that is, from May 1528 until his death in December determined monarch who, with the support of his magnates, consolidated royal authority, rebuilt dilapidated crown finances and financially exploited the papacy. This thesis is an evaluation of James V's personal reign based upon evidence found in contemporary 'official' records with particular emphasis upon legislation from the Acts of the Parliament of Scotland and the Acts of the Lords of Council in Public Affairs.

The reign itself can be given in brief outline. The son of James IV and Margaret Tudor, eldest daughter of Henry VII of England, James V was born at Linlithgow on April 10, 1512 and succeeded to the Scottish throne upon his father.'s death after the battle of Flodden in September 1513. Until 1528 the country was governed sporadically by the leaders of various factions, the most important of whom was Archibald Douglas, sixth earl of Angus, who held the young king prisoner for two years, an episode which James was never to forget nor forgive. At the age of seventeen James V escaped from the Douglases in May 1528 and effectively began his personal rule.

For the next fourteen years much time and energy was spent in restoring royal revenue and re-establishing law and order. Adhering to tradition, James maintained a close alliance with France by marrying Francis I's daughter Madeleine in 1537 and, after her death, Mary of Guise. Relations with England began to deteriorate from 1541 and

(cont'd) 1542.

when James failed to appear at York for a personal meeting with his uncle, Henry VIII, the English king unleashed his wrath and dispatched troops to the Scottish border. The situation went from bad to worse, resulting in a Scottish defeat at Solway Moss² on November 24, 1542. James fell ill the week following the battle and died, aged thirty, at Falkland, on December 14, 1542, seven days after the birth of his daughter Mary.

The reign of James V has caused little controversy in historical accounts of the period/due to the fact that most, if not all, of the historians who have written about his reign have generally reached the same conclusions. From the sixteenth up to, and including, the twentieth century a traditional viewpoint of the reign, originating in several sixteenth-century accounts and in particular George Buchanan's *Historia*, has established a portrayal of the king which has remained essentially the same. The following is an abbreviated version of James V's personal rule and

reputation as it has generally been represented.

After escaping from the earl of Angus and the Douglas kin in 1528, James V retained a hatred of this family that would last for his lifetime. Being a lover of justice for both rich and poor, the king endeavoured to establish peace and stability in his kingdom. Unfortunately he carried this concern too far and, as a result of his severity, began to

'This defeat was preceded by an initial refusal at Fala Muir of the Scottish nobility 'to invade; for more detail, see Chapter 4. alienate several members of the nobility. As he grew older James became greedier for money to enrich the crown, build palaces, and contribute to his own personal fortune. He attacked his magnates, depriving many of them of their lands and authority.

After his French marriages the king grew increasingly suspicious of the nobility and pursued anyone who was connected with Angus. Religious persecutions escalated with the result that the entire country seemed to be in fear of him. By 1541 James had agreed to meet Henry VIII at York, but he was later convinced by the prelates, under whose control he was wholly and utterly commited, not to proceed with the meeting. This led to war with England, the disaster of Solway Moss and, ultimately, the king's own death. The defeat of the Scots at English hands was due to the alienation of the magnates from their sovereign; their hatred of him motivated them to surrender willingly to the English rather than return to Scotland and face his wrath.

The rout at Solway Moss only deepened the king's suspicions and growing paranoia that the entire nobility was against him. This threw him into a deep depression from which he never recovered. Falling into a fever; he cried out for his favourite, Oliver Sinclair, who had been taken prisoner after Solway Moss, and upon hearing the news of the birth of a daughter, Mary, on December 7,1542 he was said to have exclaimed: "The devil take it. It came with a lass and it will go with a lass." Turning himself to the wall, the king, wracked by a broken heart, willed himself to die seven days later.

Although extremely unpopular with his nobility, James was remembered as the 'Poor Man's King' or 'King of the Commons' because of the love he had for his lower subjects. His popularity among them was enhanced by various adventures he undertook travelling incognito to taverns and villages where he was able to discover their grievances. Thus, upon his death, the common people lamented while the lords and earls rejoiced at having been relieved of a king they detested.

This traditional view of James V is derived largely from the near-contemporary histories of George Buchanan, John Lesley, John Knox and Robert Lindsay of Pitscottie. Each of these authors exhibits a particular bias which is readily apparent in their descriptions. The account closest to the reign is found in the vernacular poems of Sir David Lindsay.

Lindsay, son of David Lindsay of the Mount, was born c.1486, near Cupar, in Fifeshire and was a member of James IV's court. After Flodden he held various offices in the young James V's personal service which he listed as usher, sewer, cupbearer, carver, keeper of the king's purse, privy

³This famous deathbed utterance was said to refer to the royal line of succession; the Stewarts came to the crown by marriage of their ancestor Walter the Steward with Marjøry, daughter of Robert Bruce and mother of Robert II. treasurer, and principal gentleman, or groom, of the bedchamber. Lindsay became a herald from 1530 and was styled Lyon King of Arms by 1542 under which office he was employed in several embassies. After the king's death he retained his court position, continued to travel as an ambassador and became associated with the reformed religion. He remained active as a poet and wrote several poems and satires up until his death in 1555.

The depictions of James V in Lindsay's early poems describe the king as a young child and Lindsay's own presence in the king's household. In several of these poems Lindsay included an "Exhortatioun to the Kyngis Grace" which outlined the characteristics a good king should possess. Lindsay praised his king in 1530 for conforming to the model of a judfcious monarch:

For Justice haldis hir sweird on hie, with hir ballance of Equitie, And, in this realme, hes maid sic ordour, Baith throw the heland and the bordour, That oppressioun and all his fallowis Ar hangit heych apon the gallowis.

The king, despite his athletic talents must, in Lindsay's opinion, refrain from lechery:

Quharefor, sen thou hes sic capacitie To lerne to playe so plesandlie, and syng, Ryde hors, ryn speris with gret audacitie, Schute with hand bow, crosbow, and culveryng, Amang the rest, schir, lerne to be ane kyng:

And, sen the Diffinitioun of ane kyng

"The Complaynt of Schir David Lindesay."(1529-1530). All poems are taken from *The Works of SIr David Lindsay*. 4 Vols. Edited by Douglas Hamer. (Edinburgh, 1931-1936). All citations refer to line number unless otherwise indicated. 381-386.

Is for to have of peple governance, Addres the first, abuse all uther thyng, Tyll put thy bodye tyll sic ordinance, That thyne vertew thyne honour may avance. For quhov suld Prencis governe gret regionis, That can nocht dewlie gyde thare awin personis?"

Even more pressing than the king's self-control was a need for change and reform in the church. Lindsay's criticism of the Roman Church found its strongest voice in his "Ane Satyre of the Thrie Estaitis" which, although exhorting James to reform the Catholic Church in Scotland, remained sympathetic towards the king. Lindsay, in several other poems, continued to 'chastise' the king lightly by reminding him to remain worthy of the office he had been given, although there was never any overt or severe criticism of James's domestic policy.

This is hardly surprising considering Lindsay's position. As his poems were meant to be read by the king it is doubtful if Lindsay would have jeopardized his status as court poet by finding serious fault with James's capabilities as a ruler. The poet's description of the king remained positive as he left his hardest words for the clerics.

An anti-Catholic bias was even more pervasive in John Knox's History of the Reformation in Scotland written around 1566. Although it cannot be taken as an impartial account of the reign, as Knox himself admits, ' it was the first of the "Lindsay, "The Testament and Complaynt of the Papyngo." (1530), 283-287, 290-296. "He indicates, in the preface, that politics will only be mentioned when they refer to religion. Every event in history, as a result, is subordinate to the depiction of the

.sixteenth-century histories to summarize the reputation James V had received:

He was called of some a good poor man's King: of others he was termed a murderer of the nobility and one that had decreed their whole destruction. Some praised him for the repressing of theft and oppression; others dispraised him for the defouling of men's wives and virgins.

George Buchanan's Historia, completed by the early 1570s but not published until 1582, is less sympathetic than Lindsay's poems and establishes a portrayal of James that has been accepted and utilized by successive historians. Born in 1506, Buchanan travelled to Paris for his early education and by 1523 had returned to Scotland in order to march with Albany against England. In a personal account of his own life, Buchanan describes himself as becoming 'tinged' with the flame of Lutheranism in 1526, after which he converted to Calvinism. When persecutions against heretics in Scotland increased in 1539, Buchanan was imprisoned but managed to escape and remained on the Continent for several years. He returned once more to Scotland around 1560 and ten years later was appointed tutor to the young king, James VI. Buchanan sat in parliament during the 1570s but after 1578 ceased to hold a political office and died four years later.

'(cont'd) struggle between the Roman Church and the Reformed. ' John Knox. History of the Reformation in Scotland. Edited by W.C. Dickinson, (Edinburgh, 1949), p. 40-41. ' George Buchanan. Rerum Scoticarum Historia, translated by J. Aikman.(Glasgow and Edinburgh, 1827-9)/II, book xiv.

James V's reign, in Buchanan's judgment, began favourably but, due to the king's suspicious disposition, eventually led to disaster for the country.' Thus, despite the young King's courage and strength, he exhibited, from an early age, a "naturally keen and violent"'° nature. As his reign progressed he became "naturally prone to superstition"'' and was "both covetous and needy."'' Buchanan saw two influences acting upon the king which prevented him from meeting Henry VIII and which served to alienate him from his nobles. In several instances, however, Buchanan seems to become unclear in his own mind whether this alienation came from the king's own efforts and inclinations or from these outside forces.

James, according to the author, willingly agreed to meet Henry VIII but was averted by the Hamilton family on one side and the clergy on the other. The former did not wish for the meeting to take place because they feared that an English marriage alliance might take place, thus ruining their own chances of succession. He maintains that the Hamiltons were apprehensive over any matrimonial endeavours the king undertook and did everything in their power to prevent the king's marriage. The clergy, for their part, became worried over the proposed meeting because they feared for the fate of Catholicism and thus bribed any courtier 'For a more detailed analysis of Buchanan's historical and political beliefs see I.D. McFarlane, Buchanan (London, 1981), Chapter 12. 'Buchanan, p.301. ''*Ibid.*, p.314.

² Ibid., p. 318.
"who possessed the greatest influence over [the king]"'' as well as offering James himself large amounts of money.

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With the birth of his two sons,' however, the king, "feeling himself more secure, began to despise the nobility."' James, Buchanan states, kept both the clergy and the nobility in a state of suspense, playing one off against the other, in order to extract greater and greater amounts of money from them. At Solway Moss the king "intended, by this, to deprive the nobility of all honour, if the expedition succeeded."' The appointment of Oliver Sinclair as commander, however, offended the entire army and led to the defeat.

From Buchanan's account comes the conclusion that the nobles willingly gave themselves up as prisoners

to the English king, though an enemy, [rather] than expose themselves to the vengeance of their own sovereign...[whereupon James] incredibly affected by indignation, rage, and grief...[died of] grief rather than disease.'?

Thus, the king's reputation as a greedy, suspicious and (casping monarch was established. Buchanan's Protestant bias, however, negates an objective analysis of the reign as well as the fact that he was neverable to explain what motive led the king to 'despise' his magnates nor why they became alienated from him.

''Ibid,, p.314. ''James; born at St. Andrews in May 1540 and Arthur, born at Falkland in April 1541. Arthur died, on the same day as his brother, eight days after his birth. ''Ibid,, p.318. ''Ibid,, p.322. ''Ibid,, p.323, 325. Although a contemporary of James V, Buchanan was unreliable in his dates of the reign and at least one modern Scottish historian dismisses both Buchanan and Pitscottie as "hardly worth discussing as serious history."' Another objection to Buchanan is that his history "was primarily concerned... [with justifying] the political theory that a tyrant might be deposed by his people; and his target was Mary, queen of Scots."' Therefore, he sought to provide precedents for the justice of her deposition.

Nevertheless, despite some minor variations, Buchanan's viewpoint of the reign became the standard for virtually every Succeeding historical interpretation. The remaining two contemporary, or near-contemporaty historians John Lesley and Robert Lindsay of Pitscottie tend to repeat Buchanan's interpretation although Lesley exhibits a much more sympathetic treatment of the king, as well as an understanding of the Continental situation which influenced James's domestic and foreign policy. Buchanan's Calvinist bias is absent from Lesley's account due to the fact that Lesley remained a Catholic during the Reformation in Scotland. Thus, there is also much less emphasis upon 'clerical influence* over the king.

Lesley places the decision for the refusal to meet Henry VIII at York with the king, after having consulted

"Norman Macdougall. "The sources: a reappraisal of the legend." in Scottish Society in the Fifteenth Century.Edited by Jennifer Brown, (London, 1977), p. 30. "Ibid., p. 30.

with his nobles. At Fala Muir² the author admits that "at ane worde...[the magnates] al refused"² to follow the king across the border but that the reasons they gave were just and sensible; the invasion was not worthy of reproof, it would bring the realm into danger, and, as the king had no heir, if England won, Scotland would soon be brought under its yoke. ²²

From this point Lesley's narrative agrees with Buchanan's interpretation. Lesley's *Historie* was completed between 1568 and 1570 and is the second to label the king as a 'Poor Man's King.' His summation of the king is much more positive than Knox's and he specifies who gave the king this particular title:

He was a manteiner of Justice, an executor of the lawis, a defender of the Innocent and the pure. Quhairthrouch he was namet commounlie be his speciall Nobilitie the pure manis king.²³

Robert Lindsay of Pitscottie's *Historie*, '* completed by 1579, is the least accurate and least reliable of sixteenth-century historical accounts of the James V's reign and therefore deserves little comment. He, like Buchanan, was "a Protestant apologist and propagandist"', whose sources were various relatives and authors who were not even

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² John Lesley. The Historie of Scotland. Translated by James Dalrymple. Edited by E.G. Cody.(Edinburgh, 1895), p. 256. ² Ibid., p. 256. ² (Lesley, p.261.

² Robert Lindsay of Pitscottie. The Historie and Cronicles of Scotland from James I to 1575. Edited by AE.J.G.Mackay, (Edinburgh, 1899). ² Macdougall, p. 30.

