

STUDIES IN ORTHOTHANASIA:
AN EXPLORATORY PSYCHOLOGICAL INVESTIGATION

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by

Gerald Michael Devins

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GERALD MICHAEL DEVINS

A dissertation submitted to the Faculty of Graduate Studies of
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Abstract

Relationships among death anxiety and attitudes toward voluntary passive euthanasia were explored in terms of proximity to death, experience with death in "important others", and several dimensions of demographic status. Two experimenter-interviewers and three subject populations were employed: 86 young non-life-threatened persons, 62 elderly non-life-threatened individuals, and 63 elderly life-threatened patients. "Young" and "elderly" were operationally defined. A standardized face-to-face one-to-one interview procedure was utilized. Each interview included the administration of the Templer Death Anxiety Scale (DAS), a 7-point Reaction to "A Living Will" (RLW) item (ranging from "strongly agree" to "strongly disagree"), a Background Information questionnaire, and a series of questions concerning participants' experiences with death in "important others".

Results indicated that sex and size of hometown were the only two demographic variables related to death anxiety with females evidencing higher anxiety levels than males (consistent with earlier research) and rural- evidencing more concern than urban-dwellers. Only the size of hometown variable was found to be associated significantly with attitudes toward voluntary passive euthanasia. Rural-dwellers expressed greater uncertainty regarding the acceptability of the practice as a personal outcome. It was speculated that the relative (to cities) absence of modern life-saving technology in rural areas may have contributed to this. This finding was in contrast to that of Kubler-Ross.

Significant differences in death anxiety levels were observed due to the proximity to death factor. However it was the chronological age variable which appeared to be solely responsible, with young participants evidencing significantly higher DAS scores than elderly. Objective health status as either life-threatening or non-life-threatening was not found generally to influence death anxiety. Examination of the specific DAS items on which age-differences were manifested revealed, however, that young and elderly persons differed in terms of the degrees to which they were willing (1) to discuss death-related issues at an open level and (2) to accept death as an unavoidable fact of life. It was suggested that differences in terms of these orientations may contraindicate fear/anxiety as a dimension for the study of death-related attitudes and behavior as they relate to chronological age. Proximity to death did not appear to contribute to RLW scores.

Experience with death in "important others" was not found to contribute to either DAS or RLW scores when this factor was defined in terms of low vs high total number of experiences, some vs no experience, or number of years since most recent experience. When it was defined in terms of the "highest impact" type of "important other", however, a significant Proximity to Death X Highest Impact Type of Death interaction emerged in both dependent measures. The order of death anxiety differences was as follows: young persons specifying an immediate family member as the highest impact type greater than young/close friend or relative greater

than elderly/close friend or relative greater than elderly/
immediate family member. All of these four differences were
significant at the 5% level. While the order of RLW differences
was similar to that observed in DAS scores, the only post hoc
contrast of significance was between young/ and elderly/ immediate
family members. A dimension of representativeness of experiences
with death in "important others" in relation to one's expectations
about his/her own future death was introduced as a possible
mediating factor in this interaction effect.

The relationship between death anxiety and attitude toward
voluntary passive euthanasia remained unclear. A significant
but relatively low correlation ($r = .28$) between the two was ob-
served among the elderly. The fears of personal death, death in the
abstract, and fatal chronic disease were identified as potential
contributors to this relationship. No significant association
between these dependent measures was observed among young participants.
Subjective reactions experienced by the writer during the research,
implications for future research, and implications for professionals
serving the elderly were offered.

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Chapter I

The Psychology of Death and Dying--Studies

Why Investigate?

The science and technology of modern medicine have experienced a dramatic growth and development characteristic of the entire health field in the twentieth century (Mauksch, 1975). The successful development of such therapeutic procedures as hemodialysis, cardiopulmonary resuscitation techniques, open heart surgery, and organ transplantation, among others, has permitted many patients with formerly lethal disorders to return to full and useful lives. However some are only returned to partial health (i.e., their health status is restored but in order to maintain it their post-trauma activities must be limited) and many do not survive resuscitation attempts. It has been estimated (Ad Hoc Committee on Human Tissue Transplantation, 1969) that approximately 2% of all terminal patients treated by modern medicine represent what might be described as tenuous health or "partial death". These patients--in whom the heartbeat may be stimulated electrically, respiration sustained entirely artificially by a mechanical respirator, and who often are in a comatose state (Task Force on Death and Dying of the Institute of Society, Ethics, and the Life Sciences, 1972)--would have been considered dead 25 years ago (Glaser, 1975; McFadden, 1972; Mohandas & Chou, 1971; Rodstein & Bornstein, 1970; Rozovsky, 1972; Silverman, 1971; The Moment of Death, 1972). Many others--while not presenting such a dramatic partial death clinical picture--suffer life-threatening somatic conditions, the prognoses of which imply death as the most likely outcome within the near future (Glaser, 1975). These patients then, who a short

time ago presented no serious problems in matters of medical decision-making, today present problems for ethics, morality, and scientific knowledge. They introduce conflict between the traditional medical values of prolonging life versus preventing suffering--values intimately involved in the medical decision-making process (Degner, 1974).

Traditional Western values have held that the treatment of moribund individuals is a problem to be dealt with solely by medical professionals on the basis of established scientific knowledge within an accepted bioethical framework of principles. Prior to the advent of the "resuscitative revolution", it might be argued, the satisfaction of these two ethical standards--the prolongation of life and reduction of suffering--had remained a relatively simple matter in the treatment of dying patients. Since there existed no "extraordinary" means of maintaining moribund persons alive for extended periods of time, the primary focus of an attending physician's ministrations was directed at the relief of pain and discomfort until the "final release" of death. However, with the development of modern therapeutic measures, the prolongation of life has come to represent an empirical possibility. Such recent cases as that of Karen Ann Quinlan--where the body has been maintained in a biologically functioning state, while the "mind" and all behaviors with which the psychologist is concerned have been said to have perished--would appear to suggest an implicit contradiction between prolonging life and preventing suffering. It has been suggested (Degner, 1974) that such conflict may be expected to arise whenever the application of a given treatment may prolong a patient's life while

withdrawal may permit death to occur (however to add to the complexity this has not occurred, as yet, in the Quinlan case).

It would appear that recent developments in health technology have occasioned a need for the participation of a more varied group of professionals in the attempt to develop an acceptable reformulation of ethical principles which might better serve the needs of society in such paradoxical situations. Recent developments in both the popular media and the scientific literature appear to reflect a more general trend in modern society toward an increasing interest in the areas of Thanatology (the more general study of death and dying) and Orthothanasia (the more specific art and science of enabling moribund individuals to die in a "peaceful", natural, manner). Among those who may offer the necessary new perspectives are included psychologists, philosophers, legislators, and society in general. The ancient Mind-Body problem of metaphysics thus reenters into the question.

The threat of malpractice litigation against physicians and institutions responsible for the treatment of patients in whom the traditional signs of death have been obscured by resuscitative intervention would make it advisable that both legislators as well as the larger society be included among those to be consulted. Currently, medical practitioners who choose to relieve the suffering of moribund patients under their care via the final release of death--by refusing to prolong life--may be criminally prosecuted for homicide (Cantor, 1975; Wilson, 1975). The probability that such a drastic consequence might be implemented is greatest in situations where death has been induced

actively by the attending physician (e.g., via arterial injection of an air embolism) (Hendin, 1973; Maguire, 1974). Yet it has been noted (Horowitz, 1973; Teed, 1974) that contemporary Canadian and American statutory law—with the recent exception of the State of California (Associated Press, 1976)—does not guarantee protection to doctors from legal repercussions. There are cases where death—rather than having been induced actively—has been permitted to occur passively via the withholding of life-prolonging treatments, and it is in these "shades of gray" that ambiguities persist.

Certainly the contributions to be made as well as the benefits to be gained through participation in investigations of the nature of death and dying by research psychologists are legion. As noted, psychological interests in the areas of Thanatology and Orthothanasia appear to be rising along a number of dimensions (e.g., attitude and anxiety of counsellor as well as patient, etc.). Clinical and social psychologists, for example, could quite conceivably aid in the alleviation of grief in clients who have suffered the loss of a loved one as well as effecting a more accepting attitude toward the phenomenon of death—which is after all a part of life! Psychologists could and should be concerned with the perplexing problems posed by such issues as the quality of life (and death), the psychological problems posed by organ and tissue transplantation, euthanasia, etc.

Empirical inquiry into the life-prolonging dilemma has typically focused on the physician. Such investigations however, while always emphasizing the role of the individual patient as a key participant in

this decision-making process, usually have neglected to investigate patients' desires concerning the course of their medical treatment. Thus, for example, specific demographic information (e.g., age, sex, race, finances) associated with a particular individual patient has been demonstrated to influence the doctor's decisions concerning the desirability of prolonging or not prolonging life (Kalish, 1965), while the same information associated with the same individual has not been investigated along the dimension of patients' or potential patients' desires for either the enlistment of life-prolonging measures or the alternative of voluntary passive euthanasia (permitting death to occur at the patient's previous request by withholding potentially life-prolonging therapeutic measures).

A growing body of literature appears to be emerging from research which has been directed at other psychological aspects of the dying process, yet potential implications regarding the question of the "consumer's" feelings about voluntary passive euthanasia and the psychological dimensions which may be involved (e.g., death anxiety, proximity to death, previous experiences with death in others, etc.) have neither been explicated nor explored. While these implications for psychologists have not, as yet, become fully apparent, psychological participation in matters of life and death could only result in benefits to both the current state of scientific knowledge and to society in general.

The Dilemma

The traditional principles of medical bioethics--preservation of life and prevention of suffering--continue to suffice as adequate moral

guidelines in most situations (A New Ethic for Medicine and Society, 1970; Wilson, 1975). The problem of determining the appropriate objectives of medical care may become difficult, however, when all remedial therapies have been exhausted and remaining treatment measures make possible only a severely restricted level of existence. Life is suspended in a state of unconsciousness (Wilson, 1975).

The brain death syndrome—irreversible coma in individuals maintained "alive" entirely by cardiopulmonary resuscitation machinery in whom irreparable brain damage has been observed and where the resumption of consciousness is impossible (Devins & Diamond, 1976)—represents the great majority of these cases. In such situations North American medical science (along with numerous international policy-making bodies) has attempted to resolve the dilemma by fiat—by reformulating the traditional operational criteria of death and consequently several revised operational "definitions" of death have appeared in the scientific literature within the past decade (e.g., Ad Hoc Committee on Human Tissue Transplantation, 1969; Harp, 1974; Mohandas & Chou, 1971; Report of the Ad Hoc Committee of Harvard Medical School, 1968; Task Force on Death and Dying, 1972). All these revised definitions advocate two alternative modes of determining when death has occurred: (1) the traditional criteria of spontaneous cessation of heartbeat, pulse, and respiration; or (2) the brain death syndrome—to be used when the traditional signs of (1) have been obscured by resuscitative intervention. Thus where a moribund individual's life is "suspended in unconsciousness" as a result of irreversible coma, modern

medical opinion would most likely agree to a diagnosis of brain death, thereby circumventing any potential conflict between the two bioethical principles mentioned above.

It is where the dying patient suffers intractable pain, however, that recent advances in health technology have intensified the conflict between the traditional medical duty to prolong life and to prevent suffering (Degner, 1974). For such life-threatened patients the "final release" of death represents the only presently available means of alleviating discomfort. But as indicated allowing death to occur "prematurely" (i.e., ignoring resuscitative methods) clearly must be considered as contradictory to the primary principle of preserving life! While concrete pragmatic attempts to resolve the dilemma have been offered only most recently within the medical literature (e.g., Clinical Care Committee of the Massachusetts General Hospital, 1976; Rabkin, Gillerman, & Rice, 1976), the matter has typically been considered within the realms of philosophy and moral theology (e.g., Fletcher, 1973; Koenig, 1973; Lewis, 1968; McCormick, 1974; Moore, 1968; Ramsey, 1970; Smith, 1971; Thomson, 1976; Vernon, 1972; Wilson, 1975; Young, 1976). Consequently a number of questions have emerged because of the fact that modern medical science can now prolong "human" life. What is implied by the "sanctity of life", "death with dignity"? What is our understanding of the terms "life" and "death"? Are we concerned with the human organism or the human organism? What is "it" that dies? Are we obliged to preserve life "at any cost", etc.?

Any attempt to explore the life-prolonging dilemma inevitably

entails consideration of such questions. The first problem deals with definition of death. Here the distinction between conceptual and operational definitions is an important one. In formulating a bioethical solution to the "preservation of life vs prevention of suffering" conflict do we require a new conceptual definition of death, or a set of operational criteria to detect those individuals in whom death is imminent? Intrinsic to a concern with the conceptual definition of death is a concern with the concept of life. As noted by Rozovsky (1972), "in our search for the answers, we may find that the secret of death is as elusive as the secret of life" (p. 25). The report of the Task Force on Death and Dying of the Institute of Society, Ethics, and the Life Sciences (1972) further indicated that:

To ask "What is death?" is to ask simultaneously "What makes living things alive?" To understand death as the transition between something alive and that "same" something dead presupposes that one understands the difference between "alive" and "dead", that one understands what it is that dies. (p. 48)

The current state of scientific knowledge cannot identify "what it is that dies" (Cantor, 1975; Kavanaugh, 1972; Wilson, 1975).

Modern medical science can, however, develop a set of operational criteria which may be used successfully in identifying individuals in whom the physiological phenomenon of death may be expected (Jaretzki, 1976). Yet death may occur at many different levels--organism, organ, or cellular (Rodstein & Bornstein, 1970). Consequently two further philosophical issues must be considered: the quality and sanctity of life.

As a result, the paradoxical question now facing both the medical profession as well as larger society is "Are we concerned with the life of the human organism or with the life of the human organism?"

Emphasis on the former (i.e., human) would appear to imply that the concepts of life and death would be linked up to the "higher human functions" and hence to the functioning of the central nervous system and ultimately of the cerebral cortex, i.e., behavior. Emphasis on the latter (i.e., organism) might indicate that these concepts would be associated with mere vegetative existence and thus to the functioning of the circulatory system and heart. Advocates of both these positions have voiced their positions emphatically. Many practitioners have advocated the traditional opinion (Radical Vitalism) that the physician's responsibility is to preserve "life" so long as the heart continues to beat (Kass, 1971)--and argue that biological life per se must be held as sacred. The Radical Vitalism position would thus imply that since biological life is human life, any and all presently available therapeutic measures are indicated and would resolve the "preservation of life vs prevention of suffering" dilemma by placing absolute priority on the former. Others (Hollistic Personalists) positing that it is the human element which is responsible for life hold that it is the "potentiality for human relationships" (McCormick, 1974, p. 175) which is to be revered as the essence of personhood. They have argued that an appropriate perspective on the life-prolonging dilemma "requires realizing that not all human biological life is human personal life" (Engelhardt, 1975, p. 587). By defining human life in terms of potential for distinctly

"human" experience, Hollistic Personalism would therefore urge that once the so-called "higher human functions" have extinguished, further biological maintenance is contraindicated.

Implicit in all of these difficult and emotionally charged issues are a number of moral concerns which add to the complexity of the matter. Currently, heated debates rage within both medical bioethics and the larger society along several moral dimensions. The majority of these polemics appear couched in terms of one of two conflicting perspectives: Millian Utilitarianism and humanitarianism.

Plum and Posner (1972) pose the problem as follows:

Both patients and families insist upon death with dignity, and efforts by physicians to needlessly extend a vegetative existence in a patient. . . often emotionally ravage the families and discredit the profession. . . . Intensive care facilities are limited and expensive. Their best use demands that patients likely to benefit from such intensive care be identified and selected and that these units not be overloaded with patients who can never recover. (p. 224)

Mill's notion of Utilitarianism (Cahn, 1971) appears to have been adopted by a large proportion of practitioners.

Arguments from a "humanitarian" perspective, on the other hand, have emphasized that the "preservation of life vs prevention of suffering" conflict should and must be resolved "solely in the interest of the moribund patient and on no other bases" (Devins and Diamond, 1976, p. 293). This position has argued that "extreme suffering. . . degrades and

demoralizes, thereby forcing [human] life to lose its meaning" (Langone, 1972, p. 57). Moreover, consistent with the movement for death with dignity is an increasing desire within the North American Community as a whole (Bok, 1975) for greater patient autonomy (i.e., granting a more central role to the life-threatened patient in deciding whether greater emphasis ought to be invested in preserving life or relieving suffering). While life may be preserved quantitatively, "heroic" measures cannot preserve life qualitatively (Ayd, 1962; Beecher, 1968; Cassell, 1972; Heifetz, 1975; Kubler-Ross, 1974; Lewis, 1968) and therefore voluntary passive euthanasia may be indicated.

Euthanasia¹

The term "euthanasia" traditionally has been employed to describe a painless, peaceful, dying process. Hence it might be defined as concern for an "easy" or "good" death. However, the attempt to formulate acceptable definitions of this has necessitated further explication of circumstances attending the deathbed. Discussions of the question of euthanasia typically have been offered along two dimensions: voluntary/nonvoluntary and active/passive. The active/passive dimension concerns how euthanasia is accomplished, while voluntary/nonvoluntary indicates whether this easy death occurs at the request of the dying person (or at least with his informed consent) or whether it is to be administered against (or in the absence of) his wishes.

Failure in the literature to differentiate between active and passive forms has—in many instances—resulted in much confusion. Briefly, "active"—also known variously as "mercy killing", "direct", and "positive"

—euthanasia refers to the positive induction of death with the intention of benefiting the individual by precluding a prolonged painful death (Wilson, 1975). "Passive" euthanasia, also referred to as "death with dignity", "indirect", and "negative", permits death to occur by withholding life-prolonging measures (Maguire, 1973). Both represent attempts to ensure a painless and peaceful death for the dying individual. Active euthanasia seeks to achieve this end via acts of commission—by actively inducing death "prematurely"—whereas passive euthanasia involves "acts" of omission—permitting death to occur at "nature's discretion" by deliberately withholding potentially life-preserving therapeutic measures. However there are "shades of gray". A large proportion of both the population of medical practitioners as well as the general public have argued that the practice of active euthanasia represents nothing less than an act of murder (Cantor, 1975; Meyers, 1973; Wilson, 1975). Similarly, permitting euthanasia—whether active or passive—to be administered against the dying patient's wishes has been argued to constitute the "first step" toward establishing a genocidal nonvoluntary "euthanasia" program similar to that practiced in Nazi Germany during the second world war (Steinfels & Levine, 1976). Consequently, although a substantial number have endorsed all forms of euthanasia (Young, 1976), the overwhelming majority of those advocating the right of the dying patient to a peaceful death have restricted their support to the safe voluntary passive euthanasia (Jaretzki, 1976).

Unfortunately, when a dying patient reaches a somatic stage at which voluntary passive euthanasia represents a relevant alternative,

he is most often in an irreversibly comatose state and incapable of providing informed consent (Heifetz, 1975). As a result if passive euthanasia is to be afforded such individuals, documents—indicating the desire for death with dignity via passive euthanasia—must be endorsed long before the advent of life-threatening somatic trauma. Recently a number of these have appeared (e.g., Bok, 1976; Heifetz, 1975; The Euthanasia Educational Council, undated; The Voluntary Euthanasia Society, undated).

The "Living Will"

The most widely known such document is A Living Will, prepared and distributed by The Euthanasia Educational Council (undated). While it has been criticized as unduly vague in stipulating at what point passive euthanasia is to be enacted (Bok, 1976; Heifetz, 1975), it expresses the essential theme of voluntary (passive) euthanasia.

A Living Will

To my family, my physician, my lawyer, my clergyman, to any medical facility in whose care I happen to be, to any individual who may become responsible for my health, welfare or affairs.

Death is as much a reality as birth, growth, maturity and old age—it is the one certainty of life. If the time comes when I, _____ can no longer take part in decisions for my own future, let this statement stand as an expression of my wishes, while I am still of sound mind.

