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A STUDY OF THE EFFECT OF DEATH CONFRONTATION  
ON DEATH CONCERN VARIABLES

by



FREDERICK IVAN MEEK

B.A. McMASTER UNIVERSITY

M.A. UNIVERSITY OF WINDSOR

A Dissertation

submitted to the Faculty of Graduate Studies

through the Department of

Psychology in Partial Fulfillment

of the requirements for the Degree

of Doctor of Philosophy at

The University of Windsor

Windsor, Ontario, Canada

1982

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## Abstract

The purposes of the present study were: 1) to determine relationships between psychometric death concern variables, 2) to determine if the use of a personal death fantasy exercise would significantly reduce death anxiety, 3) to ascertain the experimental effect of fantasy process variables, and, 4) to describe relationships with avoidance-confrontation continuum. Templer's (1970) Death Anxiety Scale, Ray and Najman's (1974) Death Acceptance, Thauberger's (1974) Avoidance of the Ontological Confrontation of death, and Morgan's (1975) Vivia, Death Transcendence and Meditative Awareness subtests were administered pre-, immediately following, and two weeks after subjects engaged in two visually imagined fantasy experiences. Experimental Treatment Low Death Anxious ( $n = 20$ ) and High Death Anxious ( $n = 20$ ) Groups engaged in an innocuous fantasy involving an imagined walk in a meadow, followed by the personal death fantasy which involved imagining a simulated cardiac arrest during which the subject dies. The control group comprised of low death anxious ( $n = 10$ ) and high death anxious ( $n = 10$ ) subjects engaged in the same initial innocuous fantasy as the experimental treatment groups, however, the control groups' second fantasy involved a second innocuous fantasy. The process variables were time fantasizing, number of interventions, death associated words, and four vocal quality categories. The expected relationships between the psychometric variables were supported for all death concern relationships except the death anxiety and vivia relationship which was non-significant. The expected reduction in death anxiety following con-

frontation experience was not found. There was a significant multivariate effect accounted for by the meditative awareness variable over all groups. The process variables of time spent, focused and externalizing thought units were significantly related to the death concern variables. Avoidance-confrontation was significantly related to each of the other death concern variables. Observed changes on the avoidance-confrontation measure indicated that low death anxious individuals could be either confronters or avoiders, however, high scorers on the death anxiety scale were avoiders. Experimental differences for the high and low ranges of death anxiety as well as the relationship between death anxiety and the avoidance-confrontation measure were also observed; however, the high-low death anxiety differential effects were obscured by statistical design inadequacies of the study. Limitations of the present design and recommendations for future research are discussed.

## ACKNOWLEDGEMENTS

During the process of the completion of the present project, a number of individuals have provided valuable assistance and support. First of all, the author extends his gratitude to his life-partner, Ms Joanne Shaw, whose consideration and support have been critical to the completion of this project. Secondly, along with Joanne, the author's three sons, Jonathan, Adam and Micah, have contended with an irritable, over-tired, obsessed doctoral candidate and the author thanks them for their patience.

The author also extends his heartfelt gratitude to Dr. Marvin L. Kaplan who chaired the author's doctoral committee. Marv has patiently provided direction and support throughout the project.

The author wishes to thank Mrs. Iris Becker-Zawadowski, M.L.S., and her staff for their assistance with research article search and photocopy services which have been of great assistance, Ms Jude Quick who completed the Voice Quality scoring of the audio tapes, and Mrs. Sally Dolphin, who painstakingly typed the manuscript. Special thanks are extended to Mr. Richard Arseneault, B.A., B.Sc., who spent countless hours assisting the author in contending with the statistical design and computer programming aspects of the project.

# TABLE OF CONTENTS

	PAGE
ABSTRACT . . . . .	iv
ACKNOWLEDGEMENTS . . . . .	vi
LIST OF TABLES . . . . .	xiv
CHAPTER I: INTRODUCTION . . . . .	1
The Development of "Death" Research . . . . .	1
Death Issues in Psychological Theory . . . . .	2
Confrontation of Personal Death Anticipations . . . . .	4
Response to Death . . . . .	4
Changes Commensurate with Confrontation . . . . .	9
Death Concern Research . . . . .	11
Fear or Anxiety? . . . . .	12
Self-report versus Indirect Measures . . . . .	12
Reliability and Validity . . . . .	14
Orientations Alternative to Fear and Anxiety . . . . .	16
Unidimensional versus Multidimensional Death Concern . . . . .	17
Collett-Lester (1969) Fear of Death Scale (FODS) . . . . .	25
Templer's (1970) Death Anxiety Scale (DAS) . . . . .	28
Multi-level Approach to Death Concern . . . . .	32
Summary of Death Concern Research . . . . .	34
Confrontation of Personal Death Anticipations Research . . . . .	37
Response to Death Anticipation . . . . .	37
The Threat Index (T.I.) . . . . .	38
Avoidance-Confrontation . . . . .	40



	PAGE
Confrontation Research . . . . .	42
High versus Low Death Concern . . . . .	43
Response to Death Anticipation . . . . .	44
Sensitivity of Confrontation and Matching of Death Concern . . . . .	45
Indirect Measurements-Process Involvement . . . . .	48
Follow-up Measures . . . . .	50
Summary of Confrontation of Personal Death Anticipation Research . . . . .	52
The Present Study . . . . .	54
Hypotheses . . . . .	56
Relationship Between Death Concern Instruments . . . . .	56
Confrontation Effects on Death Concern . . . . .	56
Process Involvement Effects . . . . .	57
Avoidance-Confrontation Continuum . . . . .	57
CHAPTER II: METHOD . . . . .	58
Subjects . . . . .	60
Contact Procedure . . . . .	60
Psychometric Measures . . . . .	61
Selection of Groups . . . . .	62
Treatment of Groups . . . . .	63
Experimental Procedure . . . . .	63
Fantasy Procedures . . . . .	64
Introductory Phase . . . . .	64

	PAGE
Initial Relaxation . . . . .	65
First Fantasy--All Subjects . . . . .	66
Interim Relaxation Phase . . . . .	67
Second Fantasy--Experimental Groups . . . . .	67
Second Fantasy--Control Groups . . . . .	68
Post-fantasy Administration of Instruments . . . . .	69
Process Involvement Measures . . . . .	70
Time Spent in the Visually Imagined Personal Death Experience . . . . .	71
Frequency of Death Associated Words Reported . . . . .	71
Frequency of Experimenter Interventions . . . . .	72
Voice Quality . . . . .	72
CHAPTER III: RESULTS . . . . .	75
Independence of Death Concern Variables . . . . .	75
Changes in Measures as a Result of Experimental Procedure . . . . .	78
Process Involvement Effects . . . . .	84
Analysis of Covariance-Process Involvement Variables Relationships between 1st and 2nd Fantasies . . . . .	85
Second Fantasy Effects by Treatment Groups . . . . .	88
Effects of Involvement on Death Concern . . . . .	91
Relationships Between Avoidance-Confrontation and the Other Death Concern Variables . . . . .	94

	PAGE
Pre-test Avoidance-Confrontation Relationships for	
Total Pool ( $n = 313$ ) . . . . .	94
Avoidance-Confrontation Relationships for the	
Experimental Groups ( $n = 60$ ) . . . . .	96
Avoidance-Confrontation Trends for Experimental and	
Control Treatment Groups . . . . .	98
Avoidance-Confrontation Trends for Low Death Anxious and	
High Death Anxious Experimental Treatment Groups . .	98
Summary of Results by Hypotheses . . . . .	100
CHAPTER IV: DISCUSSION . . . . .	105
Statistical Design . . . . .	107
Experimental Effects--Low and High Death Anxiety Groups .	107
Experimental Effects--Avoidance-Confrontation Response	
to Death . . . . .	108
Sensitivity of the Death Fantasy Method . . . . .	111
A Multidimensional Approach . . . . .	112
Process Involvement . . . . .	113
Externalizing Thought Units in the Personal Death	
Fantasy . . . . .	115
Experimenter Interventions . . . . .	116
Process Involvement Between First and Second Fantasies .	116
Report and Processing Differences in the Second Fantasy .	117
Avoidance-Confrontation and Process Involvement . . . . .	117
Summary of the Sensitivity of the Death Fantasy Factor .	118

	PAGE
Timing of Follow-up Consolidation Theory . . . . .	119
Confounding Influence of Meditative Awareness . . . . .	120
Nature of Death Anxiety . . . . .	121
Psychological State-Effect on Vivia . . . . .	121
Recommendations for Future Research . . . . .	123
Control Group . . . . .	124
Avoidance-Confrontation Continuum . . . . .	124
Sensitivity of Confrontation Media . . . . .	125
Fantasy Reporting . . . . .	126
Follow-up Measures . . . . .	126
CHAPTER V: SUMMARY AND CONCLUSIONS . . . . .	127
APPENDIX	
A Outline of Study Read in Psychology Classrooms . . . . .	132
B Instructions for Completing Psychometric Instruments . . . . .	135
C Templer's (1970) Death Anxiety Scale (DAS) . . . . .	137
D Thauberger's (1974) Avoidance of the Ontological Confrontation of Death (AOCd), Form A . . . . .	139
E Ray and Najman's (1974) Death Acceptance Scale . . . . .	142
F Vivia, Death Transcendence and Meditative Awareness Variables of Morgan's (1975) Personal Experiences Check List (P.E.C.L.) . . . . .	144
G Letter and Summary Sent to Participants . . . . .	147
H Death Associated Words . . . . .	152
I Summary of Voice Quality Categories . . . . .	154

	PAGE
REFERENCES . . . . .	156
VITA AUCTORIS . . . . .	173

# LIST OF TABLES

TABLE	PAGE
1. Pre-test Psychometric Scale Correlations for the Total Subject Pool ( $n = 313$ ) . . . . .	76
2. Factor Analysis Pre-test Psychometric Death Concern Scales for Total Subject Pool ( $n = 313$ ) . . . . .	77
3. Multivariate Analysis of Variance Psychometric Variables (Death Anxiety, Avoidance of Ontological Confrontation, Death Acceptance, Vivia, Meditative Awareness, Death Transcendence) ( $n = 60$ ) . . . . .	79
4. Univariate F-tests on Psychometric Variables (Death Anxiety, Avoidance of Ontological Confrontation of Death, Death Acceptance, Vivia, Meditative Awareness, Death Transcendence) ( $n = 60$ ) . . . . .	80
5. Group Mean Differences and Time Effects Psychometric Variables ( $n = 60$ ) . . . . .	81
6. Pre, #1 Post and #2 Post Means and Standard Deviations for Experimental and Control Groups on Psychometric Questionnaires ( $n = 60$ ) . . . . .	82
7. Pre, #1 Post and #2 Post Means and Standard Deviations for Experimental Low Death Anxious ( $n = 20$ ) and High Death Anxious ( $n = 20$ ) Groups . . . . .	83
8. Multivariate Analysis of Covariance; Experimental Process Variables (with Voice Quality Innocuous Fantasy as Covariates) ( $n = 60$ ) . . . . .	86

TABLE	PAGE
9. Univariate F-tests on Experimental Process Involvement Variables (d.f. 2,51) ( <u>n</u> = 60) . . . . .	87
10. Group Mean Differences-Treatment Effects, Experimental Process Involvement Variables ( <u>n</u> = 60) . . . . .	89
11. T-value Summary of Relationship between Process Variables (Time in Death Fantasy, Frequency of Focused Thought Units and Frequency of Externalizing Thought Units) as Covariates and Death Concern Variables for Experimental Treatment Subjects ( <u>n</u> = 60) . . . . .	92
12. Pre-, #1 Post- and #2 Post-Test Scale Correlations for the Total Sample of Participants ( <u>n</u> = 60) . . . . .	95
13. Voice Quality Total Averaged % by Condition and Group . . . . .	114

## CHAPTER I

### INTRODUCTION

#### The Development of "Death" Research

Over the last 30 years a burgeoning research area has developed investigating the issue of attitudes toward personal death and the effects of resolving personal death anticipations through confrontation. Previously, the effects of personal death issues on individual psychological functioning was an area of speculation confined to philosophical introspection, reflection, and hypothesis building. Although they continued to remain central tenets in existential theory, these hypotheses were not generally subjected to rigorous experimental validation. Over the last decade, the increasingly popular research interest in death has led to the development of research methodology and to differentiated concepts of death anxiety, death acceptance, death anticipation and confrontation of death.

A review of the death related literature indicates that a great deal of effort has been expended in the development of psychometric instruments related to death concern. A number of investigations designed to examine the relationships between death concern and various other personality variables have also been undertaken; however, these experimental studies have generally provided inconsistent results.



A second focus of death research studies has been that of investigating the effects of confrontation of personal death anticipations. In general, the results of these confrontation studies have not substantiated theoretical premises that postulated changes in death concerns following confrontation of personal death anticipations. These results are partially due to a lack of standardized procedures and the inadequacy of reliability and validity measures during test construction, as well as to improper choice of a death concern instrument in the specific experimental paradigm.

The present chapter will examine the research involved with the general topic of death and specifically with respect to the problems in research which are especially salient to the research involved with the confrontation of personal death issues. The confrontation research will be reviewed and the shortcomings of the confrontation research will be elaborated. Lastly, the present study will be outlined.

#### Death Issues in Psychological Theory

The recent research concerned with the confrontation of death anticipations stems primarily from existential psychology which is based on the existential philosophies of Kierkegaard, Heidegger and Sartre (Becker, 1973; Koestenbaum, 1976). According to the existential perspective, man has one basic polarity, life and death (Becker, 1973; Guthrie, 1971; Koestenbaum, 1971, 1976; Olson, 1971; Sardello, 1974).

On one side men are individually unique and, like gods, immortal; on the other side men are mortal and, therefore, the same as the lowliest animal. How a person mediates between these poles will significantly influence his/her attempt to give meaning to his/her life. A person essentially emphasizes his/her uniqueness and avoids or represses his/her mortality. Restriction of the experience of mortality and overemphasis of one's unique ability to objectify is seen as resulting in anxiety and in less individual meaning to existence.

According to the existential perspective a person cannot experience death before he/she actually dies, however, the anticipation of personal death has a significant impact on present experience. Death is perceived as a "felt anticipation or a sorrowful loss" (Koestenbaum, 1976, p. 7). Since human existence encompasses the individual's subjective-objective polarity, the anticipation of death directly effects the degree to which individuals emphasize their own subjectivity in the meaning they give to human existence (Koestenbaum, 1976).

In general individuals tend to avoid a present awareness of the thoughts and feelings that they are dying. (Kastenbaum & Aisenberg, 1972). Consequently, they attempt to protect themselves from the anxiety of living which is, in reality, death anxiety.

In summary, the existential perspective emphasizes the polarity of life and death which is directly related to the polarity of objectivity and subjectivity. Personal death is a felt anticipation which effects the degree of emphasis individuals give to the subjective component of human existence. Restriction of awareness of experience

along the life-death continuum results in fear of death and reduced meaning to life.

### Confrontation of Personal Death Anticipations

In the previous section a brief overview of existential theory related to personal death issues was outlined. One's personal death is a felt anticipation which has an effect on the subjective component of the meaning of human existence. The effect of "confrontation" of personal death anticipation on a person's experience has been raised as an important issue. In this section confrontation of personal death anticipation will be considered from a theoretical perspective. Because of the importance that individual attitude, or response to death, has on confrontation, this factor will be considered prior to consideration of confrontation of death anticipation.

Response to Death. Individuals differ in terms of attitudes toward death in general. More specifically, individuals differ in their response to environmental stimuli which effect personal death anticipations. The differential responses to death are theoretically related to the degree of alteration in the subjective component of individual meaning to existence (Koestenbaum, 1976). Since the response to death apparently functions like a moderator to incoming stimuli, the effect of individual response to death is important when considering confrontation and resolution of personal death anticipations. The "moderator" effect is seen most clearly in avoidance behaviour. Kastenbaum and Aisenberg (1972) pointed out that there is a tendency to avoid the

issue of personal death, and Becker (1973) raised the issue that society tends to foster this avoidance pattern. The moderator effect has also been presented in the framework of a contrasting and/or a polarized continuum of responses to personal death anticipations. For example, Garfield (1975) conceptualized response to death in terms of Deikman's (1971) model of bimodal consciousness. Garfield states that:

"Deikman conceptualized both an active and a receptive mode of psycho-biological organization. The active mode is characterized by: 1) a manipulative orientation toward one's environment; 2) physiological emphasis upon the striate muscle system and the sympathetic nervous system; 3) psychological emphasis upon focal attention, electroencephalographic predominance of beta-wave emissions, object-based logic, heightened boundary perception, dominance of formal over sensory characteristics and preference for shapes and meanings rather than colors and textures; 4) phenomenological emphasis upon a state of striving directed towards achieving personal goals, e.g. nutrition, defense, rewards, pleasure, etc.; 5) future orientation. On the other hand, the receptive mode of psycho-biological organization is characterized by: 1) an orientation towards the maximal intake of one's environment; 2) physiological emphasis upon the sensory-perceptual system and the parasympathetic ner-

vous system; 3) psychological emphasis upon diffuse deployment of attention, paralogical thought processes, decreased boundary perception, dominance of sensory over formal characteristics and electroencephalographic predominance of alpha waves; 4) a maximal functioning during infancy with subsequent dominance by the active mode as a result of the progressive development of striving activity; 5) 'here and now' orientation." (pp. 163-164).

Garfield (1975) argues that Deikman's active and receptive functional modes are consistent with Kastenbaum and Aisenberg's (1972) contrasting responses to death, overcoming and participatory.

Garfield (1975) states:

"An overcoming response to death is seen as highly probable when there exists: 1) a conceptualization of death as an external contingency; 2) a view of the context of the anticipated death as possessing overtones of failure, defeat, or humiliation; 3) a highly developed need in the individual for achievement and independence; 4) a technological (or magical) prospect for supporting one's objectives; and 5) cultural or group values which require an assertion of power against the devastating or malicious forces of the environment." (pp 164-165).

and:

"The individual is more likely to develop a participatory relationship to death when: 1) death is conceptualized as possessing an internal locus; 2) the context of the anticipated death carries overtones of honor, reunion, or fulfillment; 3) the individual has a highly developed sensitivity for cooperative behavior, sharing and affiliation; 4) techno-magical props against death are not conspicuous; moreover, there are positively-valued social channels available through which the dying person can express himself and distribute meaningful symbols or tokens; and 5) the culture feels itself to be in a natural and intimate relationship with its environment."

(p. 165).

This conceptualization of response to death as bimodal and contradictory is consistent with Koestenbaum's (1971, 1976) notions. Koestenbaum hypothesized an avoidance-confrontation continuum to conceptualize how the individual responds to death. Koestenbaum (1976) raised the issue of the effect these coping patterns have on individual meaning. According to Koestenbaum (1976):

"...human existence consists of opposites, of polarities.

Meaning is found not in the choice between polarities,

but in the experience of wholeness that derives from

integrating opposites in the sense of complementarity.

Life is a series of paradoxes...We can opt for their

integration into a larger whole or choose one of the two extremes. All are authentic coping devices." (p. 43).

Consequently, the avoidance of the "death pole" of the life-death polarity results in reduced meaning and reduced wholeness. Individuals, by confronting or facing their finitude, thereby integrating life and death, can experience wholeness and meaning to existence.

Krieger, Epting and Leitner (1974) also hypothesize a relationship between anticipation and confrontation based on the psychology of personal constructs (Kelly, 1955). According to Krieger et al., the individual's core structure will be threatened if one's system of identifying self in relation with others does not include an anticipation of death and that the threat will be proportional to the degree of reorganizing of identity necessary to construe death as a part of the self. Individuals who experience high threat would not have anticipated death in their core structure.

It follows from these theoretical formulations that individuals who tend to confront death anticipation or allow for anticipation of death will be open to environmental stimuli related to personal death experiences, will experience little threat to their core structure, will experience low fear of death and low death anxiety, and will function flexibly and creatively. On the other hand, individuals who tend to avoid anticipation of death will experience high threat, accompanying high death anxiety and fear of death. When forced to confront their anticipations of death, these avoiders will withdraw from interaction in their search for meaning to existence.

In summary, these theoretical formulations propose that individual response to death acts as a moderator to environmental stimuli which arouse personal death anticipations. The literature suggests a bimodal model of response to death. Whether individuals tend to confront or tend to avoid personal death anticipation will have an effect on one's meaning of existence and changes may be expected following a confrontation experience.

Changes Commensurate with Confrontation. The tendency to confront or avoid death anticipation is especially important when an individual is faced with his/her death anticipation. In the previous section the importance of individual response to death and response directions were examined. In this section, the theory related to the changes commensurate with confrontation will be described.

The existential philosophers Sartre and Heidegger (see Olson, 1971) state that assuming our finitude will result in a mastering of our anticipations and as a result we will become a finite totality in the present. This line of thinking suggests that by facilitating one's recognition of anticipations of death, a person can effectively change his or her experience.

Koestenbaum (1971B) differentiates between the objective and subjective experience of anticipation of death. The assumption is that an anticipation of death experience will result in an intensification of anxiety which in turn will lead to new individual meaning in the present through the acceptance of death. Acceptance of death will theoretically, in turn, result in greater individual authenticity. The



individual will have a philosophical understanding, will engage in free and subjective problem solving as well as avoid objective manipulation (Koestenbaum, 1976; May, Angel, & Ellenburger, 1958). Polster and Polster (1973) similarly say that in working through the death anxiety, by experiencing our finitude in the present, we gain an integration of life and death as well as a release of energy for an active, creative life. Thus, according to an existential view there is a reduction of anxiety and a change in emphasis and action with resultant new meaning and consistency in the life of the individual who confronts his fear of death in the present.

Other theorists, in general, provide agreement with this position (Adler, Stanford, & Morrissey Adler, 1976; Becker, 1973; Burton, 1971; Cutter, 1974; Frankl, 1969; Kastenbaum, 1972; Kavanaugh, 1972; Meyer, 1975). Furthermore, Cutter (1974), Kavanaugh (1972) and Kubler-Ross (1969) advocate coming to terms with death at an early stage in life as a means of giving positive meaning to total life while shaping daily existence according to the kinds of values consistent with a good death.