² °See fn. 2 above.

his own contemporaries. He was not an educated scholar, and thus does not write with exactness or strict accuracy. His history abides by Buchanan's account although it exhibits an even more concentrated anti-Catholic bias. James's seeming inability to make a decision without first consulting David Beaton, archbishop of St. Andrews, and other prelates is continually emphasized by Pitscottie.

Succeeding histories adhere to the traditional viewpoint initiated by Buchanan and the other primarily Protestant sixteenth-century accounts. Thus James's over-reliance upon his prelates for advice, the alienation of his nobility and his death of a "broken heart" pervade seventeenth-²⁺ through to twentieth-century interpretations of the reign:

Even so, late eighteenth and early nineteenth-century histories, in particular, became slightly more favourable to James. His faults are duly noted but are ascribed to the immorality of the age rather than to personal aberration. The blame for the failure of his kingship is placed upon the magnates who are seen as ignorant and ambitious 'thugs' in constant opposition to the crown. James V is characterized as essentially a good king who, unfortunately, was up against forces he could not control. In John Pinkerton's History of Scotland the author details other forces which "William Drummond of Hawthornden's History of Scotland, published in 1655, merely perpetuates the 'reputation' James V had received from sixteenth-century historians and contributes little that is new to the historiography of the reign aside from a personal appeal for toleration and cooperation between a king and his magnates.

worked at decreasing any good intentions the king may have,

The talents of the clergy, particularly of Beaton, the incapacity and illiterature of the nobles, the matrimonial alliance with the bigoted house of Guise all afford motives operating to excuse James.²

Sir Walter Scott in Tales of a Grandfather, published in 1827-9, maintains this positive approach and extends the king's reputation as an amiable sovereign concerned with the welfare of his poor subjects to near mythical status. The king is now described as travelling throughout the kingdom in various disguises so that he "might hear complaints which might not otherwise reach his ears."²⁴ James is also given a new appellation:

When James V travelled in disguise, he used a name which was known only to some of his principal nobility and attendants. He was called the Goodman of Ballengiech. ²

By 1841 Patrick Tytler, in his History of Scotland, perpetuates this view. James is endowed with

a strict love of justice, an unwearied application in removing the grievances and promoting the real interests of his people, and a generosity and warmth of temper, which prompted him, on all occasions, to esponse with enthusiasm the cause of the oppressed.'

He is styled as "King of the Commons", '' is absolved of any ulterior or personal motives in the execution of Lady

² John Pinkerton. The History of Scotland from the Accession of the House of Stuart to that of Mary.(London, 1797), p.361.

² Walter Scott. *Tales of a Grandfather*.(Paris,1833), p. 283. ² Ibid., p.283.

³ Patrick Fraser Tytler. History of Scotland. (Edinburgh, 1841), p.186.
³ Ibid, p. 186. Glamis, '' and establishes the College of Justice in order to "remove the means of oppression out of the hands of the aristocracy."''

Early twentieth-century interpretations tempered this 'whitewashed' view of James and began to stress the seeming inevitability of Solway Moss and the king's death. Warning signs were in evidence early on in his reign.

By the close of 1532 all the forces were in full working which were to result in the disastrous end of the reign of James V - his alienation from his nobles, his close union with his clergy, and his antagonism to Henry VIII.

The year 1537 was seen as a turning point in James's career as he brought home from France a conception of royal prerogative and expensive tastes "which were alien to the traditions of his own kingdom."'' The traditional view that he alienated his magnates still prevailed as well as his love of the common man. James was said to have been known as "King of the Commons, the Gaberlunzie King and the Red Tod[Fox]."' He also achieved literary renown as the People's Poet, "Christ's Kirk on the Green" and "The Gaberlunzie Man" supposedly being two of his own works."'

³ Janet Douglas, Lady Glamis and sister of Angus, was accused of plotting to murder the king and was burned at the stake in Edinburgh, July 1537. Both during James's reign and after she was believed to have been guiltless of the charges brought against her and was seen as an innocent victim of the king's wrath against the Douglases.

³ ³ *Ibid*, p. 199.

³ [•]P. Hume Brown. The History of Scotland. (Cambridge, 1900) p. 379. ³ [•]Ibid,, p.384.

"'Ibid,, p.396.

p.184.

'John H. Burton. History of Scotland. (Edinburgh, 1899),

Throughout much of the twentieth-century James's reign has been described and explained in the customary manner although more emphasis began to be placed upon his financial policies and the religious situation in Scotland. Protestant English and Catholic French 'parties' grew up as a result of Flodden and characterized his minority. James's own pro-French policy alienated those nobles who advocated closer ties with England while his avariciousness for land and money turned away any remaining supporters.

W.C. Dickinson adheres to this view and stresses that the 'disaffection' which existed between the king and the nobility was one "that appeared to be both religious and political." ' He, however, refrains from attributing the king's death to a broken heart and merely states the date upon which James; V died. Gordon Donaldson's interpretation of the reign is succinct and comprehensive although he also maintains the persistent view that James, due to his harsh domestic policy, alienated his magnates. While acknowledging, James's virtues, albeit unwillingly, he concludes that the king's later years were like a "reign of terror."' He does, however, discover an 'excuse' for whom he considered one of Scotland's most revolting and sadistic kings:

He was, after all, half a Tudor by birth and perhaps a Tudor rather than a Stewart in character. '

Similarly, J.D. Mackie acknowledges that although James V

*W.C.Dickinson. Scotland from the earliest times to 1603. (Edinburgh, 1961) ,p. 312.
* Gordon Donalson. Scotland: James V-James VII. (Edinburgh, 1965), p. 62.
**Ibid., *p.62. was, for the most part, successful in his domestic policy, by "... attacking Borderers, Highlanders, and Douglases he was alienating some of his best fighting men." ** /

Jenny Wormald stands alone as the only twentieth-century historian who has seen the reign of James

V as one of strength and success. " The structure of the Scottish government necessitated a degree of cooperation between the king and his nobles which, she asserts, was visible throughout James V's reign. The nobles' unwillingness to be used as a tool of Frande contributed to the disaster of Solway Moss and, although this is a valid conclusion, it does not go far enough. This 'Flodden complex' extended to a fear for the personal welfare of the king; the Scots had no desire to repeat a battle in which their king, and a substantial amount of the nobility, was slain.

Despite her difference from previous histories of James's reign, Wormald's account, like those preceeding it, remains a general one. The governmental legislation of James V has received very little attention as a reflection of his abilities as a king. Indeed, when the parliamentary statutes and council ordinances which were passed during the fourteen years of his personal rule are studied in tail, it becomes

'J.D. Mackie. A History of Scotland. 2nd edition. Revised and edited by B. Lenman and G. Parker. (Middlesex, 1978), p. 130.

"Mackie, like Wormald concedes that James V was "gifted in many ways" but concludes that the Scots king exhibited "an instability" as well as a lack of "persistence" and "calculation". *Ibid*, p. 134. appendent that James V's social policy consistently strove towards strengthening the crown financially. He was, as Donaldson states, an acquisitive king but this trait did not make him unpopular. On the contrary, he was a strong and successful king whose determination to re-establish law and order in Scotland after an anarchic minority was fully supported by parliament.

The rest of this thesis will examine James's effectiveness as a ruler and legislator. Chapter 1 discusses the financial and governmental difficulties which arose during his minority and the early years of his personal rule, the minority period in particular having a substantial effect upon the king's later governmental policies. Chapter 2 provides a brief outline of the structure of government and the role of the Scottish parliament and leads up to a more detailed discussion of James's legislation in Chapter 3. Chapter 4 deals with the last years of his reign and is followed by a brief conclusion in the final chapter.

11. Chapter 1

With the death of James IV on September 9, 1513 at the battle of Flodden Scotland was faced with yet another minority as it had been for the previous four reigns. This had a number of important implications. While the 'Auld Alliance' between Scotland and France had been strong enough for James IV to fight England in support of Louis XII, the results of that conflict led to serious re-thinking by the Scots of the advantages and, more importantly, the disadvantages and dangers of supporting French policy. On the other hand France, due to its preoccupation with the Empire, sought association with whomever would support it, even to the point of treating with its old enemy, England, in 1514, Previous obligations to Scotland were forgotten or conveniently ignored.

Anglo-Scottish relations were also considerably altered after 1513 due to the growth of a group favourable to closer fies with England. This enabled Henry VIII to pursue a policy within Scotland of supporting those lords who wished the 'Auld Alliance' to be discarded and of making whatever trguble or nuisance he could whenever French interests were ascendant. Scotland, therefore, during James V's minority was tied to, and was dependent upon, the flow of continental affairs and the untidy course of Tudor diplomacy.

James V was crowned at Stirling on September 21 and was placed in his mother's custody with a council of regency nominated by parliament to assist her. Despite Henry VIII's hopes for the development of an English party centering around his sister, in November 1513 the lords of council decided to uphold the French alliance by consenting "that the duke of albany suld cum hame to the Realme of Scotland."*' John Stewart, duke of Albany was the son of Alexander Stewart, the exiled brother of James III, and was next in line of succession to James V. He arrived in Scotland at the end of May 1515 when he was established and accepted as regent of Scotland.*'

The first two years of Albany's regency were none too beaceful as he spent most of his time pacifying rebellious nobles. On May 25, 1517, however, the duke, promising to return, left Scotland "for expeditioun of the materis concerning the commoun wele of this realme and for the weile addressing and ordouring of his awin materis." ** His efforts were not unsuccessful as Scotland and France formulated the treaty of Rouen on August 26, 1517 providing for mutual aid and for a Scottish invasion of England should England make. war upon France. The treaty also, provided for a marriage alliance between James V and one of Francis's daughters' "Acts of the Parliaments of Scotland, 12 Vols. Edited by Thomas Thomson and Cosmo Innes. (Edinburgh, 1814-75). Hereafter cited as APS. ii, p.282. ''Queen Margaret had since lost the office of tutrix when she married Archibald, sixth earl of Angus, on August 6, 1514, According to Scots law a mother could remain tutor to her children as long as she remained a widow. Upon remarriage she forfeited the office which would then pass to the nearest agnate or kinsman on the father's side.

**Acts of the Lords of Council in Public Affairs 1501-1554: Selections from the Acta Dominorum Concilii. Edited by R. K. Hannay. (Edinburgh, 1932) Hereafter cited as ADC. p. 92. **Gordon Donaldson. Scottish Historical Documents. (New York, 1970), p.98-100. which, despite the French king's vacillation, was finally realized twenty years later. Francis I did not ratify the treaty until 1522 and from 1517 until 1521, years during which Anglo-French relations remained amicable, Albany was detained in France. The French king had no desire to jeopardize his alliance with England and, therefore, he complied with Henry VIII's 'request' that Albany remain in France.

Scotland, without Albany's effective presence and guidance, degenerated into factious misrule. Rivalry between the two dominating factions, the Hamilton family led by James, earl of Arran, and the Douglases, under Archibald, earl of Angus, culminated in an Edinburgh street fight in April 1520 known as 'Cleanse the Causeway". Both of these families kept Scotland in political turmoil until Albany returned in November 1521.

As always, much of Scottish policy during this period depended upon continental affairs and Albany's reappearance coincided with the deterioration of Anglo-French amicability. In June 1522, Francis ratified the treaty of Rouen'' and Albany raised an army in accordance with French wishes to put military pressure upon England. The Scots marched south, came within five miles of Carlisle '' and, without exchanging any blows, agreed to a truce with Thomas ''Francis, however, was still reluctant to pursue a marriage alliance and remained evasive whenever it was brought up by Scottish ambassadors. His principal aim, as always, was to use Scotland as a diversion without having to sacrifice his own position.

"The border was nine miles north of Carlisle.

Dacre, Henry VIII's warden of the Marches. English hostilities resurfaced in 1523 and once more the Scottish army, this time with French reinforcements, '' marched to the English border but the Scottish lords refused to go further into England. Albany, undaunted, sent over a French contingent in an attempt to besiege Wark Castle, which failed miserably.

In May 1524, Albany left for France" on the condition that if he did not return by September 1 his regency would be terminated. James V was invested with symbols of sovereignty on July 26, 1524, effectively bringing Albany's governorship to an end. This also signalled the beginning of the earl of Angus's dominance in Scottish affairs. In July 1525 it had been decided in parliament that James V would remain in the custody of each of the leading nobles who would keep him for three months in rotation. Thus, the archbishop of Glasgow and the earl of Angus were to keep the king for the first 'quarter', followed by the bishop of . Aberdeen and the earl of Arran; the archbishop of St. Andrews and the earl of Argyll; and, finally, the bishop of Dunblane and the earls of Lennox. ' In November, however, Angus refused to give up the king and maintained him virtually as a prisoner.

** Albany had set out again for France in October 1522 and returned the folowing September with 5000 men and munitions. **No 'official' reason was given for the duke's departure but he was, undoubtedly, weary of pursuing a policy which was marked by a lack of desire and initiative from many of the Scottish magnates. *'APS, 11, p. 294.

On June 14, 1526 parliament once more invested James V with the symbols of sovereignty:

his auctoritie riale [was] in his awin handis...[thus] all his officis [were] to be disponit to sig personis as his grace and counsale sall think expedient. And tharfor...all his selis of the saidis officis be deliverit to his graice to morn. **

By creating the fiction that the young James was actively supporting Angus, this act, in effect, gave Angus the 'authority' to appoint many of his kin to governmental and household positions; Archibald Douglas of Kilspindy, his uncle, became treasurer, custumar-general for all of Scotland and provost of Edinburgh. Other appointments included George Douglas, Angus's brother, as carver to the king and guardian of the royal person, James Douglas of Drumlanrig as master of the wine cellar, and James Douglas of Parkhead as master of the larder.'' James Beaton, who had held the office of chancellor since 1513, was deprived of the great seal in July 1526. Angus kept it in his own hands until he himself became chancellor in August 1527.

As Douglas domination in government became more apparent, many lords such as Arran, Lennox, Argyll, Cassillis and Glencairn no longer sat in council.⁵⁴ Opposition to Angus became manifest in July 1526 when Walter Scott of Buccleuch made an unsuccessful attempt, near Melrose, to liberate the king, and in August when Lennox

² APS, 11, p. 301.