If the situation should arise in which there is no reasonable expectation of my recovery from physical or mental disability,

I request that I be allowed to die and not be kept alive by artificial means or "heroic measures". I do not fear death itself as much as the indignities of deterioration, dependence and hopeless pain. I, therefore, ask that medication be mercifully administered to me to alleviate suffering even though this may hasten the moment of death.

This request is made after careful consideration. I hope you who care for me will feel morally bound to follow its mandate. I recognize that this appears to place a heavy responsibility upon you, but it is with the intention of relieving you of such responsibility and of placing it upon myself in accordance with my strong convictions, that this statement is made.

Signed _____

Date _____

Witness _____

Witness _____

The Need for Psychological Investigation

The focus of empirical inquiry concerning the life-prolonging dilemma has centered typically on health-care givers. Little knowledge exists regarding patients' feelings about euthanasia and the factors which may play a role in the etiology or mediation of these.

Typically attitudes toward euthanasia, and its various forms, have been examined merely in passing, with the central focus of inquiry directed at other issues. For example, in a recent telephone poll (NBC Audience Services, 1975) a stratified random sample of 2,836 Americans

were asked, among other questions, "do you think doctors should use mechanical means to prolong a person's life if there is no chance for that person to recover?" (p. 15). Results indicated a majority (72%) of respondents disagreeing with such an approach (i.e., they were opposed to such a practice), 16% were in favor, and 12% responded "not sure". Similarly, Christ (1961) investigated attitudes toward death among 100 acute geriatric psychiatric patients. Employing an interview technique, subjects were asked—among other death-related questions—"If you had the choice of dying tomorrow or being bedridden for the next three years, which would you choose?" (p. 56). While not clearly indicated by Christ, apparently only 33 patients offered replies, with 15 of the 33 choosing to die, 8 were noncommittal, and 10 wished to live.

Cappon (1962), in an attempt to compare "the sick with the healthy, in general" (p. 694), selected a sample of 254 subjects at random from three sources: industry, hospitals for somatic illness, and psychiatric hospitals. All participants were given the same questions and an actuarial survey methodology was employed to compare responses. Two questions related directly to voluntary passive euthanasia, e.g.,: subjects' preferred mode of death and opinion on euthanasia. The obtained results showed an overwhelming majority of subjects (86% overall) preferred a sudden mode of death rather than a slow one. According to Cappon,

such was the strength of the wish to avoid a lingering death that the majority of non-patients stated that they preferred to die younger, with pain or from violence, rather than slowly, painlessly

from disease or old age. This same order was kept with all subjects except the dying, who were less concerned with avoiding pain and more concerned with prolonging life. (p. 695)

Interestingly while the majority of persons favored euthanasia (kind was not defined), it was most favored by the dying patients (72%) and least favored by psychiatric patients (56%), however these differences were not tested for statistical significance. Hence the sample of dying patients appeared to hold contradictory attitudes: whereas they were more concerned with prolonging life than with preventing suffering, they also expressed a preference for a sudden mode of death! Cappon interpreted this inconsistency as suggesting that the dying patients wished to have a degree of control over the time and manner of their deaths. In concluding Cappon dispelled the vitalistic myth that moribund persons value biological life above all else. The dying patients were the least disturbed by the interviewer's questioning regarding death, and ironically it was the hospital professionals who seemed most disturbed! (This suggests projection and should be of concern to administrators whose approval for research may be required.)

Aside from these few explorations of attitudes (of receivers rather than givers) toward voluntary passive euthanasia as a solution to the life-prolonging dilemma, there appears to have been little other research. Given the dearth of theory and research in Orthothanasia, an exploratory investigation of whether voluntary passive euthanasia does in fact represent an attractive alternative to life-threatened patients as well as an exploration of factors which may be related to these

feelings would appear indicated. Is voluntary passive euthanasia viewed positively as a personal outcome? Is proximity to death a relevant dimension? How might previous experiences with death in "important others" (i.e., family members, close relatives and friends, etc.) have an influence? What about anxieties or fears associated with thoughts about one's own personal death (death anxiety)? Do attitudes toward the notion of voluntary passive euthanasia vary as a function of certain demographic variables? (As will be indicated, these will be some of the questions which this research asks).

Attitudes Toward Death and Death Anxiety

One's attitude(s) toward the phenomenon of death would be the first factor to be considered in an exploration of feelings regarding voluntary passive euthanasia and indeed earlier studies had focused on such attitudes (e.g., Cappon, 1962; Christ, 1961; Feifel, 1956; Jeffers, Nichols, & Eisdorfer, 1961; Kalish, 1963; Klopfer, 1947; Lieberman, 1966; Rhudick & Dibner, 1961; Shrut, 1958; Swenson, 1959, 1961). More recently researchers have also been concerned with the area of anxieties and fears associated with death. Lester (1967a) and more recently Shady (1976) have reviewed this literature. Unfortunately, considerable confusion still prevails. Inconsistencies within the scientific literature along at least two dimensions exist: subject populations employed and dependent measures and methodologies by which the problem has been approached.

Subject populations. Investigations of death attitudes have employed a wide variety of individuals. Subjects have been selected from

health-care giver populations such as doctors (Degner, 1974; Feifel, Hanson, Jones, & Edwards, 1967; Rea, Greenspoon, & Spilka, 1975), nurses and occupational therapists (Bakshis, Correll, Duffy, Grupp, Hilliker, Howe, Kowales, & Schmitt, 1974; Geizhals, 1975), and suicide prevention center staff-members (Lester, 1971a). Also diverse health-care receiver populations have been employed, e.g., psychiatric patients (Cappon, 1962; Christ, 1961; Timpler, 1970, 1971b), patients suffering somatic illness (Lucas, 1974), terminally ill and life-threatened patients (Feifel & Branscomb, 1973; Feifel, Freilich, & Hermann, 1973; Kubler-Ross, 1969; Moore & Newton, 1976; Newton & Devins, 1976; Newton, Devins, & Moore, 1976), nursing home patients (Shrut, 1958), highly religious persons (Cerny, 1975; Meissner, 1958; Timpler, 1972b), suicidal persons (Lester, 1967b), retired persons (Timpler, 1971a), and the "general public" (Berman, 1974; Cappon, 1962; Diggory & Rothman, 1961; Nelson & Nelson, 1975). Moreover, such subjects have ranged in age between 18-86 years (Feifel, 1956; Jeffers, Nichols, & Eisdorfer, 1961; Klopfer, 1947; Kurlychek, 1976; Lester, 1971b, 1972; Rhudick & Dibner, 1961; Swenson, 1961).

By far the most researched population in the death anxiety literature has been that of students. While a few studies have employed high school students as subjects (e.g., Durlak, 1972b; Lester & Timpler, 1972), the majority of such investigations have employed undergraduate college students (e.g., Bell, 1975; Berman, 1973; Berman & Hays, 1973; Bluestein, 1975; Handal & Rychlak, 1971; Klug & Boss, 1976; Krieger, Epting, & Leitner, 1974; Nelson & Nelson, 1975; Pandey & Timpler, 1972; Salter &

Salter, 1976). Unfortunately few studies have attempted to incorporate more than one population for comparison purposes and as a result, a great number of independent "bits" of knowledge concerning a wide variety of discrete subject populations are scattered throughout the literature.

Dependent measures and methodologies. With regard to the second source of confusion, i.e., dependent measures investigated, Durlak (1972a) has noted that

studies in the field of death research have emphasized the need for standardized measures of the fear of death. Nevertheless, only a few scales have been developed with considerations of reliability and validity in mind. Even with these measures, however, item content varies greatly. . . . It is therefore unclear to what extent these scales are measuring the same thing and what components of attitudes toward death are being tapped by these different measures.
(p. 545)

While the history of "systematic" death anxiety research is a short one, it is replete with a variety of dependent measures which would indicate subjects' degrees of death anxiety as well as a variety of modes of approaching the problem. Implicit in Durlak's (1972a) earlier comment, however, is the unfortunate fact that death anxiety seldom has been conceptually defined. Hence operational definitions of the concept have included such themes as fear of personal death (i.e., death of self) and pain in dying (Dickstein, 1972; Templer, 1970), death avoidance, denial, and reluctance to interact with the dying (Nelson & Nelson, 1975), the meaning of death (Feifel, 1956), the social and symbolic nature of

death (Bakshis et al., 1974), and fear of the consequences of one's own death (Diggory & Rothman, 1961).

Finally, many methodologies have been adopted. Fear of death has been investigated by projective methods (Feifel & Branscomb, 1973; Feifel, Freilich, & Hermann, 1973; Rhudick & Dibner, 1961; Shrut, 1958), objective physiological indices (Meissner, 1958; Templer, 1971b), interview (Bakshis et al., 1974), and questionnaire procedures (Moore & Newton, 1976; Newton, Devins, & Moore, 1976). Clearly, there is a need for a unified attempt to explore death anxiety in which a variety of relevant populations might be investigated. Comparison of groups, normative data for a specific group, and possible relationships between death anxiety and attitudes toward voluntary euthanasia might be studied via a standard procedure.

Given the personal and emotionally charged nature of the issues, an interview procedure has been suggested to constitute the best means of obtaining reliable data (Munnichs, 1961). In support of this approach, Feifel (1961) has posited that "there is no question about the impressive leverage which direct verbal questioning affords us in gaining information" (p. 62). Regarding the latitude afforded the investigator by interview and questionnaire procedures, Lester (1967a), for example, has offered the opinion that

interviews can be given in place of and in addition to questionnaires. The questionnaire may be used as the basis for the interview, which makes it possible to add any questions that are necessary to determine the subject's attitudes. (p. 27)

While a great many questionnaires and scales have been developed in an attempt to assess death anxiety objectively, only a few have been constructed with considerations of reliability and validity (e.g., Boyar, 1964; Collett & Lester, 1969; Dickstein, 1972; Lester, 1967c; Sarnoff & Corwin, 1960; Templer, 1970; Tolor, 1966). One of the most recent of these measures to appear in the psychological literature is the Death Anxiety Scale (DAS), authored by Templer (1970)—a 15-item true/false instrument intended to reflect the permeation of death anxiety in a variety of life experiences.

Death Anxiety Scale

In Templer's Death Anxiety Scale, reliability and construct validity have been assessed by means of a variety of experimental procedures (Templer, 1970). Originally 40 items were constructed on an a priori (rational) basis. Twenty-five of these, however, were later discarded on the basis of a judgemental rating and a quantitative item analysis. The remaining 15 items constitute the DAS², which has been demonstrated to possess reliability (a correlation of .83 was obtained in a three-week test-retest situation).

Templer (1970) has reported two separate investigations of DAS construct validity. In the first the scores of 21 psychiatric patients who previously (in counseling sessions) had verbalized fears regarding death were compared with DAS scores of control patients—matched for diagnosis, sex, and approximate age—who had not previously expressed such concerns. Mean DAS scores differed significantly between the high death anxiety patients (11.6) and controls (6.8). In the second study

convergent (internal) and discriminant validity were assessed by administering the DAS, Boyar's (1964) Fear of Death Scale (a previously constructed death anxiety-type scale), and the MMPI to 77 advanced undergraduate college students. A high positive correlation ($\underline{r} = .74$) between the DAS and the Fear of Death Scale constituted evidence of the former's convergent validity. Ray and Najman (1974) also offered evidence of the scale's convergent validity in reporting a significant positive correlation ($\underline{r} = .61$) between the DAS and the similarly oriented scale of Sarnoff and Corwin (1959). A statistically significant but moderate positive correlation ($\underline{r} = .39$) between DAS scores and the Manifest Anxiety Scale (an MMPI subscale) was interpreted as offering discriminant evidence that the DAS does not simply reflect general anxiety.

In contrast to the Fear of Death and other such scales, the DAS has been employed in a wide variety of investigations of the psychology of death and dying. Although no formal norms have been established for the instrument, a considerable amount of data has been collected. Templer and Ruff (1971) have reported the means and standard deviations obtained from seven separate studies involving more than 3,600 adults and adolescents. These investigators also observed no significant difference between mean DAS scores when embedding (with neutral items) occurred. Moreover, scores of a variety of individuals have been explored for possible relationships with: age, sex, and parental resemblance (Lester & Templer, 1972; Salter & Salter, 1976), religion and belief-in-afterlife (Berman, 1973; Berman & Hays, 1973; Templer, 1972b), extraversion, neuroticism, and cigarette smoking (Berman, 1973;

Templer, 1972a), GSR to death-related words (Templer, 1971b), race (Pandey & Templer, 1972), health and depression (Templer, 1971a), general anxiety (Lucas, 1974), attitude toward aging and behavior toward the elderly (Salter & Salter, 1976), and evaluation of death as a threatening event (Krieger et al., 1974).

Relationships between DAS scores and demographic status as indicated by religious affiliation, occupational, educational, socio-economic, and marital status are unclear (e.g., Berman, 1973; Berman & Hays, 1973; Pandey & Templer, 1972; Templer, 1972b). In fact the only demographic dimension along which DAS scores consistently have been reported to vary is that of sex of respondent, with females typically obtaining higher mean scores (i.e., expressing greater death anxiety) than males (Templer & Ruff, 1971). Given this state of scientific knowledge concerning the construct, three disturbing facts emerge: (1) the importance of demographic status in determining DAS scores is presently unclear; (2) death anxiety—defined as a numerical score on Templer's (1970) DAS—has not been demonstrated to vary as a function of what might be described as "proximity to death" (because of chronological age or life-threatened health); and (3) experience with death in "important others" (parent, spouse, sibling, child, close relative or friend, or some or all of these) has not been explored as an etiological factor in death anxiety.

Proximity to Death and Experience with Death in "Important Others"

Proximity to death may be defined along the dimension of chronological age, or in terms of life-threatened versus non-life-threatened

health status, or as a combination of both. Yet although some data have been reported which imply possible relations between such factors and general fears of death, no knowledge presently exists regarding their influence in the area of death anxiety (DAS score). Feifel, Freilich, and Hermann (1973), for example, investigated personal fear of death in dying heart and cancer patients and a control group of healthy, same-aged, adults using a multilevel projective criterion measure. Subjects' reactions to the notion of death, frequency of death thoughts, and views regarding life-after-death were compared on conscious, imagery, and below-the-level-of-awareness items. Conscious fears of death were obtained simply by asking "Are you afraid of death? Why?" At the imagery level participants were requested to respond to "What ideas or pictures come to your mind when you think of your own death?" Responses were defined as negative (e.g., "a black cold night"), ambivalent (e.g., "light and darkness mixed up"), or positive (e.g., "at rest peacefully in a green meadow"). Finally, below-the-level-of-awareness death fears were assessed via the usual criteria for a word association test consisting of 20 nouns, 10 of which were death-related (e.g., "grave", "coffin", etc.) and 10 of which were neutral.

Significant differences in death fears were reported to occur as a function of proximity to death in terms of life-threatened versus non-life-threatened health status. Thus dying heart and cancer patients exhibited significantly more death anxiety to death-related stimuli than did the non-life-threatened controls when below-the-level-of-

awareness criterion measures were examined. Interestingly this difference in death fears did not obtain when assessed at the conscious (i.e., overt responses to direct questioning) or imagery levels. Finally, no differences were observed in mean death anxiety as a function of type of life-threatening disorder (i.e., heart versus cancer).

Feifel and Branscomb (1973) have reported a similar study in which the death fears of 371 individuals—92 life-threatened patients, 94 chronically ill and physically disabled persons, 90 psychiatric patients, and 95 "healthy" individuals—were investigated. Congruent with the findings reported by Feifel et al.,(1973), Feifel and Branscomb noted significant differences in dread of personal death as a function of proximity to death—both in terms of chronological age and life-threatened versus non-life-threatened health status—on below-the-level-of-awareness dependent measures. Similarly, on the basis of a multiple discriminant analysis, age was reported to play "a sustaining role in influencing dread of personal death" (pp. 286-287), with older respondents displaying greater death anxiety. Institutionalization as a factor, however, did not appear to be significant as a predictive agent. Contrary to the findings of Feifel et al.,(1973), death anxiety was observed by Feifel and Branscomb at the conscious level as well (however no significant imagery level differences were observed). Similar opinions regarding the a priori relevance of an experience with death in "important others" factor also have been voiced by Feifel (1961), Martin and Wrightsman (1964), and Treanton (1961).

General Statement of Objectives and Hypotheses of the Present Study

It was the purpose of the present study to perform an empirical investigation of several of the abovementioned variables. Relationships among death anxiety and attitude toward voluntary passive euthanasia were explored in terms of proximity to death, experience with death in "important others", and several dimensions of demographic status. A standardized procedure--administration of the DAS and a 7-point Reaction to "A Living Will" item (ranging from "strongly agree" to "strongly disagree") in an interview situation--was utilized with three different subject populations (young non-life-threatened individuals, elderly non-life-threatened persons, and elderly life-threatened patients).

Given the relative lack of theory and empirical findings, it appeared unwise to postulate a number of directional predictions (i.e., one-tailed hypotheses) regarding results. Briefly, research questions sought to determine: (1) whether death anxiety and attitude toward voluntary passive euthanasia were related; (2) if these two dependent factors varied in terms of an individual's proximity to death, experience with death in "important others", demographic status or a combination of some or all of these; and (3) if upon treating each of the 15 DAS items as separate dependent measures (with the reaction to "A Living Will" item as a sixteenth), potential sources of death anxiety (and their relationships with attitude toward voluntary passive euthanasia)--which varied due to any (or all) of the factors explored--might emerge.

Method

Subjects

Participants were selected on the basis of proximity to death which was defined jointly by chronological age and health status. "Young" persons were defined operationally as less than 30 years of age, while people 60 years of age and older were considered "elderly". Individuals were deemed "life-threatened" if they were suffering or recovering from a recent life-threatening somatic condition. Since the type of life-threatening disorder has not been demonstrated to influence death fears significantly (Feifel et al., 1973), such conditions as stroke, heart attack, and cancer all were considered life-threatening. "Non-life-threatened" persons, on the other hand, included any individual not suffering a serious (i.e., potentially life-threatening) medical problem at the time of encounter.

Three different populations were randomly sampled in order to obtain the 211 subjects who participated in the investigation:

(a) young non-life-threatened individuals; (b) elderly non-life-threatened persons; and (c) elderly life-threatened hospitalized patients. Sample (a) was composed of 86 undergraduate university students enrolled in introductory psychology classes at the University of Manitoba. These subjects ranged from 17 to 28 years of age (mean age = 19.5 years). Sample (b) comprised 62 individuals sampled from Winnipeg Age and Opportunity Bureau Senior Centers. These persons ranged in age from 61 to 84 years (mean = 71.0). The third sample, (c), was composed of 63 persons currently receiving treatment as "in-patients" in the

Department of Geriatric Medicine at the St. Boniface General Hospital in Winnipeg. Ages of sample (c) participants ranged from 60 to 97 years (mean = 74.8). No young life-threatened population could be included due to the rarity of such persons in the community.

Experimenters

There were two experimenter-interviewers. Since all data were obtained by means of a face-to-face interview procedure (see Procedure section, below), this manipulation was included in order to determine whether or not potential experimenter-bias (E-bias) effects influenced the nature of the information disclosed by participants. One member of the writer's thesis committee³ who had considerable research and interviewing experience in the area of death and dying served as Interviewer 1 and conducted nine interviews (four young non-life-threatened, two elderly non-life-threatened, and three elderly life-threatened). The writer (a male graduate student in the University of Manitoba Department of Psychology, age = 24 years) served as Interviewer 2 and conducted the remaining 202 interviews.

Before commencing data collection, a videotape recording was made of Interviewer 2 conducting an interview. This was intended to reduce potential E-bias. The recording was then viewed by both interviewers as well as another graduate student⁴ at which time unnecessary and possibly directive interviewer behaviors were noted and discussed.

Materials⁵

The following variables were assessed via the materials listed below:

Death anxiety. Anxiety associated with thoughts about death was indicated by an individual's numerical score on Templer's (1970) Death Anxiety Scale (DAS).