In summary, existential theory predicts that confrontation and resolution of personal death anticipations will result in reduced anxiety, release of action potential and increased individual meaning in the present. Confrontation and resolution of personal death can be achieved by experiencing subjective finitude in the present. Further, individual response to death is an important moderator of the confrontation process.

The following two sections will deal with the empirical investigations related to the existential theory concerning the issue of death. First, the more general research concerned with the development of psychometric instruments as well as the relationships between these instruments and personality variables will be examined. This review will be confined to considerations directly related to a confrontation of personal death anticipation experimental design, which is the focus of the present study. The second research review section will examine the investigations dealing with confrontation of personal death anticipation research.

#### Death Concern Research

Over the last quarter century, a number of death concern psychometric instruments have been developed. The relationships of the various measures to other personality variables have been studied to establish correlates of death anxiety. The reviews of this burgeoning research literature have raised several important issues regarding these investigations (Kastenbaum & Aisenberg, 1972; Kastenbaum & Costa, 1977; Kurlychek, 1978-79; Lester, 1967; Pollak, 1979-80).

The issues which will be examined in this review section are as follows: 1) the apparent confusion between "fear" and "anxiety" in the labelling of the psychometric instruments, 2) the conflict surrounding the use of direct self-report measurement scales as opposed to indirect measures, 3) the lack of concern with reliability and validity in the development of death concern instruments, 4) the almost exclusive focus on anxiety and fear as opposed to other more posi-

tively oriented measurements of death, and 5) the quality of unidimensionality as opposed to multidimensionality of death concern. Although the above mentioned issues are important in all research dealing with the topic of death, these issues are especially pertinent to the examination of the results of studies investigating the effects of confrontation of personal death.

Fear or Anxiety? Kastenbaum and Aisenberg (1972) and Kastenbaum and Costa (1977) reviewed the field and noted that the terms fear and anxiety imply differing measurement approaches yet these terms have been used interchangeably in a number of studies. The resultant confusion has apparently not yet been clarified by individual researchers (Feifel & Nagy, 1981). Kastenbaum and Costa (1977) question the assumptions that death universally elicits anxiety and that defensive denial must be present in the face of low levels of manifest death fear. Although the universal assumption may be true, it is difficult to test empirically. Kastenbaum and Costa conclude that the evidence to support these assertions is weak.

Self-report versus Indirect Measures. Kastenbaum and Costa (1977) also raise the issue that direct self-report measures are questionable indicators of death anxiety. These reviewers argue that:

"High scores on such a measure may indicate a high fear of death, but this by definition is distinct from death anxiety, which is held to be unconscious. Occasionally, low scores on such a measure are taken as indices of anxiety, since they are presumed to derive from vigorous defense.

Unless other types of data are available, this interpretation is gratuitous: low scoring subjects simply may not be much concerned with death." (p. 234).

The tendency to interpret low concern scores as indicators of defensiveness is especially relevant in the death related literature. Kastenbaum and Costa suggest that indirect demonstration of anxiety attributable to death concern along with low self-reported death anxiety would clarify this issue.

Indirect methods of assessing death concern have been utilized in the death related research in the interval since Lester's (1967) review. Projective techniques such as the Thematic Apperception Test, word association and sentence completion tests and other indirect methods such as galvanic skin response (G.S.R.) have been reported as measures of death concern (Kastenbaum & Costa, 1977). Kurlychek (1978-79) observed that these methods have infrequently been used in the more recent research. Projective techniques have inherent difficulties in their administration and scoring as well as unimpressive reliability and validity studies, according to Kurlychek (1978-79). Although psychophysiological data are free of response bias, the interpretation of these measures is problematic. Kurlychek (1978-79) argued that measures indicative of autonomic arousal are largely determined by cognitive set and less directly related to specific emotions. On the basis of this reasoning; repressed or un verbalized death fear or anxiety cannot be conclusively inferred from arousal patterns using physiological measures. The opposing views of

Kurlychek, and of Kastenbaum and Costa, on the issue of self-report as opposed to indirect measures of death concern, suggest that the inclusion of both types of measurement in death related research would be advantageous.

Reliability and Validity. In his review of the fear of death literature, Lester (1967) reported a lack of consistent findings. He attributed this deficiency to insufficient attention to the reliability and validity of the measuring instruments as well as to a failure to determine whether the differing techniques are assessing the same dimensions. In addition, Lester states that the choice of variables used such as sex, religion, psychiatric disturbance and health indices are not directly related to the genesis of the fear of death but are instead based on availability.

Lester (1967) noted that only three studies considered the question of reliability and validity. Boyar (1964) used an item analysis and determined split-half reliability (.89) and test-retest reliability (.79 for a 10-day interval) for the fear of death scale he constructed. Lester (1966) determined the reliability of parallel forms (.65) and the test-retest reliability (.58 for a 6-week interval) of his fear of death scale.

Boyar and Lester both included what they considered validation procedures. Boyar used a film on traffic accidents and Lester used associated behaviours (i.e., reactions to funerals). Martin and Wrightsman (1965) used two fear of death measures, a Likert scale and a sentence completion test as a cross-validation procedure.

While these validation procedures suggest some convergent validity, they do not evidence discriminant validity. That is, these validity procedures evidence a significant relationship between two measurements and both measures tap similar constructs; however, whether or not the construct of death fear is being measured by either or both instruments is open to question.

In spite of Lester's (1967) early criticism, the later reviews of the death related research by Kastenbaum and Costa (1977) report similar criticisms. Kastenbaum and Costa (1977) in their summary state that there is neither evidence for discriminant validity of any scale of death fear or death anxiety scale nor is there evidence to support the belief that death anxiety is universal.

In his review of the death concern scales and the correlates of death anxiety, Pollak (1979-80) pointed out that considerably more attention has recently been paid to the construction and validation of standardized scales. However, Pollak summarizes:

"An overall evaluation of the studies reviewed indicates many conflicting, contradictory, and even paradoxical conclusions. The findings do suggest that death anxiety is a complex construct that interrelates in a variety of ways that are not completely understood with a host of demographic and personality variables." (p. 115).

In spite of the attention to validation and test construction, the correlations found between death concern and other personality variables remain puzzling.

Orientations Alternative to Fear and Anxiety. Most of the attitude scales related to death are concerned mainly with the measurement of anxiety or fear (Kastenbaum & Costa, 1977; Kurlychek, 1978-79). Kastenbaum and Costa (1977) raised the issue that the almost exclusive focus on fear and anxiety has led to the neglect of other more positive approaches to the death construct which may also be relevant.

There are reports of some death acceptance scales that have been developed to measure the level of acceptance of death (Kurlychek, 1976; Ray & Najman, 1974). Kurlychek (1976) proposed a Death Acceptance Scale which was formulated using seven adjective pairs according to standard semantic differential scaling procedures. There is a seven-point response scale and the concepts to be investigated can be inserted by the experimenter.

Ray and Najman (1974) developed a seven-item scale designed to measure death acceptance in order to examine the relationship between death acceptance and death anxiety. These researchers hypothesized that death-acceptant individuals will not deny that death does concern them and they will also be able to be positive about death. The expected low negative correlation between the homogeneous death acceptance scale and both Templer's Death Anxiety Scale (1970) and the Sarnoff and Corwin (1959) scale was found by Ray and Najman (1974); however, the expected relationship between death anxiety and denial was not found. Ray and Najman explained this latter finding of non-significance between death anxiety and neurotic denial as being a result of inadequacies in the instrument utilized to measure denial...

The development of a more positive approach to the death construct is evidenced by the emergence of these instruments. Nevertheless, replication and further experimentation utilizing the concept of death acceptance is necessary.

Unidimensional versus Multidimensional Death Concern. Although the fear of death concept is assumed to be unidimensional by many researchers (Lester, 1967), Durlak's (1972) often-quoted convergent validity study and Dickstein's (1977-78) research provide evidence for a multidimensional approach to death concern. Durlak (1972) examined the concurrent validity of five scales of death concern, the relationship of these scales to a social desirability scale, and the relative strength of the scales as measures of concern with personalized as opposed to generalized death and dying fears. The Collett-Lester Fear of Death Scale (1969) was the instrument used to measure relative strength of the dimensions in Durlak's study with 94 undergraduates. Durlak's results indicated that Lester's Death Attitude Scale (1967) is largely a measure of fear of death of self and is more weakly related to the other fear dimensions measured by the Collett-Lester Fear of Death Scale. In addition, both Boyar's (1964) and Sarnoff and Corwin's (1959) death fear scales correlated more strongly with fear of death of self and fear of dying of self than with fear of death of others and fear of dying of others.

Dickstein (1977-78) included the Death Concern Scale (Dickstein, 1972), the Tolor and Reznikoff Death Anxiety Scale (1967), and Templer's (1970) Death Anxiety Scale with 68 undergraduates in a study



similar to Durlak's (1972). Dickstein derived correlations and determined the significance between these three death concern scales and the Collett-Lester (1969) Fear of Death and Dying subscales.

Templer's (1970) Death Anxiety Scale significantly correlated for both males ( $p < .01$ ) and females ( $p < .05$ ) with all four subscales of the Collett-Lester (1969) Scale. The Dickstein (1972) Death Concern Scale correlated significantly for both males ( $p < .10$ ) and females ( $p < .05$ ) with the Death of Self and the Death of Others subscales.

The Tolor and Reznikoff (1967) Death Anxiety Scale was correlated significantly with all four subscales of the Collett-Lester Scale for males ( $p < .05$ ); however, only two subscales of the Collett-Lester Scale, Death of Self and Dying of Others ( $p < .10$ ) were significantly correlated with the Tolor and Reznikoff Scale for females included in the Dickstein (1977-78) research. Dickstein also reported significant intercorrelations amongst all of the four scales of death concern, a low level of commonality for females but not males based on the intercorrelations among the Collett-Lester subscales, as well as significant relationships between death attitudes included and social desirability.

Dickstein's (1977-78) conclusion appears to be representative. He noted that:

"There is some justification for distinguishing between various aspects of death attitudes." (p. 376); and,

"The four death scales share a moderate commonality, are generally correlated with measures of general

anxiety, and manifest a significant social desirability component." (p. 377).

Although the inadequate construction of the Collett-Lester Fear of Death Scale and the use of this scale in Durlak's study, in particular, has been criticized (Nelson & Nelson, 1975), the Durlak (1972) and the Dickstein (1977-78) studies provide evidence for the multidimensionality of the fear of death concept.

The factor analytic approach in the development of a multidimensional death concern scale has been used by several research investigations (Buch, 1975; Hoelter, 1979; Minton & Spilka, 1976; Nelson & Nelson, 1975). Nelson and Nelson (1975) developed 55 Likert-type items which were administered to 135 college undergraduates. The undergraduate data were subjected to scale correlation analysis to insure a minimal level of conceptual commonality. The resultant reduced item pool of 24 items were administered to 1279 individuals. Factor analysis revealed four dimensions: death avoidance, death fear, death denial, and reluctance to interact with the dying. Nelson and Nelson suggest that their conceptually constructed index is superior to the rationally constructed multidimensional Collett-Lester Scale (1969) because the exhaustiveness of the scale items in the original pool of the Collett-Lester Scale is not known and their typological method inhibits the inclusion of conceptual dimensions. Furthermore, Nelson and Nelson suggest that the use of rationally constructed death anxiety indices results in findings which are difficult to interpret and difficult to compare to findings of studies employing different unfactored indices.

Nelson and Nelson's assertion that their index is superior to the Collett-Lester Scale has not been directly investigated, nor has the Durlak (1972) design been repeated using the Nelson and Nelson index instead of the Collett-Lester dimensions. If the replication of the Durlak study with the Nelson and Nelson index was undertaken, it would be expected that the fear of death scales used in the Durlak study would correlate with the death fear factor primarily considering the similarity of items which load heavily on the death fear factor in the Nelson and Nelson index with the items in the comparison fear of death scales. In addition, it might be hypothesized that the Collett-Lester scale dimensions would also correlate significantly with only the Nelson and Nelson death fear factor if a direct comparison were undertaken to test the validity of Nelson and Nelson's (1975) assertions.

Although these particular hypotheses have not been tested directly there is at least one study which utilized a factor analytic method and found results inconsistent with previous studies employing unfactored indices. Hoelter (1979) developed eight factors, four (fear for significant others, fear of conscious death, fear of being destroyed, fear for the body after death) which were significantly correlated with religious orthodoxy while both the Boyar (1974) and Timpler (1970) death scales failed to correlate significantly with religious orthodoxy. On the basis of these results, it would appear that there is some evidence for the validity of the Nelson and Nelson assertion that factor analytically derived multidimensional fear of death scales provide more useful, relevant information.

However, the relationship between death concern and religiosity is an example of the equivocal research results. Buch (1975) demonstrated a relationship between manifest anxiety-defensiveness, contact with the dying, sex and six factor analytically derived dimensions of death fear; however, religion, race, state of health and expected cause of death were not found to be critical variables related to the six factors.

Minton and Spilka (1976), using an 180 item perspective of death questionnaire, which was not factor analytically derived, found significant correlations between the perception of death in terms of an afterlife of reward and committed religion, consensual religion and the negative perception of death in terms of natural end, unknown and failure, as well as extrinsic religious orientation and eight of the nine perspectives of death. Minton and Spilka (1976) also found that feelings of powerlessness were affiliated with both perspectives of death and religious measures. The Buch (1975) results using a factor analytically derived scale are counter to the Hoelter (1979) results which also employed a factor analytically derived fear of death scale. These inconsistent results taken with the Minton and Spilka (1976) results employing a non-factoral death perspective measure and a multidimensional religious scale, do not substantiate the assertion of Nelson and Nelson (1975) that factor analytically derived scales are superior.

Further evidence against the Nelson and Nelson assertion that factor analytically derived scales are superior is provided by the

Burrows (1971) study. Burrows (1971) utilized a two dimensional perspective of religion administered along with Boyar's (1964) Fear of Death Scale and an attitudes towards death scale to 291 college students. Burrows (1971) found a significant relationship between discomfort with religious beliefs and fear of death.

Although several studies reported here demonstrated significant correlations between fear or perspective of death and measure of religion, the literature indicates a relationship between these two factors only if a multidimensional approach toward either variables is utilized. However, whether or not factor analytically derived fear of death scales are superior to other multidimensional scaling procedures remains to be substantiated. Each of the scales developed has a different number of factors and there does not appear to be any consistency in the factor descriptions between scales. This may be an artifact of the original item pools utilized in the development of the scale and different scales may be more sensitive to different aspects of the concept of death. The limited use of these scales, which is probably a result of their recent development, contribute to the equivocal results.

However, more basic is the apparent lack of concern with validity in the development of multidimensional scales. There is one study which attempts to address the issue of the validity with a multidimensional scale of death concern. Nelson (1978) tested the validity of the four factors derived by Nelson and Nelson (1975). Nelson reported that an internal consistency alpha coefficient on the original sample

( $n = 1279$ ) for the death avoidance factor (.73) was acceptable; however, the alpha coefficients for death fear (.59), reluctance to interact with the dying (.58), and death denial (.42) were low, indicating a need for further refinement of the original death attitudes scale. Nelson also did two studies with ( $n = 455$ ;  $n = 587$ ) undergraduate students and a 43 Likert-type item scale composed of 23 rationally derived additional items along with the original 20 items utilized by Nelson and Nelson (1975). Factor analysis resulted in three factors. The reliability alpha coefficients of these factors were adequate (death avoidance,  $\alpha = .76$ ; disengagement or reluctance to confront death processes,  $\alpha = .71$ ; death fear,  $\alpha = .74$ ). Reliability and intercorrelation comparison method indicated that three subsets of items appear to measure functionally distinct components. Using the Zuckerman (1960) affect adjective checklist, administered pre- and post-test, Nelson (1978) determined an increase in trait anxiety ( $t = 3.97$ ,  $p < .001$ ) following responding to the death attitude items. Predictive validity was determined by substantiation of differential hypotheses related to student academic career planning and by registration in a death related course ( $n = 27$ ).

Although further research is necessary to adequately assess the reliability and validity of the 3-factor death attitude scale, Nelson (1978) suggests that the 15 item instrument may be useful in clarifying the complexity of death attitudes and behaviour in future research. However, further research is necessary with all multidimensional

scales to substantiate the utility of these scales in comparison to the unidimensional scales.

A basic question may be raised of whether or not a "unidimensional" scale is in fact unidimensional (Lonetto, Fleming, & Mercer, 1979; Pandey, 1974-75). Two factor analytic investigations were undertaken with a unidimensional scale (Lonetto et al., 1979; Pandey, 1974-75) to determine if Templer's (1970) Death Anxiety Scale (DAS) discriminated groups on the basis of sex and racial differences among college students (Pandey, 1974-75) as well as on the basis of varying degrees of experience with death and dying (Lonetto et al., 1979). The hypothesized differences between subject groups in both of these investigations revealed four factors using factor analytic techniques with the items of Templer's DAS. Pandey (1974-75) described the factors as: a) concern with escape; b) depressive fear; c) concern about mortality; and, 3) sarcasm. Lonetto et al. (1979) classified their factors under four major headings: a) cognitive-affective; b) physical alterations; c) awareness of time; and, d) stressors and pain. It appears that on the basis of these two studies Templer's (1970) Death Anxiety Scale is comprised of at least four unique factors.

In summary, the multidimensional approach to death concern has become more popular in recent research. A multidimensional approach may provide results which are more consistent with theoretical expectations. The research evidence that unidimensional scales of death concern are sensitive to only limited aspects of the death may account

in part for the inconsistent results reported in the research literature.

The equivocal research results with multidimensional scales may, in part, be accounted for by: 1) their limited use, 2) the disparity between dimension descriptions, and 3) lack of concern with validity in the development of multidimensional scales. Further comparative and validation investigations are warranted to substantiate the utility of the recently developed multidimensional scales over those previously developed. In addition, the evidence that Templer's (1970) "unidimensional" Death Anxiety Scale (DAS) has at least four factors (Lonetto et al., 1979; Pandey, 1974-75) warrants further investigation. Considering the research accumulated on the DAS (see page 28), comparative analyses between the DAS factors and the other multidimensional scales may provide the necessary data to establish the relative efficacy of particular scales.

### Two Popular Scales

The literature outlining the validity, reliability and the research with the two most commonly used instruments of death concern will be outlined in the next two sections.

Collett-Lester (1969) Fear of Death Scale (FODS). Collett and Lester's Fear of Death Scale (1969) was developed from 38 rationally derived statements which were administered twice to a sample of 25 female undergraduates. The students were required to indicate agreement or disagreement on a six-point scale. The result, after elimination of six items because of non-significant correlations with the



specific scale, was four specific fears including fear of death of the self, fear of death of others, fear of dying of self and fear of dying of others. According to Collett and Lester, the low intercorrelations between the specific fear scales indicate the potential usefulness of the differentiation of fear of death into these four specific fears. In addition, the subjects showed significantly higher fear of death than fear of dying ( $p < .01$ ), significantly higher fear of death when the referent was the self rather than when another was the referent ( $p < .01$ ), and significant interaction of the two variables, death-dying and self-other ( $p < .01$ ).

The Collett-Lester (1969) scales have been used in a number of studies with results which are either only weak or inconsistent with expected hypotheses. Lester (1971) who administered the Collett-Lester Scale and the Lester (1967) scales to 46 (non-disturbed) individuals, concluded that there was no association between attitudes towards death and attitudes towards suicide. Similarly, Lester (1969) found no relationship between fear of death as measured by the Collett-Lester Scale and neither the relative frequency of occurrence of nightmares nor the degree to which nightmares were remembered with a sample of 170 individuals. Although Lester (1972) found significantly greater fear of death for females than males on all the Collett-Lester specific fear scales (except fear of dying of others scale), activity, potency ratings, age and semantic distance measures were not associated with fear of death as measured by the Collett-Lester Scale in his study of 46 individuals. Cohen and Parker (1974) administered the

Collett-Lester scales (1969) and four modified TAT pictures to 46 subjects and found no significant relationships between fear of death and measures of failure. In addition, Mullaly (1975) found a significant positive correlation between Collett-Lester's fear of personal death and fear measures, a significant positive correlation between fear of personal death and one symptom measure as well as a significant negative correlation between mood state and fear of personal death. However, there was a non-significant correlation between global improvement ratings and death and dying fears.

These weak and/or inconsistent research findings may be partially attributed to statistical design. They appear to have disregarded the aforementioned relative sensitivity of the Collett-Lester Scale (1969) to specific fears and the criticism of Nelson and Nelson (1975) that the Collett-Lester (1969) scale has design deficiencies which may account for the inconsistent results. More important is the lack of concern with reliability. In spite of its use, there is only one study (Lester & Lester, 1970) which is only suggestive of the validity of the Collett-Lester Fear of Death Scale (1969). There is no evidence indicative of discriminant validity for the Scale. In addition, there is only one available study concerned with the question of the reliability of the Collett-Lester Fear of Death Scale (1969) and that is the study by Larrabee (1978). Larrabee (1978) found only low to moderate significant test-retest reliability for the Collett-Lester Fear of Death Scale with only 20 subjects.

Consequently, the validity and reliability of the Collett-Lester (1969) scale is still open to question. Thus, the research with the Collett-Lester Scale (1969) may in turn not be valid because of the questionable validity and reliability of the scale itself.

Templer's (1970) Death Anxiety Scale (DAS). The other frequently utilized scale is the Templer (1969, 1970) Death Anxiety Scale. The DAS has been reported as having construct validity in studies using both psychiatric patients and college students, test-retest reliability (.83) over a three-week interval, internal consistency (point biserial correlation significant at the .10 level), and discriminant as well as convergent validity (Templer, 1969, 1970). In addition, Templer's DAS appears to be free of response set on the basis of its reported lack of significant correlation with a social desirability scale, a response set tendency scale, as well as relationships to the L and K scales of the Minnesota Multiphasic Personality Inventory (MMPI) (Templer, 1970). It is also reported to be significantly unaffected by imbedding within the last 200 items of the MMPI (Templer & Ruff, 1971). The Templer DAS has also been convergently validated by Nightingale (1972).