³William Fraser, *The Douglas Book*, 4 Vols. (Edinburgh, 1885), *Vol. II*, p. 143. ³ Donaldson, *James V-James VII*. p. 40. publicly accused Angus of holding James V prisoner.** Supported by the queen mother, "Argyll, Moray, Glencairn, Cassillis, Home, Ruthven and the two archbishops",** Lennox attempted to seize the king in September but was killed in the effort. Opposition towards Angus was obvious but fears for the life of the young king, while in Angus's custody, prevented any other serious attempts at a coup.

In May 1528 James V, now seventeen years of age, with the help of his mother, escaped to Stirling Castle and in July marched to Edinburgh with the support of most of the lords of the realm. Angus, his brother and uncle were summoned to compear for treason on September 1 but they refused to appear and fled, instead, to England. On November 6, 1528 their lives, lands, and goods were declared forfeited in parliament. A reciprocal oath between the lords, and Jamés V was sworn on this day to

nevir labour...nor solist for Archibald douglas...nor speke, assist nor intercommoune with him...bot that thai sall resist the said Archibald and his part takaris and persew thame at thar utirmost...for the quhilkis causis the kingis grace swor inlikwis be the haly evangellis."

With his escape from the Douglases and their forfeiture in parliament James effectively gained control and began his personal rule. For the next six years, from 1528 until 1534, financial concerns and the consolidation of royal authority dominated his domestic policy.

³ ⁵ ADC, p. 250-51.

³ Donaldson, James V-James VII, p. 40.-³ ADC, p. 290.

The most prevalent problem which faced James V after the anarchic years of his minority was the deplorable state of crown finances. The main sources of crown revenue were the great customs, royal lands, rents from royal burghs, a profits of justice and feudal casualties (profits accruing to a feudal superior). Then, and until 1597, customs were levied almost exclusively on exports; imports, with the exception of wine and other goods from England, were free of duty. ** Wool was the principal source of customs revenue and was the responsibility of the comptroller. This officer was also the receiver-general and manager of all crown property.'' During the fourteen years of his personal rule James V had two comptrollers: James Colville of Uchiltree, 4 whose term of office began in 1525 (with a break of one year from 1529-30, when the position was filled by Robert Barton) and continued until September 1538; and David Wood of Craig who held the post from September 1538 until March 1543.

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Crown lands were managed and their revenues accounted for in exchequer by ballivi ad extra, who had originally been the king's baillies outside of his royal burghs. Individually, they had a wide variety of titles:

**Athol A. Murray. "The Exchequer and Crown Revenue of Scotland 1437 -1542." Unpublished Ph.D. Thesis, University of Edinburgh, 1961, p. 142.

'For a more detailed explanation of the comptroller's duties and responsibilities see the following by Athol A. Murray; "The Comptroller, 1425-1488." Scottish Historical Review, Vol.52, April 1973, pp.1-29, "Financing the Royal Household: James V and his Comptrollers, 1513-1543", in The Renaissance and Reformation in Scotland. Edited by Ian B. Cowan and Duncan Shaw, (Edinburgh, 1983) and his Ph. D. thesis, Ibid.

chamberlains, receivers, farmers, mairs, stewards or rangers. The comptroller retained overall responsibility for crown lands but these lands were set or let by commissioners specially appointed by the king.

Crown lands were severely diminished during James V's minority as Albany sought to buy or reward support. Rents were curtailed in some cases: Colin, earl of Argyll was given a remission from the rents of Kintyre for ten years " due to the war with England and his inability to levy them." Flodden, however, as Gordon Donaldson maintains, may well have been a convenient excuse for Argyll and others to pocket the crown's rent money for their own personal profit."

During the years of the regency, supporting Albany and his household proved to be extremely expensive compared with maintaining the Young king, the former's monthly expenses averaging around £700 while the latter's worked out to about £127.42 Crown revenue was low and household expenses rose even after Albany's departure so that in July 1525 Robert Barton, then the comptroller complained in parliament that

the expensis of the kingis houshald is risin as gret that his propertie may not beir the samin and daly apperis to rise gretar becaus na ordor is put into be the lordis havand auctoritie of the samin... without thaim providit sum gud ordor and reule to his houshald It is not possible that his grace may

* Rotuli scaccarli regum Scotorum: the Exchequer Rolls of Scotland. Edited by J. Stuart and others. (Edinburgh, 1878-1908.) Hereafter cited as ER. Vol XIV, Preface, p. xxxviii.

'' Donaldson, James V-James VII , p. 43. '2ER, Vol. XIV, Preface, p. 1xxiv. be sustenit to his honor as efferis." Barton's successor, James Colville of Uchiltree, was complaining by January 2, 1526 that he could not answer for the most part of the king's property nor uphold the king's house "quhilk is at far gretar expens dailye than it has bene ony tyme bypast sen the feild of Flodoun or laitlie befor the said feild.". At the same time he asked to be 'discharged' from the office. In June of the same year the treasurer was lending £3000 to the comptroller to help defray costs.

27

By July 1527 Colville, who was still comptroller, was again threatening to resign unless the lords could find a way to bear the king's expense which "war sa gret that he [Colville] mycht nocht beir the chargis tharof."'⁵ This obvious lack of revenue and failure to meet household expenses was to have a great impact upon the social policy of James V once he began his personal rule. His efforts to rebuild royal finances and restore revenue from crown lands was the dominating factor throughout his reign of the next fourteen years.

In the first six years of his personal reign, however, the king had little time to concentrate upon local governmental legislation. Although a truce with England was signed at Berwick in December 1528 (which provided for arbitration of border disputes and negotiation of a final

APS, 11, p. 295 ADC, p. 234-35. ADC, p. 260.

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treaty of peace within five years) '' Anglo-Scottish relations were far from amicable. Henry VIII made continual attempts to reinstate Angus in James's favour'' but the Scottish king was never to relinquish his hatred of the Douglases and would thus never consent to Henry's requests. The relative lack of statutes passed during this period, compared to the second half of his reign, indicate that the concern was with pacifying unruly barons and lords in the Isles and upon the borders, rather than improving conditions in the realm as a whole.

Peace with England was made at the end of 1528 although neither side appeared to be wholly committed to a permanent cessation of hostilities. Disputes over the debateable land.. became more apparent from 1529.' and Henry attempted to coerce more peaceful relations from the Scottish king by intimating that James was endangering his position in the

"State Papers of the reign of King Henry VIII. 11 Vols. (London, 1830-52). Hereafter cited as St.P. All citations refer to document numbers unless otherwise noted. IV (iv), 201, ADC, p. 298-99.

*' St.P. IV (iv), 202, 204, 213, Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII 1509-47. Edited by J.S.Brewer, J.Gairdner and R.H.Brodie, 21 Vols. (London, 1862-1910, 1920). Hereafter cited as L&P. All citations refer to document number unless otherwise noted. V, 854, VII, 1350.

(* This was an area of land on the border which, due to the fact that "the boundary line between the two kingdoms was not always clear", was a continuing subject of dispute. Criminal activities by the permanent inhabitants of this area disturbed the frontier administrators of both countries who were unable to receive redress "lest they appeared to acknowledge the claim of the opposite kingdom to ownership of the area." Ian A. Rae. The Administration of the Scottish Frontier 1513-1603. (Edinburgh, 1966); p. 24, 22. 'St.P. IV (iv), 212, 218, 222, L&P, V, 535, 537, 845. English succession' by these hostile actions.

In September and October 1531 there were meetings of Scots and English wardens in the hope of redressing

grievances?' but by November complaints about the debateable land and numerous border forays by both sides were escalating. Throughout the spring and summer of 1532 letters between Henry VIII and James V abounded with complaints

,about each king's failure to keep the peace.' By September 1532 there were threats and fears of an English invasion. These fears were not unfounded: in October Henry Percy, earl of Northumberland, Henry VIII's warden of the East and Middle Marches, suggested that the time was right for an invasion of Scotland because James was "at thys tyme in great and extreme povertie...[and was] all destitute of any ayd helpe or releve of any outward Prince."'

Preparations for defence continued throughout December. 1532 and into the new year with a belief that war would soon ensue.' Peace negotiations finally began in June 1533' and ' James IV's marriage to Margaret Tudor made their son, James V, heir-presumptive to the English throne until the birth of Mary Tudor in 1516 and next in line of succession after her and Elizabeth until, of course, the birth of Edward in 1537. In 1531, when this 'threat' to James V's "possibility to the succession" was made, Henry VIII had already claimed that his marriage to Katherine of Aragon was invalid. By implication, therefore, this ruled out the right of Mary Tudor and, if Henry had died at this time (Elizabeth was not born until 1533), must have made either his sister, Margaret Tudor, or her son, James V, heir to the English throne. 'St.P. IV (iv), 214, ADC, p. 362.. 'St.P. IV (iv), 232.

'ADC, p. 390-97, L&P, V, 1110, 1224, 1364, 1558. 'ADC, p. 406, St.P. IV (iv), 246-248. a truce for one year was concluded at Newcastle on October 1.'• A permanent peace, to endure for the lives of both kings and for one year after the death of either, was made by commissioners from both sides in May 1534'' although it was not confirmed by James V until June 30'' nor by Henry VIII until August.''

Thus, although Henry was preoccupied with his bown reformation of the church, he was obviously not committed to the peace of 1528. Continuing to support Angus he wished to keep Scotland weak and divided in order to guard his own backdoor lest his alliance with France fell through and England became subject to an attack led by the European Catholic rulers. Once his own religious position was, for the most part, secured in 1534 with the Act of Supremacy he was willing to accept the advantages of peace. James V, while contending with external problems on his borders from the English was also, during this period, attempting to establish some internal order to his kingdom.

From the beginning of his personal rule, James's determination to govern, and to govern strongly, was apparent. His animosity towards Angus and his kin did not abate with their forfeiture in the parliament of September 3, 1528. Throughout the following months, various expeditions to the borders and, specifically, to the

*The Letters of James V. Edited by R.K.Hannay and Denys Hay. (Edinburgh, 1954), p. 245, St.P. IV (iv), 251. *Letters of James V, p. 267. *Ibid, p. 270. *St.P. IV (iv), 264.

strongpoints and castles of the Douglases, were undertaken. George, lord Hume, warden of the East Marches, and his brother John, abbot of Jedburgh, were given the task of expelling Angus and his followers from the Douglas strongholds of Coldingham and Colbrandspeth. ** In order to ensure the support of the most important border families in this task James commanded that the Humes, Kers, Scotts and other important lords of Lothian enter pledges within the king's castles upon their own expense, as security for their assistance to the king. " Patrick, earl of Bothwell was given the lieutenancy of Lothian, Merse and Teviotdale for one year and was to receive Angus's castle of Tantallon in feu-ferme ("a heritable grant of land in return for a fixed: and perpetual money rent.")*2 once Angus had been expelled. The Douglas earl did manage for a time to hold out in Tantallon but, realizing that his cause was lost, fled to England with his brother and his uncle, where he remained until after the death of James V in 1542. James did not tolerate those lords who refused to assist him in these expeditions and several lords were "put to the horn' (outlawed) and their goods escheated to the crown

31

because of their refusal to cooperate.

• ADC, p. 286. • ADC, p. 291.

**Ranald Nicholson. Scotland: The Later Middle Ages. (Edinburgh, 1974), p. 6. * Ancient Criminal Trials in Scotland 1488-1624. 3 Vols. Edited by Robert Pitcairn. (Edinburgh, 1833), Vol. I, p. 140-42.

These stern measures towards both high and low officials and lords characterized James's internal policy during this period and thereafter. In May and June 1529, James personally led members of the council upon justice ayres at Lauder, Jedburgh, Selkirk and Peebles for pacification of the country while keeping several of the most powerful border officials in ward: **

It is divisit concludit and ordanit be the lordis of the secrete consale that the kingis grace with his trew barouns and liegis sall ryd in propir persoun endlangis his bordouris foranentis Ingland for punyssioun of malef[act]ouris, pecifying of the cuntre and executioun of justice as salbe sene expedient, and that the erle Bothvile, lord Maxwell, lord Home, lardis of Johnnstoun, Buccleuch, Mark. Ker, and utheris lardis beand now in ward sall remane in to the samin during the kingis pleisour.**

In May 1530, James led a border raid travelling through Roxburgh, Berwickshire, Peebleshire, Selkirkshire and Lothian where pledges were taken and several thieves were hanged, ** the most famous of which was Johnnie Armstrong who

was later made immortal in ballad."?

According to the ballad, James was supposed to have written a "luving letter" requesting this notorious border criminal to meet him but upon Armstrong's arrival the king refused him pardon and hung Armstrong with some forty of his

"'Warding was a form of imprisonment whereby a person 'entered himself into ward' rather than being put there. It could often be 'free ward' when the door was not locked or when the prisoner was confined to an area within a radius of specified miles.

***ADC*, p. 327. **Pitcairn, Vol. I, p. 144-45.

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*'For the text of the ballad see Michael Brander. Scottish Border Battles and Ballads. (London, 1975), p. 74-78.

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followers. The ballad makes Armstrong into a hero, asking for "grace at a graceless face"** when in all probability he was more than a nuisance to both England and Scotland. There is no evidence to suggest that the king was 'treacherous' in dealing with Armstrong.

The borders had always been an area where the central authority was weakest and where several of the lords, not to mention lesser men, were far from trustworthy. James's suspicions and his treatment of these lords, while harsh, was justifiable. Some of them, such as the earl of Bothwell, were openly intriguing with England. In a letter, from Northumberland to Henry VIII of December 1531, the English earl related ammeeting he held with Bothwell who, angry at the Scottish king for keeping him in ward and for giving away some of his lands to the Kers, pledged his allegiance to Henry VIII and stated that the English king would be crowned in Edinburgh shortly: * This last point was an obvious exaggeration as Bothwell did not have any support from the rest of the nobility for these ambitions. Consequently, in June 1532, Bothwell was removed from his command in Liddesdale and of the castle of Hermitage and was placed in ward. He remained in and out of ward from 1532 until he was finally banished from Scotland in 1537." He was compelled to resign Liddesdale which, with Hermitage Castle, was annexed to the crown on December 10, 1540." Ibid, p. 77. St.P. IV (iv), 222.

ADC, p. 425-26, 438-39. Scots Peerage. Edited by James Balfour Paul. 9 Vols.