Reaction to "A Living Will". Acceptability of voluntary passive euthanasia as a personal outcome (should the need arise) was assessed by obtaining participants' subjective reactions to a statement selected from "A Living Will" (Euthanasia Educational Council, undated) along a 7-point scale ranging from "strongly agree" to "strongly disagree".

Experiences with death in important others. The term "important others" was intended to include all members of an individual's close or immediate family. Hence, parents, spouse(s), siblings, children, and close relatives (i.e., other relatives such as grandparents, aunts, uncles, etc. whom participants described as having been important to them) all were deemed important others. Particularly dear friends were also included as important others if so described by participants. However, important others whose deaths did not occur during an individual's lifetime (e.g., an older sibling who died before the subject was born) were not included. Data from a series of questions concerning the subject's experiences with death in important others were then obtained and yielded the following information: (a) total number of deceased important others, parents, spouses, siblings, children, close friends and/or relatives; (b) the number of years which had elapsed since the death of each; and (c) the type (e.g., parent, spouse, etc.) of the important other whose death was considered by the individual to have had the greatest impact upon him/her "as a person".

Demographic status. A "Background Information" questionnaire elicited the following information: (a) sex; (b) age; (c) marital status; (d) religious affiliation; (e) degree of religiosity (defined by self-report); (f) size of hometown; (g) health status; (h) type of medical problem if any; (i) educational level attained; (j) occupational classification (according to the code specified by Wechsler, 1955); (k) number of cohabitants (i.e., persons with whom a residence was shared).

Procedure

A standardized one-to-one face-to-face interview procedure was employed for the collection of data, i.e., the same interview schedule was employed in all cases. Each interview was conducted in privacy and commenced with the interviewer's introduction of himself to the subject who then received a briefing⁶ concerning the nature of the study. It should be emphasized that in the case of elderly life-threatened patients the interviewer emphasized that he/she was not a hospital staff member and that patients were under no obligation to participate. Those individuals refusing to participate were thanked for meeting with the interviewer, wished well, and left. In the cases of persons consenting to the interview, the interviewer immediately initiated the first phase of the interview schedule in which background information was collected.

Phase 1. Background Information. Demographic data concerning each participant were collected via the verbal administration of the "Background Information" questionnaire. This first phase was included

to serve at least two important functions in addition to the obvious one of obtaining information. The innocuous nature of these initial questions was intended to help set the interviewee "at ease", while at the same time permitting the hoped for development of a comfortable level of rapport between interviewer and participant. Since sincere (i.e., "truthful") responses to the questions of interest—highly personal and emotionally charged issues—were of the utmost importance, it was essential that the interviewer gain the trust of the interviewee. Consequently, it was imperative that subjects be made to feel "safe" in sharing their feelings concerning the "taboo" issues of death and voluntary passive euthanasia.

Phase 2. Death anxiety and reaction to "A Living Will". The initiation of phase 2 immediately followed phase 1. Both Templer's DAS and the Reaction to "A Living Will" (RLW) item were administered verbally at this time. In the cases of elderly life-threatened individuals, administration of the RLW item was preceded by assurances from the interviewer that the presentation of this item did not reflect any knowledge concerning the patient's current medical condition or prognosis.

In order to avoid potential "order effects", approximately half of the interviewees received the DAS first, with the RLW item following. The remaining subjects received these materials in the reverse order. Since recent research (Templer & Ruff, 1971) has demonstrated no significant difference in DAS scores as a function of embedding, no "filler" questions were interspersed among the 15 DAS items.

Phase 3. Experiences with death in important others and termination of the interview. Once the death anxiety and RIW information had been elicited and recorded, the focus of inquiry was shifted toward the interviewee's experiences with death in important others. Upon completion of this series of questions, participants were thanked by the interviewer for their cooperation and were informed that the meeting could now be terminated. Any questions by the interviewee pertaining to the study were answered at this time. Once a subject's curiosity regarding the investigation had been satisfied to the best of the interviewer's ability, the interview session was terminated.

Results

While a summary of results may be found at the end of this chapter, detailed analyses are here presented. The majority of analyses performed involved 2-way multivariate analyses of covariance (MANCOVAs) (Finn, 1976). The first factor, Proximity to Death, had three levels: young non-life-threatened, elderly non-life-threatened, and elderly life-threatened. The second factor, Experience with Death in Important Others, was defined in three different ways (with two levels in each): (a) total number of experiences with death in important others (low, high), (b) type of important other whose death had the greatest impact upon the individual (immediate family member, close friend or relative), and (c) years since most recent experience with death in an important other (less than one, one or more). The covariates included were sex of participant, religious affiliation, degree of religiosity, size of hometown, and number of co-habitants⁷. Two multivariate sets of dependent measures were analysed for each of these three 3 X 2 MANCOVA designs. In one set of analyses, total DAS scores and RLW scores constituted the multivariate criterion measure "package". In the second set, each individual DAS item was treated as a separate dependent variable which, along with RLW scores, comprised the 16 measures analysed. Multivariate mean vectors for each effect and univariate analyses of individual measures have been reported for these analyses. Exact least squares analyses were performed in order to account for unequal sample sizes using Overall and Spiegel's (1969) method I which assesses each effect after adjusting for its relationship to all other effects.

Individual post hoc comparisons were performed by means of Scheffe confidence intervals⁸. The type I error rates adopted were as follows: (a) parallelism tests of regression hyperplanes with $p < .05$ were considered significant (and hence as contraindicating the use of a MANCOVA model); (b) tests of effects (and covariates) with $p < .05$ were deemed significant; and (c) tests of effects in which the p obtained ranged between .05 and .10 were considered "marginally" significant.

Validity Checks

Three statistical procedures were employed in order to determine if participants' responses had been biased systematically by the nature of the interview schedule or interviewers. Separate 1-way analyses of variance (ANOVAs) were first performed on the obtained total DAS scores and RLW scores in order to test for potential E-bias effects (see Tables 1 and 2). No significant difference in either of these two measures was observed [DAS: $F(1,209) < 1$, $p < .63$; RLW: $F(1,209) < 1$, $p < .32$]. Since both interviewers appeared to have elicited similar types of responses, data collected by Interviewers 1 and 2 were combined.

A second criticism which might be directed against an interview procedure would suggest that interviewers may change their style of questioning as data collection proceeds (e.g., practice effects). Pearson product-moment correlation coefficients were calculated separately for total DAS scores and RLW scores with the dates on which the

Table 1
Analysis of Variance Summary Table
Total DAS Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	2.0687	0.236	.6275
Within Groups	209	8.7582		
Total	210			

Table 2
Analysis of Variance Summary Table
RLW Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	4.0802	0.999	.3186
Within Groups	209	4.0829		
Total	210			

interviews occurred in order to test the tenability of this "practice-bias" argument. However, since all of the young non-life-threatened interviews had been conducted prior to those with elderly non-life-threatened and elderly life-threatened individuals, it was deemed advisable to compute separate coefficients for each of these three levels of Proximity to Death. As may be seen in Table 3, however, no significant correlation emerged. Hence, the information obtained did not vary significantly due to "practice-bias" on the part of interviewers.

Order effects on dependent scores were circumvented by administering the DAS before the RLW in approximately half of the interviews and in the reverse order for those remaining. Separate 1-way ANOVAs performed on total DAS scores (Table 4) and RLW scores (Table 5) revealed no significant order effect [DAS: $F(1, 209) < 1$, $p < .61$; RLW: $F(1, 209) = 2.16$, $p < .15$]. Consequently, data obtained by both interview schedule orders were pooled for all subsequent analyses.

Preliminary Analyses

Although the original design of the study entailed a 3 X 2 (Proximity to Death X Experiences with Death in Important Others) MANCOVA with five covariates, the preliminary analyses reported below indicated that elderly non-life-threatened and elderly life-threatened participants did not differ significantly in their responses to the dependent measures (i.e., the DAS and RLW). Further, these analyses revealed that several of the demographic variables were not related significantly to dependent scores and therefore would not be useful as

Table 3
 Pearson Product-Moment Correlation Coefficients
 Total DAS and RLW Scores with Date of Interview

Proximity to Death	Total DAS Score	<u>p</u>	RLW	<u>p</u>
Young Non-life-threatened	0.1311	0.229	-0.0306	0.780
Elderly Non-life-threatened	-0.1250	0.333	-0.0379	0.770
Elderly Life-threatened	-0.1014	0.429	0.0008	0.995

Table 4
Analysis of Variance Summary Table
Total DAS Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	2.3796	0.272	.6027
Within Groups	209	8.7567		
Total	210			

Table 5
Analysis of Variance Summary Table
RLW Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	8.7552	2.156	.1435
Within Groups	209	4.0606		
Total	210			

covariates.

Covariates

A step-wise multivariate multiple regression analysis [which is performed as part of the Finn (1976) MANCOVA program] determined the contribution of each of the abovementioned five covariates to the prediction equation for total DAS and RLW scores. Two variables, sex of participant [$F(2, 194) = 4.64, p < .01$] and size of hometown [$F(2, 191) = 4.50, p < .01$] were significantly associated with these dependent measures and as a result were retained as covariates. Religious affiliation [$F(2, 193) < 1, p < .38$], degree of religiosity [$F(2, 192) = 1.55, p < .21$], and number of co-habitants [$F(2, 190) < 1, p < .39$] did not contribute significantly and so were not included in subsequent analyses.

A similar test was performed to determine the contribution of each of these covariates to the prediction equation for the second multivariate set of 16 criterion measures (with each of the 15 DAS items treated as a separate measure and the RLW item comprising the sixteenth). However, none of sex of participant [$F(16, 180) = 1.41, p < .14$], religious affiliation [$F(16, 179) < 1, p < .72$], degree of religiosity [$F(16, 178) < 1, p < .50$], size of hometown [$F(16, 177) = 1.53, p < .10$], or number of co-habitants [$F(16, 176) = 1.27, p < .22$] were associated significantly with the multivariate package and consequently were excluded from subsequent analyses dealing with this second set of dependent variables.

Reconceptualization of size of hometown. Size of hometown was

originally intended to comprise three levels—farm, small town, and city—and to serve as a covariate in several of the MANCOVAs performed upon the first multivariate data package. A univariate multiple regression analysis to determine the contribution of this variable to the prediction equation revealed it to be associated significantly with total DAS scores [$F(1, 191) = 4.50, p < .01$] although not with the RLW item [$F(1, 191) = 3.40, p < .07$]. The small degree of disparity between mean total DAS scores of persons who had spent the majority of their lifetimes on a farm (farm-dwellers) and those who had spent this period in a small town (small town-dwellers) (0.22; see Table 6), however, was determined to be non-significant ($p > .05$) by means of a post hoc Scheffe confidence interval procedure. On the other hand, the mean total DAS scores of city-dwellers (5.27) were significantly lower ($p < .05$) than those formed by the combination of farm- and small town-dwelling persons (6.65). Hence, it was decided to reconceptualize the size of hometown covariate as a two-level one: rural (i.e., the combination of farm- and small town-dwelling) vs urban (i.e., city-dwelling). All subsequent analyses involving size of hometown employed it in this reconceptualized form.

Total Number of Experiences with Death in Important Others

Participants' total number of experiences with death in important others were classified as either "low" or "high" (as defined operationally in the Findings section which follows) for the preliminary MANCOVAs. A multivariate test of equality of mean vectors revealed the Proximity to Death X Total Number of Experiences with Death in Important Others



Table 6
Observed Group Means and Sizes
Total DAS Score

Size of Hometown	<u>M</u>	<u>n</u>
Farm	6.78	18
Small Town	6.56	25
City	5.24	168

interaction to be non-significant [$F(4, 400) < 1, p < .98$]. A similar test for the main effect of Total Number of Experiences with Death in Important Others indicated that it, too, was non-significant [$F(2, 200) < 1, p < .99$]. Unless otherwise specified, these results were repeated in all subsequent preliminary MANCOVAs in which Total Number of Experiences with Death in Important Others served as a factor.

Proximity to Death

Reliable differences in the first multivariate package of dependent scores (i.e., total DAS and RLW scores) due to Proximity to Death were revealed by a significant multivariate test of equality of mean vectors for this factor [$F(4, 400) = 4.24, p < .002$]. The means of total DAS and RLW scores (as well as group sizes) have been presented in Table 7. Univariate tests indicated that while total DAS scores varied significantly as a function of this factor [$F(2, 201) = 8.32, p < .0004$], RLW scores did not differ [$F(2, 201) < 1, p < .56$]. Moreover, the small difference (0.46) between mean total DAS scores for the two elderly groups appeared to be negligible (i.e., non-significant). Thus, before the final formal Proximity to Death X Experiences with Death in Important Others analyses were performed, potential differences (and similarities)—due to Proximity to Death—in the first multivariate dependent measure package were explored further.

Health status. No significant differences in dependent scores between the two elderly groups were indicated by a multivariate test of equality of mean vectors for health status (i.e., life-threatened vs non-life-threatened) [$F(2, 116) < 1, p < .61$]. Two covariates,

Table 7

Group Means: DAS and RLW Scores

Proximity to Death (<u>n</u>)	Individual DAS Items															Total ^a DAS	RLW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Young Non-Life- Threatened (86)	.33	.58	.23	.40	.77	.65	.79	.50	.70	.20	.14	.49	.34	.34	.57	7.01	2.45
Elderly Non-Life- Threatened (60)	.05	.35	.02	.25	.18	.35	.20	.63	.53	.10	.23	.63	.45	.15	.23	4.23	1.93
Elderly Life- Threatened (63)	.16	.40	.05	.33	.21	.24	.19	.64	.62	.16	.21	.67	.41	.22	.18	4.69	2.52

^aAdjusted for two covariates.

age and educational level attained, were included in the analysis. However, neither was found to be significantly related to dependent scores as revealed by a step-wise multivariate multiple regression analysis to analyse the contribution of each to the prediction equation [age: $F(2, 117) < 1, p < .96$; educational level attained: $F(2, 116) < 1, p < .48$].

Age. A step-wise multiple regression analysis, using the forward (step-wise) inclusion method specified by Nie, Hull, Jenkins, Steinbrenner, and Bent (1975), was performed upon the data obtained from the two non-life-threatened (i.e., young and elderly) samples in order to ascertain whether dependent scores were related to age. The results of this analysis have been reported in Table 8. Inspection of the table reveals that total DAS scores were associated significantly with respondent's age [$F(1, 144) = 39.34, p < .01$] although RLW responses were not [$F(1, 143) < 1, p > .05$].

As was found to be the case for the first multivariate dependent variable package, reliable differences in the second multivariate package (i.e., composed of 16 measures) due to Proximity to Death were revealed by a significant multivariate test of equality of mean vectors for this factor [$F(32, 376) = 2.63, p < .0001$]. The observed group means of these 16 variables have been reported in Table 7. Univariate tests indicated that responses to six of the DAS items—specifically DAS 1 (I am very much afraid to die) [$F(2, 203) = 3.45, p < .03$], DAS 2 (The thought of death seldom enters my mind) [$F(2, 203) = 7.23, p < .001$], DAS 5 (I am not at all afraid to die) [$F(2, 203) = 14.42, p < .0001$],

Table 8
Step-Wise Multiple Regression Analysis Summary Table
Total DAS and RLW Scores

Variable	\underline{R}^2	\underline{R}^2 Change
Total DAS Score	0.21458	0.21458*
RLW	0.21503	0.00045

* $p < .01$

DAS 6 (I am not particularly afraid of getting cancer) [$F(2, 203) = 3.39, p < .04$], DAS 7 (The thought of death never bothers me) [$F(2, 203) = 19.25, p < .0001$], and DAS 15 (I feel that the future holds nothing for me to fear) [$F(2, 203) = 8.24, p < .0004$]—varied significantly as a function of this factor. The remaining DAS items—along with the RLW item—did not. Once again, before the final formal Proximity to Death X Experiences with Death in Important Others analyses were performed, potential differences (and similarities)—due to Proximity to Death—in the second multivariate package of dependent scores were explored further.

Health status. No significant differences between the dependent scores of the two elderly groups were indicated by a multivariate test of equality of mean vectors for health status [$F(16, 102) < 1, p < .71$]. Again, the two covariates, age and educational level attained, were included in the analysis. Neither was found to be significantly related to the dependent scores, however, as revealed by a step-wise multivariate multiple regression analysis to analyse the contribution of each to the prediction equation [age: $F(16, 103) < 1, p < .76$; educational level attained: $F(16, 102) = 1.40, p < .16$].

Age. A step-wise multiple regression analysis, using the forward (step-wise) inclusion method of Nie et al. (1975), was performed on the data obtained from the two non-life-threatened samples in order to ascertain whether dependent scores were related to age. The results of this analysis have been reported in Table 9. As may be seen, DAS 7 [$F(1, 144) = 81.80, p < .01$], DAS 5 [$F(1, 143) = 24.62, p < .01$],

Table 9
 Step-Wise Multiple Regression Analysis Summary Table
 Individual DAS and RLW Scores

Variable	R^2	R^2 Change
DAS 7	0.3626	0.36226**
DAS 5	0.45595	0.09368**
DAS 15	0.48054	0.02459**
DAS 11	0.50196	0.02142*
DAS 4	0.52244	0.02048*
DAS 12	0.54086	0.01843*
DAS 2	0.54852	0.00766
DAS 3	0.55661	0.00809
DAS 6	0.56436	0.00776
DAS 8	0.56844	0.00408
DAS 9	0.57144	0.00301
DAS 14	0.57341	0.00197
DAS 10	0.57492	0.00151
DAS 1	0.57550	0.00058
DAS 13	0.57601	0.00051
RLW	0.57623	0.00022

** $p < .01$

* $p < .025$

DAS 15 [$F(1, 142) = 6.72, p < .01$], DAS 11 (I am really scared of having a heart attack) [$F(1, 141) = 6.06, p < .025$], DAS 4 (I dread to think about having to have an operation) [$F(1, 140) = 6.00, p < .025$], and DAS 12 (I often think about how short life really is) [$F(1, 139) = 5.58, p < .025$] were associated significantly with age. No other DAS items nor the RLW item were significantly related to this variable.

Reconceptualization of proximity to death. While it was found that both multivariate packages of dependent measures varied significantly with the Proximity to Death factor, this variation appeared to be due largely to differences in participants' ages. This statement was supported by the findings that (1) among elderly participants, dependent scores did not differ due to differences in health status (i.e., non-life-threatening vs life-threatening) and (2) among non-life-threatening persons, differences in both multivariate packages were found to be associated significantly with age. It was decided, therefore, to combine the data obtained from the two elderly groups and reconceptualize the factor. All subsequent analyses involving Proximity to Death employed it as a two-level factor (young, elderly).

Findings

Analysis 1

Participants ranged in their total numbers of experiences with death in important others from zero to 97 (median = 4.66). All of those persons whose total number of such experiences were less than or equal

to four (48.5%), therefore, were assigned to the "low" category and the remaining 51.5% were described as having experienced a "high" number of such deaths. Analysis 1 thus comprised a 2 X 2 (Proximity to Death X Total Number of Experiences with Death in Important Others) MANCOVA with two covariates (sex of participant and size of hometown) in which the first multivariate data package (i.e., total DAS and RLW scores) served as the dependent measure.

A non-significant multivariate test of parallelism of regression hyperplanes [$F(12, 392) = 1.09, p > .05$] indicated the 2-way MANCOVA as an appropriate statistical model. A step-wise multivariate multiple regression analysis to determine the contribution of each covariate to the prediction equation revealed both to be associated significantly with the multivariate dependent package [sex of participant: $F(2, 203) = 4.10, p < .02$; size of hometown: $F(2, 202) = 4.57, p < .01$].