The 15-item DAS has a scale score range from 0 to 15. Templer and Ruff (1971) on the basis of their study with 3600 subjects, have determined that normal subjects score roughly in the range from 4.5 to 7.0 with one standard deviation equal to slightly over 3.0; psychiatric subjects score higher than normals (Templer & Ruff, 1971); females consistently score higher than males (Chiappetta, Floyd, & McSeveney,

1976; Templer & Ruff, 1971). In addition, relationships between age and DAS scores have been reported as non-significant (Templer, Ruff, & Franks, 1971).

Templer (1976) proposed that the degree of death anxiety is generally determined by both psychological health and life experiences concerning the death topic. According to Templer (1976), decreases in depression as well as treatment with tricyclic antidepressants correlate positively and significantly with decreases in death anxiety. It has been reported that purpose in life and death anxiety as measured by Templer's DAS are inversely related (Brown, 1975). In addition, DAS scores are reported as unrelated to physical health or somatic complaints (Lucas, 1974). Death anxiety as measured by the DAS, has been found to be constant across psychodiagnostic categories as determined by a combination of MMPI characteristics and psychiatric diagnoses (Goff, 1976).

Templer's (1970) DAS has also been utilized with other death concern scales to provide a composite measure of the construct of death (Garfield, 1975; Lonetto, Fleming, Clare, & Gorman, 1976; Morgan, 1975; Ray & Najman, 1974). Lonetto et al. (1976) used a combination of Templer's (1970) DAS and the Handal (1964) Fear of Death Scale. Lonetto's et al. analyses revealed that males and females who saw death as sexless showed less anxiety about death than their counterparts who perceived of death as being either male or female. In addition, both indices of death concern taken together were highly discriminant of subject group (91.46%).

Garfield (1975) utilized several measures of death concern in order to measure the differential responses of five groups matched for age, sex and race. One of the measures of death concerns was Templer's Death Anxiety Scale. Garfield also utilized indirect measures (G.S.R. and heart rate fluctuations) in his study which was designed to examine the relationship between death concern and meditation practice. Garfield's results indicated significant differences between groups which were attributed to differential altered-state experience.

The Garfield study is important insofar as it provides evidence for the response to death as a "moderator" issue outlined previously in the present review (page 5). On the basis of previous research relating meditation, death anxiety and self-actualization (Goleman, 1974; Seeman, Nidich, & Banta, 1972; Wesch, 1970) see also Steele, 1979), Garfield suggests that: "Meditation may be viewed as a procedure for cultivating a receptive mode of consciousness." (p. 163) in terms of Deikman's (1971) model of bimodal consciousness.

Garfield concludes that long-term meditation and possibly other altered-state techniques may be effective tools for enhancing this participatory orientation to death, thereby reducing individual levels of death fear. Morgan (1976) provides further evidence of Garfield's conclusions. He combined the subjects' standardized scores on the Handal and Templer death concern measures and examined the relationship between the combined standard scores and the Personal Experiences Check List (P.E.C.L.) (Morgan, 1975) in order to test the pre-

dictive quality of previous altered-state experiences on death-anxiety. Morgan (1976) found three variables of the P.E.C.L. which he called Vivia, Death Transcendence, and Meditative Awareness yielded the best predictive efficiency (multiple correlation .43,  $p < .005$ ). Vivia, which Morgan described as the experience of being fully charged with energy and able to complete difficult tasks with ease, was positively correlated with death anxiety. Individuals high on the Vivia dimension would have a lot more to lose in death since they have a lot more going for them (Morgan, 1976). Death Transcendence or the experience that one's own death could be accepted with no regrets, was negatively correlated with death concern. Since individuals with high Death Transcendence, according to Morgan, are highly satisfied with their lives, these individuals would not feel concerned about death. A negative correlation was found between death concern and Meditative Awareness or the experience of a calm, detached, inner-centredness. According to Morgan, the negative relationship between Meditative Awareness and death anxiety was expected due to previous research which has shown a negative relationship between general anxiety and Meditative Awareness. Morgan (1976) concludes that his results should be further replicated with a larger population.

On the basis of the review of the death concern instruments, Templer's (1970) Death Anxiety Scale appears to have the most normative data available of all death concern instruments (Kurlychek, 1978-79; Pollak, 1979-80). The use of Templer's scale in confrontation of

death research would provide the most meaningful and valid results.

#### Multi-level Approach to Death Concern

The multi-level death concern approach is a recent development in the death related research which has not been reviewed previously. This developing research indicates that individuals with high and low levels of death concern are qualitatively different on various measures of personality. Furthermore, the multi-level approach is especially pertinent to the present research consideration owing to the relationship between level of death concern and response to death noted in the theoretical literature (page 4). This section will review the research incorporating multi-level approaches and elaborate the importance of this research in explaining previous inconsistent results.

Individuals with self-reported high and low death anxiety differ significantly biosocially (Templer & Salter, 1979). Individuals with high death anxiety scores, according to Templer and Salter, tend to be highly neurotic, have low A-B or are at the "A" or feminine passive end of the A-B psychotherapy (Berzins, Barnes, Cohen, & Ross, 1971) style continuum, have interests predominantly surrounding people and feelings, and tend to be more intuitive. Because of the reported relationship between intuitive ability and right cerebral hemisphere functioning (Bakan, 1971), individuals who score high on the DAS would be expected to be right cerebral hemisphere dominant. On the other hand, individuals with low death anxiety scores tend to be low in neuroticism, have a high A-B or are at the "B" or masculine, active

end of the A-B continuum, have mechanical and scientific interests, and tend to be more analytical. These low death anxiety scale scorers will also tend to be left cerebral hemisphere dominant. According to Templer and Salter (1979), further validation of the five biosocial components and the relationship between these five components and death anxiety is required.

Garfield's (1975) research, which was previously reviewed, supports Templer and Salter's (1979) assertion and partially supports Templer's two factor theory since meditation is related to psychological health. Furthermore, considering the relationship between meditation and response to death, these research investigations raise the issue of the importance of a multi-level approach to death concern. That is, the use of absolute level of death concern in correlational studies with demographic and personality variables may provide inconsistent or non-significant relationships owing to the contradictory relationships between response to death and personality attributes for either high or low death concern individuals.

One of the first studies which utilized a multi-level approach to death concern was the Feifel and Branscomb (1973) investigation of personal death and several demographic variables. These researchers determined conscious, fantasy and below-awareness levels of personal death fear for each of the subjects who were classified into groups based on level of health. Although Feifel and Branscomb predicted relationships between the predictor variables and the three levels of death fear, they found significant relationships between only two out



of the ten demographic variables' and one level of the fear of personal death. It is conceivable that these relationships would have been obscured if only one level of death concern had been determined for each subject.

Further support for the importance of the multi-level consideration of death concern is provided by a comparison of two studies by Feifel and Nagy (1980; 1981) which utilized a conscious fantasy and below-awareness multi-level approach to death similar to the Feifel and Branscomb (1973) study. Inspection of the two Feifel and Nagy studies reveals that they differ only insofar as the later study considered the analysis on the basis of low, medium and high ranges of the three levels of death concern. Even the reported group statistics are identical. The multi-level range analysis of the 1981 study revealed significant relationships. On the other hand, the earlier study resulted in non-significant results on all relationships when the effects of the high, medium and low ranges of death concern were not taken into account in the analysis. These differential effects dependent on the range of death concern which resulted in significant findings are promising and warrant further validation.

#### Summary of Death Concern Research

Since the review of Lester (1967), the death related research has become more complex, revealing the construct of death as a multifaceted concept. The issues arising from the present review of the death concern investigations are summarized as follows:

1) To date, the apparent interchange between "fear" and "anxiety" terminology in the death concern instruments and the questionable universality of death fears pointed out by previous reviews have not been clarified.

2) The conflict between the use of self-reported measures and indirect measurements of death concern has not been resolved. It appears that studies which incorporate both types of measures may provide more valid results.

3) The criticism of the early reviewers regarding reliability and validity inadequacies in the development of psychometric instruments has received considerable attention. Although more recently attention has been given to reliability and validity in the development of death anticipation measurements, these basic issues are still open to debate. The specificity of the measuring instrument to particular aspects of death concern, which has been evidenced by comparative research, necessitates a careful matching of death concern instrument to the research hypotheses being examined.

4) Review of the research literature suggests the importance of including scales with a focus other than fear and anxiety. The issue of death acceptance as a more positive variable of death anticipation has been considered. Two measures of death acceptance were outlined in the present review.

5) There is evidence of a developing trend to consider death concern or anticipation of death as a multidimensional construct. Several multidimensional scales of death concern have appeared since

the Collett-Lester (1969) FOD scale was first introduced (Buch, 1976; Hoelter, 1979; Nelson & Nelson, 1975). A number of these scales have evolved from factor analysis. Although initial results with these multidimensional scales are promising, further validation of the dimensions of the multidimensional scales is necessary to establish the superiority of these scales over the established scales in the death concern research.

Recent reviews (Kurlychek, 1977-78; Pollak, 1979-80) point out that Templer's (1970) Death Anxiety Scale is probably the most adequate and popular death concern instrument in the death related research. Furthermore, the multi-faceted nature of the construct of death necessitates the inclusion of at least two measures of death concern (Dickstein, 1977-78). There have been a number of investigations which have combined at least two death concern scales to derive a composite death concern level in their designs (for example, Lonetto et al., 1976; Morgan, 1976; Ray & Najman, 1974); however, by considering death concern as a total composite as opposed to several unique factors, may be inadequate insofar as meaningful information may have been lost if the uniqueness of each scale is not subject separately to statistical analysis.

6) An important methodological consideration is the inclusion of high and low ranges of death concern for statistical analysis in death related research. Recent research (Feifel & Nagy, 1981; Garfield, 1975; Neimeyer, 1978; Templer & Salter, 1976) indicates that high and low death anxious individuals differ significantly in

terms of general personality attributes and inclusion of the high-low dimension has yielded significant results which otherwise may not have been discovered. The largely inconsistent results of previous research investigating the relationships between death anticipation and personality variables may be partly accounted for by this research incorporating a multi-level death concern approach.

Inclusion of high and low levels of death concern in the analyses of the death concern research may yield more valid and consistent results and the recent research of Garfield (1975) and Morgan (1976) emphasizes the inverse relationship between death anxiety and meditation and altered states of awareness which requires further investigation owing to the hypothesized relationship between meditation and response to death.

#### Confrontation of Personal Death Anticipations Research

In this section, the research dealing specifically with the investigation of outcomes related to confrontation of death anticipations will be examined. Existential theory predicts that engaging or confronting individual personal death anticipations will lead to reduced individual death concerns.

#### Response to Death Anticipation

The theoretical importance of individual response to death was outlined previously (page 4). The work of Garfield (1975) and Deikman (1971), and the parallels to the hypothesized participatory and overcoming responses to death of Kastenbaum and Aisenberg (1972), were previously reported (page 30). These research results are consistent

with the notions of Koestenbaum (1971, 1976) who hypothesized an avoidance-confrontation continuum to conceptualize how the individual responds to death.

Although how an individual responds to aroused anticipation of personal death is important in the measurement of death anticipation, and especially important in the measurement of outcomes related to a confrontation of personal death anticipation experience, little research has been concerned with "response" to death as a discrete variable. Some recent efforts have been concerned with remedying this lack. Specifically, the Threat Index (Krieger, Epting, & Leitner, 1974) and the Avoidance of the Ontological Confrontation of death (Thauberger, 1974) have been developed to tap individual response to death and they show promise of being important variables in death related research.

The Threat Index (T.I.). Several investigations (Krieger, Epting, & Hays, 1979; Krieger et al., 1974; Neimeyer, 1978; Neimeyer, Dingemans, & Epting, 1977; Rainey & Epting, 1977) have examined response to death using the Threat Index (T.I.). Krieger et al. (1974) developed the Threat Index based on the psychology of personal constructs (Kelly, 1955). He established the reliability of the Index and compared the Index scores with Lester's Fear of Death Scale and Templer's Death Anxiety Scale scores as well as a self-report measure. Their results provided support for the hypothesis that high threat correlates with high death fear and self-reported fear of death.

The original Threat Index (T.I.) was derived from the disparity of self-ratings and death elements and involved a time-consuming structured interview process. The original format was compared to two paper and pencil techniques with 38 undergraduates and non-significant differences between the approaches were found (Neimeyer et al., 1977). Although it was expected that the Threat Index would increase following an anxiety-arousing film related to death, pre-post differences were non-significant on measures of state anxiety, trait anxiety, T.I., and death anxiety than the control group (Neimeyer et al., 1977); however, re-analyses of the pre-post differences for high threat subjects as compared to low threat subjects in the experimental condition yielded a significant increase in state anxiety for the highly threatened group (Neimeyer, 1978). Predicted lower Threat Index levels were evidenced for funeral pre-planners as compared to controls providing evidence of the construct validity of the Threat Index; however, the hypothesized pre-post reduction in the Threat Index for thanatology students as compared to control students was opposite to the expected direction although the control levels did remain stable and the thanatology levels increased (Rainey & Epting, 1977).

Thirty-two subjects were administered the Threat Index (T.I.), the self-administered form of the T.I. (S.A.T.I.), the Marlowe-Crowne Social Desirability Scale and a fear of death seven-step Likert scale item in a recent study (Krieger, Epting, & Hays, 1979). The two measures of threat were not significantly correlated with social desirability as measured by the Marlowe-Crowne Social Desirability Scale.

The test-retest reliability over a four-week period was established for both measures of threat indicating the stability of the two instruments. The Self-Administered Threat Index was found to have significantly higher internal consistency than the Threat Index as measured by the odd-even split half Spearman correlation method. Validity of the threat interpretation of the Self, Preferred/Death split was demonstrated by the subjects' placement together of the elements. The Krieger et al. (1979) researchers concluded that "the psychometric properties and ease of administration of the S.A.T.I. would certainly seem to make it the form of choice in research applications." (p. 94).

Although these results with the T.I. are promising, further research is required with the Threat Index in order to establish the discriminant validity of this measure of response to death as well as the T.I. effects of a confrontation experience.

Avoidance-Confrontation. Another psychometric scale which is particularly relevant to the issue of response to death is the Thauberger Avoidance of the Ontological Confrontation of death scale (AOCd) (1974). There are three forms of the AOCd which were developed concurrently and have demonstrated reliability (Thauberger, Cleland, & Thauberger, 1979). In addition, Form A and Form C of the AOCd are not significantly correlated with two social desirability measures and are significantly positively correlated to the Eysenck Neuroticism Scale (Thauberger et al., 1979).

S The Thauburger Scale was utilized in a simulated death atmosphere, experience in order to determine the validity of the psychometric instrument. Forty-four subjects were required to, through graded exposure, experience physically being in a coffin. The results were analyzed on the basis of extreme scores on the AOCd (Thauburger, 1974), which categorized subjects as either avoiders or confronters of death. Not only were the high AOCd scorers (avoiders) significantly higher on the anxiety, depression and hostility scales of the Multiple Adjective Check List (Zuckerman & Rubin, 1974) than low AOCd scorers (confronters) at the pre-testing, the avoiders also significantly and consistently showed a greater increase on post scores of hostility, anxiety and depression for the post minus pre-testing. In addition, a significant positive correlation between blood pressure (systolic-diastolic) and base rate AOCd scores (Thauburger, Thauburger, & Cleland, 1976) was found in an adjacent study. Heart rate was negatively correlated with AOCd and there were non-significant differences between avoiders and confronters on the variables of age, sex, education, number of children parented, geographical background, and income (Thauburger et al., 1976).

Thauburger's AOCd was found to be significantly negatively correlated with scores on the Berger Acceptance of Self Scale (Wright & Shaw, 1967), significantly positively correlated with Eysenck's Neuroticism Scale, and not significantly correlated with scores on the Berger Acceptance of Others scale (Thauburger & Sydiaha, 1979).



Reliability and validity of the AOCd as a measure of orientation or response to death has been established based on correlations with physiological measures taken during a "coffin" experience. Although the AOCd requires further experimentation it appears that it may be a useful measure of response to death anticipation in death related research.

In summary, little research effort has been concerned with the investigation of the variable of response to death anticipation. The Threat Index (T.I.) and Thauberger's research with the Avoidance of the Ontological Confrontation of death (AOCd) provide promising results which attest to the significance of the response to death anticipation dimension in the confrontation of personal death anticipation research.

#### Confrontation Research

The research dealing with changes following a confrontation of personal death anticipation does not generally support the existential hypothesis of a reduction in death concern. The non-significant changes in death concern may in part be accounted for on the basis of methodological inadequacies. These involve a lack of concern regarding: 1) high versus low death concern groupings, 2) the inclusion of a measure of response to death, 3) the sensitivity of the death concern instrument to the hypothesis being investigated. In addition, the analysis of data on the basis of a multidimensional death construct is apparently the rule, not the exception, in the confrontation of death anticipations literature. This reviewer was only able to find

one study which made provision for all of these issues (Thauberger et al., 1976); however, the Thauberger et al. investigation was designed only as a validity investigation of the AOCd.

The present section will examine the confrontation research on the basis of these methodological issues. The issue of the timing of post-test changes will also be discussed owing to the importance that this issue may have on outcome measures in the confrontation research. Furthermore, the issue of indirect measurement is relevant to the confrontation research and will also be discussed.

High versus Low Death Concern. Although the present review of the death related literature indicated the importance of high versus low death concern comparisons, this issue has largely been ignored in the confrontation research. One study grouped subjects on the basis of high and low self-concept as measured by the Tennessee Self-Concept Scale (Casciani, 1976). Another study grouped subjects on the basis of anxiety levels combined with Introversion/Extraversion as measured by the Eysenck Personality Inventory (E.P.I.) (Marnocha, 1979); however, the Marnocha investigation was concerned with process involvement and not post-test changes in death concern.

One study (Thomas, 1979) anecdotally affirms the utility of a high versus low death concern comparison analysis. Thomas (1979) measured changes in death anxiety, general anxiety, and self-concept immediately following and one month post-involvement in a 16-hour workshop on death and dying. Although his results were non-significant between the treatment and non-participation control group, Thomas observed a regression toward the mean effect for high and low death

anxious treatment subjects; however, the small number of subjects precluded meaningful analysis of these effects.

In summary, high versus low death concern comparison analysis has been neglected in the confrontation research. One study provides anecdotal evidence for the utility of a high-low comparison analysis in the confrontation research.

Response to Death Anticipation. Measures of individual response to death have not been included in confrontation research designs. One study (Taube, 1975) observed that the willingness to confront death was an issue.

Taube (1975) included Templer's Death Anxiety Scale, the Semantic Differential and the Personal Orientation Inventory in her study designed to measure confrontation and reconceptualization of the idea of death as well as expected changes in meaning of life and death concepts. Differences were found to be non-significant between an experimental group which was given a fantasy confrontation experience followed by group discussion, an experimental fantasy confrontation group without discussion and a third group which interacted on a topic unrelated to death. Taube attributed her results to her unmotivated subjects; however, her anecdotal notes indicated approximately one-half of the subjects were willing to confront death in the death fantasy and the other half avoided the confrontation. The effect the confronters had on pre-post levels of death may have been obscured due to Taube's exclusion of an avoidance-confrontation control measure.

In summary, measurements of avoidance-confrontation of personal death anticipation have not been included in the confrontation research. The anecdotal evidence of one study does support the hypothesized importance of avoidance-confrontation of death.

Sensitivity of Confrontation and Matching of Death Concern.

Another important issue in the confrontation research is the sensitivity of the confrontation media and an adequate matching of death concern measurement instrument with the particular confrontation medium's sensitivity (Kurlychek, 1978-79).

The previous reported findings that death concern is multi-dimensional (Buch, 1975; Hoelter, 1979; Lonetto et al., 1979; Nelson, 1978; Nelson & Nelson, 1975; Pandey, 1974-75) and the criticism by Durlak (1972) that specific death concerns instruments measure only aspects of total death fear, may be particularly relevant to the confrontation media as well. If, for example, the research design incorporates a death anxiety measure which is especially sensitive to death of self and a confrontation medium which is sensitive to death of others, a reduction in death anxiety could not be expected. The Murray (1974) study is a good example of this effect because it employs confrontation media sensitive to both personal aspects as well as general aspects with apparent emphasis on the general. Considering the interrelationship between personal death concerns and general issues surrounding death fear, it might be expected that changes on Templer's DAS, which is specifically sensitive to personal death, would take longer. In addition, it is hypothesized that if the confrontation medium is sen-

sitive to personal death concerns, significant changes in personal death anxiety measures will be found immediately.

The medium utilized in confrontation of death research has been primarily educational with minimal emphasis on experiential exercises. Erp (1973) and Hughes (1976) employed viewing a film as the confrontation medium. Educational workshops on death were used as the confrontation medium by most of the researchers investigating death confrontations (Bell, 1975; Callas, 1976; Colton, Gearhart, & Janaro, 1973; Murray, 1974; Steele, 1977; Thomas, 1979; Wittmaier, 1979-80). Hoblit (1972) utilized an interview. Polderman (1977) employed group discussions with minimal experiential exercises. Bohart and Bergland (1979) used general group education and exposure combined with relaxation. Only two of these investigations reported significant findings, (Bell, 1975; Wittmaier, 1979-80). The majority of these research projects report non-significant changes on affective death measures.

Bell (1975) and Wittmaier (1979-80) report significant changes on what appear to be cognitive measures of death concern following courses related to death and dying; however, changes on the affective measures of death concern were reportedly non-significant in both studies. The results of these two studies appear to reflect the sensitivity of the confrontation media to the measures for which significance was obtained. That is, it appears the researcher may find significant results with cognitive measures when primarily cognitive, instructional confrontation media are utilized; however, if an affective measure of death concern is employed to measure pre-post changes commensurate

with involvement in a confrontation experience which is primarily instructional, cognitive and non-experiential, non-significant results will be found. This relative sensitivity of the confrontation medium and the matching to death concern measures principles is also evident in another study (Durlak, 1978-79).

