

Dimensions of Existential Belief
and Desirable Responding:
A Factor Analysis.

by

Harold R. Wallbridge

A thesis
presented to the University of Manitoba
in partial fulfillment of the
requirements for the degree of
Master of Arts
in
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Winnipeg, Manitoba

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RESPONDING: A FACTOR ANALYSIS

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HAROLD R. WALLBRIDGE

A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
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ABSTRACT

Scientific inquiry into the existential features of the human experience is underdeveloped. One reason for this is the difficulty researchers have in measuring existential constructs. This thesis initiates the development of an instrument for measuring a variety of existential beliefs. Subjects (N=690) responded to two questionnaires: a survey of existential beliefs, relating to issues of death, meaninglessness, freedom, and isolation, and the Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1984). A factor analysis of the existential survey produced the following factors: (a) Existential Wellbeing, (b) Existential Neurosis, (c) Positive Realism, (d) Religiosity, (e) Death Acceptance, (f) Existential Aloneness/Uncertainty, (g) Romantic Ideals, (h) Death Thoughts, (i) Inner Locus of Control, (j) Intimacy Needs, (k) Seeking Destiny, (l) Suicide Rejection, and (m) Goal Achievement. Overall, a broad dimension of wellbeing-illbeing was observed to underlie the existential survey. A broad dimension of honesty-dishonesty was also observed to underlie the BIDR. Canonical correlations showed that greater overall wellbeing was related to more reported honesty. The relationship between existential beliefs and desirable responding is discussed.

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Dimensions of Existential Belief and
Desirable Responding: A Factor Analysis

Blaise Pascal (1670/1965) said: "Man is but a reed, the weakest in nature, but he is a thinking reed." (p. 30). Pascal's metaphor elegantly captures the existential perspective of human beings. Like a reed, we are vulnerable and weak compared to the forces around us. We are rooted into a particular condition from which there is no escape, until death. We are tied to the same primordial soil from which all life emerged, yet something sets us apart. We are aware, conscious of our condition and of our fate. Through conscious awareness we are free: rooted but flexible.

Pascal's 'thinking reed' refers to more than the mere mental activity necessary for everyday living, it refers to the existential experience: the awareness of reality and of one's place in it. Existentialists consider human beings to be unique as a species because we have this capacity for knowing we exist. Furthermore, the degree to which we actively participate in this existential experience contributes to who we are as individuals. Those who seek to transcend the mundane distractions of general life and search for solutions to the necessary and inevitable

problems of the human condition achieve something special. In the vernacular of existentialism, this could be called 'full humanness'. To the existentialists, the existential experience is the foundation of all human psychology and culture. It is about such existential experience - the 'thoughts' of Pascal's reed - that I am interested in studying.

The existential perspective

The following section represents some of my own views on existentialism. My intention is to orient the reader to the overall perspective on existentialism that is used in this thesis. The works of Barrett (1958), McQuarrie (1972), May (1969), Tillich (1944), Bugental (1965) and Yalom (1980) are salient sources of this perspective. I have found these accounts of existential theory to be excellent introductions to the area. Later in this paper, after I have indulged myself, I will review existentialism more systematically.

I consider existential theory to be particularly paradoxical in terms of some of its contradictions. Few perspectives have so tenaciously confronted the 'inescapable' limits of human existence. Threats to being, such as death, alienation, anxiety, absurdity, loneliness, and guilt, are frequently addressed in existential works. Existentialists treat issues such as these with a sober passion designed to shock us into awareness. They consider

coping with these limits to be the fundamental problem of existence. These are 'inevitable certainties', they cry, 'so wake up and face them.' As a consequence, existentialism has a reputation for being morbidly depressing. No one wants to be reminded of the absurdity and finality of human life in such brutal detail.

Few philosophies, however, can boast of giving humankind as much freedom and potential as does existentialism. Ultimately there may be no escape from the demon finitudes of existence but in the meantime the opportunity and responsibility for choosing the nature of one's existence is nearly infinite. We are human because we are free. Human beings are not strictly determined by the biological and environmental contingencies which control other animals. The critical difference is that humans are consciously aware and therefore have the power of independent choice. We are conscious of our circumstances, the limits facing us, yet we still choose, and must continue to choose, the course of our lives every minute of the day.

The human contradiction is that we are forever bound by the conditions of reality, yet we are not machines driven by uncontrollable demand. We are also as free as gods to make choices of existence, yet neither are we supernatural spirits able to escape our inevitable oblivion. The existential human is a paradoxical creature in conflict: simultaneously free and imprisoned, infinite and finite, godlike and mortal.