A summary of the MANCOVA results has been reported in Table 10 and the means (and sizes) of the four groups have been presented in Table 11. As may be seen, a significant multivariate test of equality of mean vectors [$F(2, 202) = 8.10, p < .0005$] indicated reliable differences in the dependent package as a function of the Proximity to Death factor. Univariate analyses revealed that young persons evidenced significantly higher mean total DAS scores (7.01) than did elderly individuals (4.45) [$F(1, 203) = 16.18, p < .0001$]. However, no RLW differences emerged [$F(1, 203) < 1, p < .61$]. No significant effects were found for the Total Number of Experiences with Death in Important Others factor [multivariate $F(2, 202)$ mean vectors $< 1, p < .99$] or the interaction

Table 10

Multivariate Analysis of Covariance Summary Table

Total DAS and RLW Scores

Source of Variation: Proximity to Death

Multivariate $F(4, 400)$ mean vectors = 4.2393, $p < .0023$

Univariate $F(2, 201)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	8.3146	.0004
RLW	0.5834	.5590

Source of Variation: Total Number of Experiences with Death in Important

Others

Multivariate $F(2, 200)$ mean vectors = 0.0109, $p < .9892$

Univariate $F(1, 201)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	0.0013	.9718
RLW	0.0177	.8944

Source of Variation: Proximity to Death X Total Number of Experiences

with Death in Important Others Interaction

Multivariate $F(4, 400)$ mean vectors = 0.1082, $p < .9797$

Univariate $F(2, 201)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	0.0792	.9240
RLW	0.0958	.9087

Table 11
 Group Means and Sizes
 Total DAS and RLW Scores

Group ^a (n)	Variable	
	DAS	RLW
1 (80)	7.01	2.45
2 (6)	7.00	2.50
3 (23)	4.35	2.13
4 (100)	4.56	2.26
<u>Combined^b:</u>		
Young (1 + 2)	7.01	2.46
Elderly (3 + 4)	4.45	2.21
Low (1 + 3)	5.74	2.30
High (2 + 4)	5.72	2.37

^a1 = Young/Low; 2 = Young/High; 3 = Elderly/Low; 4 = Elderly/High.

^bAdjusted for two covariates.

of the two factors [multivariate $F(2, 202)$ mean vectors $< 1, p < 1.0$].

Sex of participant and size of hometown. A 2 X 2 (Sex of Participant X Size of Hometown) MANCOVA, with age as a covariate, was performed upon the first multivariate dependent package in an attempt to clarify the relationships among these variables⁹.

A non-significant multivariate test of parallelism of regression hyperplanes [$F(6, 398) = 1.08, p > .05$] indicated the 2-way MANCOVA to be an appropriate statistical model. A step-wise multivariate multiple regression analysis to determine the contribution of age as a covariate to the prediction equation revealed it to be associated significantly with the multivariate package [$F(2, 202) = 21.77, p < .0001$].

A summary of the MANCOVA results has been reported in Table 12; group means (and sizes) have been presented in Table 13. Inspection of Table 12 reveals a significant multivariate test of mean vectors [$F(2, 202) = 5.22, p < .006$] indicating reliable differences in the dependent package as a function of Sex of Participant. Univariate analyses revealed that females evidenced a significantly higher mean total DAS score (6.61) than did males (5.25) [$F(1, 203) = 10.45, p < .002$]. No RLW difference emerged, however, due to this factor [$F(1, 203) < 1, p < .69$]. Similarly, the significant multivariate test of equality of mean vectors for the Size of Hometown factor [$F(2, 202) = 3.66, p < .03$] indicated reliable differences in the multivariate package. Univariate analyses revealed that the mean total DAS scores of rural-dwelling individuals (6.63) were significantly higher than those of urban-dwellers (5.23) [$F(1, 203) = 4.34, p < .04$]. Similarly in

Table 12

Multivariate Analysis of Covariance Summary Table

Total DAS and RLW Scores

Source of Variation: Sex of Participant

Multivariate $F(2, 202)$ mean vectors = 5.2237, $p < .0062$

Univariate $F(1, 203)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	10.4474	.0015
RLW	0.1607	.6890

Source of Variation: Size of Hometown

Multivariate $F(2, 202)$ mean vectors = 3.6604, $p < .0275$

Univariate $F(1, 203)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	4.3431	.0385
RLW	4.4338	.0365

Source of Variation: Sex of Participant X Size of Hometown Interaction

Multivariate $F(2, 202)$ mean vectors = 0.6374, $p < .5299$

Univariate $F(1, 203)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	1.0590	.3046
RLW	0.0695	.7294

Table 13
 Group Means and Sizes
 Total DAS and RLW Scores

Group ^a (<u>n</u>)	Variable	
	DAS	RLW
1 (21)	5.62	2.91
2 (73)	4.88	2.07
3 (22)	7.64	2.96
4 (92)	5.59	2.29
<u>Combined^b:</u>		
Male (1 + 2)	5.25	2.49
Female (3 + 4)	6.61	2.63
Rural (1 + 3)	6.63	2.93
Urban (2 + 4)	5.23	2.18

^a1 = Male/Rural; 2 = Male/Urban; 3 = Female/Rural; 4 = Female/Urban.

^bAdjusted for one covariate.

response to the RLW item¹⁰, rural-dwellers scored significantly higher (2.93) than did urban-dwellers (2.18) [$F(1, 203) = 4.43, p < .04$]. However, the interaction of the two factors was non-significant [multivariate $F(2, 202)$ mean vectors $< 1, p < .53$].

Analysis 2

Analysis 2 entailed a 2 X 2 (Proximity to Death X Total Number of Experiences with Death in Important Others) multivariate analysis of variance (MANOVA) by which the second multivariate criterion package (i.e., 16 measures) was analysed¹¹. A summary of the MANOVA results has been presented in Table 14 and the observed means and sizes of the four groups have been reported in Table 15. Inspection of Table 14 reveals a significant multivariate test of equality of mean vectors for the main effect of Proximity to Death [$F(16, 190) = 4.67, p < .0001$]. Univariate analyses revealed that young persons scored significantly higher (refer to Table 14 for exact F and p values) on six of the DAS items—specifically, items 1, 2, 5, 6, 7, and 15 (see Table 15 for these mean values). All other differences related to the factor were non-significant. As was found to be the case in Analysis 1, a non-significant multivariate test of equality of mean vectors for the Total Number of Experiences with Death in Important Others factor was observed [$F(16, 190) < 1, p < .63$]. Similarly, the interaction of the two factors was not significant [multivariate $F(16, 190)$ mean vectors = 1.29, $p < .21$].

Analyses 3 and 4

The findings that low vs high total number of experiences with death in important others comparisons did not reveal significant

Table 14
 Multivariate Analysis of Variance Summary Table
 Individual DAS and RLW Scores

Source of Variation: Proximity to Death

Multivariate F (16, 190) mean vectors = 4.6660, $p < .0001$

Univariate F (1, 205)s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	6.1501	.0140
2	14.4421	.0002
3	2.0626	.1525
4	0.5702	.4511
5	29.0456	.0001
6	5.3059	.0223
7	38.7030	.0001
8	1.4024	.2376
9	0.3334	.5644
10	0.3609	.5487
11	1.5555	.2137
12	0.0287	.8656
13	0.0962	.7568
14	0.1726	.6783
15	16.6811	.0001
RLW	0.3320	.5652

Source of Variation: Total Number of Experiences with Death in Important
Others

Multivariate \underline{F} (16, 190) mean vectors = 0.8454, $\underline{p} < .6329$

Univariate \underline{F} (1, 205)s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	0.0284	.8663
2	6.3405	.0126
3	2.0626	.1525
4	0.0145	.9042
5	0.1723	.6786
6	0.7670	.3823
7	0.0089	.9248
8	0.0087	.9260
9	0.1524	.6967
10	0.0365	.8488
11	0.4716	.4932
12	1.800	.1812
13	0.2443	.6218
14	1.7631	.1857
15	0.8108	.3691
RLW	0.0342	.8536

Source of Variation: Proximity to Death X Total Number of Experiences
with Death in Important Others Interaction

Multivariate F (16, 190) mean vectors = 1.2855, $p < .2097$

Univariate F (1, 205)s:

<u>Variable</u>	<u>F</u>	<u>P</u>
DAS 1	0.0063	.9371
2	1.7655	.1854
3	3.9335	.0487
4	0.2146	.6438
5	0.4603	.4983
6	4.7701	.0301
7	0.1409	.7078
8	0.0087	.9260
9	2.0669	.1521
10	0.0346	.8527
11	0.9962	.3195
12	3.2958	.0709
13	0.9755	.3247
14	0.2005	.6549
15	0.0046	.9460
RLW	0.0067	.9348

Table 15

Group Means: DAS and RLW Scores

Group ^a (<u>n</u>)	Individual DAS Items															RLW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1 (80)	.33	.55	.25	.40	.78	.68	.79	.50	.71	.20	.14	.46	.33	.35	.56	2.45
2 (6)	.33	1.00	0.00	.33	.67	.33	.83	.50	.50	.17	.17	.83	.50	.17	.67	2.50
3 (23)	.09	.26	0.00	.26	.17	.17	.22	.65	.48	.13	.35	.70	.48	.26	.13	2.13
4 (100)	.11	.40	.04	.30	.20	.32	.19	.63	.60	.13	.19	.64	.42	.17	.22	2.26
<u>Combined:</u>																
Young (1 + 2)	.33	.58	.23	.40	.77	.65	.79	.50	.70	.20	.14	.49	.34	.34	.57	2.45
Elderly (3 + 4)	.11	.37	.03	.29	.20	.29	.20	.63	.58	.13	.22	.65	.43	.19	.20	2.24
Low (1 + 3)	.27	.49	.19	.37	.64	.56	.66	.53	.66	.19	.19	.52	.36	.33	.47	2.38
High (2 + 4)	.12	.43	.04	.30	.23	.32	.23	.62	.59	.13	.19	.65	.43	.17	.25	2.27

^a1 = Young/Low; 2 = Young/High; 3 = Elderly/Low; 4 = Elderly/High.

differences in participants' dependent scores (Analyses 1 and 2) were probed further. Analyses 3 and 4 sought to determine whether any experience with death in important others (as opposed to none whatsoever) influenced DAS and/or RLW scores. Participants were classified as either never having had such an experience ("no experience") or as having had at least one or more ("some experience"). It was found that virtually all of the elderly interviewees had reported one or more deceased important other and so only the data obtained from young participants were compared.

Analysis 3. A 1-way (Experiences with Death in Important Others) MANCOVA, with sex of participant as a covariate¹², was performed upon young participants' total DAS and RLW scores. A non-significant multivariate test of parallelism of regression hyperplanes [$F(2, 81) = 1.31, p > .05$] indicated MANCOVA as an appropriate statistical model. A step-wise multivariate multiple regression analysis determined that the covariate contributed significantly to the prediction equation for the package [$F(2, 82) = 7.35, p < .0012$]. The MANCOVA results have been summarized in Table 16 and the means and sizes of the two groups have been presented in Table 17. As may be seen, no significant differences in the dependent package emerged due to Experiences with Death in Important Others [multivariate $F(2, 82)$ mean vectors = 1.06, $p < .35$].

Analysis 4. A 1-way (Experiences with Death in Important Others) MANOVA was performed upon the subset of the second multivariate dependent measure package which had been obtained from young participants. A summary of these results may be found in Table 18. Group means and

Table 16
Multivariate Analysis of Covariance Summary Table
Total DAS and RLW Scores

Source of Variation: Experiences with Death in Important Others

Multivariate $F(2, 82)$ mean vectors = 1.0622, $p < .3504$

Univariate $F(1, 83)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	2.1431	.1470
RLW	0.0147	.9037

Table 17
 Group Means and Sizes
 DAS and RLW Scores

Variable	Experience with Death in Important Others	
	No Experience <u>n</u> = 29	Some Experience <u>n</u> = 57
DAS 1	.31	.33
2	.45	.65
3	.21	.25
4	.41	.39
5	.69	.81
6	.62	.67
7	.69	.84
8	.48	.51
9	.76	.67
10	.21	.19
11	.17	.12
12	.41	.53
13	.28	.37
14	.35	.33
15	.48	.61
Total DAS ^a	6.51	7.27
RLW	2.41	2.47

^aAdjusted for one covariate.

Table 18
 Multivariate Analysis of Variance Summary Table
 Individual DAS and RLW Scores

Source of Variation: Experiences with Death in Important Others

Multivariate $F(16, 69)$ mean vectors = 0.5618, $p < .9014$

Univariate $F(1, 84)$ s:

<u>Variable</u>	<u>F</u>	<u>P</u>
DAS 1	0.0452	.8322
2	3.2315	.0759
3	0.1580	.6921
4	0.0609	.8058
5	1.4743	.2281
6	0.1751	.6767
7	2.7219	.1028
8	0.0508	.8222
9	0.7594	.3860
10	0.0229	.8801
11	0.3866	.5358
12	0.9622	.3295
13	0.7259	.3967
14	0.0111	.9164
15	1.3409	.2502
RLW	0.0157	.9007

sizes have been reported in Table 17. As was found in Analysis 3, Analysis 4 revealed that no significant variation in the criterion package occurred due to the Experiences with Death in Important Others factor [multivariate $F(16, 69)$ mean vectors < 1 , $p < .90$].

Analyses 5 and 6

The Experiences with Death in Important Others dimension was redefined operationally for Analyses 5 and 6 in order to explore the possibility that responses to the questions of interest might vary as a function of how recently participants had experienced the death of a loved one. Individuals were classified as either having reported the occurrence of such an experience within the 12-month period which preceded the interview ("less than one year") or as having had such an experience at an earlier time ("one or more years"). The data obtained from 29 young interviewees who reported never having experienced the death of an important other were not included in these analyses.

Analysis 5. A significant test of parallelism of regression hyperplanes [$F(12, 334) = 2.73$, $p < .0016$] contraindicated the MANCOVA model (with sex of participant and size of hometown as covariates) for the statistical analysis of this subset of the first multivariate criterion measure package. Consequently a 2 X 2 (Proximity to Death X Years Since Most Recent Experience with Death in an Important Other) MANOVA was performed upon the data. The results of this analysis have been presented in Table 19; the means and sizes of the four groups appear in Table 20. Once again, the significant main effect of Proximity to Death emerged [multivariate $F(2, 175)$ mean vectors = 12.84, $p < .0001$].

Table 19

Multivariate Analysis of Variance Summary Table

Total DAS Score and RLW Score

Source of Variation: Proximity to Death

Multivariate $F(2, 175)$ mean vectors = 12.8419, $p < .0001$

Univariate $F(1, 176)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	25.7281	.0001
RLW	0.6311	.4281

Source of Variation: Years Since Most Recent Experience with Death in
an Important Other

Multivariate $F(2, 175)$ mean vectors = 0.0751, $p < .9277$

Univariate $F(1, 176)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	0.0102	.9199
RLW	0.1186	.7310

Source of Variation: Proximity to Death X Years Since Most Recent
Experience with Death in an Important Other

Multivariate $F(2, 175)$ mean vectors = 0.0624, $p < .9395$

Univariate $F(1, 176)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	0.0165	.8980
RLW	0.0866	.7690

Table 20
 Group Means and Sizes
 Total DAS and RLW Scores

Group ^a (n)	Variable	
	DAS	RLW
1 (12)	7.17	2.67
2 (45)	7.29	2.42
3 (32)	4.53	2.25
4 (91)	4.52	2.24
<u>Combined:</u>		
Young (1 + 2)	7.26	2.47
Elderly (3 + 4)	4.52	2.24
Less than one (1 + 3)	5.25	2.36
One or more (2 + 4)	5.39	2.29

^a1 = Young/Less than one; 2 = Young/One or more; 3 = Elderly/Less than one;

4 = Elderly/One or more.

Univariate tests also revealed that the two individual dependent measures were related to this factor in a manner similar to that observed in Analysis 1. Multivariate tests of equality of mean vectors indicated no significant differences in the package associated with the Years Since Most Recent Experience with Death in an Important Other factor [$F(2, 175) < 1, p < .93$] as well as a non-significant interaction effect [$F(2, 175) < 1, p < .94$].

Analysis 6. A 2 X 2 (Proximity to Death X Years Since Most Recent Experience with Death in an Important Other) MANCOVA, with sex of participant¹³ as a covariate, was performed upon the above-specified subset of the second multivariate data package. A non-significant parallelism test of regression hyperplanes [$F(48, 467.75) = 1.32, p > .05$] revealed MANCOVA to be an appropriate statistical model. The step-wise multivariate multiple regression analysis determined that the covariate made a significant contribution to the prediction equation [$F(16, 160) = 1.72, p < .05$]. The results of this analysis were parallel to those found in Analysis 2—i.e., a significant main effect for Proximity to Death with neither a main effect for the second factor nor a significant interaction effect—and have been summarized in Table 21 (to which the reader may refer for precise F and p values). Group means and sizes may be found in Table 22.

Analyses 7 and 8

The Experiences with Death in Important Others dimension was again operationally redefined for Analyses 7 and 8. The type of important other whose death was described as having had the greatest impact upon

Table 21
 Multivariate Analysis of Covariance Summary Table
 Individual DAS and RLW Scores

Source of Variation: Proximity to Death

Multivariate $F(16, 160)$ mean vectors = 8.5495, $p < .0001$

Univariate $F(1, 175)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	9.7318	.0022
2	15.7510	.0002
3	11.5809	.0009
4	3.3116	.0705
5	66.4608	.0001
6	14.9780	.0002
7	70.1486	.0001
8	0.2451	.6213
9	0.1411	.7077
10	1.4375	.2321
11	1.7884	.1828
12	0.4778	.4904
13	0.0266	.8706
14	1.3543	.2461
15	30.7211	.0001
RLW	0.7977	.3731

Source of Variation: Years Since Most Recent Death in an Important Other

Multivariate $F(16, 160)$ mean vectors = 0.8478, $p < .6301$

Univariate $F(1, 175)$ s:

<u>Variable</u>	<u>F</u>	<u>P</u>
DAS 1	0.678	.4113
2	3.2191	.0745
3	0.2664	.6065
4	3.5123	.0626
5	0.0295	.8639
6	0.1783	.6734
7	0.0225	.8809
8	1.5562	.2139
9	0.9744	.3250
10	0.7930	.3746
11	0.1075	.7435
12	0.5786	.4480
13	1.8989	.1699
14	1.0414	.3089
15	0.0987	.7539
RLW	0.1267	.7230

Source of Variation: Proximity to Death X Years Since Most Recent Death
in an Important Other Interaction

Multivariate $F(16, 160)$ mean vectors = 0.8660, $p < .6092$

Univariate $F(1, 175)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	0.0809	.7765
2	1.6698	.1979
3	0.9740	.3251
4	1.9404	.1654
5	0.2433	.6226
6	0.2987	.5855
7	0.0272	.8693
8	1.3176	.2525
9	1.1688	.2811
10	0.2907	.5906
11	0.0523	.8194
12	1.1741	.2800
13	0.0103	.9194
14	1.7048	.1933
15	0.8457	.3592
RLW	0.1598	.6899

Table 22

Group Means: DAS and RLW Scores

Group ^a (n)	Individual DAS Items															RLW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1 (12)	.25	.83	.17	.33	.83	.58	.83	.67	.50	.17	.08	.67	.42	.17	.67	2.67
2 (45)	.36	.60	.27	.40	.80	.69	.84	.47	.71	.20	.13	.49	.36	.38	.60	2.42
3 (32)	.09	.44	.06	.09	.19	.31	.22	.66	.59	.06	.22	.63	.56	.22	.19	2.25
4 (91)	.11	.35	.02	.36	.20	.29	.19	.63	.57	.15	.22	.66	.39	.18	.21	2.24
<u>Combined^b:</u>																
Young (1 + 2)	.30	.72	.22	.37	.82	.64	.84	.57	.61	.18	.11	.58	.39	.27	.63	2.54
Elderly (3 + 4)	.10	.40	.04	.23	.19	.30	.20	.64	.58	.11	.22	.64	.47	.20	.20	2.24
Less than one (1 + 3)	.17	.64	.12	.21	.51	.45	.53	.66	.55	.12	.15	.65	.49	.19	.43	2.46
One or more (2 + 4)	.23	.48	.14	.38	.50	.49	.52	.55	.64	.18	.18	.57	.37	.28	.40	2.33

^a1 = Young/Less than one; 2 = Young/One or more; 3 = Elderly/Less than one; 4 = Elderly/One or more.