Durlak (1978-79) undertook a comparison of didactic and experiential confrontation media. The death concern variables utilized by Durlak were affective measures of personal death anxiety and fear. Durlak's (1978-79) results indicated that the didactic group did not differ significantly from the control group and the didactic group differed significantly from the experiential group. Durlak concluded that experiential exercises were significantly more effective in changing individuals' attitudes toward death than programs without experiential exercises. However, the significant difference between the experiential versus the didactic and the control group may be due to the nature of the death concern in combination with the sensitivity of the confrontation medium. It might be expected that had cognitive measures of death concern been incorporated in the Durlak study, significant changes for the didactic group only may have been observed on the cognitive death concern measures. Durlak's (1978-79) results do, however, lend empirical support for an emotional personal approach to death as an important element in the confrontation literature.

In summary, there is support for the importance of both: 1) matching death concern instrument with confrontation medium, and, 2) the sensitivity of the confrontation media. The non-significant changes

in death concern generally evident in the confrontation research may in part be accounted for on the basis of a failure to control for sensitivity between death concern instruments and confrontation medium.

Indirect Measurements-Process Involvement. Taylor (1979-80) raised the issue of the inclusion of process involvement measures. Taylor states: "Our intention for the participant to project himself or herself into a situation of immediate threat ought to be reflected more clearly in our methodology." (p. 278).

Measurement of process involvement is especially relevant in the confrontation research when it is important to ascertain if the confrontation procedure effectively aroused death anticipation. Two recent investigations (Casciani, 1979; Marnocha, 1980) lend empirical support for the importance of process involvement measures.

Casciani (1979) included indirect measures of process in his study which was originally designed to measure different reactions to death related slides for high and low self-concept groups. Although the results based on self-concept were non-significant, removing the high-low self-concept differentiation revealed the following significant relationships: a) between exposure time and more negative evaluations; b) between G.S.R.'s and self-reported sadness, tension, and fear; and, c) between DAS scores and average colour-word interference scores for the subjects who viewed the death related slides as opposed to subjects who viewed neutral slides. These results not only give direction for further research, they also give credence to the necessity for the inclusion of indirect measures of process

involvement in studies employing a confrontation of death design. Had Casciani included an avoidance of death measure in his research, there may have been a positive relationship between these involvement measures and an avoidance measure.

Marnocha (1980) attempted to assess the relationship between the confrontation medium and affective arousal. His study utilized a guided fantasy induction procedure to heighten arousal and vividness of the personal death images. Marnocha's research project attempted to ascertain if the creation and discussion of a personal death fantasy would prove successful. Themes of the personal death fantasy were measured along with vocal style and the perspectives of death fantasy discussion were also examined. Affective responses were self-reported (positive and negative), pulse rate and perceived relaxation relative to baseline relaxation and delayed auditory feedback procedure as a comparative stressor condition. Minimal directive instructions were given to induce personal death fantasy. The following relationships were significant: a) anxiety level with reduction in control and more loss themes; b) dispositional imagery vividness with control and reduction in the trauma in the fantasy content; c) more thoughtful discussion of more traumatic fantasy with higher noted use of imagery; d) female sex with avoidance themes; and, e) male sex with more violent and natural death themes. These results support the contention of the importance of process measures of involvement in a fantasy oriented confrontation experience.



The Marnocha (1980) study also evidences the credibility of a fantasy-oriented confrontation medium and is the only study available which assesses relationships in an open-ended, individualized fantasy-oriented confrontation medium although existential theorists suggest that fantasy may be the optimal mode for the confrontation and resolution of personal death anticipations.

In summary, available research indicates that process involvement measurements in confrontation research are important determinants of predicted projection into the confrontation medium. These measurements have largely been ignored in previous confrontation research. It may be that the non-significant changes reported in earlier studies of death concern may be attributed in part to a lack of control over the type of medium as well as to the relative sensitivity of the medium to affect death concerns. A fantasy procedure is suggested as the most efficacious medium for altering death concern variables in the hypothesized direction.

Follow-up Measures. Another issue of relevance is the use of follow-up measures in confrontation research. According to Templer (1976), a period of consolidation following confrontation of anticipations of death may be required before a reduction in death anxiety can be expected. Murray (1974) is cited by Templer as evidence for his consolidation hypothesis. Murray utilized a death-focused lecture discussion, audio visual presentations, group dynamics, role playing and sensitivity techniques with nurses and found no significant

decreases in death anxiety in immediate post treatment. However, four weeks after treatment Murray found significant decreases in death anxiety.

Several of the available confrontation studies (Callas, 1976; D'Enbeau, 1977; Hoblit, 1972; Hughes, 1976; Steele, 1977) which reported non-significant changes in death concern measures did not incorporate follow-up measures. Consequently, Templer's hypothesis of a necessary period of consolidation may to some degree have accounted for the non-significant results reported by these researchers.

Polderman (1977) and Bohart and Bergland (1979) included post-test measures with non-significant results. Bohart and Bergland (1979) utilized "an opportunity to view a videotaped autopsy" and Templer's (1970) Death Anxiety Scale as follow-up measures in their comparison of in vivo systematic desensitization, systematic desensitization and symbolic modelling, and delayed treatment control groups. Bohart and Bergland suggest that the timing of the follow-up was less than the Murray (1974) timing which may have accounted, in part, for their non-significant results.

Polderman (1977) utilized Templer's (1970) Death Anxiety Scale (DAS) and Eichman's measure of general anxiety as immediate post-test measures and the whole pre-test battery, comprised of Templer's DAS, the Collett-Lester (1969) Fear of Death Scale, Eichman's measure of general anxiety and Crumbaugh and Maholick's Purpose in Life Test as a six-week follow-up measure with non-significant results for the

experimental treatment group when compared with the control group.

Although the timing of Polderman's follow-up measure was adequate considering the research of Murray, Polderman did not include a measure of avoidance-confrontation in his test battery and he did separate his groups into high and low death concern which may have accounted for the lack of significant findings.

In summary, the research indicates that a period of consolidation is necessary before changes in death concern are evident. Failure to include a post-test and the timing of follow-up measure may, in part, account for previously reported non-significant changes in death concern commensurate with a personal death confrontation experience.

#### Summary of Confrontation of Personal Death Anticipation Research

Existential theory hypothesizes that confrontation of personal death anticipation will result in reduced personal death concern combined with increased meaning to human existence. Confrontation of death involves the experiencing, acceptance and resolution of personal death anticipation. The empirical investigation of the confrontation of personal death anticipation was examined in this section.


The research investigating the experiencing, accepting and resolving of personal death anticipations is relatively recent and has failed to substantiate existential hypotheses. In the present review, several issues were examined. These issues focus on the possible explanations for the generally non-significant results and provide direction for further research. These issues are as follows:

1) The lack of concern with relevant methodological research design considerations such as the inclusion of high and low death concern ranges, the inclusion of more than one instrument to measure multi-faceted death concern, and the inclusion of reliable response to death measure. These considerations are important insofar as the exclusion of them may have resulted in erroneous and/or non-significant results.

2) The complex multi-faceted nature of death necessitates adequate matching of a death concern instrument to the sensitivity of the confrontation medium. Durlak's (1979-80) comparison of didactic to experiential confrontation paradigms is especially relevant to this issue. If changes in affective arousal are predicted, an emotion arousing confrontation medium is necessary. The general trend in the research is to measure change in death concern following educational or cognitively oriented confrontation media and the results have generally been non-significant.

3) Two studies reviewed here provided information regarding the importance of measuring the degree of involvement with the confrontation medium that is necessary in determining the sensitivity to hypothesized death changes of the experimental paradigm (Taylor, 1979-80).

Although individualized fantasy as the confrontation medium was hypothesized by existential theoreticians to yield the most significant results in experiments concerned with confronting and resolving



personal death anticipations, personal death fantasy as the confrontation method has only been used minimally.

4) Evidence which supports the consolidation (Templer, 1976) theory, highlights the necessity of inclusion of follow-up measures. Previously reported non-significant results following a confrontation experience may be accounted for, at least in part, by the failure to include adequate follow-up.

#### The Present Study

A number of studies have attempted to ascertain the effects of a confrontation with anticipations of death on death concern measures. There has been a notable failure to substantiate the existential theoretical hypotheses of a reduction in death concern and an increase in individual meaning to existence. Previous investigations have not adequately attended to methodological and conceptual considerations which may account for the non-significant research findings. A review of the confrontation of death anticipation research revealed the following inadequacies:

- a) lack of attention to reliability and validity of the death concern measurements included in the confrontation research;
- b) treatment of death as a unidimensional concept with the consequent inclusion of one measure of death concern;
- c) lack of concern with the hypothesized avoidance-confrontation continuum;

d) lack of concern with the relative sensitivity of the confrontation media and the effects of this sensitivity on death concern measures;

e) lack of concern with relative and important differences between high and low death concerned individuals;

f) limited use of indirect measures or confrontation process measurements; and,

g) limited use of fantasy experiences in the confrontation media.

The present study is an attempt to attend to these inadequacies. The study will examine the relationships between death anxiety and death confrontation and how death concern variables and their relationships change as a function of carefully monitored confrontation conditions. Death concerns will be measured by the following instruments: a) death anxiety by Templer's (1970) Death Anxiety Scale (DAS); b) death acceptance by Ray and Najman's (1974) Death Acceptance Scale (DACC); and, c) avoidance-confrontation by Thauberger's (1974) Avoidance of the Ontological Confrontation of Death (AOCd). The Vivian, Meditative Awareness, and Death Transcendence subtests of Morgan's (1975) Personal Experiences Check List (P.E.C.L.) will also be included to measure experiential changes. These psychometric instruments will be administered on three occasions, pre-, post-test, and two weeks following participation in a confrontation experience. The confrontation experience will be in the form of a modified guided affective imagery (G.A.I.) technique (Leuner, 1969) involving the participant imagining undergoing a cardiac arrest. The degree of contact or involvement

with the process of the fantasy experience will be measured by the time spent in the fantasy, the number of interventions or "probes", the frequency of death associated words emitted, and the subjects' voice quality characteristics utilizing the categorical scoring system of Rice, Koke, Greenberg, and Wagstaff (1978).

### Hypotheses

Relationships Between Death Concern Instruments. It is expected that the pre-test relationships between the psychometric measures will be consistent with previous investigations.

1) Prior to confrontation, death anxiety (Templer's DAS) is expected to be positively correlated with the experience of being fully charged with energy and able to complete difficult tasks with ease (Morgan's Vivian). Death anxiety (DAS) is expected to be negatively correlated with death acceptance (Ray & Najman's DACC) as well as the experiences of high life satisfaction (Morgan's Death Transcendence) and calm, detached inner-centredness (Morgan's Meditative Awareness).

Confrontation Effects on Death Concern. Following participation in the personal death fantasy experience, it is expected that death anxiety will be reduced. The change is expected to be greater after a two-week period of consolidation.

2) There will be significantly lower scores on the death anxiety scale (Templer's DAS) compared to pre-test scores

two weeks following participation in the personal death fantasy.

Process Involvement Effects. It is expected that the more the subject is involved with the fantasy the greater the death anxiety.

3) There will be a significant relationship between the pre-test change in death anxiety and the degree of involvement with the process of the personal death fantasy.

Avoidance-Confrontation Continuum. Since the relationship between Thauberger's (1974) Avoidance of the Ontological Confrontation of Death and other death concern variables has not heretofore been examined empirically, the relationship between Thauberger's (1974) Avoidance of the Ontological Confrontation of Death and the other psychometric instruments included in the present study will be explored.



## CHAPTER II

### METHOD

The principal purposes of this study were: 1) to ascertain whether relationships between death concern instruments found by various researchers would be replicated using a relatively large sample of subjects; 2) to ascertain whether levels of death concern would change as a result of the participation in a personal death fantasy; 3) to ascertain if the degree of contact or involvement with the process of the visually imagined fantasy experience would significantly effect changes in death concern; and, 4) to examine the relationship between the avoidance-confrontation measure and the other death concern instruments.

The study followed this general method. A brief outline of the study was read in undergraduate classrooms. Students wishing to participate in the study were requested to complete the death concern instruments. The scores on the death concern measures for this total sample pool were utilized to accomplish purpose (1) above. To accomplish purpose (2), an experimental group composed of 20 high and 20 low death anxiety individuals were selected from the total sample pool. These individuals participated in two visually imagined fantasies. The first fantasy experience was considered innocuous and involved imagining a walk in a meadow. The second fantasy involved the subjects' visual imagination of themselves undergoing a simulated

cardiac arrest in a hospital. A control group consisting of 10 low and 10 high death anxious individuals participated in the first innocuous fantasy as well as a second innocuous fantasy experience which involved imagining being a tree. Audio tape recordings were made of each subject's report of the two fantasies. Each fantasy was reviewed by the experimenter and the subject. The review or processing of the fantasy was also audio tape recorded. The audio tape recordings were utilized to determine the following measures of subjects' involvement in the process which was the third area of investigation in the present study; a) time spent in each fantasy; b) number of experimenter interventions in each fantasy; c) number of death associated words verbalized; and, d) number of thought units for each of the four voice quality categories of Focused Externalizing, with voice quality characteristics categorized by Limited and Emotional. The purpose of determining process involvement was to ascertain whether degree of involvement would increase the post and follow-up changes in death concern. Finally, the relationships between the avoidance-confrontation continuum and the other death concern variables included in the present study were investigated.

Statistical analysis was completed using the SPSS Pearson Correlation, Factor analysis (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975), and SPSS-MANOVA (Cohen & Burns, 1977) programs with a Cyber 170/835 computer. The death concern data for the large pool of volunteers was subjected to Pearson Correlation and Factor Analytic statistical techniques. The Experimental versus Control group differences

between pre-, post-, and follow-up tests for the 60 participants in the fantasy procedures were compared using Multivariate Analysis of Variance and Covariance techniques.

### Subjects

Sixty female subjects were drawn from the psychology undergraduate subject pool of the University of Windsor. Subjects were selected on a voluntary basis only and the data of individuals who had had a recent loss(es) were eliminated from the study. The data from the large pool of volunteers ( $n = 313$ ) was analyzed in order to ascertain the relationships between the death concern instruments (Purpose #1). The sample pool of participants ( $n = 60$ ) was utilized to statistically examine the other purposes of the present study.

### Contact Procedure

An outline of the study (Appendix A) was read in undergraduate psychology classrooms at the University of Windsor during the summer and fall of 1981. Students who were willing to participate in the study were requested to complete pre-test questionnaires (see Psychometric Measures below) and write their name and telephone number on a schedule of available hour-long time periods during which the experimental procedure was to be conducted. Potential subjects were also instructed that they would be contacted by telephone if their further participation in the experiment was not required. A copy of each of the psychometric scales arranged in random order was completed by all volunteers and returned to the experimenter.

### Psychometric Measures

The psychometric scales consisted of Templer's (1970) Death Anxiety Scale (DAS), Thauberger's (1974) Avoidance of the Ontological Confrontation of Death, Form A (AOCdA), Ray and Najman's (1974) Death Acceptance Scale, and the Vivia, Death Transcendence and Meditative Awareness subtests of Morgan's (1975) Personal Experiences Checklist (P.E.C.L.).

The Templer scale is a widely used death anxiety instrument which was developed with considerations of reliability and validity (page 28). Templer's DAS is a 15-item scale (see Appendix C). Individuals completing the DAS are instructed to respond in either a "mostly true for me" or a "mostly false for me" direction. Responses to the 15 items are compared to the scoring key, summated and yield scale scores from 0 to 15.

Thauberger's scale consists of 20 items each of which relates to an aspect or issue involving death (see Appendix D). Items are keyed such that a high score indicates avoidance of the ontological confrontation of death and low scores indicate confrontation of death. Individuals are asked to respond in a True for Me/False for Me format and total score from 0 to 20 is obtained for each respondent. The AOCd, Form A, has demonstrated reliability and validity (page 40).

The Ray and Najman (1974) Death Acceptance Scale (see Appendix E) has seven items to which subjects are asked to respond in a True for Me/False for Me format. The range of total scale scores is 0 to 7.


Vivia is a 9-item subtest, Death Transcendence is a 5-item subtest and Meditative Awareness is a 4-item subtest of the 50-item P.E.C.L.

(see Appendix F). Vivian, according to Morgan (1976), is the self-reported experience of being charged with energy and able to easily complete difficult tasks. Death Transcendence is the tendency to report that one's own death could be accepted without regrets. Meditative Awareness, according to Morgan, taps self-reported experiences commensurate with a calm, detached, inner-centredness.

The three self-reported groups of experiences classified by Morgan as Vivian, Death Transcendence and Meditative Awareness have been found to be correlated to death anxiety (page 31).

#### Selection of Groups

A total of 313 students completed the pre-test psychometric instruments. Owing to their greater availability, only females were utilized in the present study; 63 instrument packets completed by males were selected out. Since it appears important to avoid the effects of significant recent loss, 44 individuals, who indicated that they had experienced a significant loss within the last year, were dropped from the subject pool. Since only high and low ranges of the death anxiety were to be included, 96 potential participants who scored within the middle one-third (5-10) range on the death anxiety instrument were excluded from the subject pool. Of the remaining 98 students, 15 volunteers did not indicate an available time and 26 did not show up for the time indicated on the schedule in spite of telephone reminders. The remaining 60 subjects were formed into the following groups: 1) Low Death Anxious Experimental Group ( $n = 20$ ); 2) Low Death Anxious Control Group ( $n = 10$ ); 3) High Death Anxious Experimental Group ( $n = 20$ ); and, 4) High Death Anxious Control Group ( $n = 10$ ).



### Treatment of Groups

Twenty of the 30 volunteers who scored in the lowest one-third of the range on the DAS on pre-testing comprised the Low Death Anxious Experimental group which was subjected to Innocuous Fantasy #1 followed by the Personal Death Fantasy. Similarly, 20 of the 30 volunteers who, on the pre-test administration, scored in the ~~high~~ one-third of the range of the DAS comprised the High Death Anxious Experimental group which engaged in Innocuous Fantasy #1 followed by the Personal Death Fantasy. The remaining 20 volunteers comprised the Control groups which were comprised of 10 low death anxious and 10 high death anxious volunteers. The Control groups engaged in Innocuous Fantasy #1 followed by a second innocuous fantasy (Innocuous Fantasy #2).

### Experimental Procedure

Subjects were met individually at a mutually agreeable time in a quiet room at the University. They were requested to sit in the reclining chair provided. The lights in the experimental room were dimmed. The subjects were informed that all of the instructions were audio taped in order to standardize the instructions for all participants. The taped recording was played for each subject.

Following the general introductory and relaxation phases of the study, subjects participated in two fantasies separated by a relaxation phase. The fantasies were modified versions of a Guided Affective Imagery (G.A.I.) experience (Leuner, 1969; see also Bullock & Severe, 1981; Kosbab, 1974; Schoettle, 1980).

Each of the two fantasies themselves were divided into two portions, Free Report and Processing. During the Free Report phase of the fantasy the subject verbalized her awareness of the fantasy, while reclined, with her eyes closed as the fantasy unfolded. Minimal prompts were given by the experimenter during the Free Report to assist the subject in verbalizing her awareness. During the Processing phase of the fantasy, the subject sat with her eyes open, and recalled the reported fantasy, with the experimenter's assistance in order to elicit further awareness.

As previously indicated, the Low Death Anxious and High Death Anxious Experimental groups participated in Innocuous Fantasy #1 followed by the Personal Death Fantasy. The Low Death Anxious and High Death Anxious Control groups participated in Innocuous Fantasy #1 followed by Innocuous Fantasy #2.

#### Fantasy Procedures

Introductory Phase. Once the subject was seated and the lights in the room were dimmed, that portion of the instruction tape which explained the process of the study was played.--The tape relayed the following:

"In a few moments you are going to be asked to lie down, close your eyes and relax. Once you are relaxed you will be asked to imagine a scene or setting. You will be asked to report your experience in detail as it occurs once the instructions are completed. Please report as much detail as you can about the imagined sequence as it unfolds. It

is also important to report your feelings as they occur during the visually imagined experience. In addition, an audio tape recording will be made of your responses. However, the audio tape will only be used for this experiment. Do you have any questions?"

At this point the tape recorder was turned off and the subjects were asked if they had any questions. Answers were given without divulging the specifics of the fantasies which the subject was going to be asked to imagine.

Initial Relaxation. When the subject had no further questions, the tape recorder was switched on and the subject listened to the following instructions:

"Now I'd like you to push back your chair (5-second pause during which the experimenter assisted the subject in setting the subject's chair in the reclining position), close your eyes (5-second pause) and focus on your breathing (5-second pause). Try to make your breathing as slow and as deep as you can."

The tape recorder was turned off at this point and the subject's breathing and overall state of relaxation was observed. When the subject appeared to be relaxed, the tape recorder was switched on again and the subject listened to the following instructions:

"When you're relaxed and feel comfortable, let me know by raising your left hand."



The tape recorder was again turned off until the subject raised her hand. When the subject indicated that she felt relaxed and comfortable, the tape recorder was turned on and the subject listened to the instructions for the Innocuous Fantasy #1.

First Fantasy--All Subjects. All 60 subjects were administered the tape recorded instructions for Innocuous Fantasy #1 following the introductory instructions and the relaxation phase of the study. The tape recorded instructions for Innocuous Fantasy #1 were as follows:

"Now I'd like you to imagine that you're walking through a meadow (5-second pause). Be aware as you walk through the meadow of your surroundings (5-second pause) and your body (5-second pause) and the contact you have with the environment (5-second pause). Continue imagining yourself in this situation and let me know what you are imagining and feeling (5-second pause). Please tell me all the details as you are experiencing them."

At this point the instructions tape was turned off and the audio recording of the subject's verbalization during this, the Free Report phase of the fantasy was begun. During the Free Report phase, when a subject said nothing for a period of 10 seconds, the experimenter intervened with the questions "What is happening now?" and "How are you feeling now?" The Free Report phase was terminated when a 30-second time period elapsed during which the subject reported no additional details and/or feelings. At this juncture, the subject was asked to open her eyes on the count of 3. The subject's opening of her eyes marked the beginning of the Processing phase of Innocuous Fantasy #1.