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James continued to ride and personally lead his men on judicial and military forays. In June 1534 the king rode to Eskdalemuir to pursue rebels and outlaws and from October to December of the same year travelled to Liddesdale to capture thieves.' This personal involvement did much to establish his position as a monarch who would not tolerate disobedience and as one who took his kingly duty as the dispenser of justice seriously. While he did not treat his greater lords and magnates with contempt he, nonetheless, made it known that he was their sovereign in more than name only. In fulfilling his judicial duty as a king James not only asserted his authority in previously weakly-ruled areas but kept those areas fairly calm and free from overt disturbances for the rest of his reign.

The Highlands and Isles of Scotland were another area where royal authority was weak and, like the borders, personal expeditions by the monarch served to enforce his authority and strengthen his image as a ruler. Nonetheless, this area was traditionally governed by two important noble families. The Gordons in the Highlands and the Campbells in the Isles, the chiefs of whom were given lieutenancies? in order to maintain peace. Problems arose, of course, when ''(cont'd) (Edinburgh, 1904-14), Vol. III, p. 158.

"Rae, p. 262. "Lieutenants wielded greater powers than wardens and other local officials. "This greater power was derived from the fact that they were acting directly on behalf of the king, taking his place either as leader of the fighting force or, as the mainspring of the administration." Rae, p. 104. They were also distinguished by the fact that "they were central, rather than local officials of the crown", and had control over a larger area of the country. *Ibid*, p. 105.

during periods of minority government these families obtained more and more power over the area through the acquisition of lands and status, ostensibly in the name of the crown, but in reality at its expense. The rents from crown lands, as previously mentioned, were not always returned in full and in some cases not at all.

As the king's representatives, Archibald Campbell, earl of Argyll in the south and George Gordon, earl of Huntly in the north were given extensive powers which became an effective means for their own private exploitation. As W.C. Mackenzie notes, these clans were no worse than other clans, would have been in similar circumstance's but "the central authority by its policy provided Argyll and Huntly with the means of satisfying their cupidity. As Lieutenant of the Isles... Argyll was in effect King of the Hebrides."'* James V continued to utilize these lords giving Colin, third earl of Argyll, authority in August 1529 to bring "all the cuntreis of the Ilis to the kingis lawis and obedience."'' Upon the earl's death in November 1529, however, James was unwilling to grant his successor the same privileges and power. Archibald, fourth earl of Argyll, "bound himself for good rule in the realm and to keep obligations and ordinances made or accepted between his grandfather and father and the king and James IV.

'W.C. Mackenzie. The Highlands and Islands of Scotland: A Historical Survey. (Edinburgh, 1937), p. 122. 'ADC, p. 313. 'ADC, p. 343. Although he maintained the hereditary position as Justice-General of the whole kingdom and master of the king's household, he was deprived of his family's office as lieutenant of the Isles, and in June 1531 was compelled to 'give up' the office of chamberlain of Kintyre. He was reduced to asking the king for "ane commissioun of lieutennandrie of the south Ilis and Kyntyre in the best , forme during the Kingis will and of the remanent of his awine boundis."'' The king held to his rigorous position and refused to grant Argyll the office. He went as far as imprisoning the earl for several months in 1531 due to Argyll's failure to compear and answer accusations charged against him by Alexander Macdonald of Islay.'' By 1533, however, Argyll was again active as Justice-General.'' James V, in his efforts to pacify the Isles planned a

personal expedition during the summer of 1531. His determination to quell any disturbances in this area was exhibited in a postcript of a letter to Francis I in March 1531:

[The Islesmen] will be quelled easily, and are in fact writing and sending envoys to obtain pardon; yet unless they are thoroughly reduced they will not keep promise for long. [I] will not desist till the

'ADC, p. 357.
'ADC, p. 335-36. Macdonald, chief of the Clandonald of Isla, had personally entered a submission to the king at Stirling in the previous year for good rule in the Isles. Argyll, wishing perhaps to provide a reason for his continuance in office as lieutenant of the Isles, (this is the conclusion put forth by Donald Gregory. History of the Western Highlands and Isles of Scotland. (Edinburgh, 1881), p. 140.) accused Macdonald of various crimes which Macdonald denied and, in turn, accused Argyll of abusing the office. 'ADC, p. 409.

leaders are broken or give hostages. If they prove obstinate, there is nothing like the culverin for clearing them out of their boats and strongholds.''' James did, in fact, achieve a 'bloodless' victory as the chiefs voluntarily came before the king and pledged their goodwill. For the rest of his reign there was little disturbance from the southern Isles.

Jurisdiction in the northern Highlands was delegated to the king's half-brother, James Stewart, earl of Moray.'' In November 1530 the king bestowed the earldom of Orkney and Shetland upon him'' and in February 1531 he was appointed lieutenant of the 'north parts.''' He continued to exercise authority in the Highlands as well as accompanying 'the king on numerous border raids. The Gordons still maintained some of their prestige in the north. George, fourth earl of Huntly received a commission of fire and sword'' in June 1534 against the Clan Chattan which had been causing much mischief in the north.''

By using the traditional method of delegating authority to various magnates and personally accompanying them on

raids and forays, James was able to establish a considerable

""Letters of James V. p. 190.

'''He was born in 1500; the son of James IV and Janet Kennedy.

***These were "commissions of justiciary which gave local officials and landlords powers to proceed with unrestricted force against wrongdoers." Gordon Donaldson and Robert S. Morpeth. A Dictionary of Scottish History. (Edinburgh, 1977), p. 76.

"Scots Peerage. Vol. IV, p. 534.

amount of franquility in the most troublesome areas of the kingdom. He was astute enough not to give these lords over-extensive powers and was thereby able to consolidate royal authority without incurring any derogation of his own personal power or jeopardizing crown-magnate relations. He imprisoned those lords who disobeyed the crown but he did not wholly deprive them of their office or status unless they continued to strive to undermine his position or to assert themselves at the crown's expense. In these efforts the king continued to have the support of parliament and the assistance of the nobility.

The setting of James V's governmental programme was a traditional one which had built up over several centuries. Certainly his reliance upon the nobility for regional administration, as indicated in the previous chapter, was neither novel nor innovative. The doverned population of Scotland saw much more of their local lord, in his baron court, than they did of the king and it was to this court that they went for public justice. Most actions dealt with debt, slaughter, theft, '"" and disputes between tenants; in short, anything that comprehended the well-being of the tenants and their surrounding neighbourhood. Nonetheless, if a tenant was dissatisfied with the 'doom,,' or judgment, brought against him he could appeal to the court of the sheriffdom.

III. Chapter 2

The sheriffdom was the basic local judicial and administrative unit of medieval and early modern Scotland. Early sheriffdoms consisted of those lands which owed suit to the court and service to the royal castle. The castle became and remained the centre of the sheriffdom, acting as the legal, administrative and military caput for its' scattered lands.' ' The sheriff court was a royal court, '"'The sheriff or baron had jurisdiction in cases of slaughter; that is, murder committed in the 'heat of blood', in self-defence or with forethought felony (provided the murderer was caught 'red-handed'). Similarly, in cases where -a thief was apprehended with the stolen goods in his

personal possession or in his dwelling, local officials had the authority to try such pleas. ' 'For the organization, functions and procedure of a sheriff court in the period covered in this study see The

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presided over by the king's sheriff who, as the crown's local agent, held administrative, financial, military and judicial responsibilities. Shrieval duties included searching for, and pursuing rebels put 'to the horn', summoning the host for military functions, supervising 'wappinschaws'(weaponshowings), executing all royal writs and letters, collection of 'ordinary' crown revenue as well as the collection of taxes. The sheriff's criminal jurisdiction was limited to actions of slaughter and theft; other criminal actions were reserved for the justiciar.

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In the dispensation of royal justice, justiciars held an important position. As royal judges they were expected to ride throughout the country, in the spring and in the autumn, 'on ayre' from sheriffdom to sheriffdom holding their itinerant courts at the caput of each region. In the reign of Robert I (1306-1329) there was a simple division, with one justiciar responsible for lands north of the Forth and another for those to the south. In 1503 came the first instance of a Justice-General for the entire kingdom and from 1524 this official was to remain continually in Edinburgh while deputies, appointed by him, were responsible for administering criminal justice in the localities. Early jurisdiction of the justiciar was both criminal and civil but by the reign of James V and, more importantly, with the establishment of the College of Justice in 1532, this jurisdiction became solely criminal. The four pleas of cont'd) W.C.Dickinson. (Scottish History Society, 1928) Introduction and appendices.

the crown (murder, rape, robbery and arson), considered too important to be heard in the sheriff court, were the responsibility of the justiciar. The ultimate court of appeal, however, remained with the king and his council which met in parliament.

During the sixteenth century, parliament was considered to be a national assembly of landowners who, by right of their feudal relationship with the king, had a duty and an obligation to attend his great council in order to do his business. The medieval concept of kingship concluded that government was the king's government, personally controlled and inspired by him. The king, as the fountain of justice, was the focal point through which the laws of Scotland were made and dispensed. The Scottish parliament was the forum for this law-making and was, in effect, the supreme court of law. It was essentially a meeting of the king's council although its members could meet in a less formalized body, called a general council, which functioned in much the same way as parliament but was free of its judicial business.

The term 'general council' was adopted in the

fourteenth century to denote a meeting of an enlarged council, attended by members of the three estates, similar to parliament, but with less formality and a smaller membership. The presence of the king at a general council was not required but he was free to invite "those whom he pleased... and, [for the most part] he invited the great lords, spiritual and temporal."'" By the end of the fifteenth century a general council could legislate, sanction taxation, and was generally as proficient as parliament in dealing with the affairs of the kingdom. remained distinct from parliament, however, in that

it scarcely ever functioned as a court: it could be summoned on shorter warning and its procedure was not hampered by judicial formalities or clogged up with litigation.''

Major affairs of the kingdom were deliberated in parliament and general councils. The king relied upon the advice of his privy or searet council, however, for day-to-day problems of government. Its membership consisted of a small number of prelates, earls, barons and leading officials, probably fewer than ten persons altogether, who were in close or constant attendance upon the king:

As the king's right-hand men, councillors acted in every aspect of government. All they could not do was sentence people to death or forfeiture and settle lawsuits concerning landownership.''

A separate record for the privy council was not kept until 1545 so that its decisions, along with matters of the

session (see below), general council and exchequer are

contained in the Acta Dominorum Concilii. It was only after '° Dickinson, p. 192.

''Although it was a form of assembly for the three estates of the realm, during the reign of James III general councils tended to become meetings of 'afforced' privy councils as burghal members began to be neglected and were not always summoned to attend. See R.K. Hannay, "General Council of Estates." Scottish Historical Review, Vol. 20, 1923, pp. 263-284.

¹¹ Nicholson, p. 21.

'''Alexander Grant. Independence and Nationhood: Scotland 1306-1469. (London, 1984), p. 148. the erection of the College of Justice in 1532 that records of session and privy council began to differentiate.

As the king's court, the validity of a parliamentary meeting depended upon his summons. Parliament was summoned by precept''¹ and by public proclamation:

The kingis grace with avise of the lordis of his counsale hes ordanit ane parliament to be proclamit to begyn in the burgh of Edinburgh the thrid day of December nixt tocum for ordouring, treting and concluding of sic grett materis as instantlie occurris concerning the kingis grace, the weill of this realm and liegis tharof: therfor ordanis the directour of the chancelarie to direct preceptis to all prelatis, baronis, commissaris and balzeis of burrowis, and all uthir our soverane lordis frehalderis within this realm, chargeing thame to compeir the said day for thar avise to be had in sic thingis as salbe proponit at that tyme to thaim.

The composition and membership of parliament during the fifteenth century and up to the middle of the sixteenth

consisted of the three estates; clergy, tenants-in-chief and burgesses. The over-riding principle of membership to the

Scottish parliament was that it represented the landowners of the realm; the "members... must represent land and... all land must be represented in some way."!!!

The theory presumably was that when all lay tenants-in-chief were summoned with the ecclesiastical landowners and burgesses, the entire land of Scotland- and so in a sense all its inhabitants- was represented.

''' "Individual writs [were] sent out from the king's chancery to those who were required to attend; and both the proclamation and the precepts had to give at least forty days' notice in advance." Dickinson, p. 188. '''ADC, pu. 495.

'''Robert Rait. The Parliaments of Scotland. (Glasgow, 1924), part

''Grant, Independence and Nationhood, p, 167.

The clergy represented the spiritual estate. The bishops from the thirteen medieval sees of St.Andrews, Dunkeld, Aberdeen, Moray, Brechin, Dunblane, Ross, Caithness, Orkney, the Isles, Glasgow, Galloway or Whithorn, and Argyll or Lismore were recorded as being present in parliament from the thirteenth century. Abbots and priors also attended parliament making a possible attendance of about fifty although actual attendance was very irregular. Members of the lower clergy attended parliament from the fourteenth century but, by the sixteenth century, many of those who attended were also royal officials. This

disappearance of the lower clergy from parliament left the clerical estate composed solely of ecclesiastics who, by reason of their office, were tenants-in-chief of the crown, and thus emphasized the tendency of Scottish parliamentary theory to regard parliament as composed of men who represented land.''

For the magnates attendance at either a parliament or a general council was an obligation; as tenants-in-chief of the crown they owed suit to the king's court. Up to the end of the fourteenth century Scottish noble society was essentially territorial, and the nobility consisted of earls, barons and freeholders''' A baron in the sixteenth

_century was "anyone who held a barony - a fief with a court '''Rait, p. 174.

''That is, essentially all tenants-in-chief of the king, even if they were relatively modest landholders; see Alexander Grant. "The development of the Scottish peerage."Scottish Historical Review.Vol. LVII, April, 1978, p. 1. For a more comprehensive explanation of the composition of parliament and the evolution of its membership see A.A.M.Duncan."The early parliaments of Scotland." Scottish Historical Review. Vol. XLV, April, 1966, pp.36-58.

in which public justice could be dispensed."''' The concept of earldoms by the middle of the fifteenth century, however, was changing. From 1424, upon the return of James I

(1406-37) from England, the nobility of Scotland underwent a series of transformations initiated by that king through parliament so that there emerged a Scottish peerage that was to become more social and political than territorial.''' There are no existing lists of attendance for the

parliaments of James I and II; however, it became apparent that few tenants-in-chief below the rank of earl and baron attended.''