^bAdjusted for one covariate.

a participant "as a person" was classified as either an "immediate family member" (which included parents, spouses, siblings, and children) or as a "close friend or relative" (which included any other type of deceased person described as an important other by the interviewee). Thus a two-level Highest Impact Type of Death factor was created for the following two explorations.

The data obtained from a total of 50 participants—the 29 young persons with no experience with death in an important other and 2 young and 19 elderly interviewees who indicated that no one specific loved one's death could be considered as having had an impact upon them which was greater than that occasioned by any other—were excluded. This resulted in a total N of 159 for Analyses 7 and 8.

Analysis 7. A 2 X 2 (Proximity to Death X Highest Impact Type of Death) MANCOVA, with sex of participant and size of hometown as covariates, was performed on the above-described subset of the first multivariate criterion package (see Table 23 for results). The appropriateness of MANCOVA was confirmed by a non-significant parallelism test of regression hyperplanes [$F(12, 292) = 1.65, p > .05$]. The step-wise multivariate multiple regression analysis showed that both covariates contributed significantly (marginally in the case of size of hometown) to the prediction equation [sex of participant: $F(2, 153) = 3.61, p < .03$; size of hometown: $F(2, 152) = 2.82, p < .06$].

Once again, the significant Proximity to Death main effect resulted [multivariate $F(2, 152)$ mean vectors = 11.15, $p < .0001$]. Follow-up univariate tests indicated significant variation in mean total DAS

Table 23
 Multivariate Analysis of Covariance Summary Table
 Total DAS and RLW Scores

Source of Variation: Proximity to Death

Multivariate $F(2, 152)$ mean vectors = 11.1521, $p < .0001$

Univariate $F(1, 153)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	21.6086	.0001
RLW	2.8158	.0954

Source of Variation: Highest Impact Type of Death

Multivariate $F(2, 152)$ mean vectors = 0.4242, $p < .6551$

Univariate $F(1, 153)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	0.0133	.9083
RLW	0.7831	.3777

Source of Variation: Proximity to Death X Highest Impact Type of
 Death Interaction

Multivariate $F(2, 152)$ mean vectors = 3.6808, $p < .0275$

Univariate $F(1, 153)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS	5.4838	.0205
RLW	3.0905	.0808

scores [$F(1, 153) = 21.61, p < .0001$] and marginally significant variability in mean RLW answers [$F(1, 153) = 2.82, p < .10$] due to the factor. However, a non-significant multivariate test of equality of mean vectors revealed the absence of a main effect for Highest Impact Type of Death [$F(2, 152) < 1, p < .66$]. Interestingly, a significant Proximity to Death X Highest Impact Type of Death interaction emerged [multivariate $F(2, 152)$ mean vectors = 3.68, $p < .03$]. Univariate analyses revealed the interaction to be significant for mean total DAS scores [$F(1, 153) = 5.48, p < .02$] as well as marginally significant in the case of mean RLW responses [$F(1, 153) = 3.09, p < .08$].

As displayed in Figure 1, the order of mean total DAS scores observed was as follows: young/immediate family member (i.e., young persons who specified an immediate family member as the highest impact type of death) (9.00, $n = 7$) greater than young/close friend or relative (7.02, $n = 48$) greater than elderly/close friend or relative (5.62, $n = 83$) greater than elderly/immediate family member (4.30, $n = 21$). Each of these four group differences reached significance ($p < .05$) as determined by a post hoc Scheffe confidence interval procedure. The four group means for the RLW item have been presented in Figure 2. As may be seen, the order of scores was similar to that observed for mean total DAS scores. However, the only significant difference among the four was that between the young/ and elderly/immediate family member groups (means = 3.57 and 1.98 respectively; Scheffe $p < .05$).

Analysis 8. A 2 X 2 (Proximity to Death X Highest Impact Type of Death) MANCOVA, with sex of participant¹⁴ as a covariate, was

Figure 1. Mean total Death Anxiety Scale (DAS) scores:
Proximity to Death X Highest Impact Type of Death interaction
(IF = immediate family member; CF/R = close friend or relative).

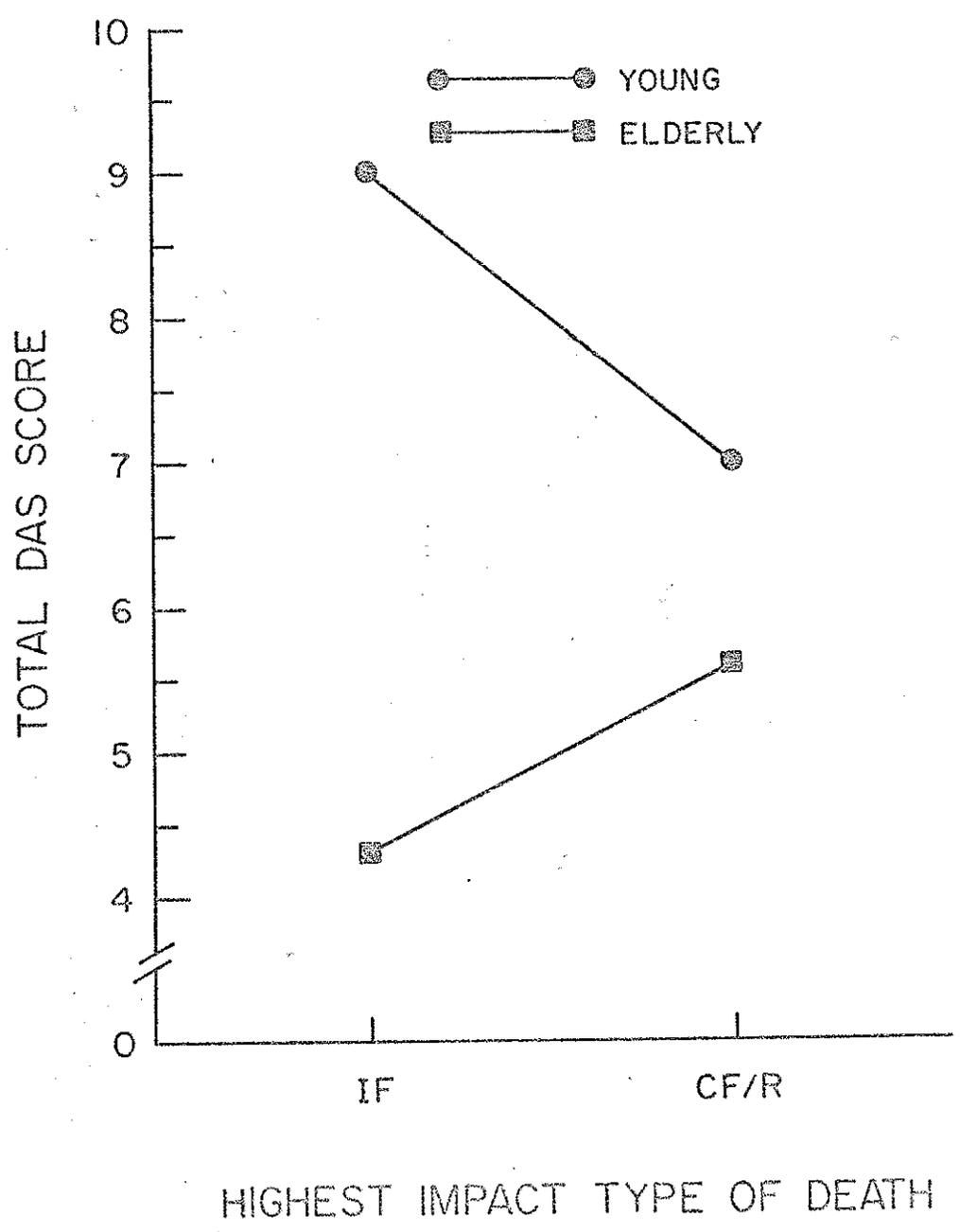
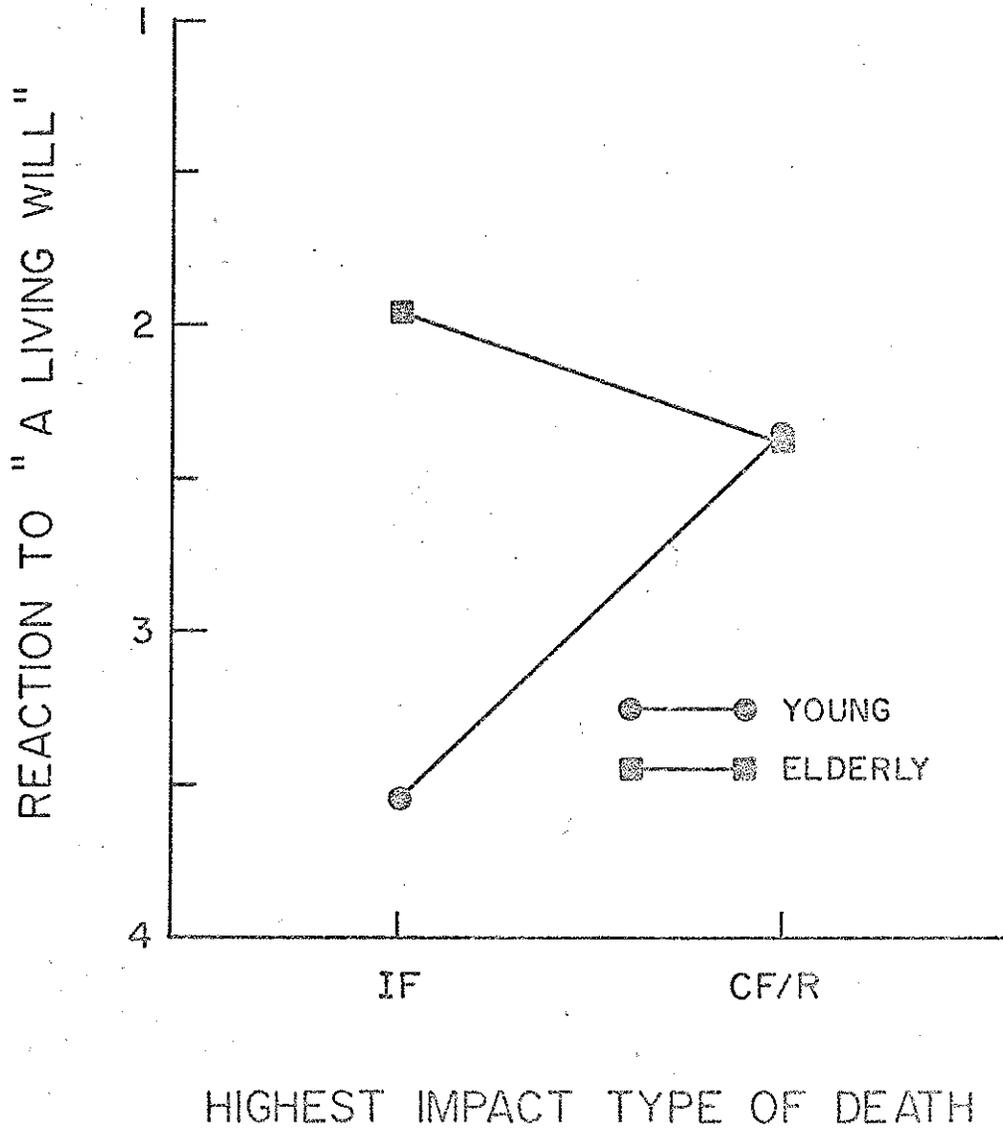


Figure 2. Mean Reaction to "A Living Will" (RLW) scores:
Proximity to Death X Highest Impact Type of Death interaction
(IF = immediate family member; CF/R = close friend or relative).
Note.- 1 = "strongly agree", 2 = "moderately agree", 3 = "slightly
agree", 4 = "not sure". Higher mean RLW scores thus indicate
lower acceptability of voluntary passive euthanasia as a personal
outcome.



performed upon the above-specified subset of the second multivariate data package (see Table 24 for results). MANCOVA was confirmed as an appropriate model [parallelism $F(48, 405.29)$ regression hyperplanes = 1.19, $p > .05$] and the step-wise multivariate multiple regression analysis revealed that the covariate contributed significantly [$F(16, 139) = 2.07, p < .01$].

In addition to the significant Proximity to Death main effect [multivariate $F(16, 139)$ mean vectors = 8.13, $p < .0001$] and the significant Proximity to Death X Highest Impact Type of Death interaction effect [multivariate $F(16, 139)$ mean vectors = 2.66, $p < .001$] which were observed in the previous analysis, reliable differences in the criterion package emerged due to the Highest Impact Type of Death factor [multivariate $F(16, 139)$ mean vectors = 2.57, $p < .002$]. Group means and sizes may be found in Table 25.

Univariate analyses indicated that young interviewees were more likely to respond in the scorable direction (indicating greater death anxiety) on the following nine DAS items: 1, 2, 3 (It doesn't make me nervous when people talk about death), 5, 6, 7, 9 (I fear dying a painful death), 14 (The sight of a dead body is horrifying to me), and 15 as well as on the RLW item (refer to Table 24 for exact F and p values). Elderly participants, on the other hand, scored significantly higher on two of the DAS questions—specifically, numbers 12 and 13 (I shudder when I hear people talking about World War III). Univariate tests following the second factor showed that participants who specified an immediate family member as the highest impact type of death scored significantly

Table 24
 Multivariate Analysis of Covariance Summary Table
 Individual DAS and RLW Scores

Source of Variation: Proximity to Death

Multivariate $F(16, 139)$ mean vectors = 8.1311, $p < .0001$

Univariate $F(1, 154)$ s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	20.0041	.0001
2	6.2824	.0133
3	15.1590	.0002
4	0.0068	.9347
5	41.7666	.0001
6	10.9775	.0012
7	52.4691	.0001
8	0.2509	.6173
9	4.2841	.0402
10	0.8028	.3718
11	0.8674	.3533
12	3.1673	.0771
13	8.3602	.0044
14	2.8063	.0960
15	21.9725	.0001
RLW	3.0942	.0806

Source of Variation: Highest Impact Type of Death

Multivariate F (16, 139) mean vectors = 2.5675, $p < .0017$

Univariate F (1, 154)s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	2.1994	.1401
2	0.0034	.9536
3	0.4898	.4852
4	1.2576	.2638
5	0.3641	.5472
6	0.0209	.8853
7	0.0070	.9336
8	4.9922	.0269
9	2.2642	.1345
10	0.0183	.8927
11	0.1324	.7165
12	0.8682	.3530
13	12.5895	.0006
14	0.0011	.9731
15	0.1656	.6847
RLW	0.8635	.3543

Source of Variation: Proximity to Death X Highest Impact Type of Death

Interaction

Multivariate F (16, 139) mean vectors = 2.6618, $p < .0012$

Univariate F (1, 154)s:

<u>Variable</u>	<u>F</u>	<u>p</u>
DAS 1	10.3942	.0016
2	1.7250	.1910
3	4.6529	.0326
4	1.9662	.1629
5	0.6143	.4345
6	3.7085	.0560
7	0.0014	.9705
8	6.2715	.0134
9	0.0354	.8511
10	1.3633	.2448
11	13.5415	.0004
12	0.0196	.8890
13	2.5303	.1138
14	5.4123	.0213
15	0.0068	.9344
RLW	3.3165	.0706

Table 25

Group Means: DAS and RLW Scores

Group ^a (n)	Individual DAS Items															Total DAS	RLW
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1 (7)	.71	.57	.43	.43	.86	.86	.86	1.00	.86	.29	.43	.43	0.00	.57	.71	9.00	3.57
2 (48)	.29	.67	.21	.38	.81	.63	.85	.44	.65	.17	.06	.54	.42	.31	.60	7.02	2.35
3 (83)	.06	.41	.01	.25	.17	.27	.19	.65	.59	.11	.18	.63	.42	.16	.21	4.30	1.98
4 (21)	.19	.24	.10	.52	.29	.48	.19	.67	.43	.19	.48	.76	.57	.38	.14	5.62	2.38
<u>Combined^b:</u>																	
Young (1 + 2)	.50	.61	.32	.40	.83	.74	.85	.72	.75	.23	.25	.49	.20	.44	.65	8.01	2.96
Elderly (3 + 4)	.13	.33	.06	.39	.23	.37	.19	.66	.51	.15	.33	.69	.51	.27	.18	4.96	2.18
I.F.M. ^c (1 + 3)	.38	.47	.21	.33	.50	.55	.52	.82	.72	.19	.30	.54	.16	.35	.44	6.65	2.77
C.F.R. ^d (2 + 4)	.25	.48	.16	.46	.56	.56	.54	.18	.54	.18	.27	.65	.55	.36	.40	6.32	2.37

^a1 = Young/Immediate family member; 2 = Young/Close friend or relative; 3 = Elderly/Immediate family member; 4 = Elderly/Close friend or relative.

^bIndividual DAS item means adjusted for one covariate; total DAS and RLW means adjusted for two covariates.

^cImmediate family member.

^dClose friend or relative.

greater on item 8 (I am often distressed by the way time flies so very rapidly) of the DAS while those who specified a close friend or relative were more likely to respond in the scorable direction (i.e., indicating greater death anxiety) to item 13. The RLW item was not associated significantly with this factor, however, according to these tests (again, the reader is referred to the MANCOVA summary table, Table 24).

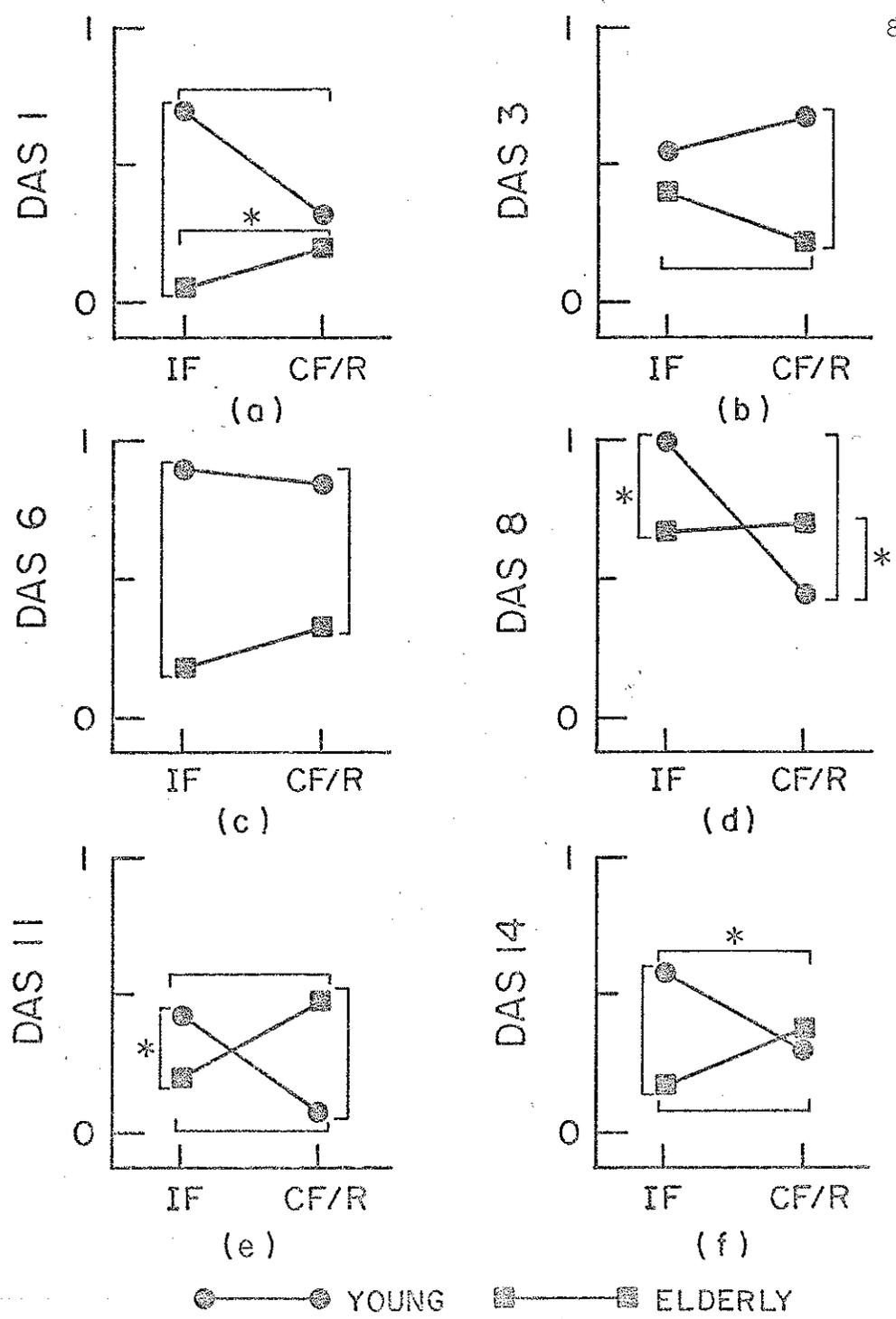
The univariate analyses which followed the significant interaction effect revealed significant variation on DAS items 1, 3, 6, 8, 11, 14 and on the RLW item. The relationships among these means (and their respective levels of significance as determined by the post hoc Scheffe test) have been depicted in Figure 3.