The audio recording of the subject's verbalization continued throughout the Processing of the fantasy. During the Processing phase, the subject with the experimenter's assistance reviewed the fantasy reported during the Free Report phase. The subject was asked if there was any additional awareness as she reviewed each previously reported awareness of the fantasy. The Processing phase was terminated when no new information surrounding the fantasy was elicited. At this point in the experimental procedure, the tape recorder was turned off and the subject was again assisted in relaxing.

Interim Relaxation Phase. During the Interim Relaxation, subjects were administered the same instructions which they had heard during the Initial Relaxation. That is, subjects were instructed to close their eyes and focus on their breathing. The subject indicated that she felt relaxed and comfortable by raising her left hand.

The experimental procedure to the end of the Interim Relaxation phase was administered to all subjects in this study. The two experimental groups were given instructions for the Personal Death Fantasy following the Interim Relaxation while the Control groups were engaged in Innocuous Fantasy #2 at this point.

Second Fantasy--Experimental Groups. When the subjects in the Treatment groups indicated they felt relaxed and comfortable again, the audio recorded instructions for the Personal Death Fantasy were started. The instructions for the Personal Death Fantasy were as follows:

"Now that you are relaxed again I want you to imagine that you're lying in the bed in a hospital room (5-second pause). There are people moving around in the room (5-second pause), equipment is also being moved around in the room (5-second pause). You feel another person's hands compressing your chest (5-second pause). You hear someone say, 'We might as well stop trying; it's too late to save this patient.' (3-second pause). You realize they are talking about you (3-second pause). Continue imagining yourself in this situation and let me know what you are experiencing (3-second pause). Please tell me all the details as you are experiencing them."

At this point in the procedure, the Free Report phase of the Personal Death Fantasy began. The instruction tape recording was switched off and the recording of the subjects' verbalizations began. The recording of the subjects' responses continued until the termination of the Processing phase of the Personal Death Fantasy.

The procedure outlined above for the Free Report and Processing phases of Innocuous Fantasy #1 was followed for the Personal Death Fantasy.

Second Fantasy--Control Groups. The Control groups were asked to engage in Innocuous Fantasy #2 following the Interim Relaxation. The tape recorded instructions for Innocuous Fantasy #2 were as follows:-

"Now that you are relaxed again I would like you to imagine you are a tree (5-second pause). Be aware of your surroundings (5-second pause), your body (5-second pause), and the contact you have with your environment (5-second pause). Continue imagining yourself in this situation and let me know what you are experiencing (3-second pause), what you are imagining and feeling (3-second pause). Please tell me all the details as you are experiencing them."

The subsequent procedure outlined above for the Free Report and Processing phases of both Innocuous Fantasy #1 and Personal Death Fantasy was also followed during the Free Report and Processing phases of Innocuous Fantasy #2 (see page 66).

Debriefing. After the second fantasy all subjects were asked for their personal reactions to the experimental procedure. This procedure was employed to help the subjects deal with any residuals of emotions that may have been aroused during the procedure. Subjects were also requested not to discuss the experiment with any potential participants.

#### Post-fantasy Administration of Instruments

Following the Debriefing, subjects were requested to complete the psychometric instruments (DAS, AOCd, Death Acceptance, Vivian, Death Transcendence, and Meditative Awareness) on the day following their involvement in the experiment and again two weeks following inclusion in the experiment. Subjects were instructed to place the completed

questionnaires in the experimenter's mail slot in the Department of Psychology, South Windsor Hall. All of the questionnaires were returned by the subjects.

Finally, the subjects were thanked for their involvement and told that they would be informed as to the specific nature of the study in writing when the project was completed.

A summary of the research was sent approximately three weeks following the completion of the experiment (Appendix E).

#### Process Involvement Measures

In addition to the aforementioned psychometric scales incorporated to test Hypotheses (1), (2), and (4), four measures of process involvement were utilized in the present study in order to test Hypothesis (3). Recent research examining the relationships between induced level of stress, imagery and fantasy content in a guided fantasy of personal death (Marnocha, 1980) indicated that the degree of involvement in the experiential imagery process would affect the outcome measures.

The degree of involvement in the process of the fantasy was measured in the present study by the time in the fantasy, the frequency of death associated words verbalized, the number of experimenter interventions or "probes" and the Rice et al. (1979) measures of voice quality during both the reporting and processing phases of the visually imagined fantasy experience. With the exception of death associated words verbalized variable, the process involvement was also ascertained for Innocuous Fantasy #1. The Innocuous Fantasy #1 levels of the pro-

cess involvement variables were utilized as a baseline for the second fantasy.

#### Time Spent in the Visually Imagined Personal Death Experience.

Although no other confrontation of death study had utilized the time as a process involvement measure, clinical experience with projective techniques suggest a relationship between time expended and emotional level. In the present study it was assumed that the longer the subject remained in the visually imagined experience, the more involved she was with the visually imagined fantasy experience. The total time expended by each subject in each fantasy was broken down into two portions, Report and Processing. The total length of time spent reporting each of the fantasy experiences and the time spent processing each of the fantasy experiences, were reported.

Frequency of Death Associated Words Reported. Although the subject may spend considerable time in the fantasy, she may deviate from the visual imagery intended by the instructions. In the present study, the number of death associated words emitted by the subject was assumed to be an indicator of adherence to the death fantasy instructions as well as an indicator of the intensity of involvement with the death fantasy. It was assumed that the higher the number of words with a death connotation such as "coffin", "heaven", "hell", etc., the more involved the subject would be with the personal death fantasy. The number of death associated words during both the Report and Processing portions of the Personal Death Fantasy was determined by counting while listening to the audio tape recordings of the Personal Death Fantasy for each

subject. A list of the death associated words which were emitted by subjects in this study is contained in Appendix H.

Frequency of Experimenter Interventions. In the present study, it was assumed that the experimenter's interventions or prompting during the fantasy would assist and/or "force" the subject in verbalizing additional awareness thereby maintaining and intensifying the subject's contact with the fantasy. Consequently, the relative number of experimenter interventions or "probes" was expected to be positively correlated to both time in the particular phase of the fantasy and the involvement in the process of the fantasy. The number of experimenter interventions was counted for each phase of the two fantasies while listening to individual subjects' audio tape recording.

Voice Quality. Recent research indicated that subject voice quality would be a useful and valuable measure for describing moment-by-moment process involvement (Gendlin, Beebe, Cassens, Klein, & Oberlander, 1968; Greenberg, 1980; Greenberg & Higgins, 1980; Kerr, 1980; Marnocha, 1980; Rice, Koke, Greenberg & Wagstaff, 1979; Rice & Wagstaff, 1967). Voice quality has primarily been utilized to examine the relationships between personality measures, productive psychotherapy and outcome measures. Moment-to-moment process and shifts in process involvement according to theoretical experiential expectations have also been investigated with voice quality techniques.

In the present study, the voice quality associated with subject verbalizations audio tape recorded during both the Reporting and Processing phases of the two visually imagined fantasies was determined

by the technique developed by Rice et al. (1979). One of the four Rice et al. vocal styles, Focused, Externalizing, Limited, and Emotional, was determined for each thought unit verbalized by the subjects in the present study. The moment-to-moment level of contact and involvement with the process of the fantasy, as well as the changes in vocal quality during the different segments of the particular fantasy for each subject, were determined and the trends for the groups were analyzed.

The Focused voice quality according to Rice et al. (1979):

..."seems to involve the turning inward of attentional energy in a process of tracking inner experience and trying to symbolize it in speech. This symbolization seems to be as much for the self as for the listener, and little attention seems to be focused outward toward the listener." (Page 1, Vol. II)

Since subjects with more thought units categorized as Focused would be more involved with the process of the personal death fantasy, it was expected that the more Focused individuals would have more significant death concern changes as compared to individuals with three non-Focused voice quality characteristics.

In the present study, the categorization of the individual thought units was judged by an independent individual who was naive regarding the purpose of the study and the subject categorization. She was trained by the experimenter in the Rice et al. (1979) technique.



An estimate of the reliability of the voice quality scoring was undertaken by the experimenter who independently scored five subjects' tape recordings randomly by drawing subject numbers out of a hat. The overall agreement on the five subject tapes was 89% which is highly significant and attests to the reliability of the scoring.

## CHAPTER III

### RESULTS

The principal purposes of this study were: 1) to determine whether the independence of death concern instruments found by various researchers would be replicated using a large sample of university undergraduates; 2) to determine whether measures of death concern variables would change as a result of engaging in a personal death fantasy experience; 3) to test if the degree of contact or involvement with the process of the visually imagined fantasy experience would significantly interact with measurements of death concern; and, 4) to examine the relationship between the avoidance-confrontation measure and the other death concern instruments.

#### Independence of Death Concern Variables

The total pool ( $n = 313$ ) affords the opportunity to examine the independence of variables. Pearson correlation coefficients were derived and the significance level determined for all possible relationships using the levels of pre-test measures for the total sample pool ( $n = 313$ ) of students volunteering for the experiment. The pre-test death concern variables were also subjected to principal components factor analysis.

Correlational data indicate that all of the relationships are found to be significant with the exception of death anxiety and vivia (see Table 1). These data replicate previous findings of: 1) a nega-

TABLE 1  
Pre-test psychometric scale correlations  
for the total subject pool ( $n=313$ )

	Death anxiety (DAS)	Death accep- tance (DACC)	Avoid- ance of ont. confron. (AoCD)	Vivia (VIV)	Death trans- cendence (DTRAN)	Medita- tive aware- ness (MEDAW)
Death Anxiety (DAS)		-.28**	.26**	-.05	-.21**	-.17*
Death Accep- tance (DACC)			-.13	.20**	.18**	.14
Avoidance of Confrontation (AoCD)				-.19**	-.21**	-.21**
Vivia (VIV)					.25**	.38**
Death Trans- cendence (DTRAN)						.29**
Meditative Awareness (MEDAW)						

\*  $p < .01$

\*\*  $p < .001$

TABLE 2  
 Factor analysis  
 Pre-test psychometric death concern scales  
 for total subject pool ( $n=313$ )

Varimax rotated factor matrix					
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
DAS	-.07962	-.19750	-.11873	.89192	.15945
DACC	.06364	.94788	.06188	-.18457	-.02853
AoCDA	-.10893	-.03418	-.08465	.14051	.97196
VIVIA	.69161	.33029	.22304	.32435	-.20056
MEDAW	.90461	-.05604	.03280	-.24494	-.03513
DTRAN	.11410	.06676	.97584	-.10424	-.08401
EIGEN VALUE	2.02605	1.06169	.87451	.79754	.70051
PERCENT OF ORIGINAL VARIANCE	33.8	17.7	14.6	13.3	11.7

tive correlation between death anxiety and death acceptance (Ray & Najman, 1975); 2) a negative relationship between death anxiety and meditative awareness (Morgan, 1975); and, 3) a negative relationship between death anxiety and death transcendence (Morgan, 1975). However, the expected positive relationship between death anxiety and vivia (Morgan, 1975) was not found ( $r = -.05$ , n.s.). Consequently, Hypothesis (1) which was concerned with the interrelationships of the death concern variables was partially substantiated.

The results of the principal components factor analysis is given in Table 2. The first factor, accounting for 33.8% of the original variance, loads primarily on meditative awareness and to a lesser extent on vivia. The remaining four factors derived from the analysis have principal loadings on only one psychometric death concern variable.

The results of the factor analysis suggest that Death Anxiety, Death Acceptance, Avoidance of the Ontological Confrontation of Death, and Death Transcendence appear to be independent factors. However, Vivia and Meditative Awareness are shown to vary together to a great degree and perhaps are one factor.

#### Changes in Measures as a Result of Experimental Procedure

In order to determine if engaging in a personal death fantasy experience had an effect on pre-test levels of the psychometric death concern variables, scores on each of the psychometric instruments were subjected to a 3 x 3 multivariate analysis with groups (Low Death Anxious Experimental, High Death Anxious Experimental, and Control, as a Between-Subjects main effect and time of evaluation (pre-, #1 post-,

TABLE 3 .

Multivariate analysis of variance  
 psychometric variables (death anxiety, avoidance of  
 ontological confrontation, death acceptance, vivia,  
 meditative awareness, death transcendence) ( $n=60$ )

Source	Test name	Approx. F	Hypo- thesis D.F.	Error D.F.	p
Treatment	Pillai	4.52	12.00	106.00	.001***
	Hotelling	8.01	12.00	102.00	.001***
	Wilk	6.19	12.00	104.00	.001***
Time	Pillai	2.48	12.00	220.00	.01**
	Hotelling	2.54	12.00	216.00	.01**
	Wilk	2.51	12.00	218.00	.01**
Treatment x time	Pillai	1.23	24.00	448.00	.21
	Hotelling	1.21	24.00	430.00	.23
	Wilk	1.22	24.00	381.47	.22

\*\*  $p < .01$

\*\*\*  $p < .001$

TABLE 4

Univariate F-tests on psychometric variables  
 (death anxiety, avoidance of ontological confrontation  
 of death, death acceptance, vivia, meditative awareness,  
 death transcendence) ( $n=60$ )

	Hypothesis M.S.	Error M.S.	F	p
Treatment (d.f. 2,57)				
Death anxiety (DAS)	796.67	22.59	35.26	.001***
Avoidance of the ontologi- cal confrontation of death (AoCD)	179.84	50.98	3.53	.04*
Death acceptance	44.36	6.38	6.96	.01**
Death transcendence	16.25	4.08	3.98	.02*
Vivia	7.12	7.72	.92	.40
Meditative awareness	2.52	1.58	1.60	.21
Time (d.f. 2,114)				
Death anxiety (DAS)	4.21	1.87	2.25	.11
Avoidance of the ontologi- cal confrontation of death (AoCD)	1.37	4.64	.30	.74
Death acceptance	.41	.68	.60	.55
Death transcendence	.95	.46	2.08	.13
Vivia	1.72	.78	2.20	.12
Meditative awareness	2.47	.33	7.47	.001***

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

TABLE 5

Group mean differences treatment and time  
effects psychometric variables (n=60)

Experimental minus control				
	Coeff.	Standard error	T-value	p
Treatment				
Death anxiety	-1.28	1.50	-.85	.40
Avoidance of confrontation	-1.52	2.26	-.67	.50
Death acceptance	.73	.80	.92	.36
Death transcendence	.50	.64	.78	.44
Vivia	1.10	.88	1.25	.22
Meditative awareness	.25	.40	.63	.53
Time				
Death anxiety	-.43	1.50	-.29	.77
Avoidance of confrontation	-.07	2.26	-.03	.98
Death acceptance	-.17	.80	-.21	.84
Death transcendence	-.35	.64	-.55	.58
Vivia	.10	.88	.11	.91
Meditative awareness	-.40	.40	-1.01	.32



TABLE 6

Pre, #1 post and #2 post means and standard deviations  
for experimental and control groups  
on psychometric questionnaires (n=60)

Measures	All groups		Experimental		Control	
	$\bar{x}$	s.d.	$\bar{x}$	s.d.	$\bar{x}$	s.d.
Pretest						
Death anxiety	7.92	4.12	7.85	4.26	8.05	3.93
Death acceptance	3.27	1.67	3.28	1.72	3.25	1.59
Onto. avoidance	9.45	4.68	9.40	4.53	9.55	5.09
Vivia	6.52	1.68	6.62	1.82	6.30	1.38
Death transcen.	1.20	1.25	1.25	1.30	1.10	1.17
Meditative aware.	2.75	0.97	2.80	0.91	2.65	1.09
#1 post						
Death anxiety	7.45	4.27	7.32	4.32	7.70	4.28
Death acceptance	3.40	1.72	3.60	1.72	3.00	1.69
Onto. avoidance	9.75	4.56	9.48	4.45	10.30	4.84
Vivia	6.85	1.72	7.02	1.75	6.50	1.64
Death transcen.	1.35	1.29	1.42	1.36	1.20	1.15
Meditative aware.	3.08	0.77	3.18	0.78	2.90	0.72
#2 post						
Death anxiety	7.90	4.18	7.45	4.11	8.80	4.30
Death acceptance	3.42	1.82	3.58	1.74	3.10	1.97
Onto. avoidance	9.63	4.72	9.20	4.38	10.50	5.34
Vivia	6.63	1.86	6.90	1.72	6.10	2.05
Death transcen.	1.45	1.48	1.58	1.52	1.20	1.40
Meditative aware.	3.12	0.86	3.10	0.90	3.15	0.81

TABLE 7.

Pre, #1 post and #2 post means and standard deviations  
for experimental low death anxious ( $n=20$ )  
and high death anxious groups ( $n=20$ )

Measures	Experimental Low death anxious		Experimental High death anxious	
	$\bar{x}$	s.d.	$\bar{x}$	s.d.
Pretest				
Death anxiety	3.90	1.25	11.80	1.67
Death acceptance	4.05	1.54	2.50	1.57
Ontological avoidance	7.50	3.91	11.30	4.39
Vivia	6.70	1.53	6.55	2.11
Death transcendence	1.80	1.36	0.70	0.98
Meditative awareness	3.10	0.85	2.50	0.89
#1 post				
Death anxiety	3.85	2.66	10.80	2.40
Death acceptance	4.40	1.54	2.80	1.54
Ontological avoidance	7.35	3.47	11.60	4.37
Vivia	7.20	1.54	6.85	1.95
Death transcendence	1.85	1.46	1.00	1.12
Meditative awareness	3.30	0.66	3.05	0.89
#2 post				
Death anxiety	4.00	2.03	10.90	2.34
Death acceptance	4.50	1.54	2.65	1.42
Ontological avoidance	8.20	3.64	10.20	4.91
Vivia	7.05	1.64	6.75	1.83
Death transcendence	2.10	1.62	1.05	1.23
Meditative awareness	3.25	0.79	2.95	1.00

and #2 post-) as a repeated measures, Within Subjects main effect.

The significant effects were examined for the Experimental versus Control and the Low Death Anxious versus High Death Anxious contrasts, using the special contrast option of the SPSS MANOVA program.

The multivariate analysis of the psychometric variables revealed an effect on the Treatment factor ( $p < .001$ , using Pillai's criterion<sup>1</sup>), the Time factor ( $p < .01$ , using Pillai's criterion) but not on the interaction (Table 3). Univariate analysis (Table 4) showed significant Treatment effects on Death Anxiety (DAS),  $F(2,57) = 35.26$ ,  $p < .001$ ; Avoidance of the Ontological Confrontation of Death (AOCd),  $F(2,57) = .353$ ,  $p < .04$ ; Death Acceptance,  $F(2,57) = 6.96$ ,  $p < .01$ ; and, Death Transcendence,  $F(2,57) = 3.98$ ,  $p < .02$ . Significant Time effect was shown on Meditative Awareness,  $F(2,114) = 7.47$ ,  $p < .001$ . Examination of group mean differences for the significant effects of Treatment and Time on the psychometric variables indicated that the experimental and control groups did not differ significantly on any of the psychometric variables (see Table 5).

#### Process Involvement Effects

In order to ascertain if the degree of involvement with the process of the visually imagined fantasy experience had an effect on the experi-

<sup>1</sup>Recent discussion of criteria to be utilized in multivariate analysis of variance suggest that Pillai's is the most robust and powerful for data typically utilized in psychological studies (Olson, 1976, 1979; Stevens, 1979). However, according to Timm (1975), there is little difference between each of the commonly-used criteria. All three commonly-used criteria are quoted for the reader's benefit.

mental process, the process involvement variables (time in 2nd fantasy, interventions in 2nd fantasy, associated death words emitted by subjects during the 2nd fantasy, and the frequency of the four voice quality categories, focused, externalizing, limited, and emotional) were subjected to a 3 x 2 multivariate analysis of covariance with groups (Low Death Anxious Experimental, High Death Anxious Experimental and Control) as a Between-Subjects main effect, and phase of the 2nd Fantasy (Free Report and Processing) as a Within Subjects main effect with the process involvement variables in the Innocuous Fantasy #1 as covariates. Finally, the significant process involvement variables derived from the multivariate analysis of variance, were included as covariates in an analysis of variance of the experimental treatment subjects' scores on the psychometric death concern scales.

Analysis of Covariance-Process Involvement Variables. Relationships Between 1st and 2nd Fantasies. The process involvement variables for the 2nd fantasy were subjected to Multivariate Analysis of Variance with the first fantasy process involvement variables treated as covariates with the experimental subjects' ( $n = 60$ ) data. This MANCOVA analysis was utilized to determine differences in groups on the process involvement variables and changes in process involvement over time.

The MANCOVA analysis with the Innocuous Fantasy #1 process involvement variables treated as covariates revealed a significant covariate effect or a significant relationship between the process involvement variables in the two fantasies (Pillai's Approx.  $F = 5.34$ ).