The participation of burgesses in parliaments and general councils was apparent from c1357. Their original presence was directly a result of the financial necessity of obtaining funds for the ransom of David II (1329-71). Pressure was put upon the burghs during this period to send representatives and thus their constitutional position began to be established. Commissioners sent from the royal burghs (burghs of regality' ' or of barony were represented by

'' Nicholson, p. 7. ''Grant, "Development of the Scottish peerage." p. 7. '' In the 1479 parliament of James III, out of a total of eighteen tenants-in-chief, six held the rank of earl while twelve were listed as barons. This trend continued during the reigns of James IV and V. In 1491 six earls and seventeen barons attended parliament and in 1528 the numbers for each were nine and nineteen respectively. ''These were non-royal burghs in which special rights of jurisdiction existed. That is, within a number of sheriffdoms lands and accompanying rights of higher jurisdiction were granted by the king to barons or religious corporations. Apart from treason, a lord of regality exercised every regal right of justice, including the four pleas of the crown. Neither sheriff nor justiciar had any rights or power in these areas.
their lords)''' who attended the sessions regularly thus formed the third estate of parliament.

Since the political significance of the burghs arose from their taxable capacity during David II's reign, this might have enabled them to exercise a considerable amount of financial pressure as leverage upon the other two estates or upon the crown, but this was never effectively utilized due to the fact that most of the Scottish kings of the fifteenth and early sixteenth centuries rarely taxed their subjects. Thus, while the burgesses became a permanent estate in parliament from the fourteenth century, they did not develop into an English-style lower house.

While attendance at parliament was the obligation of anyone who had received a special precept or writ it became increasingly apparent that not everyone was attending. Cost, distance, bad weather and the harvest kept some of the

lesser landowners at home. Hence meetings of parliament were usually dominated by the prelates, greater magnates and

royal officials. Consequently there began a practice whereby "power [of parliament was] comittit be the hale thre estatis to certane persouns undirwritin to avise common and conclude. uppon the materis eftir folowand"''' while the other members went home. These commissions were relatively large and included; at times, over fifty members, all of whom were representatives of the three estates. Specific functions of

parliament were also appointed to committees which would

'²'APS, 11, p. 89.

assist with the work of the existing session. Their results were then reported back to a later meeting of the same parliament.'

Judicial powers of parliament were delegated to two committees: one dealing with causes and complaints and the other with the 'falsing of dooms' (that is, the reversal of judgments from the lower courts). Discussion of upcoming legislation would be given to a committee which would frame 'articles' for the subsequent approval of the three estates. This latter development existed under James I and was, by the reign of James V, 'formalized under the committee of the articles (or lords of the articles). It was a small committee, usually composed of nine to twenty members, each from the three estates.

During the minority of James V general councils (which had been remarkably absort, or at least minimal in the previous two reigns) were revived and tended to merge in association with the privy council and lords of the articles so that differentiation between their activities is difficult to determine. Their deliberations are outlined in

the Acta Dominorum Concit II which indicate that during his

''There has been some doubt as to whether or not the parliaments of James V, and those of his predecessors, were separate parliaments or merely different sessions within one parliament. N. Wilding and P. Laundy in An Encyclopedia of Parliament, (London, 1972) make no such differentiation and consider the parliaments of all Scottish kings up to James VI as consisting of one parliament for the entire reign. This thesis, however, disagrees with the above English historical interpretation and is in accord with recent Scottish historians (see Nicholson) who assume that each of the parliamentary meetings during a reign was indeed a minority "commissions of parliament were sometimes composed, solely of members of the privy council."'' By the end of James V's reign the committee of the articles gained even more power and acted as a commission with full powers. Hence an entry in the parliament of 1535:

becaus there is mony actis statutis and constitutions to be maid for gude reule and police to be had within this realme and amang all our soverane lordis liegis bayth spirituale and temperall guhilk can not be haistely done And it was bayth tedious and sumptuous to the haile estatis to byd and remane thereupon Heirfore oure said soverane lord...hes gevin to the lordis of articulis fornamyt full power of parliament To devise and mak sic actis statutis and constitutions for gude reule...And guhatever thai ordane or statutis to have the same forme strenth and effect as the samin war maid and statut be all the thre estatis beand personaly present.'²

Despite these innovations and developments Scottish governmental institutions remained less complicated than those in England or France because Scotland did not have as great a need to develop a highly centralized government. Financing foreign wars and absent kings with continental ambitions were not common circumstances in medieval Scottish kingship which, consequently, relieved much of the pressure for institutional development. Scottish kings' dependence

upon their magnates for local government, the lack of a paid army, and the fact that Scotland was a much poorer country were also contributing factors.'''

The kings of Scotland had to rely on their earls and barons, as heads of lay society, to act as royal

¹² Rait, p. 363.

''' APS, ii, p.340. ''' Grant, Independence and Nationhood, p. 170 representatives in the localities and as recruiters for the army. In return for their collaboration loyal magnates were confirmed in their lands and lordships from which they derived their power and influence. The patronage which originated in the monarchy and the services the nobility rendered in turn thus served to foster (a relationship that was based upon mutual conciliation and cooperation rather than confrontation.

Lack of taxation was another important element which kept Scotland's institutions comparatively undeveloped. The chief point of Scottish constitutional theory emphasized that the king was expected to 'live of his own'; any royal expenditure, beyond the king's revenues, was regarded in normal times, as an 'oppression to the people'. It followed that special taxation was regarded as abnormal and would only be used for extraordinary occasions, such as war, ransoms, or the king's marriage, and would require

parliamentary approval. Nevertheless:

although the consent of the Scottish parliament... was necessary [in such cases], from the fourteenth century, parliament was never thereafter able, until its last days, to use 'the power of the purse' to put pressure on the crown... between the fourteenth and seventeenth century taxation was rare and usually so modest that the opportunity of using finance as a lever hardly ever occurred.'?*

Without financial pressure "the problem was rather to persuade people to turn up than to persuade them to modify,

their demands, "! * '

''Gordon Donaldson.Scotland: The Shaping of a Nation. (London, 1974), p. 97. ''Jennifer Brown. "The exercise of power." in Scottish Despite poor attendance of the lesser landowners and the dominance of earls and barons, royal officials and prelates, parliament was still a very important institution with a wide range of business to consider. Its acts and ordinances could vary from a treaty with England or France to setting market days for selling flesh and bread. Parliament exhibited, as Alexander Grant states, an "all_pervading utilitarianism."

It is difficult to assess, however, exactly who initiated the legislation of parliament. One Scottish legal historian maintains that "answers are not at present possible or... can only be tentative."''' But it becomes apparent, especially during the reigns of strong and aggressive kings, that much, if not most, of governmental legislation was derived from the monarch. Ranald Nicholson concludes that during the reign of James I, "so far as legislation was concerned, it was James who kept the initiative."''' This study will attempt to show that this was also the case with James V.

Yet, the Scottish parliament was not the "mere court of registration for the actions of the party in power"''' which Rait ascribed to it. Parliament took action concerning James II's financial activities and repeated criticism of James III's 'lack of governance' arose in no less than six of his ''' (cont'd) Society in the Fifteenth Century.p. 45.

''Grant, Independence and Nationhood, p. 169. ''James Robertson."The development of the law." in Scottish Society in the Fifteenth Century, p. 145. ''Nicholson, p. 304.

"Rait. p. 33.

parliaments.'' As Brown concludes, parliament did not regard "itself as existing simply to represent the royal will... [and] it is extremely unlikely that parliament was a subservient body."''

Parliament ordained measures which were intended to enhance the 'weill of the realme' and it was the duty of the local official to enforce any act or ordinance'' and to announce it to the general public:

it is divisit and ordanit that proclamatiouns be maid at the principall merkat crocis of all the schiris of the realme and uthir placis neidfull... Oure soverane lord hes Ordanit that the actis of parliament maid be his hienes be publist outhrow all his realme And that all schereffis stewartis ballies provostis and ballies of burrowis and otheris his liegis may have the copyis thareof and pretend na Ignorance throw misknawing of the samin.''

Procedure for implementing local administration and legislation was usually by 'letters' issued out of chancery by request of king and council. These letters would be sent to "all schereffs, balzeis, stewartis, provestis, aldirmen, and balzeis of burrowis, and to all stewartis and balzeis of regaliteis within the realme"'' concerning any issue of importance to the localities. They could include summons to parliament, appointment to office, royal pardons or

reprieves, brieves (a writ or precept issued from chancery

¹³ * APS, *ii*, p. 42, 103, 104, 139.

¹³ Brown, p. 46.

'' Throughout the governmental records of both the Scottish parliament and the Lords of Council in Public Affairs, there was no differentiation between the terms act, statute, and ordinance. According to Rait this differentiation was not made until after the revolution of 1689. (Rait, p. 419) '' ADC, p. 383, APS, *ii*, p. 379. in the sovereign's name) for initiating lawsuits or setting market days or prices in the burghs.

52

Much of parliamentary legislation reflected the policy of the king and his council. During the reign of James I an unprecedented number of statutes were passed which dealt with virtually every aspect of Scottish life from economic and social matters to affairs of state. For the most part, his successors followed this example and continued to strive for the well-being of the population. Several acts were repeated and enlarged upon in succeeding parliaments with the result that some common 'concerns' emerged.

Taken as a whole, the parliaments of the fifteenth century indicated "a continuous desire for the improvement of justice."''' This was illustrated in several acts which proposed increased efficiency in the administration of the law through reform of legal procedure.''' There was also, in the parliaments of James I, II, and III, a "sustained movement for the creation of a permanent supreme court."''' This movement regulted in the creation of the Court of Session.

An act of March 11, 1426 ordained that the king's chancellare and with him certane discret personis of the thre estatis... [were to] sit...thre tymis in the yere [to] knaw examyn conclude and finally determine all and sundry complaynts, causis and querells that may be determined befor the kingis consal.'*

'' Robertson, p. 143)
'* APS, ii, p: 10, 17-18, 20-22, 36,37,97,105,111, 144, *77.
'* Robertson, p. 146.
'* APS, ii, p. 11.

In 1458 these parliamentary committees, known as 'sessions', were ordered to sit three times a year. During the reign of James III session business was transferred to the king's standing council in civil causes and by James IV's reign a ⁷dayly council', having the same powers as the lords of session, was created as a supplementary civil court intended to give faster and more effective access of justice to the "pure [poor] folkis". During the minority of James V, however, there was still no clear division between the judicial functions of the council and its general affairs. Nevertheless, a council ordinance of 1527143 set up new regulations and outlined the procedure of the session. The most important regulation was the first, which restricted the session to those who had been selected to serve upon it; the session was finally "becoming a more specialized branch of conciliar activity."'' The establishment of the College of Justice in 1532 did little more than develop and give greater precision to current practice.

Thus, what began under James I as an expedient to alleviate some of the pressure from a heavy burden of petitions to the king and his immediate councillors, evolved through the parliaments of his successors into a

professional and regular body to administer civil justice. James V merely provided the money with which to endow the

court and pay the judges.

"ADC, p. 272-3.

'**R.K. Hannay, The College of Justice:Essays on the Institution and Development of the Court of Session. (Edinburgh, 1933.) p. 33. 53

Indeed, James V's legislative programme adhered to the traditional policy of his ancestors by enacting measures which embraced both national and local issues. Economic, social, and judicial ordinances provided the same kind of 'paternalistic concern' for the governed population of. Scotland and several statutes passed in his parliaments were repetitions of previous acts. Nonetheless, he maintained a uniqueness by utilizing parliament as an essential ally in order to exploit the wealth of the church and to re-establish law and order after the turbulent and factious years of his minority. As we shall see, the acts of parliament and council ordinances which were passed during his reign effectively indicate that James V's governmental policy, during the fourteen years of his personal rule, was continually motivated by financial concerns,

IV. Chapter 3

Information on the governmental legislation of James V. is derived from two_sources: the Acts of the Parliaments of Scotland and the Acts of the Lords of Council in Public Affairs. The former is a record of the laws of the kingdom as enacted by the king and parliament, and remain distinct from the Acts of the Lords of Council in which privy council, Court of Session, general council and exchequer matters are included. No part of the original records of parliament exist for the reigns of James I and II. The statutes of these two sovereigns, as printed in Volume II of the Acts of Parliament, '*' have been obtained from "a collation of several old transcripts with the first printededition [of the acts of parliament] of 1566."' ** "The existing series of original parliamentary records commenced in 1466 and are also reproduced in Volume II.

"Up to 1560, it had been assumed that all acts were the acts of the sovereign in parliament"''' and therefore the format of an act or statute '*' was usually introduced in such a way to convey this: "It is statute and wordainit be the kingis grace and his thre estatis of parliament ... " '**Since this thesis is concerned with the parliamentary legislation of James V, with reference to statutes passed during the previous four reigns, it is limited to Volume II (1424-1567) of the Acts of Parliament and does not attempt

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to utilize parliamentary evidence prior to 1424. ""Acts of the Parliaments of Scotland, Volume I, Preface, p. 18. '''Rait, p. 435.

'As mentioned previously (see Chapter 2, n.136), there was no differentiation between the terms act, statute or ordinance in the parliaments of James V and his predecessors.

Most of the statutes of the Stewart kings began in this way. Before the reign of James III, however, the acts themselves were fairly short in length and did not contain a preamble which outlined or explained why the act was necessary. By the reign of James V, and especially during the later years of his personal rule, almost every statute had a preamble and was relatively lengthy.

Of the eighteen parliaments of James V's'reigh, nine were held during the king's personal rule. Within these nine parliaments 125 statutes were passed which dealt with major affairs of the kingdom. Hence, measures pertaining to the church, law and order (including legal procedure), finance, rural legislation, military concerns and burghal affairs were ratified. These were common concerns and, as a result, several acts of parliament during James V's reign were repetitions of those from the reigns of James I, II, III and IV. Those monarchs passed much the same number of statutes (157, 139, 168 and 143 respectively)'*' on many of the same issues.