Analysis 9

While a wide range of total DAS scores (0 to 14) were observed, the great majority of participants (80.7%) expressed some degree of agreement with "A Living Will" (see Table 26). Relationships among the dependent measures themselves were explored by calculating Pearson product-moment correlation coefficients between responses to each of the individual DAS items (as well as total scores) with responses to the RLW item. Separate coefficients were computed for the young and elderly groups, however, due to the strong relationship observed earlier between the Proximity to Death dimension and dependent scores. The results of Analysis 9 have been summarized in Table 27.

Young participants. Three DAS items—i.e., items 7 ($r = .22$, $p < .04$), 11 ($r = .28$, $p < .01$), and 13 ($r = -.22$, $p < .05$)—were significantly associated with RLW answers in this group. However, the

Figure 3. Proximity to Death X Highest Impact Type of Death interaction effect on individual Death Anxiety Scale (DAS) items: (a) DAS 1; (b) DAS 3; (c) DAS 6; (d) DAS 8; (e) DAS 11; (f) DAS 14 (IF = immediate family member; CF/R = close friend or relative).
Note.- Bracketed contrasts: Scheffe $p < .05$; bracketed contrasts marked by an asterisk (*): Scheffe $p < .06$.



HIGHEST IMPACT TYPE OF DEATH

Table 26
 Frequency Distributions
 Total DAS and RLW Scores

Score ^a	DAS		Score ^b	RLW	
	Relative Frequency (%)	Cumulative Frequency (%)		Relative Frequency (%)	Cumulative Frequency (%)
0	2.5	2.5	1	51.5	51.1
1	5.4	7.9	2	25.7	77.2
2	9.4	17.3	3	3.5	80.7
3	11.9	29.2	4	3.5	84.2
4	10.4	39.6	5	1.5	85.6
5	10.9	50.5	6	4.0	89.6
6	11.9	62.4	7	10.4	100.0
7	9.4	71.8			
8	14.4	86.1			
9	5.4	91.6			
10	4.0	95.5			
11	1.0	96.5			
12	2.0	98.5			
13	1.0	99.0			
14	0.5	100.0			

^aHigher scores indicate higher death anxiety.

^b1 = strongly agree; 2 = moderately agree; 3 = slightly agree; 4 = not sure; 5 = slightly disagree; 6 = moderately disagree; 7 = strongly disagree.

Table 27
 Pearson Product-Moment Correlation Coefficients
 DAS and RLW Scores

Variable	<u>Proximity to Death</u>			
	<u>Young</u>		<u>Elderly</u>	
	RLW	p	RLW	p
DAS 1	-.0682	.533	.2334	.009
2	.0492	.653	.0861	.340
3	.0389	.722	.1831	.041
4	.0870	.426	.0582	.519
5	-.0389	.722	.2025	.024
6	.0071	.948	.2015	.024
7	.2229	.039	.1304	.147
8	.0617	.572	.0937	.299
9	-.1247	.253	.0224	.804
10	-.0100	.927	.1187	.187
11	.2843	.008	.1663	.064
12	.1230	.259	.0647	.474
13	-.2154	.046	.1232	.171
14	.1762	.105	.1877	.036
15	.0882	.420	.1367	.128
Total Score	.1157	.289	.2759	.002

total DAS scores observed for young people were not correlated significantly with RLW ($r = .12$, $p < .29$).

Elderly participants. Five of the individual DAS items answered by elderly persons were correlated significantly with their reactions to "A Living Will": items 1 ($r = .23$, $p < .01$), 3 ($r = .18$, $p < .04$), 5 ($r = .20$, $p < .02$), 6 ($r = .20$, $p < .02$), and 14 ($r = .19$, $p < .04$). The association between DAS item 11 and RLW was marginally significant ($r = .17$, $p < .06$). Unlike the young interviewees, the total DAS scores obtained by elderly participants were correlated significantly with the RLW responses ($r = .28$, $p < .002$).

Some Additional Findings

Type of Life-Threatening Disorder

Previous research has suggested that the nature of death fears may not vary across different types of life-threatening trauma. The reader is reminded, for example, that Feifel et al. (1973) reported no significant differences in the death-related fears expressed by heart and cancer patients. The analyses reported below attempted to explore this line of investigation further in a population of patients suffering a wider variety of life-threatening disorders. In general, it was found that the conclusion formed on the basis of heart and cancer victims could not be extrapolated to a wider variety of problems.

Elderly life-threatened patients were classified according to the type of disorder for which they had been hospitalized: heart ($n = 6$), stroke ($n = 21$), diabetic amputees ($n = 6$), cancer ($n = 12$), broken hip

Table 28
Analysis of Variance Summary Table
Total DAS Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	5	28.7157	3.781	.0052
Within Groups	54	7.5939		
Total	59			

Table 29
Analysis of Variance Summary Table
RLW Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	5	4.5181	0.946	.4588
Within Groups	54	4.7742		
Total	59			

Table 30
Analysis of Variance Summary Table
Total DAS Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	26.5263	2.988	.0889
Within Groups	61	8.8765		
Total	62			

Table 31
Analysis of Variance Summary Table
RLW Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	0.1353	0.029	.8660
Within Groups	61	4.7144		
Total	62			

with complications ($n = 6$), and a heterogeneous "other" classification ($n = 9$). Separate 1-way ANOVAs were performed on the total DAS and RLW scores observed for these patients (see Tables 28 and 29). In the case of the former, a significant omnibus test of mean differences was noted [$F(5, 54) = 3.78, p < .005$]. Post hoc examination of this finding revealed that the cancer patients' mean DAS score (7.33) was greater (approaching significance with Scheffe $p < .06$) than the combination of those obtained by stroke (4.48), diabetic amputee (3.50), broken hip (3.33) and "other" (2.67) patients. No other meaningful post hoc comparison (pair-wise or complex) of these means—including that between cancer and heart (5.33) victims—was significant. Responses to the RLW item did not differ reliably as a function of patients' type of life-threatening disorder [$F(5, 54) < 1, p < .46$].

Terminal vs non-terminal illness. Elderly life-threatened patients were also classified as either terminally ill (as identified by the ward head nurse at the time of interaction¹⁵) or non-terminally ill.

Separate 1-way ANOVAs were again performed on total DAS and RLW scores. As indicated in Table 30, a marginally significant difference in mean DAS scores emerged [$F(1, 61) = 2.99, p < .09$] with dying persons expressing greater death anxiety (6.67) than non-terminally ill patients (4.46). The RLW scores of these participants (Table 31) did not differ significantly [$F(1, 61) < 1, p < .87$].

A Possible "Hypochondriac Effect"

Geriatricians have expressed the concern that much of their time and efforts are "wasted" annually in examining and treating a relatively

small "hypochondriac" proportion of the elderly community for minor ailments which do not require professional care¹⁶. One of the questions asked of non-life-threatened participants (in the initial Background Information phase of the interview) inquired as to whether the individual currently suffered any serious medical problems¹⁷. While no potentially life-threatening problems were reported, a considerable proportion (40.3%, $n = 25$) of elderly non-life-threatened individuals did complain of some relatively minor type of problem (e.g., arthritis, old injuries, minor aches and pains, etc.). The total DAS and RLW scores of this group were compared to those obtained from elderly non-life-threatened persons who indicated no medical problem whatsoever ($n = 37$) by separate 1-way ANOVAs (Tables 32 and 33). Inspection of Table 32 reveals that the "minor problems" group evidenced a significantly higher mean DAS score (5.36) than did the "no problems" group (3.68) [$F(1, 60) = 6.62, p < .01$]. Similarly, a marginally significant difference in mean RLW scores [$F(1, 60) = 3.21, p < .08$] was noted (minor problems: mean = 2.48; no problems: mean = 1.68).

Summary of Results

No evidence supported the criticisms that E-bias, practice-bias, or order effects distorted the data obtained. None of the dependent scores obtained from elderly participants varied as a function of health status (i.e., life-threatened vs non-life-threatened). Differences in total DAS and several of the individual DAS item scores of non-life-threatened persons were found to be significantly associated with age.

Table 32
Analysis of Variance Summary Table
Total DAS Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	42.3254	6.616	.0126
Within Groups	60	6.3978		
Total	61			

Table 33
Analysis of Variance Summary Table
RLW Score

Source	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	1	9.6518	3.211	.0782
Within Groups	60	3.0058		
Total	61			

As a result, the Proximity to Death dimension was reconceptualized and employed as a two-level factor: young vs elderly. Total DAS (although not individual items) and RLW scores were found to be significantly associated with sex and hometown only. Religious affiliation, degree of religiosity, occupation classification, and number of co-habitants were not related to dependent scores. All analyses in which the Proximity to Death factor was included revealed a significant main effect with young participants consistently evidencing greater death anxiety (reflected in both total and individual DAS item scores) than in elderly persons. RLW was not affected. No differences in any of the criterion measures were observed to occur due to the Total Number of Experiences with Death in Important Others, Experience with Death in Important Others, Years Since Most Recent Experience with Death in an Important Other, or with their interactions with Proximity to Death. While total DAS and RLW scores did not vary due to the Highest Impact Type of Death factor, two individual DAS items did. Furthermore, a significant Proximity to Death X Highest Impact Type of Death interaction emerged for total DAS and six individual DAS item scores as well as RLW responses. Total DAS scores of females were reliably greater than those of males. No sex differences emerged in RLW. Rural-dwelling individuals evidenced greater death anxiety (total DAS score) and RLW scores (indicating lower acceptability of voluntary passive euthanasia as a personal outcome) than did urban-dwellers. Finally, explorations of the relationship between death anxiety and reactions to "A Living Will" revealed no significant association between general level of

death anxiety and RLW in young persons, but it was correlated positively ($p < .05$) with RLW among elderly individuals. Six individual DAS items were found to be correlated reliably with RLW in the elderly group. Within the elderly patient group, significant variation in total DAS scores occurred due to the type of life-threatening medical problem (no meaningful post hoc contrast of these means was found to reach significance, however). Terminally ill individuals evidenced greater death anxiety ($p < .09$) than did non-terminally ill patients. No RLW differences were noted. In non-life-threatened elderly persons, those who complained of minor medical difficulties scored significantly higher than did those reporting no problems whatsoever, on both the DAS ($p < .05$) and RLW ($p < .08$).

Discussion

The present endeavor represented an attempt to explore several of the psychological variables which might be related to Thanatology. It was hoped that psychological dimensions and relationships of potential practical and theoretical utility might be identified.

On the Criterion Measures

RLW (Reaction to "A Living Will"). Participants were specifically asked "Does this express your general wishes if you were to find yourself in such a situation?" Thus, while the "Living Will" had no legal status in the community at the time that interviews were conducted, it was employed as a vehicle by which the acceptability of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma could be assessed.

DAS. As indicated earlier, conclusions regarding death anxiety have been based upon findings involving total DAS scores. Potential sources of death anxiety--which may have contributed to the differences observed--have been inferred on the basis of those analyses in which each of the 15 DAS items were treated as separate dependent variables (with RLW comprising a sixteenth measure).

A number of procedures were adopted both to reduce the likelihood of obtaining distorted observations as well as to assess their (DAS, RLW) validity. Potentially directive interviewer behaviors were (hopefully) eliminated before the commencement of data collection via the videotape training session. Further, statistical analyses later indicated no evidence in support of E-bias, practice-bias, or

order effects. Collectively, then, these precautions testify to the admissibility of the data obtained, and the relationships observed within them.

Congruent with earlier work in the area of death anxiety, very few of the demographic dimensions here investigated were found to be related to the construct. The observation that females evidenced greater death anxiety than did males replicated the sex difference reported consistently in the DAS literature (Templer & Ruff, 1971). Religious affiliation, degree of religiosity, socio-economic status (as indicated by occupation), educational level attained (among elderly individuals), and number of co-habitants appeared not to contribute to the levels of death anxiety observed. Perhaps more interesting, however, was the finding of greater death anxiety among rural-dwelling individuals (i.e., persons who described themselves as having spent the majority of their lifetimes either on a farm or in a small town) than in urban-dwellers. This was contrary to Kubler-Ross' (1969) speculation concerning the absence of ultra-sophisticated life-prolonging technology and the greater incidence of home-deaths in rural areas (in cities deaths are more likely to occur in such institutions as hospitals and nursing homes). Kubler-Ross felt that these facets of rural life result in a greater number of "positive" death-related experiences thereby enabling rural-dwellers better to "view death as a part of life" (p. 6). While rural-dwelling persons may, in fact, hold more accepting attitudes toward the phenomenon of death (e.g., Ray & Najman, 1974, found death acceptance not to be the

categorical opposite of death anxiety) the assertion that rural-dwellers are generally more accepting of death on the basis of the present finding remains to be demonstrated. It might even be speculated that the very factors cited by Kubler-Ross as responsible for greater acceptance of death among rural-dwellers may be responsible also for greater anxiety.

Many of those who care for the terminally ill have documented the fears of pain, suffering, and abandonment which seem consistently to accompany the experience of dying (Henteleff, 1977; Koenig, 1973; Pattison, 1977). Given the tremendous faith in the palliative, if not curative, powers of the hospital and medical profession evident in contemporary North American society (Mauksch, 1975), it would seem reasonable to suggest that the relative absence of these facilities in rural areas might exacerbate fears of death in rural-dwellers, while their greater accessibility to urban-dwellers might serve somewhat of a soothing function. Similarly concerning the issue of voluntary passive euthanasia, one of the concerns most frequently cited in the literature has involved the uncertainty of whether every possible therapeutic avenue has been exhausted before terminating care (Young, 1976). Implicit in this issue is a concern about the availability of the very life-prolonging technology mentioned earlier by Kubler-Ross as absent in rural areas. It may be of interest to note that the only dimension of demographic status which the present exploration revealed to be related to attitudes toward voluntary passive euthanasia was size of hometown. As might be expected

granting the account offered above, rural-dwelling participants expressed greater uncertainty (reflected by a higher RLW mean score) in their attitudes than did urban-dwellers (it must be remembered, however, that both groups generally favored the practice as a personal solution to the life-prolonging dilemma). Unfortunately, none of the demographic dimensions investigated were statistically related to the second multivariate data package and so potential sources of death anxiety associated with sex and size of hometown could not be speculated further.

Earlier research in the area of death anxiety has presented conflicting results concerning the nature of the relationship between this construct and chronological age. In reviewing the DAS literature of the past decade, Templer (1976) reported the inability of investigators to demonstrate age-related differences in total DAS scores. Using their unique multi-level criterion measure, on the other hand, Feifel and Branscomb (1973) found elderly persons to evidence greater death fears than younger persons both below-the-level-of-awareness and at the conscious level. The finding of the present study that young participants displayed greater death anxiety than did elderly persons would appear to add to this confusion.

Traditionally, thanatologists have accounted for such counter-intuitive findings by introducing the psychological defense mechanism of denial (Kastenbaum & Costa, 1977). According to Weisman (1972), "denial helps us to do away with a threatening portion of reality" (p. 59). Hence a large proportion of the Thanatological literature

might advocate the hypothesis that elderly persons deny the "ego-threatening" fact of their greater proximity to death—resulting in lower DAS scores—and this might account for the finding of greater death anxiety in younger persons. Yet the facility with which this defense mechanism may be called upon by researchers in attempting to explain an unexpected finding may not be matched by its theoretical or practical utility. Denial may be employed in post hoc explanations to account for findings of both high or low death anxiety but its a priori predictive utility has yet to be demonstrated. Moreover postulated as an unconscious defense mechanism, the construct (i.e., denial) has thus far successfully eluded objective behavioral validation (Kastenbaum & Costa, 1977). Weisman (1972), for example, has commented on the difficulty of identifying defensive denial in an individual.

The fact of denial needs another person who judges that denial of their shared reality has occurred. But the fact of denial means more than simply the presence of an outside judge.

Shared and public realities are as much created as contended with [and] clinicians tend to ignore the significance of the external observer or participant in making the diagnosis of denial (p. 62)

Furthermore, regarding the theoretical non-utility of the construct of denial, Kastenbaum and Costa (1977) have commented that "while defensive denial may or may not characterize most individuals, denial of the evidence seems to characterize many

researchers" (p. 235).

More recent trends in the psychology of death and dying (e.g., Kastenbaum & Costa, 1977; Pattison, 1977; Weisman, 1972) have indicated the potential productivity of shifting research interests toward a broader, more general perspective which might be described as "orientations toward death"—i.e., meanings and approaches toward the phenomenon and its related issues. An examination of the potential sources of death anxiety which may have contributed to the age-difference found in the present study—i.e., those individual DAS items which were observed to discriminate among participants on the basis of proximity to death—may serve to reduce the confusion mentioned earlier regarding the relationship between the construct (i.e., death anxiety) and the chronological age variable.

While the defensive denial interpretation may not be ruled out, the manner in which participants responded to the DAS would appear to offer support for an alternative account. It might be speculated that young and elderly persons differed in their orientations toward death along a dimension of willingness to discuss death-related issues at an open and direct level. Generally, young interviewees replied to the DAS in a calm, cooperative manner (i.e., they did not seem to object to any of the questions asked). It was the impression of both the present interviewers that a large proportion of the elderly participants did not wish to discuss openly such personal and emotionally charged issues as

those presented in the scale. While elderly persons may have been quite willing to discuss their death-related thoughts and concerns with a spouse or intimate friend, the non-verbal message received was that elderly participants' knowledge of their close proximity to death rendered the topic too sensitive to be discussed with a new acquaintance. Young persons, on the contrary, may have experienced very few, if any, reservations about discussing death-related feelings since their distance from death rendered the issue relatively innocuous and non-personal at that point in their lives.

Interestingly, all of the five DAS items which were found to vary significantly due to proximity to death may be construed as dealing rather directly with the issue of personal death. In the case of each of the following, young interviewees scored significantly higher than did elderly persons (suggesting greater death anxiety in each case).

DAS 1: I am very much afraid to die.

DAS 2: The thought of death seldom enters my mind.

DAS 6: I am not particularly afraid of getting cancer.

DAS 7: The thought of death never bothers me.

DAS 15: I feel that the future holds nothing for me to fear.