TABLE 8  
Multivariate analysis of covariance,  
experimental process variables (with voice quality  
innocuous fantasy as covariates) ( $n=60$ )

Source	Test name	Approx. F	Hypo- thesis D.F.	Error D.F.	<u>p</u>
Treatment (Trt.)	Pillai	3.33	14.00	92.00	.001***
	Hotelling	3.94	14.00	88.00	.001***
	Wilk	3.64	14.00	90.00	.001***
Time	Pillai	8.46	7.00	45.00	.001***
	Hotelling	8.46	7.00	45.00	.001***
	Wilk	8.46	7.00	45.00	.001***
Treatment x time	Pillai	1.22	14.00	92.00	.27
	Hotelling	1.31	14.00	88.00	.22
	Wilk	1.27	14.00	90.00	.24

\*\*\* p .001

TABLE 9  
Univariate F-tests on experimental  
process involvement variables (d.f. 2,51) ( $n=60$ )

	Hypothesis M.S.	Error M.S.	F	p
Treatment				
Time in 2nd fantasy (report & process)	859053.94	77768.44	11.05	.001***
Interventions in 2nd fantasy	253.87	35.37	7.18	.01**
Death words	202.71	17.99	11.27	.001***
Focused freq. in 2nd fantasy	521.47	130.72	3.99	.02*
Externalizing freq. in 2nd fantasy	3864.89	558.33	6.92	.01**
Limited freq. in 2nd fantasy	5.28	15.25	.35	.70
Emotional freq. in 2nd fantasy	.83	1.17	.71	.49
Time				
Time in 2nd fantasy (report & process)	40707.56	58239.70	.70	.40
Interventions in 2nd fantasy	415.20	33.62	12.35	.001***
Death words	4.33	8.45	.51	.47
Focused freq. in 2nd fantasy	345.59	125.79	2.75	.10
Externalizing freq. in 2nd fantasy	338.70	336.20	1.01	.32
Limited freq. in 2nd fantasy	10.37	10.63	.98	.33
Emotional freq. in 2nd fantasy	2.00	1.21	1.66	.20
* p	.05			
** p	.01			
*** p	.001			

with d.f. 42/300,  $p < .001$ ). The number of death associated words verbalized by the subjects in the death fantasy was significantly related to the frequency of Focused ( $t = 2.80$ ,  $p < .01$ ), Externalizing ( $t = 3.21$ ,  $p < .01$ ), and Limited ( $t = 2.76$ ,  $p < .01$ ) voice quality thought units emitted in the Innocuous Fantasy #1. In addition, the relationship between the two fantasies was significant for the thought unit frequency of Focused ( $t = 5.14$ ,  $p < .001$ ), Externalizing ( $t = 4.09$ ,  $p < .001$ ), and Limited ( $t = 11.72$ ,  $p < .001$ ).

In summary, in examining the data of voice quality it appears that subjects did not vary in any of these dimensions from the first to the second fantasy. Whatever voice quality that was predominant in the first fantasy remained predominant in the second. Another finding is that of a relationship between the three major voice quality categories in the innocuous fantasy and death related words in the death fantasy. Increases in the frequency of Focused, Externalizing, and Limited voice quality thought units in the Innocuous Fantasy #1 are significantly related to a greater frequency of death associated words.

Second Fantasy Effects by Treatment Groups. The multivariate analysis of the experimental process involvement variables with the first fantasy process involvement variables as covariates revealed an effect on the Treatment factor ( $p < .001$ , using Pillai's criterion), the Time factor ( $p < .001$ , using Pillai's criterion) but not on the interaction (Table 8). Univariate analysis (Table 9) showed significant differences for Time,  $F(2,51) = 11.05$ ,  $p < .001$ ; Interventions,  $F(2,51) = 7.18$ ,  $p < .01$ ; Death Words,  $F(2,51) = 11.27$ ,  $p < .001$ ;

TABLE 10

Group mean differences - treatment effects,  
experimental process involvement variables (n=60)

	Coeff.	Standard error	T-value	<u>p</u>
Experimental minus control				
Time in 2nd fantasy	422.21	111.05	3.73	.001***
Interventions in 2nd fantasy	7.91	2.41	3.28	.01**
Death words in 2nd fantasy	7.47	1.72	4.34	.001***
Focused in 2nd fantasy	11.96	4.63	2.58	.01**
Externalizing in 2nd fantasy	18.64	9.58	1.95	.05*
Limited in 2nd fantasy	1.28	1.58	.811	.42
Emotional in 2nd fantasy	.51	.44	1.17	.25
Low death anxious minus high death anxious				
Time in 2nd fantasy	-176.85	66.20	-2.67	.01**
Interventions in 2nd fantasy	- 2.45	1.41	-1.74	.09
Death words in 2nd fantasy	- 1.72	1.01	-1.71	.09
Focused in 2nd fantasy	3.45	2.71	1.27	.21
Externalizing in 2nd fantasy	- 17.25	5.61	-3.07	.01**
Limited in 2nd fantasy	- .14	.93	- .15	.88
Emotional in 2nd fantasy	- .04	.26	- .17	.87

\* p .05\*\* p .01\*\*\* p .001



Focused Voice Quality,  $F(2,51) = 3.99$ ,  $p < .02$ ; and, Externalizing Voice Quality,  $F(2,51) = 6.92$ ,  $p < .01$  on the Treatment factor.

Interventions for  $F(2,51) = 12.35$ ,  $p < .001$  were significant on the Time factor.

Examination of group mean differences for the significant effects of Treatment on the Process Involvement variables indicated that the groups differed significantly in the following manner (see Table 10); 1) the Experimental subjects expended an average of 422.21 seconds more in the 2nd Fantasy than the Control subjects ( $t = 3.73$ ,  $p < .001$ ) and the High Death Anxious Experimental subjects expended an average of 176.85 more seconds in the 2nd Fantasy (Death Fantasy) than the Low Death Anxious Experimental subjects ( $t = 2.67$ ,  $p < .01$ ); 2) the Experimental subjects had an average of 7.91 more interventions than the Control subjects in the 2nd Fantasy ( $t = 3.28$ ,  $p < .01$ ); 3) the Experimental subjects emitted an average of 7.47 more death associated words in the 2nd Fantasy than the Control subjects ( $t = 4.34$ ,  $p < .001$ ); 4) the Experimental subjects emitted an average of 11.96 more 2nd Fantasy thought units categorized as Focused in the 2nd Fantasy than the Control subjects ( $t = 2.58$ ,  $p < .01$ ); and, 5) the Experimental subjects emitted an average of 18.64 more thought units categorized as Externalizing in the 2nd Fantasy than the Control subjects ( $t = 1.95$ ,  $p < .05$ ).

Examination of the group mean differences for the significant effect of Time on the Process Involvement variables indicated that there was an average of 5.63 more interventions during the processing phase of the 2nd Fantasy ( $t = 2.72$ ,  $p < .01$ ). The group mean differ-

ences for time, death associated words, and the four voice quality categories were all non-significant for the effect of Time on the Process Involvement variables.

In summary, the groups involved in the experiment differed significantly on the process involvement variables. Subjects who participated in the personal death fantasy expended more time, had more interventions, had more thought units categorized as focused and had more thought units categorized as externalizing in the 2nd fantasy than subjects who participated in a 2nd innocuous fantasy. Subjects engaged in a personal death fantasy experience also emitted more death associated words than subjects engaged in an innocuous fantasy; however, the differential instructions of the two types of fantasies would have predicted this effect. In addition, variance in the process involvement variables between free report and processing phases of the 2nd fantasy was significant for all subjects and univariate analysis and group mean differences of these effects showed that there were significantly more interventions in the processing phase than the free report phase of Fantasy #2 only.

#### Effects of Involvement on Death Concern

In order to ascertain the effects of involvement in the process on the death concern variables in the experimental condition, the death concern data for the subjects who engaged in the personal death fantasy ( $n = 40$ ) were subjected to analysis of covariance. The covariates were the process involvement variables of time expended in the death

TABLE 11

T-value summary of relationship between process variables  
(time in death fantasy, frequency of focused thought units  
and frequency of externalizing thought units) as covariates  
and death concern variables  
for experimental treatment subjects ( $n=40$ )

Covariates			
	Time expended	Freq. of focused	Freq. of externalizing
Death anxiety	2.76**	-3.58***	2.87**
Avoidance of ontological confrontation (AOCdA)	1.91	- .27	.09
Death acceptance	-2.98**	3.24**	.25
Death transcendence (DTRAN)	.13	1.31	-2.46*
Vivia (VIV)	-1.23	1.29	.24
Meditative awareness (MEDAW)	1.27	.20	-1.05

\*  $p$  .05

\*\*  $p$  .01

\*\*\*  $p$  .001

fantasy, frequency of Focused thought units in the death fantasy, and frequency of Externalizing in the death fantasy.

The MANCOVA analysis on the death concern variables with the three process involvement variables treated as covariates revealed a significant relationship between process involvement and the death concern variables (Pillai's Approx.  $F = 3.35$  with d.f. 18/333,  $p < .001$ ). The relationships between death concern and the process involvement variables is summarized in Table 11.

Results indicate a significant positive relationship between the levels of death anxiety and the process involvement variables of average time spent in the death fantasy and frequency of Externalizing thought units in the death fantasy. A significant negative relationship was found between death anxiety and the frequency of Focused thought units in the death fantasy. Death acceptance was significantly negatively related to time spent in the death fantasy and related to the frequency of Focused thought units in the death fantasy. The relationship between the frequency of Externalizing thought units and death transcendence was significant and negative in direction. These results are indicative of a significant relationship between process involvement and the death concern variables.

The MANCOVA treatment over time (pre- to post-test #1 to post-test #2) with the psychometric death concern variables (Pillai's Approx.  $F = .73$  with d.f. 12/220,  $p < .72$ , n.s.) did not show significance when the process involvement variables were included as covariates in the analysis. Previously, analysis excluding process involvement

effects revealed a significant time effect (see Table 3). These results suggest that the process involvement variables (included in the analysis) have had a significant effect on the death concern variables commensurate with Hypothesis (3) in the present study. However, these results are suggestive only owing to the non-significant changes in death anxiety.

#### Relationships Between Avoidance-Confrontation and the Other Death Concern Variables

The final purpose of the present study was to examine the relationships between the avoidance-confrontation continuum and the other death concern variables. Although the relationships between Thauberger's (1974) Avoidance of the Ontological Confrontation of Death, Form A (AOCdA) and the other measures of death concern have been reported previously in this chapter, for clarity these relationships and the effect of the experimental procedure on AOCdA levels will be summarized in this section.

#### Pre-test Avoidance-Confrontation Relationships for Total Pool

( $n = 313$ ). Pearson correlation coefficients for the total sample pool ( $n = 313$ ) pre-test levels of the death concern variables are given in Table 1. These results indicate the following: 1) a positive relationship between avoidance of ontological confrontation and death anxiety; 2) a negative relationship between avoidance of the ontological confrontation and self-reported experience of being fully energy charged and able to complete difficult tasks with ease (vivia); 3) a negative relationship between avoidance of the ontological confrontation and self-

TABLE 12

Pre-, #1 post- and #2 post-test scale  
correlations for the total sample of participants ( $n=60$ )

	Death anxiety (DAS)	Death accep- tance (DACC)	Avoid- ance of ont. confron. (AoCD)	Vivia (VIV)	Death trans- cendence (DTRAN)	Medita- tive aware- ness (MEDAW)
<u>Pre-test-</u>						
DAS		-.42***	.44***	-.13	-.26*	-.31**
DACC			-.08	.18	.17	.27*
AoCD				-.32*	-.13	-.26*
VIV					.28*	.31*
DTRAN						.15
MEDAW						
<u>#1 Post-test</u>						
DAS		-.41***	.39**	-.33*	-.26*	-.14
DACC			-.29*	.50***	.43***	.13
AoCD				-.30*	-.21	-.11
VIV					.36**	.40**
DTRAN						.09
MEDAW						
<u>#2 Post-test</u>						
DAS		-.36**	.31*	-.26**	-.21	-.09
DACC			-.07	.35**	.43***	-.07
AoCD				-.24	-.25	-.01
VIV					.28**	.42***
DTRAN						.14
MEDAW						

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

reported experience that one's own death could be accepted without regret (death transcendence); and, 4) a negative relationship between avoidance of the ontological confrontation and the self-reported experience of calm, detached, inner-centredness (meditative awareness).

Avoidance-Confrontation Relationships for the Experimental Groups (n = 60). The pre-test, immediate post-test, and two weeks follow-up post-test correlations between the death concern variables are summarized for the total sample of participants ( $n = 60$ ) in Table 12.

With the exception of the relationship between avoidance and death transcendence ( $r = -.13$ , n.s.) the relationships found at pre-testing for the participants ( $n = 60$ ) are the same as the relationships found for the total sample ( $n = 313$ ) although the magnitude of the correlation coefficients and significance levels are less for the smaller group of participants. That is, Avoidance of the Ontological Confrontation of Death (AOCdA) was found to be positively correlated with death anxiety ( $r = .44$ ,  $p < .001$ ) and negatively correlated with vivia ( $r = -.32$ ,  $p < .05$ ) and meditative awareness ( $r = -.26$ ,  $p < .05$ ).

The pattern of the relationships between death concern variables found on pre-testing was altered following experimental inclusion for the 60 subjects. Immediately following the experiment, the relationship between avoidance of the ontological confrontation of death and death anxiety was found to be less significant than the pre-test relationship ( $r = .39$ ,  $p < .01$ ) and this reduced significance was found again two weeks following involvement in the experimental procedure ( $r = .31$ ,  $p < .05$ ). The correlation between avoidance of the ontological confron-

tation of death and vivia was found to be gradually reduced in magnitude and two weeks following the experiment this relationship was no longer significant ( $r = -.24$ , n.s.). Immediately following the experiment, the previously non-significant relationship between death acceptance and avoidance of the ontological confrontation of death ( $r = -.29$ ,  $p < .05$ ) was found to be significant; however, two weeks after the experiment, the relationship between avoidance of the ontological confrontation and death acceptance ( $r = .07$ , n.s.) was consistent with the pre-test correlation. Although correlations between avoidance of the ontological confrontation and death transcendence immediately following and two weeks after experimental participation ( $r = .21$ ;  $r = .25$ , respectively) did increase in magnitude over the pre-test correlation. ( $r = -.13$ ), all of these correlations were non-significant. Immediately following the experiment, the relationship between avoidance of the ontological confrontation of death and meditative awareness ( $r = -.11$ ) was non-significant and the magnitude of the correlation was found to be even more reduced ( $r = -.01$ ) two weeks following the experiment. The pre-test correlation between avoidance of the ontological confrontation and meditative awareness ( $r = -.26$ ) was significant at the .05 level.

In summary, the analysis of the relationships between avoidance of the ontological confrontation of death and the other death concern variables over time for the 60 subjects who engaged in the fantasy procedure indicated the following experimental effects: 1) ontological confrontation of death and the self-reported experience of energy and



the ability to complete tasks efficaciously (Vivia) were no longer related; and, 2) ontological confrontation of death was no longer related to self-reported altered states experiences (Meditative Awareness). These changes in the interrelationships following the experiment reflect the significant change in Meditative Awareness for all groups and the relationship between Vivia and Meditative Awareness noted previously (page 84 and 78, respectively).

Avoidance-Confrontation Trends for Experimental and Control Treatment Groups. The group means and standard deviations for the experimental and control treatment groups is summarized by pre-test, post-test #1, and post-test #2 in Table 6. A comparison of the group means over time reveals that the control treatment group scores on the Thau-berger (1974) Avoidance of the Ontological Confrontation of Death, Form A, increased over time; whereas the experimental treatment group scores on the Avoidance of the Ontological Confrontation of Death increased slightly immediately following experimental treatment and were decreased below the pre-test level two weeks after the experiment. These comparisons are indicative of a reduction in Avoidance of Ontological Confrontation of Death two weeks following and commensurate with participation in a personal death fantasy experience.

Avoidance-Confrontation Trends for Low Death Anxious and High Death Anxious Experimental Treatment Groups. Table 7 summarizes the group means and standard deviations for the low death, anxious and high death anxious experimental treatment groups by pre-test, post-test #1, and post-test #2. A trend over time consistent with the total experi-

mental treatment group is evident for the high death anxious experimental treatment group. That is, Avoidance of the Ontological Confrontation of Death for the high death anxious treatment group increased slightly immediately following participation in the experimental procedure; however, two weeks following experimental inclusion, the mean of Avoidance of the Ontological Confrontation of Death for the high death anxious experimental treatment group was found to be lower than the pre-test mean. On the other hand, a comparison of the low death anxious experimental treatment group means reveals a different trend than the trend noted for the high death anxious experimental treatment group. The group mean for the Avoidance of the Ontological Confrontation of Death immediately following the experiment was found to be lower than the pre-test group mean for the low death anxious experimental treatment group; however, two weeks after experimental inclusion, the low death anxious experimental treatment group mean was higher than the pre-test mean on the Avoidance of the Ontological Confrontation of Death scale.

These trend comparisons suggest a differential sensitivity to the personal death fantasy dependent on initial or pre-test death anxiety level. If the group members who were low death anxious engage in a personal death fantasy experience, the results of the present study suggest that as a group they will show a self-reported tendency to confrontation of death one day after the experience, and a tendency to increased avoidance of ontological confrontation, higher than pre-fantasy level, two weeks after participation in the fantasy experi-

ence. However, if they were high death anxious, the results of the present study suggest that they will tend to be more avoidant immediately following the experience and two weeks after the fantasy experience, they will tend to confront death even more than they would have prior to the fantasy.

#### Summary of Results by Hypotheses

Before proceeding with a discussion of the results, the hypotheses will be summarized together with the pertinent results of the present study that bear on each one.

Hypothesis (1a) stated that death anxiety was expected to be positively correlated with the self-reported experience of being fully charged with energy and able to complete difficult tasks with ease (Vivia). Hypothesis (1a) was not supported by the analysis of the correlation matrix derived for the total sample pool ( $n = 313$ ).

Hypothesis (1b) stated that death anxiety was expected to be negatively correlated with death acceptance. Hypothesis (1b) was supported by the analysis of the correlation matrix derived for the total sample pool ( $n = 313$ ).

Hypothesis (1c) stated that death anxiety was expected to be negatively correlated with the self-reported experience of high life satisfaction (Death Transcendence). Hypothesis (1c) was supported by the analysis of the correlation matrix derived for the total sample pool ( $n = 313$ ).

Hypothesis (1d) stated that death anxiety was expected to be negatively correlated with the self-reported experience of calm, detached,

inner-centredness (Meditative Awareness). Hypothesis (1d) was supported by the analysis of the correlation matrix derived for the total sample pool ( $n = 313$ ).

Hypothesis (2) stated that two weeks following subjects' participation in the personal death fantasy, it was expected subjects' scores on the death anxiety scale (Templer's DAS) would be significantly lower than pre-test scores.

Hypothesis (2) was not supported. Analysis revealed that significant effects over the three testings were due to increased meditative awareness for all subjects. An overall regression to the mean effect was observed on the death anxiety variable. That is, the high death anxious group evidenced a reduction in death anxiety whereas the low death anxious group increased the mean level of death anxiety two weeks after the experiment. The control group also increased the observed mean level of death anxiety, indicating an experimental effect for the high death anxious experimental treatment group.

Hypothesis (3) stated that the degree of involvement with the process of the personal death fantasy would be significantly related to the pre-post changes in death anxiety.

Hypothesis (3) was partially supported. Multivariate analysis of variance with the process involvement variables revealed that subjects who participated in the personal death fantasy experience expended more time, had more interventions, had more thought units categorized as focused and had more thought units categorized as externalizing in the second fantasy (the death fantasy) than control

subjects in the second fantasy (a second innocuous fantasy). There were more experimenter interventions in the processing or review than the reported fantasy phase of the second fantasy for all subjects. Covariate analysis revealed that predominant level of vocal style remained consistent across the two fantasy experiences for all subjects and the number of death associated words emitted in the second fantasy (personal death fantasy) for the experimental treatment group was related to the frequency of focused, externalizing, and limited voice quality thought units in the first fantasy.

Multivariate analysis of variance of the death concern variables with the process involvement variables (time expended in the death fantasy, frequency of thought units categorized as focused in the death fantasy and frequency of thought units categorized as externalizing in the death fantasy) included as covariates, revealed significant relationships between the process involvement variables and the death concern variables. The three process involvement variables were significantly related to death anxiety (Table 11). Time spent in the personal death fantasy and frequency of thought units categorized as externalizing were positively related to death anxiety. Frequency of thought units categorized as focused in the personal death fantasy was negatively related to death anxiety. Death acceptance and the time spent in the death fantasy were negatively related. Frequency of thought units categorized as focused in the death fantasy was significantly related to death acceptance. Frequency of externalizing thought units in the death fantasy was also negatively and sig-

nificantly related to death transcendence. The pre-, post- #1, and post- #2 changes on the death concern variables were non-significant.

The process involvement results are indicative of a relationship between pre-test levels of death concern variables and process involvement as well as indicative of more involvement for the experimental treatment groups as opposed to the control groups. The non-significant time effects on the death concern variables with the process involvement variables treated as covariates are suggestive of a significant relationship between pre-post death concern changes. However, owing to the non-significant changes in death anxiety, it cannot be definitively stated that the degree of process involvement was related to a significant change in death anxiety.

The final area of investigation for the present study was the relationship between Thauberger's (1974) Avoidance of the Ontological Confrontation of Death (AOCd) and the other death concern variables. These relationships were investigated with the total sample pool ( $n = 313$ ), the total subject group ( $n = 60$ ), and the experimental treatment groups.

With the total sample pool the following relationships were significant: a) avoidance of the ontological confrontation of death and death anxiety; and, b) ontological confrontation of death and the self-reported experiences of high life satisfaction (death transcendence), calm, detached, inner-centredness (meditative awareness) and excess energy with efficacious problem-solving ability (vivia).

Similar relationships, except the confrontation and life satisfaction which was non-significant, were found with the pre-test data from the subjects who engaged in the fantasy procedures. Comparison of the relationships between the avoidance-confrontation continuum and the other death concern variables over time for the total experimental group ( $n = 60$ ) revealed experimental effects which resulted in a non-significant relationship between ontological confrontation of death and the self-reported experiences variables of vivia and meditative awareness. These non-significant relationships over time are probably due to the significant change in meditative awareness over time and the relationship between vivia and meditative awareness.

The examination of AOCd group mean trends over time indicated that the experimental treatment effectively reduced the level of ontological avoidance when compared to the control group. The high death anxious treatment group also reduced the mean level of ontological avoidance over time; however, the low death anxious experimental group increased the mean level of avoidance of the ontological confrontation of death. These trends over time on the avoidance of the ontological confrontation of death measure suggest differential treatment effects dependent on the range of death anxiety.

## CHAPTER IV

### DISCUSSION

Although the results of this study failed to confirm a confrontation effect, several features of the results suggest that the subjects' death anxiety scores changed during the procedure. The present discussion will examine the factors which may have contributed to the non-significant death concern changes in the present study.

One factor which may account in part for the non-significant changes in death anxiety is the statistical design limitations of the present study. The two control groups were collapsed into one group prior to statistical analyses. Consequently, the observed differential changes dependent on pre-test death anxiety level were lost in the analysis of changes in death concern over time.