James V adhered to this tradition: out of the 125 statutes passed during his personal rule, twenty dealt with church matters, thirty-six with law and order, fifteen with finance, twenty-one with rural legislation, thirteen with military and defense, eighteen with the burghs and two with

14 Although this is a crude statistical method it, nonetheless, gives some indication of the amount and length of legislation specific to each of the Stewart kings since James I.

miscellaneous matters.'*

These areas of concern were also reflected in the Acts of the Lords of Council which approved ordinances pertaining to the general business of government. The Acta Dominorum Conc[11] contains royal letters, council ordinances, church matters, petitions, court actions and decrees, as well as local complaints; in short, anything which dealt with the day-to-day affairs of the kingdom. As these council measures were often temporary and provisional they tended to be more specific than the statutes. The council, in effect, provided a parallel means of government. Its legislative powers were patently extensive and, as Gordon Donaldson concludes, "the line of demarcation between the legislative powers of council and those of parliament is hard to find."' Parliament maintained exclusive jurisdiction in cases of treason and forfeiture, however, and because of its formality and personnel "was believed to confer a quality of in an act of 1540 where the authorization of some statutes

which had been previously 'unpronounced' was confirmed:_

[It has been] divisit statut and ordainit that the saidis actis be now pronuncit In his hienes presence and thre estatis swa that the samin may be kepit in tyme tocum as law In this realme with auctorite of the hale body of parliament.¹³³

***This is a rough thematic break-down of the contents of the statutes although it is by no means a rigid one; in some cases the subject matter in several acts could overlap. **Donaldson, James V - James VII, p. 288. **Ibid, p. 288. ***APS, 11, p. 356. Thus, through the use of both these legislative bodies James V was able to pursue a consistent policy which was reflected in their acts. The rest of this chapter will consider the king's governmental policy as revealed by parliamentary and council legislation in particular. This will be dealt with thematically, beginning with financial matters, followed by James's church legislation, law and order (including improvement and alterations in legal procedure), rural legislation, military and defensive measures, and, finally, burghal concerns. The king's personal influence, particularly in council, will also be discussed.

Financial matters were obviously a pressing concern. Crown revenues were severely depleted when James V attained his majority and various attempts to eliminate problems connected with them were proposed by giving the comptroller more firm control over expenses. An act of council of 1528 stated:

As the king has been 'gretlie scaithit' by 'browstaris, baxtaris, flescharis, catouris and uthiris byaris of furnissing' for his house giving in higher prices than they paid in the market, henceforth the Comptroller or his factore and servants shall purchase fish, flesh, wheat, malt and the like.''

Robert Colville, who was comptroller under Angus, retained the office and Sir Robert Cairncross ,provost of Corstorphine, was appointed treasurer in July 1528. In

15 ADC, p. 281.

August 1528 Colville entered into an agreement with the

treasurer who was to lend him £2000 so that he could support the household for one year from the king's property with assistance from the loan.'⁵ The king himself stipulated that pensions and gifts out of the casualty and property

given in his minority were not to be acknowledged and that , ye admitt nane syk nor name uthir small tecatis of ouris that ar incontrar our profyte, accepe

penciones of our ordinar officis or othiris syk giftis as ye sall think suld be admittit be resonable caus.''

This was re-emphasized in parliament in September 1528:

the kingis grace... hes concludit statut and ordanit that in tyme tocum na dispositioune of ony ward mariage remissioune or ont other thingis be langand our soverane lordis casualtie be disponit fra this furth bot be avis of his treasurer and the signator thereof to be subscrivit with his hand.''

Unfortunately these efforts had little effect upon revenue. By February 1529 Colville complained to the lords of council that the king's property could not sustain the

household expenses owing to

the surfalt expensis maid this yer in [the] hous / throw occasioun of truble that hapnit in [the] realm and throw the greit dertht that it raisit apoun flesche, fische and all uthir thingis.

The king had hoped to obtain 1000 merks's' by holding a

justice ayre but it was postponed and the treasurer became so far superexpended (that is, when expenditure exceeded receipts) that he was unable to pay the £2000 loan to

**ADC, p. 281-82. **Ibid, p. 282. **APS, ii, p. 328. **ADC, p. 304. **The merk (mark) was equivalent to 135 4d. Colville.'' In March the king was reduced to borrowing 2000 merks from George, earl of Huntly to help furnish the expenses of Thomas Erskine, the king's ambassador.''

When peace with England was finally signed in 1534 and Scotland itself was becoming more peaceful, James V's

efforts in alleviating his financial difficulties became more apparent. One area was in the tightening of accounting procedure, which again shows up in the legislation. Thus, an act of parliament in 1535, which was repeated in 1541, stipulated

that all scheriffis Stewartis custumaris chamberlains and otheris Intromettoris with oure soverane lordis propirtie Compere at every chekker quhare it salbe haldin for the tyme and mak thair Comptis and full payment Eq. with the rollis befor thare departing ... under the pane of warding of thair personis thare to remane during the king's will.'*

Revenue from the king's lands began to increase from 1535. In that year the net revenue was £5,358, and by 1539-40 had risen to £9,325. It was in 1542, however, that net revenue

was at its highest; probably around £15,000. 143

The lands of the royal estate were built up through two methods. One was annexation. From the reign of James II

crown lands were to be of two categories:

'annexed lands', which were inalienable... save with the consent of parliament... and were to be retained with the crown for the support of the crown, and

¹ • • *ADC*, p. 304.

""R.S.S. Vol. II, 601.

¹ APS, *ii*, p. 346. ¹ All figures are taken from Athol Murray, "Crown Lands 1424-1542." in An Historical Atlas of Scotland c.400-c.1600. Edited by Peter McNeill and Ranald Nicholson. (St.Andrews, 1975), p. 73. 'unamnexed lands' of which the king could dispose at his pleasure.'**

An act of annexation in 1455 further stipulated that the king and his successors, at the time of their coronation, took an oath ty observe and to keep this distinction. The second method was through revocation. This was a customary practice in Scots law where the king, at any time before he reached his "perfect age" of twenty-five years, could revoke any grants made to the crown's prejudice during his minority.

James was active in both. Hence, in 1528 parliament issued a general revocation of all

giftis, sealis and assignationis maid be his hienes... of his propirtie... [so that] his hale propirtie be Inbrot to his comptrollar for the furnessing of his maist honorable houshald."

Revocation was regarded not only as the king's duty but also as his right.'** Upon attaining his twenty-fifth year, James V made his revocation in April 1537 while at Rouen after his marriage. It was thereafter ratified in the December parliament of 1540.'*'

In the same parliament the king issued an act of annexation legalizing and attaching permanently to the crown those lands and lordships which he then had in his hands

including those additions which had been acquired during his ''W.C. Dickinson, G. Donaldson, I.A. Milne.(eds) A Sourcebook of Scottish History Vol. II 1424-1567. (London, 1953), p. 15.

'**≜**APS, 11, p. 329.

''Murray, "Exchequer and Crown Revenue", p. 201. '''APS, 11, p. 357. 'official' reason was given for the delay but the king has been presumably too busy with his marital arrangements to enforce an immediate ratification. reign. The crown thus held the following lordships and estates: The Isles, South and North; the two Kintyres, the lands and lordships of Orkney and Shetland, those of Douglas, Crawford Lindesay and Crawford John, Bunkle, Preston, Tantallon, Dunsyre, Jedburgh Forest, Kirriemuir, the superiority of the earldom of Angus, the lands and lordship of Glamis that were not held by the church, the lands of Baky, Balmukatýs, Tannades, Drumgleis, Langforgund, and Balhelvies, lands of Racleuch, Whitcamp, Over and Nether, Howcleuch, lands and barony of Avondale, those of Liddesdale and Hermitage and those of Bothwell.''' In March 1541-the lands and lordship of East Weyms's and all other lands belonging to James Colville were also annexed to the

Parliament, in March 1541, granted the king the right to set these new lands in feu:

Statute and ordanit... that it salbe lesum to his hienes to sett all his proper land is baith annext and unannext In fewferme to ony personn or persons as he plesis swa that It be not in diminitioun of his rentale grasumes or ony other dewite bot in augmentatioun of the samin. '?

Lands in feu were held on a perpetual heritable tenure in return for a fixed annual money-rent. The "augmentation" referred to in the act was interpreted as meaning not measely that the feu-duty (annual payment) should exceed the former rent but that there should be an actual increase in the

' APS, il, p. 361. ' Ibid, p. 376. '' Ibid, β. 376.

crówn.'*'

average annual revenue from the lands.'" Many of the lands were given away to various magnates and lords. However, there was an indication that James V did not wish these lords to have an excess of estates. In a letter, in 1539, of instructions from the king to the

commissioners of his lands in Ross, Ardmanach, Trouternes, Strathdee and Cromar, it was stipulated that those

"gentillmen" who had held the same lands during the king's own time and that of his father's, were to be allowed leases but only for the amount of land that "thai may laboure with thare awne pleuch and labouris, and nocht to be sett to subtennentis."'' Any lands in excess of this were to be let to the tenants occupying the ground.

Letting lands in feu-ferme did bring a short-term advantage but the feuars themselves were the ultimate beneficiaries. They enjoyed a secure and heritable possession of land that was increasing in value (due to rising produce prices) while the crown received the same amount of rent in the face of rising costs.''

In addition to rents received from crown lands, some of the lands were farmed directly for the king himself although few records of the actual management are extant.''' The king, however, did have flocks of sheep in Ettrick Forest,

Thornton, Preston and Bunkle and upon Crawford Muir. The

''Murray, "Exchequer and Crown Revenue", p.201.
'ER, Vol. XVII, Appendix, p. 662.
''Murray, "Crown Lands", p. 73.
''Murray, "Exchequer and Crown Revenue", p. 173.

63 ·

comptroller was responsible for the safe custody of the sheep, paid for the shearing and saw to the transport and storage of the wool which was sent for export.

James V's attempts to raise revenue went beyond simply augmenting his own personal lands. One of the most effective means by which the king increased the contents of the royal coffers was by tapping the wealthiest institution in the country: the church. His ultimately successful exploitation of the papacy was nothing short of blackmail and it was achieved with full support from the three estates of parliament.

It began innocently enough in 1530 when the king was actively seeking a means to increase his revenue by securing a European bride. These negotiations were not as successful as he had hoped. Both Albany, his commissioner in France, and Sir Thomas Erskine, his secretary, were kept busy åttempting to persuade the pope, Clement VII, to part with his ward and kinswoman, Catherine de Medici, duchess of Urbino. Frencis I, who at first supported the match, became apprehensive that if negotiations succeeded he might lose the support of Henry VIII by giving James too good a match.'' Consequently, he put forward his own second son, Henri, duc d'Orleans, as a more suitable match for Catherine, and Clement, for his part, had no problem in accepting this substitute. When Erskine arrived in Rome in '''IDId, p. 175.

Donaldson, Scottish Kings, p. 161.

February 1531 he soon discovered what the French king was up to and another imperial match suitable to all parties was proposed. At this point, however, the negotiations took an interesting turn.

65

Clement was well aware of, the Scottish king's dire financial straits and, upon Albany's suggestion, wrote to the Scottish prelates on July 9, 1531 asking for their opinion of a proposal for an 'ecclesiastical contribution of 10,000 *ducats* a year (about £10,000 Scots) to the Scots crown in perpetulty. The immediate motives behind this proposal are vague. Gordon Donaldson describes it'as a papal compensation to James V for the pope's refusal to give Catherine de Medici in marriage to the Scottish king.''? R.K. Hannay places the emphasis upon the renewal of a commercial treaty with the emperor (for a continuation of the liberties and privileges accorded to Scots merchants in the Low Countries) and that the contribution was to help in the fulfillment of this treaty.''' In the long term, it was probably aimed at keeping James true to the church of Rome.

In any case, without waiting for a reply from the Scottish prelates regarding this permanent subsidy, on July 17, 1531 Clement imposed a tax of three tiends (a levy of one-tenth for three years) on all ecclesiastical fruits. The avowed motives for this tax were the menacing aspect of the times, a lack of temporal revenues and an imperative need of

'''Gordon Donaldson, Scottish Kings (London, 1967), p. 162. '''R.K. Hannay. "On the Foundation of the College of Justice." Scottish Historical Review. Vol. XV, 1918, p. 35. financial help from the spiritual estate. ""

A pretext, however, was found for the permanent subsidy. On September 13, 1531 another bull was issued stating that Albany had represented the king's earnest desire to establish a college of judges and that, because there were no funds readily available, the pope was asked to impose a subsidy upon the prelates. Due to a general concern for civil justice it was assumed that the prelates would willingly contribute. A concession, nevertheless, was made; half the members, as well as the president; of this college were to be churchmen. Thus, so long as James V and his successors remained true to Rome, the prelates should contribute annually a sum of 10,000 *ducats* of gold of the *Camera.*'** This became known as the 'great tax'.

Despite rather strong clerical opposition, James did obtain approval for the great tax from the prelates, and when parliament met in May 1532 the customary and initial act for the conservation of the liberties of the church was far more elaborate than usual:

pape clement now pape of Rome has bene mair gracius and benevolent till his grace than to all his forbearis Quharfor to schaw him thankfull and obedient sone to his halynes and the kirk of Rome It is divisit statut and ordanit... That he sall keip observe mainteine and defend the auctorite liberte and fredome of the sete of Rome and halikirk.'''

James followed this with an act which did not actually institute the College of Justice but merely described what

¹''R.K. Hannay, *The College of Justice*, p. 52. ¹ *ibid*, p. 53. ¹ *APS*, 11, p. 335. the money was to be used for, thereby justifying the

taxation:

Becaus our soverane is maist desyrous to have ane permanent ordour of Justice for the universale wele of all his liegis and therfor tendis to Institut ane college of cunning and wise men baith of spirituale and temporale Estate for the doing and administracioun of Justice In all civil actions and therefor thinkis to be chosin certane persouns maist convenient and qualifyit therfor to the nowmer of xiij persons half spirituale half temporall with ane persident... the... choisin persouns... sall have the samin strenth, force and effect as the decretis of the lordis of Sessioun had in all tymes bigane.'*

Thus, the foundation of the College, which was nothing more than the Court of Session under a new appellation, was the pretext for the great tax.

The churchmen, however, did procure some financial alleviation. The final agreement stated that instead of the annual £10,000 the prelates would pay a 'lump sum' of £72,000 to be paid in the next four years and which was at the disposal of the crown. As part of this bargain for the

removal of the great tax, there was to be

a yearly sum of £1400 - payable not by the prelates but out of benefices in their patronage, as soon as these fell vacant... [the] money was to be distributed among the Lords of Session in proportion to their attendances.'*3

In effect, this provision left the college with a very much weakened endowment but freed the crown from any further obligation to supplement the £1400.'**

What was collected of the £72,000 went instead to building

Hannay, "On the Foundation of the College of Justice", p.