While the direct nature of items 1, 2, and 7 is readily apparent, some discussion of items 6 and 15 appears necessary. With regard to item 6, Weisman (1972) has observed that "in the mind of the layman . . . the diagnosis of cancer is almost synonymous with a death sentence" (pp. 81-82). Furthermore, given the stated objectives

of the interview—to gain an understanding of the participant's attitudes toward death and death-related issues—as well as the immediately preceding administration of 14 death-related (DAS) questions, it would seem reasonable to suggest that item 15 was most often interpreted as relating to the individual's own future dying experience. Perhaps, then, the observation that young participants scored significantly higher on the DAS than did elderly persons does not indicate greater death anxiety but rather a greater willingness to discuss their death-related feelings at an open level of discourse with a non-intimate acquaintance.

An alternative dimension along which young and elderly persons may vary in their orientations toward death is that of acceptance of death as an unavoidable aspect of the human life cycle. This perspective would suggest that people vary in the degree to which they acknowledge the inevitability of death as a "fact of life". In this connection, many elderly participants commented, following the administration of the DAS, that while they certainly didn't like the idea that they were going to die, they were not afraid of death. Such comments were rarely, if ever, offered by young people. Again, perhaps their closer proximity to death induces elderly persons to reflect more seriously upon their own finitude, forcing them to come to terms with it. The more distant proximity to death of younger persons, on the other hand, may permit them to postpone such deliberations. Perhaps the fear/anxiety dimension is an inappropriate one when discussing the

death-related attitudes of most elderly people (similar opinions have recently been offered by Kastenbaum & Costa, 1977 and Templer, 1976). Empirical findings of greater theoretical utility may be afforded by future research endeavors which focus only on the dimension of acceptance as an orientation toward death.

The great majority (80.7%) of participants expressed some degree of agreement with "A Living Will"; 15.9% expressed disagreement; and 3.5% were "not sure". Proximity to death, defined in terms of chronological age, did not appear to affect feelings concerning the acceptability of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma.

The general finding of no significant difference in death anxiety or attitude toward voluntary passive euthanasia among elderly participants due to life-threatened vs non-life-threatened health status was consistent with previous investigations of this dimension. Templer (1976), for example, recently concluded that "death anxiety appears to be for the most part unrelated to physical health or somatic integrity" (p. 91). Yet such a conclusion appears most confusing at an intuitive level for at least two reasons. Firstly, a vast body of evidence has amassed which indicates the potency of life-situation and its interaction with dimensions of personality in determining a wide variety of human behavior (Rotter, Chance, & Phares, 1972). Moreover, the very existence of a separate psychology of death and dying would appear ipso facto to imply that at least some aspect of somatic health status is relevant to the

study of human behavior in general and death-related behavior in particular.

Consistent with the approach adopted in the discussion of age-differences in death anxiety, it may be that elderly participants differed in their orientations toward death along a dimension of subjective evaluation of health rather than due to the objective facts of their somatic condition. Such a perspective would suggest that death-related attitudes and anxieties may be related to one's phenomenological construction of reality rather than objective life-threatened or non-life-threatened medical status. Hence objectively life-threatened persons who construed themselves to be non-life-threatened might be expected to behave no differently than objectively (as well as subjectively) non-life-threatened persons in their responses to the DAS and RLW (granting equality of the age factor whose importance regarding DAS scores has already been documented). In a rough fashion this may be analogous to denial.

The "additional" findings of the type-of-medical-problem analyses appear to be congruent with this subjective evaluation of health dimension interpretation¹⁸. While heart and cancer patients did not differ in their reported levels of death anxiety (consistent with the finding reported by Feifel et al., 1973), an omnibus significance test of mean differences revealed the life-threatened patients to be a heterogeneous group with regard to death anxiety. That is, type of life-threatening medical disorder did affect the levels of death anxiety observed in patients. Moreover,

cancer victims, who might be expected to feel most life-threatened, evidenced greater death anxiety than did stroke, diabetes, broken hip, and "other" life-threatened patients collectively ($p < .06$).

The contention that it is one's phenomenological evaluation of personal health which is related to death attitudes implies that objectively non-life-threatened persons who perceive themselves as life-threatened ought to behave differently in their responses to relevant questions than would persons who construe themselves as non-life-threatened. The reader is reminded that non-life-threatened elderly persons who complained of some "minor" medical problem evidenced significantly greater death anxiety than did those reporting "no problems". Interestingly, the former also expressed greater uncertainty regarding voluntary passive euthanasia as a personal solution to the life-prolonging dilemma.

While the effects of experiences with death in important others upon death anxiety and attitudes toward voluntary passive euthanasia appear to have received little (if any) empirical attention in the Thanatological literature, the dimension has been suggested by many researchers as potentially a fruitful one (Feifel, 1961; Martin & Wrightsman, 1964; Templer, 1976; Treanton, 1961). In this regard, Templer (1976) has commented that

death anxiety is not so much a fixed entity as a state that is sensitive to environmental events in general and to the impact of intimate interpersonal relationships in particular

It seems plausible that even interpersonal relationships

outside the family can influence death anxiety. Perhaps one's friends, clergymen, military officers, funeral directors, teachers, and colleagues are included among those that can partially determine degree of death anxiety. (pp. 91-92)

The present investigation, however, revealed no significant variation in death anxiety or attitudes toward voluntary passive euthanasia due to experience with death in important others when this dimension was defined in terms of low vs high total number of experiences, some experience vs none whatsoever, and number of years that have passed since an individual's most recent experience with death in an important other. Hence the dimension, as defined above, did not appear to contribute to the levels of death anxiety expressed by participants nor to their attitudes concerning the acceptability of voluntary passive euthanasia. In determining which types of individuals would be deemed "important others" it was assumed that all immediate family members, i.e., parents, spouses, siblings, and children, would be included. Only in the case of "close friends or relatives" were participants requested to report specifically those deceased persons whom they held dear, i.e., persons who were important to them. Consequently, all family members, regardless of their personal significance to interviewees, were considered as important others while only those close friends and relatives specified as significant by participants were so included. As a result, the operational definition of an "important other" adopted in the present study may have been at least partially responsible for the observed

absence of relationship.

Both death anxiety and reactions to "A Living Will" were found to vary significantly due to the Proximity to Death X Highest Impact Type of Death interaction. This finding would appear to further the speculation that the latter dimension may represent a more fruitful perspective from which the influences of experiences with death in important others on death-related feelings and behavior might be explored.

While the previously discussed age-difference in death anxiety was not disrupted by the interaction, the effects of highest impact type of death on DAS scores appeared to be mediated by participants' proximity to death. Whereas young persons who specified an immediate family member as the highest impact type evidenced greater death anxiety than did those indicating a close friend or relative, the direction of difference was reversed among elderly persons. This finding would appear to permit some speculation regarding the role of experiences with death in important others--conceptualized as meaningful experiences--in influencing death anxiety levels.

It might be assumed that the deaths of important others which conform more closely to one's beliefs about his/her own future death force the individual to entertain the notion of personal death at a more central level. Such deliberations could conceivably result in, at least transient, greater death anxiety. Given contemporary North America's widely held view that the great majority of deaths occur in the aged due to chronic illness (Siegler, 1976),

the deaths of older immediate family members, specifically parents, would seem likely to constitute the most representative such group for young persons. The deaths of age-peers who were friends or relatives, on the contrary, would be expected to have a greater impact upon elderly individuals. In short, perhaps the differential levels of death anxiety observed reflected differences in the type of important other whose death was construed by the interviewee to be most representative of his/her own expectations regarding personal death.

In support of this speculation, it was observed that five of the six DAS items for which the interaction obtained dealt specifically with the issues of personal death and (chronic) fatal disease:

DAS 1: I am very much afraid to die.

DAS 3: It doesn't make me nervous when people talk about death.

DAS 6: I am not particularly afraid of getting cancer.

DAS 8: I am often distressed by the way time flies so very rapidly.

DAS 11: I am really scared of having a heart attack.

The sixth item (DAS 14: The sight of a dead body is horrifying to me) appeared to deal more generally with the notion of death in the abstract.

While significant variation in attitudes toward voluntary passive euthanasia as a personal solution to the life-prolonging dilemma occurred due to the interaction, the only meaningful post hoc contrast which reached significance was that between the young/

and elderly/immediate family member groups (young persons expressed greater uncertainty). Hence speculation concerning the influence of experiences with death in important others would not appear warranted.

The nature of the relationship between death anxiety and attitude toward voluntary passive euthanasia as a personal outcome remains unclear. While a significant positive correlation was observed between the two measures among elderly persons, it was low ($r = .28$) suggesting that elderly individuals who are more death anxious may also be somewhat more unsure about the acceptability of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma. Elderly persons experiencing greater difficulty in resolving the issue of personal finitude might thus be expected to display greater death anxiety as well as more pronounced ambivalence concerning euthanasia. In line with such an interpretation were the findings that the expressed fears of personal death (as indicated by DAS items 1, 3, and 5), fatal disease (items 6 and 11), and death in the abstract (item 14) all were significantly and positively correlated with greater uncertainty concerning the practice of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma. Death anxiety was not found to be correlated significantly with euthanasia attitudes in young persons.

Implications for Future Research¹⁹

A number of interesting and (hopefully) fruitful implications for future investigations appear to have emerged from this study.

Concerning demographic status, the dimensions of sex and size of hometown were indicated as potentially useful factors in gaining a better understanding of death anxiety, attitudes toward voluntary passive euthanasia, and their possible interrelationships. Religious affiliation, degree of religiosity, socio-economic status, and number of co-habitants were contraindicated. While explorations such as this may benefit from a knowledge of which demographic variables simply are or are not relevant to death-related attitudes and behavior, the challenge remains for later investigators to determine why these relationships occur.

Unlike much previous work in the psychology of death and dying the dimension of proximity to death (defined jointly by age and health status) was also identified in the present investigation as a potentially fruitful research avenue. While the traditional defensive denial interpretation could not be ruled out as an explanation for the finding of age-differences in death anxiety, two alternative accounts were offered. It was suggested that young and elderly persons may vary in the degrees to which they are willing (1) to discuss death-related issues at an open and direct level of discourse and (2) to accept death as an unavoidable aspect of the human life cycle. Further, it was suggested that differences in terms of these orientations may contraindicate fear/anxiety as an appropriate dimension for the study of death-related attitudes and behavior as they relate to chronological age. At the very least, innumerable other dimensions--e.g., meanings

attributed to life and death, curiosity, expectations, etc.--would also appear to be relevant. It would seem unnecessarily rigid for investigators to restrict their research endeavors solely to fear/anxiety.

Whereas objective health status (i.e., somatic integrity) was not found generally to influence attitudes, the dimension of "subjective evaluation of health" was postulated as of potential theoretical importance. Future research might thus explore possible relationships between the subjective interpretations of life-threatening illness and attitudes toward voluntary passive euthanasia and death. Phenomenological proximity to death--defined jointly by subjective life expectancy (rather than age) and subjective evaluation of health (rather than somatic integrity)--might be explored as relevant factors via the adoption of an idiographic research methodology.

In a similar vein, meaningful experiences with death in important others (as opposed to the deaths of "so-called" important others which are not of personal significance to the survivor) were suggested as relevant to the etiology and mediation of death-related feelings and behavior. Future investigators might attempt to verify and extend this possibility by manipulating "highest impact type" of relationship.

Finally, a relatively weak relationship was observed between death anxiety and the acceptability of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma. However,

some degree of caution in interpreting this finding is indicated on methodological grounds for as indicated both interviewers were struck by an apparent unwillingness on the part of elderly participants to discuss death-related issues at an open and direct level with a new acquaintance. Moreover, due to the fact that only consenting volunteers could be interviewed, it may be that very highly death anxious individuals were self-selected out of the samples. For example, rarely did "refusers" calmly decline from participation (i.e., "No, I'd rather not be interviewed"). Rather, most expressed some degree of discomfort (e.g., "Yuch! Who wants to talk about death?!"). Some even became quite agitated and began to shout angrily at the interviewer. It may be wise in future to "camouflage" the nature of the interest topic (to include a greater number of more highly death anxious persons) and to employ multiple interview sessions. Such precautions may result in data which can only reflect more precisely the relationships among death-related attitudes and behaviors.

Implications for Health-Care and Other Professionals Serving the Elderly (Senior Citizens)

Psychosocial care of the elderly—both life-threatened and non-life-threatened—has recently enjoyed a growth in popular interest and acceptance. While it is beyond the scope of the present discussion to present a detailed review of the fast-growing literature in this area²⁰, a brief consideration of some of the implications of the present research for professionals who serve the elderly may be of value.

Perhaps of greatest practical significance for terminal care professionals, in particular, was the finding that an overwhelming majority of participants (80.7%) favored the practice of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma. Moreover, the fact that terminally ill patients did not differ in this regard (i.e., dying persons were equally in favor as were non-dying) would appear to contradict the vitalistic assertion that biological life—as opposed to personal life—is valued above all else. Given this indicator of increased public approval, society as a whole might do well to re-evaluate its legal and moral perspectives on such issues as patient autonomy in particular and self-determination in general.

The observation of a possible "hypochondriac effect" in elderly non-life-threatened participants may be of interest to both geriatric and other professionals who serve the elderly. While it might be argued that persons who complain of minor ailments do so primarily in order to attract attention to themselves, the finding of greater death anxiety among such elderly persons might lead one to speculate an alternative account. Perhaps those gerontic individuals who persistently seek (unnecessary) professional treatment for minor ailments do so because they are genuinely more concerned than most elderly persons that such minor problems, if left unchecked, may develop into more serious life-threatening disorders. Appropriate intervention might take the form of educational counselling sessions. Senior citizen "drop-in" centers might thus perform a valuable service

to their members by sponsoring discussion programs to which physicians, psychologists, and other psychosocial professionals might be invited to answer specific questions as well as to discuss many of their death-related concerns. Free medical examinations by doctors could also be made available to members (as is already practiced by many of the Senior Centers of the Winnipeg Age and Opportunity Bureau).

Perhaps the most generally significant implication of the present investigation, however, deals with the question of frankness in discussing death-related issues with the elderly. The findings that the psychological dimensions of subjective evaluation of health and acceptance of death as an inevitable facet of life may be intimately involved in the etiology of death-related attitudes and behavior would appear to testify to the desirability of an open approach. Certainly it may be conceded that accurate information about one's life-situation facilitates adaptive and effective interaction. This is especially so in the case of the terminally ill individual---where personal and legal obligations as well as other types of unfinished business may be in need of resolution. Needless to say, the dying cannot be expected to deal constructively with the fact of their personal finitude if left in ignorance regarding the imminence of their own deaths.

This concern for honesty in death-related communications must be tempered, however, with sensitivity and patience on the part of counsellors and practitioners---especially in dealing with the elderly.

The present investigation revealed that (most) elderly persons may be expected to display an unwillingness to discuss such highly personal and emotionally charged issues as those attending the notion of personal death. In short, the need for a compassionate, sensitive, and yet open approach in all discussions of death-related issues would appear to be paramount.

[We] must recognize . . . that all treatment involves a communicative relationship with patients The entire process, from the onset of illness to recovery or death, is invested with symbolism, with meanings that are unique to every person and to every physical condition. And these meanings, in turn, complicate the conditions that are the focus of treatment. If medical personnel [and indeed all of those dedicated to the realization of the goals of Orthothanasia] are concerned with the relief of suffering, they can no longer disregard their communicative style with patients. Suffering and the relief of suffering are influenced by symbolic as well as physical acts. Medical personnel are inescapably involved in some of the most traumatic moments of human existence. Mystification would appear to be a questionable substitute for communicative sensitivity. (Barnlund, 1976, pp. 724-725)

Subjective Reactions

The following notes reflect some of the subjective reactions experienced by the writer throughout the course of the present research.

1. One of the first questions one might ask of a thanatological researcher is "Why study death?" In fact, this question seemed to be one of those most frequently asked of me by participants and colleagues alike. Interestingly, the issue of why I had become interested in Orthothanasia and the psychology of death and dying had not concerned me prior to the present research experience. Yet it seemed to increase in personal significance as the data collection proceeded and in the periods which followed.

Certainly the frequently cited generative impulse to improve the present "human condition" would appear to have contributed somewhat to my choice of topic. But such desires to benefit humankind may be manifested in an infinite diversity of disciplines and endeavors. Similarly, occasional family discussions of various death-related issues throughout my childhood and adolescence may also have contributed to an extent. While it seems unlikely that one can ever know with certainty the motives behind his actions, I believe that it was my own experiences with death in important others which were largely responsible for the development of these interests.

My first direct encounter with death occurred when a number of loved ones died within a six-month period between the years of 1969 and 1970. Coming from a relatively small and closely knit family,

each of these affected me considerably. In recalling my reaction at the time it appears to have been two-fold: (a) a sense of loss and (b) an almost horror/shock reaction that the event of death was to everyone a terrible occurrence--although the nature of this "experience" for the deceased was unclear. It was also at this time that the death of greatest personal significance for me, that of my maternal grandfather, occurred (in this connection it may be relevant to note that between the ages of 10 and 15 my interests in death-related issues seem to have increased and I often would discuss these with my grandfather). Of all my experiences with death in important other persons, his was the most difficult for me to deal with and I wonder even today if I have fully resolved these feelings.

Other personal encounters with death which may have been significant include that of a close friend (and age-mate) and a "brush with death" in a motorcycle accident in 1973. Although I have long ago abandoned the horror/shock perspective on death mentioned earlier, and feel comfortable in accepting the phenomenon as an inevitable fact of life, many of the mysteries associated with the finality of death and what (if anything) lies beyond remain unresolved. Hence in response to the question "Why study death?" I can only offer speculation. Perhaps I became involved in such research in an attempt at self-help--hoping to resolve unequivocally my grief reaction to my grandfather's earlier death. Possibly such interests represent an effort to develop the ability to deal more directly with future

deaths of important others, or even with the notion of personal death. While much of my death-related interests seem to be attributable to an intellectual curiosity and the generative wish to help others, I cannot help but suspect that they also derive from a personal desire to deal more fully with these issues.

2. Just as one may wonder about why thanatologists choose to study death, it might be asked why members of the general public agree to participate in such investigations. While introductory psychology students (the present study's young non-life-threatened sample) did so primarily because such participation constitutes a course requirement, the sources of motivation for elderly non-students (who comprised approximately 2/3 of the present sample) were less obvious.

Interestingly, the great proportion of elderly participants indicated that they would be willing to be interviewed if it could be of help to the interviewer. While they did not express an interest in furthering the goals of science, elderly persons seemed most gratified by the fact that their participation would enable the interviewer to gain a better understanding of death-related issues and possibly contribute to the well-being of the highly death anxious. In addition to rendering the interview experience a more pleasant one, this observation indicates the importance of including an explanation of the relevance of research projects requesting the cooperation of non-student populations. However, the simple fact of the interviewer's expression of interest in the

attitudes of these persons (at this "late" point in life) may also have contributed to their desire to cooperate.

3. The research experience seemed to influence me at an affective level in addition to teaching me much about the psychology of death and dying and how to explore it empirically. Ironically, I became increasingly unsure as the interview period proceeded in my feelings about "A Living Will" as a personal solution to the life-prolonging dilemma. I also noted a concomitant increase in my own awareness of personal finitude and other death-related feelings. In talking with elderly life-threatened patients, especially, I began to speculate about the manner in which my own future death might occur and to plan what seemed like the most appropriate means of preparing for it. Informal observation and post-interview discussions with many of the participants further enabled me to assess and to modify. But the issues are complex and I have yet to resolve many uncertainties. While at the time of writing "death with dignity" for me again conforms quite closely with the ideal expressed in "A Living Will", perhaps the best indicator of my ambivalence is the fact that I have not as yet signed it.