A second factor is the insensitivity of the death fantasy to the arousal of personal death anticipations. Although there were significant differences between experimental and control treatment groups on the process involvement variables indicative of increased involvement for the experimental treatment groups, the process involvement variables were observed to be relatively consistent over time for the groups in the present study. Consequently, it may be that the individuals engaging in the death fantasy did not confront and resolve their death anticipations. That is, the structure of the fantasy



reporting and the death fantasy instructions of the present study may not have sufficiently aroused death anticipations.

Thirdly, the period of time elapsed before the administration of the follow-up measures of death concern may have been insufficient in the present study. Individuals may require a time period longer than two weeks following engaging in a personal death fantasy before consolidation occurs.

Another factor may be the confounding influence of the changes in meditative awareness. It may be that the experimental fantasy procedure affected the subjects' response or orientation to death rather than death anxiety.

A fifth factor which may have affected the results of the present study is the nature of death anxiety itself. Considering the existential tenet that personal death issues comprise the core of personality structure, the death fantasy procedure may not have been sufficiently long and intense enough to expect changes in death anxiety.

These five factors suggest that the fantasy procedure utilized in the present study may not have constituted an adequate test of the confrontation hypothesis.

Furthermore, the psychological state of the volunteers may account, in part, for the non-significant relationship between vivia and death anxiety evidenced in the pre-test intercorrelations.

These six factors will be discussed in the following sections. Finally, the results of the present study, as well as previous research in the area will be discussed from the perspective of limitations of

the present study and recommended directions for future research will be outlined.

### Statistical Design

One factor which may be involved in the non-significant change in death concern is the statistical design of the present study. It will be recalled that the data of the low and high death anxious groups was collapsed in the statistical analyses. This collapsing of the two ranges of death anxiety may have obscured any differential effects which were dependent on the pre-test range of death anxiety. The group mean trends observed on the death anxiety and avoidance of ontological confrontation of death in the present study provide evidence for a differential experimental effect dependent on pre-test level of death anxiety. These trends will be examined in the present section.

Experimental Effects--Low and High Death Anxiety Groups. . Comparison of Low and High Death Anxiety Experimental Group effects over time revealed a differential treatment effect on the death anxiety measure. The mean death anxiety level for the Low Death Anxious Experimental Group was observed to increase over time indicating an experimental effect of increased death anxiety. However, the High Death Anxious Experimental Group evidenced an experimental effect of a decrease in death anxiety. These experimental group differences were not statistically analyzed in the present study owing to design limitations. Because the analysis of experimental effects necessitated equal group membership, experimental to control comparison effects required that

the control groups be analyzed together. That is, the high and low death anxious control group were considered as one Control group in the analysis. Consequently, the comparative effects between Low Death Anxious Experimental and the Low Death Anxious Control groups were obscured by the analysis. Similarly, the High Death Anxious Experimental and High Death Anxious Control comparative analysis were not undertaken owing to the constrictions of the analysis and the design limitations of the present study. If a larger control group had been employed in the present study, the differential effects dependent on the pre-test range of death anxiety could have been examined statistically and these effects may have been significant for one or both of the experimental groups.

Experimental Effects--Avoidance-Confrontation Response to Death.

Examination of the treatment effects on the Avoidance-Confrontation response to death measurement (AOCd) also revealed a differential effect dependent on death anxiety which was obscured by the statistical design limitations of the present study. Although individuals overall tended to reduce their avoidance level or tended to be more confronting two weeks following the visually imagined personal death fantasy procedure, individuals whose pre-test scores on death anxiety were in the high range tended to be more confronting in their response to personal death anticipations following personal death fantasy. However, individuals whose pre-test death anxiety scores were in the low range tended to be more avoidant in their response to personal

death anticipations following the visually imagined personal death fantasy experience.

The opposite effects on the avoidance-confrontation continuum observed for the high death anxious and the low death anxious experimental treatment groups is interesting considering the previously discussed differential trends observed for the death anxiety measure. For the low death anxious experimental group, the trends on the avoidance-confrontation continuum are similar to the changes in mean death anxiety, indicating an overall regression to the mean and a relationship which is consistent for both measurements over time. However, the mean trends over time indicate that the relationship between AOCd and death anxiety was not consistent for the high death anxious experimental group. The direction of high death anxious group mean change on death anxiety was observed to be opposite to the direction of group mean change on the avoidance-confrontation measure. Considering the significant positive relationship between AOCd and death anxiety for the 60 subjects, these observations suggest that the personal death fantasy had differing effects on death anxiety depending on whether or not the individual was an avoider or a confronter in her response to death. That is, high death anxious individuals tend to be avoiders ( $r = .63, p < .003$ ). When death anxiety is aroused, it may be expected that the avoiders will tend to be more avoidant of the ontological confrontation in order to deal with the aroused emotion. However, the overall effect for the high death anxious group in the present study was a decrease in both the death anxiety and the avoidant measures.

These opposite to expected results indicate that the visually imagined personal death fantasy may have reduced the avoidance of death tendency for the high death anxious group.

The significant relationship between AOCd and death anxiety for the pre-test groups indicated that low death anxious individuals would be more confronting in their orientation to death. Although examination of the directional changes of the low death anxious experimental group on the measures of death anxiety and AOCd support this expectation, the relationship between AOCd and death anxiety ( $r = -.08$ ) was not significant for the low death anxious experimental group. This non-significant relationship between death anxiety and avoidance-confrontation may be due to a differential response to death for the low death anxious individual. That is, self-reported low levels of death anxiety may be due to either a tendency to confront or a tendency to avoid the confrontation of personal death anticipations. However, the observations of the present study indicated that self-reported high death anxiety was related to a tendency to avoid ontological confrontation.

In the present study, the differential trends observed for the high death anxious and low death anxious groups on the avoidance-confrontation continuum and the relationship between the avoidance-confrontation continuum and death anxiety as well as the effects these trends may have had on the process involvement effects could not be statistically analyzed owing to the limited number of subjects in the

low and high death anxious control groups which necessitated the collapsing of the control groups.

In summary, there are indications that in the observed changes on the measures of death anxiety and avoidance of ontological confrontation the Low Death Anxious Experimental group and the High Death Anxious Experimental group differed. Comparison of the trends for the two experimental treatment groups suggests alteration in the relationship between these two measures. These differential effects observed in the present study were not analyzed statistically owing to the limitations of the statistical techniques and the inadequacies of the present design.

#### Sensitivity of the Death Fantasy Method

Although the personal death fantasy included in the present study was intended to engage individuals in their personal death anticipations, the content and the procedure of the death fantasy may not have aroused anticipations of death as measured by Templer's Death Anxiety Scale. This insensitivity of the death fantasy method which may have contributed to the non-significant death concern changes observed in this investigation will be discussed in this section.

Initially a multidimensional approach incorporating all of the death concern variables will be discussed as an alternative death concern conceptualization as opposed to Templer's Death Anxiety Scale by itself. Secondly, the results of the analyses with the process involvement variables will be discussed. It is contended that the "quality" of the process involvement and the death fantasy procedure

indicated that the experimental subjects did not engage their anticipations. Consequently, it is argued that the death fantasy content and procedure may not have sensitized the subjects to their personal death anticipations.

A Multidimensional Approach. Previous research (Durlak, 1972) indicated that different measures of death anxiety and fear are selectively sensitive to particular aspects of the death concern construct. Templer's (1970) Death Anxiety Scale (DAS) was included in the present study as the measure of death anxiety. Although direct evidence is not available in the present study, it may be that overall measures of DAS taken by themselves are not sensitive to the fantasy oriented confrontation.

However, the psychometric scales in the present study could be conceptualized as dimensions of an overall multidimensional death concern construct. The results of the factor analysis and the intercorrelations with the pre-test scores on the death concern variables support this contention. Although there was a moderate degree of communality for these five scales, the principal components factor analysis in the present study revealed that each scale contributed a significant unique component to the analysis. Assuming the multidimensional correlation matrix is stable over time, it is conceivable that one factor in the multidimensional construct may change, followed by other changes in the correlation matrix. Consequently, the significant overall increase on the meditative awareness dimension may be in part accounted for by the unique sensitivity of the experimental process itself.

The total effect on the death concern correlation matrix was not evident because of the inadequate follow-up (see page 119).

Consideration of the meditative awareness variable as one dimension of the multidimensional construct would indicate that a time effect did occur in the present study and the death fantasy did successfully arouse death concern. However, a treatment by time effect would be expected if the personal death fantasy in the present study had successfully engaged the experimental subjects with their death anticipations. The non-significant treatment by time and treatment effects appear contradictory to the contention that meditative awareness is one dimension of the multidimensional construct of death. However, a more parsimonious explanation at present for the non-significant treatment by time effects is the insensitivity of the death fantasy.

Process Involvement. Although analysis of the process involvement effects revealed significant relationships between the process involvement variables and the death concern variables, it may be questioned whether subjects did engage their death anticipations and resolve their aroused anticipations. In this section, the "quality" or type of involvement will be discussed. It is assumed that if subjects are not "qualitatively" involved in the death fantasy process, the fantasy itself did not successfully arouse the subjects' death anticipations. Anecdotally, the experimenter witnessed a number of subjects who either miraculously recovered or appeared to deny what they were fantasizing. In addition, the various analyses with the process involvement measures



TABLE 13

Voice quality total averaged % by condition and group

	All groups	Low DAS		High DAS	
		Experi- mental	Control	Experi- mental	Control
Condition #1					
Ave. % Focused	17.76	27.91	10.07	17.11	6.47
Externalizing	76.20	63.50	89.93	74.68	90.93
Limited	5.67	8.32	0.00	7.92	1.52
Emotional	.37	.27	0.00	.29	1.08
Condition #2					
Ave. % Focused	16.95	26.03	14.77	13.98	6.94
Externalizing	78.75	68.14	85.23	79.58	91.82
Limited	3.71	5.59	0.00	5.21	.66
Emotional	.59	.25	0.00	1.24	.58
Condition #3					
Ave. % Focused	18.15	33.54	8.62	12.84	7.53
Externalizing	76.22	58.68	90.52	78.85	91.75
Limited	5.54	7.53	.85	8.31	.71
Emotional	.08	.25	0.00	0.00	0.00
Condition #4					
Ave. % Focused	20.01	33.68	12.08	15.70	9.22
Externalizing	75.68	59.69	85.62	80.23	88.59
Limited	4.02	6.15	2.31	3.66	2.19
Emotional	.29	.48	0.00	.40	0.00

suggests that subjects may not have engaged or resolved their personal death anticipations. Consequently, the death fantasy methodology in the present study may not have successfully aroused personal death anticipations. In other words, the personal death fantasy may have been insensitive to the arousal of death anticipations.

Evidence for the contention that the present study's death fantasy may be insensitive to death anticipation arousal will be discussed in this section under the following headings: 1) Externalizing Thought Units in the Personal Death Fantasy; 2) Experimental Interventions; 3) Process Involvement Between First and Second Fantasies; 4) Report and Processing Differences in the Second Fantasy; and, 5) Avoidance-Confrontation and Process Involvement.

Externalizing Thought Units in the Personal Death Fantasy. The process involvement results indicated that subjects were more involved with the process of the Personal Death Fantasy; however, the Experimental group also had more Externalizing units in the second fantasy than the Control group which is contradictory since Externalizing voice quality is indicative of non-involvement (Rice et al., 1979). Further, the proportion of Externalizing thought units for all groups in the present study was significantly higher than the other three voice quality categories (see Table 13). The high level of Externalizing thought units for all groups indicates that the subjects may not have been qualitatively involved with the process of the fantasy. Although experimental subjects were more involved as indicated by their reduced proportion of Externalizing thought units when compared

with their controls, the results suggest that the experimental subjects were not significantly qualitatively involved with the death fantasy to evidence a significant change in self-reported death concern.

Experimenter Interventions. The increased number of interventions of the experimental versus the control group may also provide evidence for the assertion of reduced qualitative process involvement in the content of the fantasy. It may be that subjects who require more "probes" into a relatively sensitive emotional issue and who emit externalizing verbalizations are primarily dealing with the issue by using denial and consequently will not allow themselves to "work through" the emotion aroused by the particular issue. Since the present study did not control for the mechanism of denial, this assertion is tentative and remains to be substantiated by further experimentation.

Process Involvement Between First and Second Fantasies. The highly significant relationship between the two fantasies on the process involvement measures in the present study suggests that the personal death fantasy did not have a differential effect on subject involvement in the process. These non-significant deviations from baseline for all subjects provide further evidence for the previous suggestion that non-significant death concern changes may be explained by the contention that the particular fantasy incorporated in the present design may not be sensitive enough. Since all experimental subjects in the present study received the same death fantasy instruc-

tions, varying the experimental death fantasy instructions may reveal a more sensitizing approach which will significantly reduce death concerns. The quality of the variation will be discussed further (see page 125).

Report and Processing Differences in the Second Fantasy. In the present study it was expected that subjects, with support, may reach a resolution point possibly during the processing phase of the fantasy.

Previous research (Greenberg, 1980; Greenberg & Higgins, 1980) with voice quality measures indicated that a significant shift in the proportion of Focused and Externalizing voice quality in the direction of increased Focused voice quality, was apparent at the point of a conflict resolution. In the present study, both the experimental and control groups maintained their respective levels of involvement throughout the two phases of the second fantasy. The non-significant changes between the two phases of the second fantasy on the voice quality process involvement measures indicates that "a point of resolution" was not realized in the present study. The non-significant changes in process involvement in the second fantasy also provides support for the explanation that non-significant death concern changes may be possibly due to the relative insensitivity of the death fantasy instructions to the arousal of death anticipations.

Avoidance-Confrontation and Process Involvement. Since response to death was theoretically expected to influence engaging death sensitive stimuli, it would be expected that measures of process

involvement and response to death measures would be related. However, the relationship between AOCd and the process involvement variables for the experimental groups overall in the present study was non-significant (see Table 11). Although these results may be partly due to the insensitivity of the death fantasy, a more probable explanation, however, is the nature of the AOCd instrument itself, which was discussed previously. Since the data for both experimental groups was collapsed for the statistical analysis of the effects of process involvement, the experimental changes in AOCd which are different for the low and high death anxious groups may have obscured the relationship between process involvement variables and AOCd.

In this section, evidence for the insensitivity of the death fantasy was presented and discussed. The process involvement analyses revealed the following contributing evidence: 1) the high proportion of thought units categorized as Externalizing in the personal death fantasy; 2) the increased number of experimenter interventions during the death fantasy; 3) the highly significant relationship between the process involvement variables in the initial fantasy and the process involvement variables in the second fantasy; 4) the lack of evidence for a "resolution point" in the death fantasy; and, 5) the non-significant relationship between process involvement and avoidance-confrontation response to death.

#### Summary of the Sensitivity of the Death Fantasy Factor

Initially, the discussion of the sensitivity factor centred on evidence for the consideration of meditative awareness as one dimen-

sion in the multidimensional construct of death which was comprised of the whole battery of pre-test scales. These assumptions would have resulted in partial support of the change in death concern hypothesis owing to the significant change in meditative awareness observed in the present study; however, the non-significant treatment and treatment by time results are contradictory to these assertions. At present, a more parsimonious explanation of the non-significant change in death anxiety is that the present study's death fantasy procedure and content did not arouse personal death anticipations.

Further evidence for the assertion that the death fantasy content and procedure in the present study is insensitive, is also provided by the Process Involvement analyses. The discussion of the process involvement effects indicated 1) the quality of the involvement, 2) the lack of evidence for a "resolution point", and, 3) the non-significant relationship between process involvement and the avoidance-confrontation measure evidence support the contention that the personal death fantasy method employed in the present study may not have aroused personal death anticipations. Furthermore, the increased number of experimenter interventions in the death fantasy indicated that the fantasy procedure employed may have altered the involvement in the death fantasy.

#### Timing of the Follow-up - Consolidation Theory

A third factor which may have accounted, in part, for the non-significant experimental group versus control treatment group effects of the three testings, was the timing of post-test #2. In the present study, the second post-test occurred two weeks following participation

in the experiment. However, Bohart and Bergland (1979) and Murray (1974) indicate that post-test measures should be taken at least 10 weeks following the experimental treatment. Consequently, it may be that in the present study not enough time was permitted prior to the administration of a follow-up measure.

#### Confounding Influence of Meditative Awareness

Another factor which may have influenced the effects of the fantasy condition is that of the confounding influence of the increase in meditative awareness. The results of the present study indicated that the meditative awareness variable increased over time and the correlation between death anxiety and meditative awareness reduced to non-significant levels. These results suggest the visually imagined fantasy experience affected the approach or response to death.

Previous research (Garfield, 1974; Kastenbaum & Aisenberg, 1972; Morgan, 1975) indicated that the response to death, which may be considered as the defensive response to death anxiety, is an important confrontation research methodological consideration which is related to meditation. The results of the present study suggest an increase in the meditational level commensurate with the experimental fantasizing. Garfield (1974) indicated that training in meditational practices would alter the individual's approach or response to death anticipation. It may be that the present study's experimental procedure had the effect of "training in altered state or meditational techniques" thereby altering individual response to death by reducing death anxiety defenses. The experimental treatment effects on the

avoidance-confrontation measures, which were discussed in a previous section, suggest such a change in the high death anxious individual's approach to death concern. If a further follow-up measure had been included in the present study, the correlation between death anxiety and meditative awareness may have returned to pre-test significance levels along with an appreciable reduction in death anxiety. On the other hand, it may be necessary for the individual to engage in further confrontations before death anxiety is significantly reduced.

#### Nature of Death Anxiety

A final although important possible explanation for the non-significant death anxiety changes in the present study may be the nature of death anxiety itself. Considering the central importance the issue of death has in existential personality, it may be naive to expect changes in core personality structure commensurate with only a one-hour confrontation experience. The one-hour fantasy experience employed in the present study and possibly other confrontation methods may not be powerful enough to affect changes in death anxiety.

#### Psychological State-Effect on Vivia

As was indicated in the outline at the beginning of this chapter, the volunteers' psychological state may have accounted for the non-significant relationship between death anxiety and vivia on the pre-testing. On the basis of previous research (Morgan, 1976), a significant relationship between death anxiety and vivia was expected in the present study. However, the anticipation of potential subjects



for the present study may have suppressed vivia scores for a proportion of the volunteers. It is conceivable that volunteers for participation in an experimental death investigation involving fantasy may be qualitatively different in their reporting of experiences indicating self-assurance and energy (vivia) than subjects volunteering for a paper and pencil correlational analysis such as Morgan's (1975) study. It may be that individuals who volunteer for a study such as the present investigation may not be as self-assured on pre-testing as the subjects who volunteered for the Morgan (1976) study. Consequently, a proportion of the individuals volunteering for the investigations similar to the present study may not respond in the positive direction to test items indicating that they perceive themselves as able to complete tasks with ease and fully charged with energy (vivia) while they anticipate the ambiguity of the experimental situation. However, following the completion of the experiment, these subjects may report levels of self-assurance and energy more consistent with their generally held self-perceptions. Analyses of pre-, post-test changes in vivia for the experimental groups provide support for these assertions (see Tables 6 and 7). All of the group means increased following the experiment for the experimental treatment groups. It is also notable that the relationship between death anxiety and vivia was statistically significant ( $p < .05$ ) for the experimental participants on both of the post tests (see Table 12). This assertion that vivia may possibly be an environmentally sensitive measure of energy and self-assurance warrants further investigation.

### Recommendations for Future Research

In spite of the non-significant pre-post changes in death concern the present design supported the hypothesis that a relationship exists among death concern variables, and considered the process of a visually imagined death fantasy experience for both high and low death anxious subjects which yielded interesting results and directions for future research.

Perhaps the most salient value of the present study was the demonstration of the viability of the methodology. To date, the research concerned with confrontation of personal death anticipations have apparently ignored the multidimensional aspects of the confrontation medium. The inclusion of measures of process involvement in the present study represents a first attempt to control for the salient aspects of the confrontation medium.

A relationship between process involvement and death concern has been demonstrated in the present study. Furthermore, the process involvement variables have demonstrated their utility in terms of providing explanations for the non-significant results and highlighting directions for future research. The present results with the process involvement variables are promising and warrant further investigation.

The present discussion focused primarily on explanations for the non-significant results, and the limitations of the present research design. Initially, it was pointed out that the non-significant changes in death concern over time may possibly be explained on the

basis of the following factors: a) the collapsing of the high and low ranges of death anxiety in the statistical analysis; b) the insensitivity of the death fantasy experience to significantly alter death anxiety levels; 3) the timing of the follow-up test; d) the confounding influence of the meditative awareness variable; and, e) the nature of death anxiety. Furthermore, it was suggested that the non-significant relationship between vivia and death anxiety found in the present study may be due to the psychological state of potential subjects who are volunteering for an ambiguous experimental procedure.

The results and the limitations of the present study suggest some fruitful avenues for further investigation.

Control Group. A control group for both high and low ranges of death anxiety matched in number to the experimental groups is also suggested. Although the present study provided evidence of differential high and low death anxiety range effects on the death concern variables, these results could not be tested statistically because the high and low death anxious control groups were not equal in number to their experimental treatment counterparts.

Avoidance-Confrontation Continuum. It is recommended that adequate controls be included to account for both avoidance and confrontation response to death along with the ranges of death anxiety. For example, it is suggested that low death anxious avoiders, low death anxious confronters, high death anxious avoiders and high death anxious confronters may provide optimal grouping in the confrontation research. The present study did not adequately control for the

avoidance-confrontation continuum. Consequently the observations of a differential experimental effect on pre-test high and low death concern dependent on: 1) the relationship between level of death anxiety and the avoidance-confrontation continuum; 2) the relationship between death fantasy process involvement and the avoidance-confrontation continuum; and, 3) the effects of the death fantasy process involvement on the avoidance-confrontation continuum are suggestive at this point. These relationships warrant further investigation possibly also with other avoidance measures such as the Threat Index and with a larger sample of both high and low death anxious individuals. At the very least, the present study suggests that the avoidance-confrontation continuum is a necessary and important methodological concern for future death confrontation research.