Hannay, The College of Justice, p. 67.

and improving the royal palaces and castles of Edinburgh, Falkland, Holyrood, Linlithgow and Stirling.

In the autumn of 1534 Clement VII died and it was not until spring 1535 that his successor, Paul III, issued a bull creating the College of Justice. Only in 1541 was this bull finally confirmed and ratified by the Scottish parliament. The opening nine statutes of this session served to maintain the religious status quo, the basis of which was made clear by the tenth act; the ratification of the institution of the College of Justice. Thus, honouring the holy sacraments, worshipping the Virgin Mary, obeying the pope's authority, reforming "kirkis and kirkmen", informing upon those who gathered privately to dispute the scripture, and honouring and preserving the image of saints were concessions to the papacy in order to maintain various crown privileges. it In short, extorting money from the prelates through taxation was justified by the existence of the College of Justice.

James, however, was not finished with appropriating church revenues. Scottish-papal relations up to this point followed previous practice. Whenever a benefice became vacant the king, after a period of eight months,''' recommended a nominee and the pope, in most cases, agreed. James V, adhering to past tradition, utilized this control '''For a detailed account of this see Accounts of the Masters of Works Vol.F 1529-1615. Edited by H.M. Paton, (Edinburgh, 1957).

'*'APS, 11, p. 370-71.
'''In 1535 this right of nomination was extended to twelve
months. Letters of James V, p. 285.

over appointments to benefices as patronage for civil servants and loyal magnates while, at the same time, he drew the revenues of the temporalities until the office was filled. This situation was not entirely accepted by the papacy or the prelates who were unhappy at what they saw as increasing royal encroachment.

The king, however, seems to have wanted to increase his control. Accordingly, when relations between his uncle Henry VIII and Clement VII collapsed he exploited the situation; royal nominations to vacant benefices were to be upheld and James used this privilege extensively despite clerical complaints. Sir David Young, in April 1531, was condemned for obtaining the vicarage of Tibbermure by purchasing it at Rome contrary to crown privilege and acts of parliament. Young complained that

sic thing was nevir pratikat within this realme in tymis bigane, bot usit and suffrit without impediment baith in our soverane lordis fatheris tyme and in his awin... [the decision was] against all law, justice, conscience and equity, and it tends to the exterminatioun of the papis power.'**

Again legislation was used to bolster the king's position. In 1541 parliament condemned those who attempted to take up a benefice upon their own authority of treason and

lese-majesty.''' The king, therefore, with both papal and parliamentary approval increased his control over nomination and quickly began to abuse the privilege by recommending nominees who were neither competent nor capable of

*** ADC, p. 354-56. *** APS, 11, p. 378.

exercising the office.

In January 1530 James informed Clement VII that although "youth may be an obstacle to the holding of a benefice... a father's deserts and a son's promise often demand that the rigour of the law should be relaxed."'' His candidate for the appointment to a benefice of cure was "John, the six year-old son of George Steil, a special favourite of the court and household.

The king remained in a position to force further concessions from Rome:

As I have three illigitimate sons, I am obliged to confess to your Holiness that the fault is my own... Yet the natural fatherly affection... urges every man to have regard for the welfare of his offspring... We therefore beg your Holiness that, notwithstanding their defect of birth, they may ... be duly promoted to all holy orders... and that at present, notwithstanding their minority as well as their defect of birth, they may, after receiving the clerical character, hold any church dignities whatsoever, either secular or regular of any order, in title or commend, even two, three, four or more incompatible benefices, and greater dignities post pontificales in cathedral and metropolitan churches and in the first dignities in collegiate churches, and also monasteries, abbeys and priories (deputing) coadjutors therein until they reach mature years).'''

Clement granted this request and in March 1538 James recommended yet two more natural sons to benefices. In all the king was able to supplement his income by drawing the revenues from the abbeys of Kelso, Melrose and Holyrood, the priories of St. Andrews, Perth and Coldingham and the Charterhouse at Perth:^{1,2} all benefices to which his ''' Letters of James V, p. 166. ''' Sourcebook of Scottish History, p. 89-90.

''' Scots Peerage Vol. I, p. 23.

illigitimate sons had been appointed.

Although the king saw nothing wrong in manipulating the church in this way he was inclined not to allow the same privileges to his own prelates. When the abbots of Dryburgh and Balmerino attempted to resign their benefices to their own natural sons the king asked the pope to refuse consent and to put a stop to the project on the grounds that it was a "scheme scandalous for the church and king."'' Any intervention without royal assent was a personal affront; James would "not suffer his subjects to undermine the royal

power instead of recognizing and respecting it." Despite his blatant exploitation of the church on many levels, James's actions were not wholly cynical. He does seem to have shown some concern for the well-being of the Scottish church, as indicated by various acts of council and parliament. In particular, James attempted to uphold the

true faith by enforcing sterner measures against heretics:

Memorandum to persuaid the kingis grace to extend the act of parliament maid contrar the Lutheranis be the avis of the lordis of counsal in the maist ample forme for stanching and putting done of this heresy and to caus diligent inquisitioun be maid baith be spirituall and temporale for distroing of thir new bukis maid be the said Lutheris sectis baith in Latyne, Scottis, Inglis and Flemys... Item to put in ilk burgh on the see and uthir gret tounis of the realme jugis criminall to punetis sic trespassouris guhair thai ar fundin baith in persoun. and gudis, and to assit to the spiritual1 jurisdictioun for executioun making apoun sic personis."''

The king himself, in a royal letter; charged the council to '''Letters of James V, p. 286. '? *Ibid*, p. 393. '''ADC, p. 422-424.

provide the "scharpast way possible" to prevent the spread of Eutheranism. As a result, several men were banished from the kingdom while others were burnt, some in the king's presence.''

Parliament, in 1535, reinforced these recommendations by repeating a previous act passed in 1525 "aganis" heretikis" with the addition that no stranger arriving in Scotland was to bring with him any Lutheran books or works, nor was he to dispute or discuss those opinions. '' That these opinions existed is indicated in a statue of 1535 where

the dampnable persuasionis of heretikis and thair pervsit doctrine gevis occasioun to lychtly the process of cursing [excommunication] and uther censuris of halikirk. '!

With the advent of the reforming doctrines these censures, which would have previously been dreaded or at least taken rather seriously, were being either dismissed, ignored or derided; for a great number of people, being excommunicated was no longer an event to be feared. This statute also points to the increasing financial difficulties facing the prelates due to the various taxes imposed upon them by James V. Previous methods of punishment were no longer effective. Those who sustained the sentence of cursing were, according to the act, to have their moveable and immoveable goods distrained, now by the authority of the

'''A Diurnal of Remarkable Occurents... Edited by Thomas Thomson. (Edinburgh, 1833), p. 18-19. '''APS, ii, p. 341. ''APS, ii, p. 342. king's letters. Thus the clergy were not only losing revenue but their authority and jurisdiction was also lessening in importance and effectiveness.

In February 1538 a list of bulls issued by Paul III of "certane privileges grantit be his halynes to his hienes"'' were to be registered. They neatly sum up the important favours which the Scots king had extracted from the papacy since he had begun his personal rule:

ane bull of perpetuale extension of the privilege of nominatioun of the kirkis and abbacyis for ane hale yer eftir the vacance of the samin, ane bull of indult for uptaking of the fruitis of the kirkis and abbacyis for ane hale yer eftir the vacance, ane process and executrials tharupoun, ane bull of confirmatioun of the College of Justice with exemptioun and faculte of sustentatioun of the samin, [and] ane bull of dispensatioun of the kingis gracis naturale sonis.²⁰⁰

In return for these favours the king and parliament substantiated and attempted to perpetuate Catholicism in Scotland. The papacy, in effect, 'purchased' Scottish obedience.

James's concerns with the church were not solely financial and had other more political ends in mind. In his correspondence with Rome he reiterated Scotland's loyalty to the true faith and his own precautions taken to prevent the entry of heresy into the realm. As such he was justified "in seeking from the popé and cardinals honourable and salutary privileges which are not likely to injure the Roman see."²⁰ The king, therefore, asked Clement to appoint "an upright ''ADC, p. 466.

*** ADC, p. 466. Letters of James V, p. 174. and god-fearing Scot" with power a latere, to allow monastics to elect their own abbot or prior from the fraternity at royal recommendation without recourse to Rome, and to give James the same briefs regarding fruits of prelacies and other great benefices during vacancy as were granted to Albany when he was governor.²⁰² One of the more amazing requests was that

in the case of offences against the royal person which infer a charge of treason [James] may, without incurring the papal indignation, arrest and keep in Monourable custody delinquent churchmen, even archbishops, or bishops, until Rome [was] consulted and legates [were] sent to ascertain the facts and pronounce judgment.²

This privilege was granted in September 1531200 Thus giving James_papal 'approval' when he imprisoned James Beaton, archbishop of St. Andrews, in 1533.200

In addition to the strong policy that James took towards the church, as revealed in the statutes, an

alternate aspect of his governing policy, and one which followed the example of his predecessors, was genuine

concern for re-establishing law and order throughout the

¹²°²Ibid, p. 171-176. James, however, was not successful in his own lifetime of getting his legate. ²°³Ibid, p. 176.

²° ¹*Did*, p. 201.

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realm. This was indicated by his repeated military expeditions to the more unruly areas of the kingdom as well as his presence upon justice agres. Parliament and council reinforced the king's interest by passing a substantial number of statutes and council ordinances which dealt with legal procedures, methods of justice and general rules for maintaining peace within the kingdom. Notwithstanding this positive trend there remained; as in almost every component of the king's domestic policy, an undercurrent, sometimes subtle and sometimes not so subtle, of acquisitiveness.

Several statutes emphasized the difficulties in collecting the monetary profits from fines which were to accrue to the crown so that "or Soverane lord hes bene gretlie defraudit be the crownis [crowners] in halding of his last Justice aris."²⁰⁴

An act of 1528 stipulated that if an arrested party was unable to pay the fine that the crowners were to

arrest thair gudis and put the samin in souir keping to the kingis use until the said souirte [payment] be fundin Or ellis tak thair personis and put thame in the kingis carell geif ony be within the schir.²⁰⁷

Several acts were passed in an attempt to speed up the slow

process of justice courts:

Because our soverane lord hes bene and Is of gude will and mynd to haif Justice schortlie done to all his liegis Sua that throw lang proces his liegis be not lang tareit and vext In grett expense. Therfor has statute and ordanit that all sheriffis and temporale jugis sall in tymes cuming in all personalle actiounis sett thare court peremptourlie

• APS, 11 p. 331. • APS, 11 p. 332. upon xv dais. 2001

Six acts were passed in the parliament of 1540 concerning the office of notary.²⁰ The emphasis in each stressed the necessity of lawful, quick and effective measures

for eschewing of the grett Inconvenientis that dalie occuris in the processis led befor sheriffis stewartis balzeis of burrowis and regaliteis and baronis.²¹⁰

In 1535 parliament declared that justice ayres were not to allow any postponement after the second sitting. Those accused who did not compear at the second ayre were to be

denuncit the kingis Rebellis and putt to his horne and all their gudis his eschete [because they have] abusit the Justice and brot the cuntre to gret expensis."'

Criminals were not the only ones who were taking advantage of the judicial system:

It hes bene hevelie murmurrit To oure soverane lord That his lieges hes bene gretlie hurt in tymes bigane be Jugis baith spirituale and temporale Quha hes not bene alanerlie Jugis bot plane solistaris partiale counsaloris assistoris and part takaris Whith sum of the partijs and hes tane grete geir And

² • APS, *II*, p. 358.

²°'A notary was a 'public and authentic' person who "had authority to draw up a formal and solemn record of acts and proceedings (eg. the delivery of sasine [infeftment], institution to a benefice, the loan of money, etc.) which would be received as an authentic record of what took place." (William Angus. "Notarial Protocol Books, 1469-1700", in The Sources and Literature of Scots Law, Stair Society, (Edinburgh, 1936), p. 294.) The earliest Scottish notary appeared in the late thirteenth century. During the fifteenth century there was a great increase in notaries which Robertson ascribes to an increasing professionalism and a growing commercialism which "necessitated the reduction of transactions to writing. The notaries fulfilled these needs and also kept records of the transactions in their protocol books." (Robertson, "The development of the law", p. 148, 149.) ²¹ • APS, *ii*, p. 360.

²¹¹*Ibid*, p. 350.

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Henceforth, all judges were to "do trew and equale Justice to all oure soverane lordis liegis." ²¹³ Thus council, in 1533 declared the earl of Argyll not competent to sit as a judge because of his "tendirnes of blude as thrid [third] and thrid of consanguinite"²¹⁴ to the accused and in 1535 the sheriff of Ayr and his deputy were forbidden to sit in judgment upon Gilbert, earl of Cassillis, due to the "inemite now standing betuix [them]."²¹³

Despite these problems, parliament approved several acts which endeavoured to make local sheriffs more personally responsible for their office. Statutes in the parliament of 1540 ordered sheriffs to be personally present at the three yearly head courts, to appoint "gude and wis substancius men" as their deputies and to produce their own personal signet when executing all letters and precepts from the king. Any negligent official lost his office for three years.

Local barons and landlords were made responsible not only for their own actions but for those of their tenants as well:

Every lord baroune and frehaldar [is to] ansuer in our Soverane lordis Justice arts for his awine men duelland upoune his awine propir landis... And salbe haldin to entir thame to the law.²¹⁶

Superiors were obliged to produce any man in their service '''Ibid, p. 374. '''ADC, p. 409-410. '''ADC, p. 446. '''APS. 11, p. 332.