4. Another informal observation dealt with the question of displacement of grief by the bereaved. Many individuals may believe that they have adequately resolved the feelings of bereavement associated with the loss of a loved one and yet experience an intense resurgence of their grief reaction at a later and seemingly inappropriate time. In my own experience such a reaction seemed to occur

during the course of the present project when I attended the funeral of a friend's father (the deceased was certainly not someone whom I would hold as an "important other"). At this time I experienced a genuine and deep emotion of sadness (although the object of this affect was not clear). One might attempt to account for such a reaction by suggesting that the situation may have served as a reminder (redintegration) of the funerals of my own loved ones or that such factors as the solemn funeral atmosphere and delivery of the eulogy may have been largely responsible. Yet I was aware of all of these possibilities at the time and noted that they did not appear to disturb me (at least not at a conscious level). Similar experiences have been related to me by others.

It may be that the rituals and values intrinsic to the North American "way of death" permit the bereaved to grieve the deaths of their loved ones only to a limited (although not explicitly specified) extent. While this may allow many survivors to deal adequately with their feelings, many others may require the expression of considerably more emotion over greater periods of time than is deemed acceptable within the prevailing Zeitgeist. As a result, they may be unable to resolve their reactions completely in the period immediately following the loss. Such persons may thus be forced to displace their feelings (below the level of awareness) onto other deceased persons at a later time--resulting in what appears to be an emotional over-reaction--in order to dissolve their burden in a socially acceptable manner and this behavior often requires the reassurance of its being

perfectly normal.

5. Researchers and therapists must take precautions against adopting an attitude of paternalism in working with life-threatened individuals. Projection of death fears by professionals can seriously jeopardize the delivery of appropriate care. Such a position was widely endorsed by hospital staff-members, patients, and potential patients (i.e., non-life-threatened participants) alike. In my own experience, this point was most clearly illustrated in the case of Mr. Y, one of the first life-threatened persons to be interviewed. Mr. Y was a terminally ill participant who angrily demanded that the interview be terminated after only half of the experimental materials had been administered. Given his display of agitation, my immediate reaction was to conclude that Mr. Y's terminal condition had rendered the topic of death too sensitive for him to discuss openly with me at that time. Consequently, I attempted to calm him, commenting that it was perfectly natural for one to feel uncomfortable in discussing death-related issues at this time and that I could certainly appreciate why he felt so distressed. Rather than producing the soothing effect intended, these comments seemed only to add to his rage. At this point I apologized profusely for disturbing him and thanked him nonetheless for his time. Fortunately, this gesture seemed to pacify Mr. Y considerably and on that note I left his room.

About an hour later I was approached by one of Mr. Y's nurses and was informed that whereas prior to my interaction with him

the staff had been making considerable progress in helping Mr. Y to regain an interest in life (until the inevitable event of his death), he now had deteriorated to his previous level of depression. Instantly the fear that I had contributed to an iatrogenic catastrophe swept over me completely. I was puzzled as to why Mr. Y had reacted so negatively to the interview inasmuch as prior experience with similar patients had indicated that most persons in Mr. Y's condition were interested in discussing their death-related attitudes and anxieties with another person who was neither a family- nor hospital staff-member--indeed many had invited me to return for second and third visits. The mystery unfolded the following day when I learned that Mr. Y had misunderstood my introductory remarks and had assumed that I was a salesman from a funeral home! Rather than being highly death anxious as I had suspected, he had been annoyed by the possibility that I might try to coerce him into buying a burial plot! My intended "therapy" had been interpreted as a sales pitch!

It was my paternalistic attitude which "naturally" led me to diagnose Mr. Y's "obviously high degree of death anxiety". Had I been more sensitive to other facets of the interaction, perhaps the incident could have been avoided. Fortunately Mr. Y's depression was short-lived. By mid-afternoon he had already returned to his previously cheerful disposition and his health status had not been affected adversely. I returned to visit him a few days later and apologized again and we enjoyed a pleasant visit although I did not

ask him to resubmit to the interview. The lesson to be learned from this account, especially by the writer, is that researchers and therapists must be sensitive at all times to the messages--verbal and non-verbal.

Summary, Conclusions, and Future Research

Relationships among death anxiety and attitude toward voluntary passive euthanasia as a personal outcome were explored in terms of proximity to death, experience with death in "important others", and several dimensions of demographic status (i.e., sex, age, number of co-habitants, religious affiliation, degree of religiosity, rural/urban hometown, occupation classification, and educational level attained). Two experimenter-interviewers and three subject populations were employed: young non-life-threatened persons, elderly non-life-threatened individuals, and elderly life-threatened patients. In all cases data were obtained by means of a standardized face-to-face one-to-one interview procedure. Each interview included the administration of Templer's (1970) Death Anxiety Scale, a 7-point Reaction to "A Living Will" item (ranging from "strongly agree" to "strongly disagree"), a Background Information questionnaire, and a series of questions regarding participants' experiences with death in "important others".

It was hoped that the present endeavor might contribute to the current state of scientific knowledge by exploring several of the psychological factors and variables which might be significant to the studies of Orthothanasia and Thanatology. As such, all of the findings, interpretations, and speculations offered above were intended to be viewed as suggestive in nature rather than definitive. Given this heuristic spirit, it would seem most appropriate to conclude with a number of the questions raised by the study which await further

attention and clarification.

Concerning attempts to advance the psychology of death and dying: Are feelings about the acceptability of voluntary passive euthanasia related to death anxiety to a greater extent than that here reported? If so, how do the fears of personal death and fatal disease contribute to this relationship? Moreover, why was the fear of pain in dying not observed to contribute? Are the issues of self-efficacy and self-determination relevant? With regard to age-differences in death-related attitudes and behavior, is the fear/anxiety dimension an appropriate one? Similarly, does the defensive denial hypothesis offer any predictive utility? How might an "orientations toward death" perspective prove more fruitful? Do the phenomenological dimensions of subjective life expectancy and evaluation of health offer a more promising definition of proximity to death than the objective chronological age and health status factors? Would an idiographic approach to methodologies provide more valuable information than the traditional nomothetic one? Concerning experiences with death in important others, why are some experiences interpreted as significant while others are not? Does at least part of the answer lie in the degree to which such experiences are construed as representative of one's own future death?

In attempting to apply the psychology of death and dying to the aims of Orthothanasia: Do such advance notices as "A Living Will"—requesting voluntary passive euthanasia as a personal solution to the life-prolonging dilemma should the need arise—continue to reflect

the wishes of individuals in the event that their conditions of tenure are transformed from the hypothetical to the inevitable? What are society's present definitions of life and death? Are the issues of patient autonomy and self-determination significant to the layman? Is the acceptance of death as an unavoidable fact of life essential to the development of an effective personality? Does the knowledge of a limited future intensify the search for a purpose in life? Once the dying process has commenced, how can we maximize the experience of meaningful existence until the occurrence of a "good" and easy death? Should each person determine for themselves the nature of "death with dignity" or should there be a law for everyone?

Certainly to know little about something as complex as the psychology of death and dying and its potential applications toward the goals of Orthothanasia is nothing for which we need apologize. After all, this is 1977 not 7719. Yet to know little and choose to remain ignorant about it would surely be tragic for us all. The urgent need for greater interest and endeavor in all such matters—literally of life and death—constitutes the challenge of the future. In effect one has to be cautious of projection by the relatively healthy and to bear in mind that some individuals are not so much afraid that they will die as that they will not die.

Footnotes

1. Behnke and Bok (1975), de Beauvoir (1973), Downing (1969), Fletcher (1973), Gruman (1973), Heifetz (1975), Jaretzki (1976), Koop (1976), Lewis (1968), Maguire (1973), Mannes (1973), McCormick (1974), Montange (1974), Moore (1968), Ramsey (1970), Reimer (1974), Russell (1975), Slater (1971), Smith (1971), Society for the Right to Die, Inc. (1975), Steinfelds and Levine (1976), Steinfelds and Veatch (1974); The Euthanasia Educational Council (1974a, 1974b), The Voluntary Euthanasia Society (1970, 1971), Thomson (1976), Vernon (1972), Wilson (1975), and Young (1976) have discussed the bioethical, moral theological, legal, general philosophical and other issues which have emerged from considerations of the notion of euthanasia.
2. See Appendix A for the 15 DAS items.
3. Prof. Leslie Degner served as Interviewer 1.
4. Thanks are due to Mr. Barry Spinner for his assistance.
5. All materials employed in the investigation have been included in appendices, pp. 154-158.
6. See pp. 159-164.

7. The relatively small size of some cells restricted the maximum number of covariates to five. However, a preliminary multivariate multiple regression analysis (Finn, 1976) determined that the occupation class variable [$F(2, 170) < 1, p < .48$] would not be useful as a predictor. Also, it was found that the marital status variable was totally predictable from previously entered covariates and so it, too, was not retained.
8. Experiences with Death in Important Others data for two elderly non-life-threatened participants were accidentally omitted. Thus, the data obtained from these two individuals were excluded from analyses in which this factor was involved.
9. Size of hometown for one of the elderly participants was omitted.
10. The reader is reminded that reactions to "A Living Will" (RLW) were indicated by participants along a 7-point scale ranging from 1 = "strongly agree" to 7 = "strongly disagree". Higher RLW scores, therefore, reflected lower acceptability of voluntary passive euthanasia as a personal solution to the life-prolonging dilemma.
11. See footnote 9.
12. A preliminary multivariate multiple regression analysis indicated that the size of hometown variable was not significantly related to

this "young-participants-only" subset of the first multivariate package [$F(2, 77) = 1.22, p < .30$] and so it was not retained as a covariate in Analysis 3.

13. This variable was found to be associated significantly with the subset of the second data package examined by Analysis 6. It was therefore considered most appropriate to retain it as a covariate and use MANCOVA.
14. As was found in Analysis 6, the sex of participant variable was associated significantly with this subset of the second multivariate package. Thus it was again retained as a covariate and a MANCOVA was performed.
15. All of the terminally ill patients interviewed were aware of their prognoses at the time of encounter.
16. Drs. P. Henteleff and D. Skelton. Personal communication, August, 1976.
17. The primary purpose of this item was to identify "non-life-threatening" persons with potentially life-threatening conditions so that their responses would not be included in analyses.
18. While only six terminally ill patients could be interviewed

(all of whom were aware of their limited prognoses), their mean level of death anxiety was found to be greater than that of non-terminally ill but life-threatened patients at the 9% level of significance. Feifel and Branscomb (1973) also observed significantly greater death fears among dying patients (relative to non-terminally ill patients). Given the consideration that the statistical power of any test of significance is directly related to sample size (Hays, 1973), it would seem reasonable to suggest that had the two sub-sample sizes been more equivalent (i.e., a ratio of approximately 30 non-terminal to 30 terminal patients rather than the 56:6 in the present analysis) this difference may have reached significance beyond the nominal 5% level.

19. See Kastenbaum and Costa (1977).
20. Barnlund (1976), Bleich and Boro (1976), Erickson (1974), Henteleff (1977), Koenig (1974), Kubler-Ross (1969, 1974, 1975), Mastrovito (1974), McIntosh (1976), Pattison (1977), Siegler (1976), Steger (1976), Weisman (1972), and Worden and Proctor (1976) have discussed many of the issues involved in the psychosocial care of elderly persons.

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Appendix A
Materials

Background InformationForm: DASRLW
RLWDAS

Date _____

Time _____ A.M.

S No. _____

Condition: YNLT ENLT ELT

1. Sex: M F
2. Birthdate _____ (Age = _____)
3. Marital Status: Sing. Mar. Sep. Wd. Div.
4. Religious Affiliation _____
5. Religiosity
- | | | | | | | | |
|--|-----------|---|---|------|---|---|---------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | Very | | | Not | | | Very |
| | Religious | | | Sure | | | Non-Religious |
6. Hometown: Farm Small Town City (For majority of life)
7. Present Medical Problem(s) _____, none.
(Health Status = N-L-T or L-T or Ter.)
8. Occupation _____
(pre-retirement if presently "retired"; of husband if "homemaker";
of father if "student")
9. Educational Level _____
- | | |
|----------------------------|-----------------------------|
| _____ No formal | _____ Completed secondary |
| _____ Some elementary | _____ Some university |
| _____ Completed elementary | _____ Completed university |
| _____ Some secondary | _____ Post-graduate Studies |
10. Number of Co-habitants _____

Death Anxiety Scale

- | | | |
|---|---|--|
| T | F | 1. I AM VERY MUCH AFRAID TO DIE. |
| T | F | 2. THE THOUGHT OF DEATH SELDOM ENTERS MY MIND. |
| T | F | 3. IT DOESN'T MAKE ME NERVOUS WHEN PEOPLE TALK ABOUT DEATH. |
| T | F | 4. I DREAD TO THINK ABOUT HAVING TO HAVE AN OPERATION. |
| T | F | 5. I AM NOT AT ALL AFRAID TO DIE. |
| T | F | 6. I AM NOT PARTICULARLY AFRAID OF GETTING CANCER. |
| T | F | 7. THE THOUGHT OF DEATH NEVER BOTHERS ME. |
| T | F | 8. I AM OFTEN DISTRESSED BY THE WAY TIME FLIES SO VERY RAPIDLY |
| T | F | 9. I FEAR DYING A PAINFUL DEATH. |
| T | F | 10. THE SUBJECT OF LIFE AFTER DEATH TROUBLES ME GREATLY. |
| T | F | 11. I AM REALLY SCARED OF HAVING A HEART ATTACK. |
| T | F | 12. I OFTEN THINK ABOUT HOW SHORT LIFE REALLY IS. |
| T | F | 13. I SHUDDER WHEN I HEAR PEOPLE TALKING ABOUT WORLD WAR III. |
| T | F | 14. THE SIGHT OF A DEAD BODY IS HORRIFYING TO ME. |
| T | F | 15. I FEEL THAT THE FUTURE HOLDS NOTHING FOR ME TO FEAR. |

Reaction to "A Living Will"

As I'm sure you know, modern medical science is experiencing a great deal of controversy over the question of whether or not human life should be preserved "at any cost". I'd like to read a statement to you, Mr./ Mrs./ Miss _____, which is related to this issue and ask you what you think about it.

"IF THE SITUATION SHOULD ARISE IN WHICH THERE IS NO REASONABLE EXPECTATION OF MY RECOVERY FROM PHYSICAL. . . DISABILITY, I REQUEST THAT I BE ALLOWED TO DIE AND NOT BE KEPT ALIVE BY ARTIFICIAL MEANS OR 'HEROIC MEASURES'".

IN OTHER WORDS:

IF THE SITUATION SHOULD ARISE IN WHICH I AM FACING DEATH AS AN INEVITABLE OUTCOME IN THE NEAR FUTURE, I WISH TO BE ALLOWED TO DIE WITHOUT BEING SUBJECTED TO MEDICAL PROCEDURES AIMED AT SUSTAINING LIFE RATHER THAN PROVIDING COMFORT.

What is your opinion about this matter, Mr./ Mrs./ Miss _____?
Does it express your general wishes if you were to find yourself in such a situation? How strongly do you feel: strongly, moderately, slightly?

AGREE

DISAGREE

1. STRONGLY

5. SLIGHTLY

2. MODERATELY

6. MODERATELY

3. SLIGHTLY

7. STRONGLY

4. NOT SURE

Experiences With Death in "Important Others"

E: Have you ever experienced the death of a loved one or close friend?

How old were you at the time?

Parent:

Mother _____. S's age _____. (Years ago =)

Father _____. _____ (Years ago =)

Spouse:

Wife _____. Age _____. (Years ago =)

Husband _____. _____ (Years ago =)

2nd Spouse _____. _____ (Years ago =)

Sibling:

Brother _____. Age _____. (Years ago =)

_____. _____ (Years ago =)

_____. _____ (Years ago =)

Sister _____. Age _____. (Years ago =)

_____. _____ (Years ago =)

_____. _____ (Years ago =)

Child:

Son _____. Age _____. (Years ago =)

_____. _____ (Years ago =)

Daughter _____. Age _____. (Years ago =)

_____. _____ (Years ago =)

Close Friend and/or Relatives:

_____. Age _____. (Years ago =)

_____. _____ (Years ago =)

_____. _____ (Years ago =)

* Which one of these deaths had the greatest effect upon you?

Appendix B

Briefings

While no formal instructions were administered to potential interviewees, one of the following three introductory briefings, depending upon the individual's proximity to death, was delivered so that they might be able to provide informed consent (or refusal). The total number of persons refusing to participate in an interview was 15 (6.6%).

Briefing 1.

All young non-life-threatened persons received the following introductory briefing:

I don't know if you're aware of it or not, _____ (participant's name), but recently psychologists have become quite interested in learning more concerning how people feel about the general topic of death and dying. What I'd like to do for a short time is just discuss a number of different issues on this general theme with you, if that's alright. It will only take about 15 minutes or so.

I should mention that there aren't any truly right or wrong answers to any of the questions I'd like to discuss with you, but rather it's your opinion that's important--how you feel about them. Also, as you can see, your name won't be recorded and so all of your answers will remain anonymous and maintained in the strictest confidence. Is it alright for me to continue?

None of the young non-life-threatened subjects refused to participate in an interview.

Briefing 2.

This introductory briefing was presented to all elderly non-life-threatened individuals.

During the summer months of 1976, from June to September, another individual and I were involved in a study at the St. Boniface Hospital in which we were speaking with a lot of the patients there about what it's like to become ill and have to go into the hospital. You know, the personal, emotional, side of facing the patient situation. At that time we found that a lot of people were quite interested in talking about the topic of death.

The project I'm involved in now entails speaking with a lot of different people in various life situations--healthy people throughout the community through the Age and Opportunity Senior Centers, life-threatened patients at the hospital, and younger people at the university--concerning this topic.

You know, _____ (participant's name), when someone has to cope with the death of an important other person--a husband/wife, parent, child, . . .--it can be quite an unhappy experience. Our hope is to be able to help people to resolve these feelings maybe a little quicker, perhaps help to make it less painful, and perhaps help them to enjoy the rest of their life that much more by helping them deal with these feelings more effectively.

Obviously, though, the first step is just to find out how different people in different life-situations do feel about these issues. So would it be O.K. if I just went through these few

questions with you and found out what you think about them?

It will only take about 15 minutes or so.

I should mention that there aren't any truly right or wrong answers to any of the questions I'd like to discuss with you, but rather it's your opinion that's important--how you feel about them. Also, as you can see, your name won't be recorded and so all of your answers will remain anonymous and maintained in the strictest confidence. Is it alright for me to continue?

Six (8.7%) elderly non-life-threatened persons refused Interviewer 2.

Briefing 3.

All elderly life-threatened patients received introductory briefing 3.

During the summer months of 1976, from June to September, another individual and I were involved in a study here on ECU [the Extended Care Unit (ECU) at the St. Boniface General Hospital was renamed the Department of Geriatric Medicine; it is still informally referred to as ECU, however, by staff and patients]. We spoke with a lot of the patients about what it's like to become ill and have to go into the hospital. You know, the personal, emotional side of facing the patient situation. At that time we found that a lot of people were quite interested in talking about the topic of death.

The project I'm involved in now again entails speaking with people throughout the community through the Age and Opportunity

Senior Centers and with younger people at the university concerning this topic.

You know, _____ (participant's name), when someone has to cope with the death of an important other person—a husband/wife, parent, child, . . .—it can be quite an unhappy experience. Our hope is to be able to help people to resolve these feelings maybe a little quicker, perhaps help to make it less painful, and perhaps help them to enjoy the rest of their life that much more by helping them deal with these feelings more effectively.

Obviously, though, the first step is just to find out how different people in different life-situations do feel about these issues. So would it be O.K. if I just went through these few questions with you and found out what you think about them? It will only take about 15 minutes or so.

I should mention that there aren't any truly right or wrong answers to any of the questions I'd like to discuss with you, but rather it's your opinion that's important—how you feel about them. Also, as you can see, your name won't be recorded and so all of your answers will remain anonymous and maintained in the strictest confidence. Also, I'd just like to remind you that I'm not a hospital staff member—I'm not a doctor or an orderly, or any kind of hospital employee—and that you are under no obligation to participate. Is it alright for me to continue?

Nine (12.5%) elderly life-threatened patients refused to participate in an interview (Interviewer 1 was refused by two patients while

Interviewer 2 was refused by seven).