Sensitivity of Confrontation Media. The comparative sensitivity of the several confrontation media warrants investigation. The present results indicate that the particular personal death fantasy incorporated in the present study may have been insensitive to the arousal of personal death anticipation. Comparison of the death concern changes for several different confrontation fantasy experiences may provide significant results commensurate with existential hypotheses.

Fantasy Structure. The degree of ambiguity afforded by the particular instructions of the fantasy experience may also provide significant results. The present study afforded almost unlimited direction for the fantasy following the administration of the instructions.

Providing more structure for the subject in an emotionally sensitive area may assist the subject in engaging the fantasy with resultant increases in process involvement and reduction in death concern. If, for example, subjects were asked to imagine they just died only or subjects were asked to imagine a sequence of experiences consistent with reported near death experiences, as compared to the instructions administered in the present study, the effects of the degree of fantasy structure combined with the particular matching of subject to fantasy structure may be ascertained.

Fantasy Reporting. Alteration of the reporting requirements for the fantasy may also provide fruitful results. In the present study, subjects were required to report ongoing fantasy awareness. If, for example, the subjects were allowed to report the whole fantasy after they had experienced the entire process by themselves, the degree of involvement may be intensified and death concern changes may be more significant. The interventions by the experimenter in the present study may have interfered with the subjects' involvement with the process of the fantasy.

Follow-up Measures. Finally, the inclusion of a follow-up measure at least four weeks following the experimental procedure is also recommended for future confrontation research. It is highly probable that the non-significant changes in death concern in the present study may have been in part due to the inadequate timing of the follow-up.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

A number of studies have attempted to determine the effects of confronting anticipations of death on death concern measures. There has been a notable failure to substantiate theoretical hypotheses of a reduction in death concern and an increase in individual meaning to existence. Previous investigations have not adequately attended to methodological and conceptual considerations.

The principal purposes of the present study were: 1) to determine whether relationships between death concern instruments found by various researchers would be replicated using a large sample of subjects; 2) to test the effect on death concern variables of a confrontation experience (death fantasy); 3) to ascertain if the subjects' degree of contact or involvement with the process of the visually imagined fantasy experience would significantly effect the changes in death concern; and, 4) to examine the relationship between the avoidance-confrontation measure and the other death concern instruments.

The death concern measures used here included Templer's (1970) Death Anxiety Scale, Thauberger's (1974) Avoidance of the Ontological Confrontation of Death, Ray and Najman's (1974) Death Acceptance Scale and the Vivia, Death Transcendence and Meditative Awareness variables of Morgan's (1975) Personal Experiences Check List.

There were 20 experimentally treated high death anxious subjects who engaged in a visually imagined innocuous fantasy followed by a visually imagined personal death fantasy. An additional 10 highly death anxious subjects comprised a control group which engaged in two innocuous fantasies. Similarly, 20 low death anxious subjects engaged in the innocuous fantasy followed by the death fantasy while 10 low death anxious control subjects experienced the two innocuous fantasies.

Previously found relationships between death anxiety and the following variables were confirmed: 1) death acceptance, 2) death transcendence, and, 3) meditative awareness. However, the expected relationship between death anxiety and vivia was not supported. The latter findings may be explained on the basis of the psychological state of the volunteers for the ambiguous fantasy procedures.

Although significant changes in death concern scores occurred in successive scale administrations, these changes did not vary by the form of treatment. Thus, expected changes in death concern following a personal death fantasy experience were not supported in the present study. Changes in the meditative awareness variable accounted for the significant pre-, post-, and follow-up change effects. Although the results challenge the death anxiety confrontation hypothesis, there are other possible explanations: a) the statistical method which involved collapsing the high and low death anxiety sub-groups, b) the questionable sensitivity of the death fantasy as an adequate confrontation experience, c) the adequacy of the follow-up test as a

measure of consolidation processes, and d) the confounding influence of the meditative awareness variable.

A significant relationship was found between changes on death concern variables and the following process involvement measures: a) time spent in the death fantasy, b) frequency of Focused voice quality units in the death fantasy, and c) frequency of Externalizing voice quality units in the death fantasy. Examination of each subject's process involvement on the two fantasies indicated that the subjects tended to maintain their level of process involvement throughout the experiment. This finding suggests that experimental subjects did not differentially engage the "death fantasy" and supports questioning the adequacy of the death fantasy as a confrontation experience.

Examination of the avoidance-confrontation group mean trends and the relationship between avoidance-confrontation AOCd and death anxiety indicated an effect which was dependent on pre-test level of death anxiety. These results suggest that low death anxious experimental subjects could be either confronters or avoiders while high death anxious subjects were avoiders only.

Discussion of the results focused on the following issues: a) the differential effects dependent on level of pre-test death anxiety could not be analyzed owing to the statistical limitations of the present design, b) the death fantasy reporting structure and the instructions for the death fantasy in the present study may not have aroused personal death anticipations, c) the two week time period prior to the administration of the follow-up test in the present study may not have been



sufficiently long enough to evidence significant death concern changes, d) the confounding influence of changes in meditative awareness may have obscured the results of the present study, and e) the psychological state may have effected the results with the vivia variable. The discussion of these factors suggested that the fantasy procedure utilized in the present study may not have been an adequate test of the confrontation hypothesis.

This study demonstrated some effects that may be useful in future research. For example, the present study demonstrated the viability of process involvement variables as indicators of fantasy sensitivity as well as the importance of controlling for the avoidance-confrontation response to death dimension in future death confrontation research. The recommendations for future confrontation research also included, from the present discussion, the following: 1) control over the avoidance-confrontation response to death dimension along with the high and low ranges of death anxiety may provide more meaningful results, 2) comparison of different content or setting components of the death fantasy experience may reveal an optimal procedure sensitive to the arousal of death anticipations, 3) comparison of differing degree of structure provided by the death fantasy instructions may reveal optimal death fantasy sensitivity to the arousal of personal death anticipations and reduce interference of the experimenter in the fantasy process, 4) allowing subjects to complete the fantasy before reporting the content of the fantasy may also reduce interruption of the fantasy which may increase subjects' involvement in the death fan-

tasy, and 5) the inclusion of a follow-up measure at least four weeks following the experimental procedure may provide more adequate time for the consolidation of the aroused death anticipations which may result in significant death concern changes.

APPENDIX A

INSTRUCTIONS TO BE READ IN PSYCHOLOGY CLASSES

## APPENDIX A

## INSTRUCTIONS TO BE READ IN PSYCHOLOGY CLASSES

"I'm here today to solicit volunteers for a study presently being conducted at the University. The purpose of the research is to provide evidence for the existential tenet that personal death issues underlie all psychological functioning. Specifically, the interrelationships between relevant psychometric measures will be determined. In addition the relationship between these death concern measures and fantasy experiences will be ascertained. Students who volunteer will be asked to complete some questionnaires which I have with me today. Those wishing to volunteer will also be asked to choose a one-hour time slot on a schedule, which I will also circulate today, for which they would be available to participate in the study. The individuals who meet the selection criterion of the study will engage in two visual fantasy experiences, one of which may be a personal death fantasy experience. The fantasy responses will be tape recorded. The individuals who do not meet the selection criterion will be told not to attend the scheduled hour which they have selected either by telephone or via their instructor.

In addition to receiving credit for marks in their course which will be equivalent to 1 point, students who participate in the study will be included in a lottery. All participants in the study have an equal opportunity to win \$50.00.

Are there any questions about the study?

If you are interested please raise your hand and I will distribute the forms which should only take approximately 15 minutes to complete."

APPENDIX B

INSTRUCTIONS FOR COMPLETING PSYCHOMETRIC INSTRUMENTS

## APPENDIX B

## INSTRUMENTS FOR COMPLETING PSYCHOMETRIC INSTRUMENTS

ALL INFORMATION PROVIDED IS AND WILL REMAIN

STRICTLY CONFIDENTIAL

TODAY'S DATE: \_\_\_\_\_

NAME: \_\_\_\_\_ AGE: \_\_\_\_\_ DATE OF BIRTH: \_\_\_\_\_

MARITAL STATUS: S M D W OTHER: \_\_\_\_\_  
(circle one)

NUMBER OF CHILDREN: \_\_\_\_\_

Have you experienced a significant loss within the last year?

Yes \_\_\_\_\_ No \_\_\_\_\_

Attached are a number of statements. Read each statement and decide whether it is true as applied to you or false as applied to you. Indicate by marking a checkmark in the space provided at the end of each statement. If the statement is TRUE or MOSTLY TRUE, as applied to you, mark a check in the space provided after the T. If the statement is FALSE or NOT USUALLY TRUE, as applied to you, mark a check in the space provided after the F. Please answer either T or F for each and every statement.

## APPENDIX C

TEMPLER'S (1970) DEATH ANXIETY SCALE (DAS)



## APPENDIX C

## TEMPLER'S (1970) DEATH ANXIETY SCALE (DAS)

## KEY

T	1. I am very much afraid to die.	T	___	F	___
F	2. The thought of death seldom enters my mind.	T	___	F	___
F	3. It doesn't make me nervous when people talk about death.	T	___	F	___
T	4. I dread to think about having to have an operation.	T	___	F	___
F	5. I am not at all afraid to die.	T	___	F	___
F	6. I am not particularly afraid of getting cancer.	T	___	F	___
F	7. The thought of death never bothers me.	T	___	F	___
T	8. I am often distressed by the way time flies so very rapidly.	T	___	F	___
T	9. I fear dying a painful death.	T	___	F	___
T	10. The subject of life after death troubles me greatly.	T	___	F	___
T	11. I am really scared of having a heart attack.	T	___	F	___
T	12. I often think about how short life really is.	T	___	F	___
T	13. I shudder when I hear people talking about a World War III.	T	___	F	___
T	14. The sight of a dead body is horrifying to me.	T	___	F	___
F	15. I feel that the future holds nothing for me to fear.	T	___	F	___

Scoring in Keyed direction shows higher death anxiety.

## APPENDIX D

THAUBERGER'S (1974) AVOIDANCE OF THE  
ONTOLOGICAL CONFRONTATION OF DEATH (AOCd) - FORM A

## APPENDIX D

THAUBERGER'S (1974) AVOIDANCE OF THE  
ONTOLOGICAL CONFRONTATION OF DEATH (AOCd) - FORM A

## KEY

- |   |   |   |     |   |     |
|---|---|---|-----|---|-----|
| T | 1. I do not wish to read articles on death or dying.  | T | ___ | F | ___ |
| T | 2. Pondering death or dying is not my thing.  | T | ___ | F | ___ |
| T | 3. There are more important things to do than to contemplate death or dying.  | T | ___ | F | ___ |
| F | 4. If I have the opportunity to explore aspects of death I usually take it.   | T | ___ | F | ___ |
| T | 5. If I sense that someone may threaten me with the idea of my own death, I leave that situation as soon as possible. | T | ___ | F | ___ |
| T | 6. It is better to be lively and cheerful than to worry about death.  | T | ___ | F | ___ |
| T | 7. Gloomy topics are too destructive to ever spend much time discussing them.   | T | ___ | F | ___ |
| F | 8. I often will try to be aware of other's concern about death and encourage them to express it.                      | T | ___ | F | ___ |
| F | 9. I do not try to forget those situations in which I felt I was dying.   | T | ___ | F | ___ |
| F | 10. I do not steer clear of gloomy conversations.   | T | ___ | F | ___ |
| F | 11. I do not try to put off thinking about the fact of eventual death.  | T | ___ | F | ___ |
| F | 12. I do not keep my concern about death secret.  | T | ___ | F | ___ |
| T | 13. It is not desirable to think about death.   | T | ___ | F | ___ |
| T | 14. It is best not to remind old aged people of death or dying.   | T | ___ | F | ___ |

## APPENDIX D - PAGE 2

## KEY

- |   |     |   |   |     |   |     |
|---|-----|---|---|-----|---|-----|
| T | 15. | I try to not enter into those situations in which I might be reminded of death. | T | ___ | F | ___ |
| F | 16. | I try to explore my feelings about my eventual death.                           | T | ___ | F | ___ |
| F | 17. | In a discussion, I will sometimes initiate the topic of death.                  | T | ___ | F | ___ |
| T | 18. | I try to control my concerns about death by putting them out of my mind.        | T | ___ | F | ___ |
| F | 19. | I usually try to surrender myself to my concerns about death.                   | T | ___ | F | ___ |
| F | 20. | I do not attempt to deaden my torments about dying whenever possible.           | T | ___ | F | ___ |

Scoring in Keyed direction shows higher avoidance.

## APPENDIX E

## RAY AND NAJMAN (1974) DEATH ACCEPTANCE SCALE

## APPENDIX E

## RAY AND NAJMAN (1974) DEATH ACCEPTANCE SCALE

## KEY

- |   |  |   |     |   |     |
|---|--|---|-----|---|-----|
| T | 1. Since you only do it once, death should at least be interesting.                            | T | ___ | F | ___ |
| T | 2. I know that I have nothing to fear when I die.  | T | ___ | F | ___ |
| T | 3. Death is not something terrible.  | T | ___ | F | ___ |
| T | 4. Death is a friend.  | T | ___ | F | ___ |
| T | 5. Death is a good thing because it leaves the way clear for younger men to have their chance. | T | ___ | F | ___ |
| T | 6. To fear pain makes sense but death is merely a relief from pain.                            | T | ___ | F | ___ |
| T | 7. People who worry about death must have nothing better to do.                                | T | ___ | F | ___ |

Scoring in the Keyed direction shows higher Death Acceptance.

## } APPENDIX F

VIVIA, DEATH TRANSCENDENCE, MEDITATIVE AWARENESS  
VARIABLES OF MORGAN'S (1975) PERSONAL  
EXPERIENCES CHECK LIST (P.E.C.L.)

## APPENDIX F

VIVIA, DEATH TRANSCENDENCE, MEDITATIVE AWARENESS  
 VARIABLES OF MORGAN'S (1975) PERSONAL  
 EXPERIENCES CHECK LIST (P.E.C.L.)

SCALE

- |       |   |   |     |   |     |
|-------|---|---|-----|---|-----|
| MEDAW | 1. Do you ever feel there are events and things which cannot ultimately be explained logically?   | T | ___ | F | ___ |
| DTRAN | 2. At times I have felt that my life has been so complete that I could die without objecting.   | T | ___ | F | ___ |
| MEDAW | 3. Have you ever sat quietly and allowed your mind to slowly quiet and become gradually still?  | T | ___ | F | ___ |
| VIVIA | 4. Sometimes while involved in some physical activity I feel like I've finally achieved an ideal state of functioning.  | T | ___ | F | ___ |
| MEDAW | 5. Have you ever focused at something so hard that you went into a state of extraordinary calm and serenity?  | T | ___ | F | ___ |
| DTRAN | 6. Have you ever been faced with death and had the sensation that it didn't really matter if you died or not?   | T | ___ | F | ___ |
| DTRAN | 7. I have experienced non-earthly beings during out-of-body experiences.  | T | ___ | F | ___ |
| DTRAN | 8. Have you ever felt that the words good and bad, positive and negative, were meaningless distinctions?  | T | ___ | F | ___ |
| VIVIA | 9. Sometimes while involved in some activity I have really felt at peace with myself.   | T | ___ | F | ___ |
| VIVIA | 10. Have you ever had all of your powers come together and focus and be able to do with amazing ease and spontaneity things that would usually be very difficult tasks for you (e.g. in sports, work, social situations, etc.)? | T | ___ | F | ___ |



SCALE

- |       |     |   |   |     |   |     |
|-------|-----|---|---|-----|---|-----|
| VIVIA | 11. | Have you ever actively stared at something and had it slowly (or suddenly) become very strange before your eyes?  | T | ___ | F | ___ |
| VIVIA | 12. | Have you ever been so overwhelmed by a feeling of peace, harmony, and contentment that you felt as if your whole being was somehow temporarily transformed? | T | ___ | F | ___ |
| VIVIA | 13. | Do you ever wake up in the morning feeling really charged with energy?  | T | ___ | F | ___ |
| MEDAW | 14. | Have you ever seen things that you rationally know aren't there?  | T | ___ | F | ___ |
| VIVIA | 15. | At times during orgasm it feels as though my partner and I become one.  | T | ___ | F | ___ |
| DTRAN | 16. | While engaged in some activity have you ever felt so good that you could have died and not cared?   | T | ___ | F | ___ |
| VIVIA | 17. | Have you ever felt while doing some activity that you were totally functioning in unison with yourself and your environment?                                | T | ___ | F | ___ |
| VIVIA | 18. | Have you ever sat staring off into space, actually thinking of nothing and hardly aware of the passage of time?   | T | ___ | F | ___ |

TRUE indicates an increase on the variable specified (i.e. T on item #1 shows an increase on MEDAW - Meditative Awareness).

## APPENDIX G

LETTER AND SUMMARY SENT TO PARTICIPANTS

## APPENDIX G

## LETTER AND SUMMARY SENT TO PARTICIPANTS

164½ Wellington Street,  
St. Thomas, Ontario, N5R 2S1.

Dear

Attached you will find an outline of the research project you were involved in. A further summary of the results will be sent to you when the analyses have been completed.

In addition, the winner of the lottery is Kathy Haworth. She will receive her cheque in this mailing.

Thank you for your participation.

Sincerely,

F. I. Meek

FIM/s

att.

## APPENDIX G - PAGE 2

VISUALLY IMAGINED PERSONAL DEATH  
EXPERIENCE: DEATH CONCERN CHANGES AND  
INVOLVEMENT IN THE PROCESS OF FANTASY

One purpose of the present study was to ascertain whether participation in a visually imagined personal death fantasy would alter personal death concerns.

The second purpose of the study was to describe the involvement in the fantasizing process and ascertain whether the degree of involvement in a visually imagined personal death fantasy would affect pre-post changes in death concerns.

Undergraduate psychology students comprised the pool from which subjects were drawn for the present research. A summary of the research was read in psychology classrooms and students interested in participating were requested to complete pre-test questionnaires and place their name on a schedule indicating mutually available hours for the experiment. The completed questionnaires included Templer's (1970) Death Anxiety Scale (DAS), Thauberger's (1974) Avoidance of the Ontological Confrontation of Death (AOCd), Ray and Najman's (1974) Death Acceptance Scale and the Vivia, Death Transcendence and Meditative Awareness variables of Morgan's (1975) Personal Experiences Check List (P.E.C.L.).

Female subjects who scored at the extremes ( $< 5$  or  $> 10$ ) on the death anxiety measurement instrument (DAS) were included in the experiment. There were 20 experimentally treated high death anxious subjects who engaged in a visually imagined innocuous fantasy (IF)

## APPENDIX G - PAGE 3

followed by a visually imagined personal death fantasy (DF). An additional 10 highly death anxious subjects comprised a control group which engaged in two innocuous fantasies (IF, IFi). Similarly, 20 low death anxious subjects engaged in the IF followed by the DF while 10 low death anxious control subjects experienced the two innocuous fantasies (IF, IFi).

The first innocuous fantasy (IF) for all 60 subjects involved imagining a walk in a meadow. The second or personal death fantasy (DF) which was administered to the 40 experimentally treated high and low death anxious subjects involved imagining a simulated cardiac arrest in a hospital; whereas, the second innocuous fantasy (IFi) which was administered to the 20 high and low death anxious control subjects involved imagining being a tree.

All instructions were audio tape recorded. Each subject was in a reclining position with eyes closed and assisted in developing a relaxed state prior to the administration of the tape recorded-fantasy instructions. Following the fantasy instructions, subjects reported their ongoing fantasy. During the fantasy reporting, minimal prompt were utilized following a 10-second silence in order to elicit verbalization of the fantasy. When no new fantasy detail was reported over a 30-second interval, the subject was asked to open her eyes and the fantasy was reviewed. The processing of the fantasy with the subject's eyes open was designed to elicit further

## APPENDIX G - PAGE 4

facets of the fantasy. When no further elaboration of the fantasy was provided by the subject, the subject closed her eyes again and was assisted in relaxation prior to the administration of the audio tape recorded instructions for the second fantasy. The fantasy reporting and fantasy processing phases for the two fantasies were audio tape recorded for every subject.

Subjects were requested to complete the pre-test questionnaires during the morning of the day following involvement in the experiment and again two weeks after the day they were involved in the experiment.

Audio recordings of the subjects' responses were timed, death associated words counted, and the number of interventions was calculated by experimental phase. In addition, thought units were scored for process involvement using the Voice Quality Training Manual (Rice, Koke, Greenberg, & Wagstaff, 1978).

All data was subjected to computer analyses; however, the results are not as yet completed.

## APPENDIX H

DEATH ASSOCIATION WORDS VERBALIZED BY SUBJECTS

## APPENDIX H

## DEATH ASSOCIATION WORDS VERBALIZED BY SUBJECTS

dead	death
funeral	dead body
die	kill
dying	morgue
funeral home	buried
reincarnation	terminally ill
coffin	bury
incinerated	heaven
dies	casket
dead person	hell (place)
the grave	suicide



## APPENDIX I

## SUMMARY OF VOICE QUALITY CATEGORIES

# APPENDIX I

## SUMMARY OF VOICE QUALITY CATEGORIES<sup>1</sup>

ASPECT	FOCUSED	EXTERNALIZING	LIMITED	EMOTIONAL
Perceived energy	Moderate to high. Voice may be soft but on platform.	Moderate to high; may be a bit above platform but push adequate.	Voice not resting on own platform. Inadequate push.	Not applicable.
Accent	Achieved with loudness and/or drawl more than pitch rise.	Achieved with pitch rise more than loudness or drawl.	Usual for English.	Not applicable.
Accentuation pattern	Irregular; often ragged.	Very regular.	Usual for English.	Irregular.
Pace	Uneven.	Even.	Usual for English.	Uneven.
Terminal contours	Ragged and unexpected.	Pre-planned expected.	Usual, but energy tends to peter out.	Unexpected.
Disruption of pattern	No.	No.	No.	Yes.

<sup>1</sup>Page 6. Rice, L. N., Koke, C. J., Greenberg, L. S., & Wagstaff, A. K. Manual for Client Vocal Quality, Volume II: Instructions for Raters. Counselling and Development Centre, York University, Toronto, 1979.

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## VITA AUCTORIS

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