77

accused of theft before the sheriffs and if the superior refused to do so, he was held to be "art and part takar of his [tenant's] evill deidis and [would be] accusit therefor as the principale theif." 2117

78

This last statute was enacted in 1535 and was repeated in 1541. One could conclude, in view of James V's abiding interest with money, that these acts, although ostensibly concerned with the personal responsibility of superiors for their tenants, were also an attempt to ensure that fines advanced to the crown would be guaranteed; if the tenant refused to appear, his landlord or superior was obliged to, and would therefore also be obliged to pay the fine. This emphasis upon personal responsibility and its monetary profit was visible even earlier than the production of this measure. Thus in 1531 council ordained that "eviry lord, baroun and gentilman salbe haldin to ansuer for thair men" for not bearing any invasive weapons in Edinburgh. It was further stipulated that each superior was to

pay the said soume for thame and that the provestis, balzeis and officiaris of this toun note ony personis cumand in contrar herof and gif thair names in bill to the thesaurar, so that he may gar the saidis personis for recovering of the saidis soumes apoun thame.²¹⁴

The economic well-being of the kingdom was another subject which required attention. Hence, parliament in 1535

²''*APS, ii*, p. 351. ²''*ADC*, p.363-64. passed the greatest amount of statutes (fifteen in all) intended to improve the general welfare of the populace. Despite Jenny Wormald's claim that "the government did little or nothing to encourage economic development"²¹' the year when these acts were passed is important. Peace had been signed with England in the previous year after what can only be described as six years of intermittent, albeit unofficial, warfare. Thus, the tural legislation of this session which ordered landholders to plant woods, make hedges, orchards and yards, fines for anyone caught cutting, burning or felling greenwood, and punishment for those who slaughtered or poached fish, rabbits and other small animals was a deliberate attempt by the government to alleviate some of the consequences of the Anglo-Scottish war.

An act of James I was repeated whereby hostelers were

ordered to have

act

honest chalmis [chambers] and bedding for resaving of all passingeris and strangeris... with gude and sufficient stabillis with... corne hay and straw for their horses flesche, fische breid and aile with otheris furnessing for travellaris Tó be sauld apoun ane competent price. ²²⁹

Efforts were made to curtail the prevalence of bands of mounted men (usually magnates and their tenants), not only for law and order but to protect the goods and livelihood of the people at large. Thus, parliament, in 1540, passed an

that the army of Scotland be unhorsit except greit ''Jenny Wormald. Court, Kirk, and Community: Scotland 1470-1625. (Toronto, 1981), p. 44. ''APS, 11, p. 346. baronis [due to] the gret hurt scaith and dampnage done In cuming of multitude of horsemen throw distructioun of cornis medowis and hanyng of pure folkis. ²²¹

Parliament also made a concerted effort to keep gold and silver within the realm. Two acts, passed in 1535 and again in 1541, forbade the export of money from the realm and any persons hoarding "Quhite (white) money" were to exchange it for gold, an attempt to keep silver (in particular) in circulation. All of these statutes were aimed at improving the environment in which the economic activity was carried out and must have had a substantial effect.²²²

Despite this paternalistic trait, the government remained, as Wormald contends,^{22,3} primarily concerned with finance. At the local level, while the acts of 1535 were an attempt to promote economic renewal, the emphasis upon those caught destroying forests, burning moorland or poaching salmon was that the fines for such were to be paid in full. These acts specified that

It sall not be lesum (lawful) to the treasurer and compositoris in tymes cuming to compone or fyne with the brekaris of this act for less than the pane and unlaw (fine) contenit in the samin.²²⁴

The crown was obviously concerned as much as possible to make a profit.

²²¹ Ibid, p. 362.

²² Ibid, p. 343.

²²²The only full-length study on the economic aspect of Scottish history for this period is I.F. Grant, The Soclaland Economic Development of Scotland before 1603. (Edinburgh, 1930), and it is rather dated. This is an area in need of further study. ²²³Wormald, p. 44. Although Anglo-Scottish relations remained amicable until the last year of his reign, the defense of the kingdom continued to be an important part of the king's governmental legislation as it had been for his predecessors. Hence, it was enacted that weaponshowings were to be held twice yearly and every landed man with £100 of land was ordered to build a stronghold upon his estates, the measurements and materials used adhering to specifications outlined in the statute.¹¹³ James V's desire for Scotland's artillery to be consistent with continental standards was indicated in the

81

preamble to an act of 1535:

because the schott of gunys hagbutis hand bowis and other small artalyerie now comounlie usit in all cuntreis baith be sey and land in thare weris Is sa felloun and uneschewable to the pith and hie curage of noble and vailye and men...²²⁶

it was ordained that every man was to be properly equipped according to his status. Acquiring the artillery was the responsibility of the merchants:

Every merchand saland furth of this Realm... Sall bring hame als oft as he salis... two hagbuttis or may as his pak may furness with powder and cawmys for furnessing of the samin Or ellis alsmekle mettell as will mak the said hagbutis. 227

The emphasis upon rank was repeated in 1540 when

parliament specified that the armor worn at weaponshowings was to "conforme to every manis Rent and substance."^{22*} The king's personal involvement in this area was evident:

That na fraude be maid in making of the said

²¹ Ibid, p. 345. ²¹ Ibid, p. 345. ²¹ Ibid, p. 346. ²¹ Ibid, p. 362. wapinschawingis and that the kingis grace may knaw the ordour of his peple It is statute and ordanit... that all personis present in wapinschawingis be writtin... In ane buke with the manner of thair harnes and wapnis yerlie... [to be sent] to the kingis grace. 227

In spite of good intentions these acts were not always

obeyed. Council, in 1541, ordered

that lettres be direct to all scherefis, stewartis, provestis and balleis of burrowis, lordis and balleis of regaliteis makand mentioun that forsamekle as lettres was direct to thame of befor to mak wapinschawingis conforme to the act of parliament upoun the premunitioun of x1 dais betuix the daitt of the saidis lettres and the first day of August howbeit thar is na deligence done tharto as the kingis grace is suirlie informit.²³⁰

Henceforth, "all and sindrie" who received the said letters we're to hold weaponshowings "quhidder his hienes sendis commissaris or name."²³¹

Perhaps the area where the king's personal involvement was most notably absent was in burghal legislation. Most of the acts passed during his reign which dealt with the burghs were merely repetitions of previous practice. Although the two parliaments of 1535 and 1541 passed eighteen statutes dealing with burghal matters, there were few new or innovative policies.^{2 3 2}

As in previous parliaments, the traditional and . exclusive trading privileges of the burghs were

²² 'Ibid, p. 363.

² ⁹ *ADC*, p. 504.

²³¹Ibid, p. 504.

^{23 2}Only five or six could be considered new statutes. The rest merely repeated those passed by the earlier Stewart kings.

re-emphasized. Within the burghs themselves parliament ordered maltmakers and craftsmen to lower their prices, that only "honest and substantious" men could be chosen as provosts, baillies or aldermen, and that these burghal officials were to be free of "molestation" from the other

indwellers.

Edinburgh was singled out in two acts of 1541. Burgesses living upon the west side of Leith wynd were ordered to

repare honestlie thair saidis waistis and Ruynous housis... within yere and day [beginning] ...within thre monethis... and specialie quhair thair Is comoun passagis and entrenses quhairby all strangeris and otheris our soverane lordis liegis passis and repassis.²

The "mele merkett" was also to be moved from the high gate to a more convenient place where "vyle unhonest andmiserable creatoris" could not disturb the "nytboris of the said toun and otheris the kingis liegis."²³⁴

The remaining statutes of this parliament reinforced earlier governmental policies from the previous four reigns. Measures were to be the same throughout the realm, all burghs must have one universal weight for both buying and selling and three market days were set aside for selling bread and flesh. Forestallers (those who bought up goods before they had been exposed for sale) if apprehended were to have their goods escheated; one half to the crown and the other to the burgh.

²³ APS, 11, p. 374. ² Ibid, p. 374. Only in council proceedings against disobedient burghal officials was the king's presence evident. In a royal letter to the council Patrick Charteris, provost, and his brother were ordered out of Perth which used to be "ane toure of grate honour, gude tame, and substance", but which was impoverished by Charteris and his accomplices who "usurpand the provestry... yerlie on tim be force... [made] his friends bailies and officers."¹³⁵ The tour council was ordered by royal command to meet at once and choose the Master of Ruthven to be provost, a command which they obeyed

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> "verray gladlie." Charteris was henceforth excluded from residence and office in the town.²³⁴ Otherwise, royal policy seems to have been to leave the burghs to carry on as they were. There was, for instance, no attempt to exploit them financially as the church had been exploited.²³⁷

> Concerning the king's personal input in relation to his legislation, this was particularly obvious in council. Throughout his majority there was an abundance of royal letters requiring the council to carry out royal wishes. Such letters are rare before his reign? * which seems to ***ADC, p. 281. ***ADC, p. 291.

> ²³ 'Although "no clear statement exists to show the principles on which assessment [of taxation of burghs] was / based" (Athol A. Murray, "Taxation of Burghs 1535-1556", in An Historical Atlas of Scotland, p. 75), the proportion of taxation payable by the burghs was usually less than that payable by the church. This is especially evident in 1535 when the church was responsible for half of the 'contribution' levied for the king's marriage while the burghs were to pay one-sixth. ^{23*}For example, in the documentation that survives for James

suggest a much more personalized form of government than had existed before (or even after, as during the reign of Mary). The practice was revived, however, during the reign of his grandson, James VI.

The contents of the letters, with some variations, were usually in this form:

My lord chancelar producit befor the lordis of consell and sessioun thir statutis and ordinancis undir writtin, subscrivit be the kingis grace, and desirit thaim to consider the samin and geif thai think thaim wele consavit and necessar to be observit and kepit in tyme tocum or nocht. Chancelar, president and lordis of our counsale and session, we gret yow hartlie wele. We have thocht thir thingis following necessar for the commoun wele of our realm. and tharfor sendis thaim presently to yow geif ye think thaim gud that thai be auctorizat or uthir wyis left as ye think expedient.²³⁹

The king would then proceed to outline his desires wherupon

the usual procedure was as follows:

The Clerk Register producit our soverane lordis lettres undir his privey sele and desirit the samin to be registrat in the bukis of counsell and to have the strenth, force and effect of thar decret in tyme tocum: the guhilk desir the saidis lordis thocht resonable and tharfor ordanis the samin to be insert... and that publicatioun be maid tharof at all placis neidfull.²⁴⁹

James V's concern with equity for his subjects was evident in his proposal in March 1535 to revive a previous position from the reign of James I for an advocate for the poor:

'''(cont'd) IV there are only one or two instances of royal letters. See Acts of the Lords of Council in Civil Causes. '496-1501: Edited by G. Neilson and H. Paton. (Edinburgh, 1918). ''ADC, p. 414. ''ADC, p. 469. Forsamekle as we ar daly infestit be the complant of divers our pur liegis persewand for justice quhilkis ar postponit tharfra in defait of advocatis to procur for thame and that have na expensis to do the samin, for remeid tharof we have thocht gud to the honour of god for the help of our said pur liegis that ane man of gud conscience to that effect: be chosin be yow quhilk sallbe callit advocatis pauperum.²⁴¹

86

Consequently, Thomas Marjoribanks and Master John Gladstains were "conjunctlie" appointed to the position. That the idea originated with the king is obvious from a further ordinance in April 1535, setting Friday as the day for actions concerning the poor, where it is stated that the king wrote to them "makand mentioun that his mynd is that pur miserable persouns sall have mair hasty expeditioun of justice."¹⁴² James's motivations, however, for implementing such

measures were far from selfless:

Forsamekle as thar is divers summondis raisit at our instance quhilkis gif thai be superfedit and remain uncallit unto your nixt seit and conventioun, thai ar able to be expirit and we to tyne. (lose) large proffitt tharthrow, guharefore we pray you and als chargis that ye mak ane act in your bukis of counsale that all summondis that ar raisit at our instance sic like as pleisis our thesaurar to desir to be callit, be callit now in tyme of vacance.²⁴³

Money, as always, was never far away from his actions.

The king would also voice dissatisfaction with the

cil through his letters:

[We] haf writtin divers tymes for punesing of sic personis [for barratry - buying or trading pensions or appointments from the papacy without royal license] and na thing done in that behalf to our plesour and putting of our actis to executioun... lik as that had your assistance and favoris in the

Ibid, p. 434-35.
 Ibid, p. 438.
 Ibid, p. 471-72.

using of thar baratry... ye have litill regard to our displesour and commoun weill in suffering of sic baratouris.²⁺⁺

This same 'displeasure' was expressed when letters of remission issued by the king were used to the detriment of justice. James held himself blameless because these remissions had been acquired by "sinister information" and somehow without his knowledge:

and tharfor geif ye falze to advertis us eftirwart quhen sic thingis accuris, the wyte (weight) sall be imput to you and nocht to us, sen ye ken our mynd constant for justice... and geif ye admitt ony sic private writingis the damnage and scaith of party sall ly to your conscience and nocht to ouris.^{2*3}

For the most part, however, the king, his council and parliament remained a cohesive body rarely involved in severe self-criticism or a divergence of policy.

Taken as a whole, the statutes passed in the

parliaments of James V's personal reign reflected a definite policy that was visible from his very first parliament in 1528. The trend, which was pervasive in both parliament and council, derived from the king himself and was influenced strongly by the experience of his minority. These troubled years, which left the crown in a state of abject poverty, produced a state of affairs which the king would neither forget nor tolerate. Hence, he became obsessed with rebuilding royal revenue through whatever means were available.

***Ibid, p. 481-82. ***Ibid, p. 449, 454. Fortunately for James V the religious situation in England placed him in an unprecedented and highly advantageous position where he was able to extract favours from the papacy which, hitherto, would have been unheard of. In return for these favours parliamentary legislation reinforced the religious status quo.

In addition to exploiting the church μ the king sought financial gain from the profits of justice. The legislation which endeavoured to re-organize law and order within the realm was not only an attempt to consolidate peace and refine the procedures of justice, but was also a means of contributing to the royal coffers. Thus, continual emphasis was placed upon the full payment of fines and the personal w responsibility of a superior for his tenants. In spite of the king's genuine concern for equity his acquisitiveness was never far below the surface from his social policy. Yet, this trait did not necessarily make James V unpopular. Parliament endorsed his attempts to re-build crown finances and the king, for his part, utilized those methods which were readily available. Parliamentary and council records indicate that James V was an energetic, hard-working and concerned king. Consequently, no protestations or complaints of a lazy or despotic monarch were heard in parliament; the three estates maintained the king's authority throughout his reign.

88