These paradoxes, of barriers and freedoms, enfold on one another. Existential finitudes are the source of deep pain and anguish. Lost opportunities, failed loves, absurd routines, and impending death are only a few of the existential limits which torture our awareness. Paradoxically, however, existentialists say that such painful awareness is the only way to achieve the enlightened authenticity of full humanity. The anguish is necessary for potentials to be attained. Similarly, existential infinitudes release human beings from the prison of a mechanical existence and allow for the genuine transcendence of mundane trivialities. Unlimited opportunity and potential is opened up. Paradoxically, again, there is a cost: feelings of awful responsibility and certain guilt. Chances are lost, potentials are suppressed, and mistakes are committed, all leading to miserable regret and self-blame.

Intrinsic throughout this existential conflict is the human characteristic of conscious awareness, which existentialists prize so highly. All aspects of the human experience, both the positive and the negative, emerge from this awareness. Particularly relevant is the recognition, acceptance, and transcendence of ontological conditions.¹ Existential givens must be confronted if the person is to achieve authenticity, a harmony between actuality and

¹ The term ontological is used in the existential literature to indicate the ultimate reality underlying existence. Ontology precedes existence.

potentiality. Existential 'becoming' meets ontological fact. The person is real and genuine to his or her existence.

Related to existential awareness is the phenomenon of inauthenticity or self-deception. Sartre (1943) calls this 'bad-faith,' meaning to evade one's essential freedom and life's fundamental absurdity. In the long run, such inauthenticity harms the individual much more deeply than confronting existential givens ever could. These givens are inevitable and necessary so any attempt to avoid them distorts and inhibits living. Psychopathology results because the self-deception necessary requires such energy and vigilance that the person is drained and restricted to the point of neurosis, or worse.

In summary, I find my understanding of existentialism to center on the intrinsic absurdity of human existence. In particular, I view existentialism to be an intrinsically contradictory philosophical perspective which emphasizes both the finite/limited and the infinite/unlimited qualities of human existence. In particular, my understanding of existentialism emphasizes the paradox of existence: that being both finite and infinite, limited and unlimited, is absurd. I favour this perspective on existentialism because, first, these qualities of existence define, for me, the two fundamental existential concerns that underlie human psychology and, second, the paradoxical relationship of

these qualities is consistent with my view of the universe being irrational and unknowable. After reflection, I find the basis of my preference to be religious, or quasi-religious, in nature, rather than scholarly or scientific.

The problem of psychopathology

The problem of human psychopathology is an area where psychology is exceptionally relevant. In fact, the distinction between an existentialist and a clinical diagnostician/therapist becomes quite small. Psychology and existentialism face two questions regarding mental health: (a) What existential givens must be challenged? and (b) How can this challenge be made successfully so that an authentic and pathology-free existence is maintained? Psychological research is able to address both of these questions, although this thesis is primarily directed towards the first one. In short, I am asking: What are the existential givens which move us with such dread and wonder? What are the dimensions of existential concern confronting all human beings?

The masters of existentialism have answered this question in a variety of ways. Kierkegaard (1941) spoke of a tension between the desire for immortality while realizing the absolute finiteness of existence. The temporality of the finite human being confronts the eternity of the infinite god and stirs the torment, anguish, and dread that is the

fate of being human. Heidegger (1962) wrote of human beings as 'thrown' into an existential context (Dasein) from which the nothingness of death is the only escape. Awareness of 'Being' leads necessarily to the dread of 'Nonbeing', both of which are essential to being human. Sartre (1943) said that human beings are condemned to freedom in a meaningless and absurd universe, with little to hope for but 'nausea' and despair. Only by accepting the terrible responsibility of ontological freedom is transcendence possible. Nietzsche (1964) described the natural conditions of being human by such states as despair, anxiety, guilt, and loneliness. Yet, he says, despite the futility of the effort, human beings must rise above these conditions through exercising their creative 'will to power'.

Systems of existential concern

Obviously, then, various existential problems are dealt with in existential theory. Any attempt to assess existential thinking should address a full range of these sources of existential challenge. In order to develop such a framework I will now review the work of Tillich, Bugental, and Yalom. These three account for a series of taxonomies² of existential issues which will serve as a platform for an empirical description of some of the main dimensions of

² There is an intrinsic absurdity to creating a system of existential concern. Unfortunately, the limits of language and the habits of 2,000 years of Western philosophizing are hard to break.

existential concern facing human beings. A premise of this thesis is that these theoretical categories of concern will be identifiable in the cognitions of research subjects.

In The Courage To Be, the philosopher and theologian Paul Tillich (1952) presents a theory of human beings based on Nietzschean ideas. Like Nietzsche, Tillich considers anxiety to be due to an existential awareness of nonbeing and the experience of finitude. Anxiety represents at some level the 'unimaginable horror' of sensing inevitable death. Unlike fear, anxiety has no definite object. Therefore, human beings are exposed to anxiety naked and unprotected. Tillich says, the anxiety of nonbeing is beyond 'courage', the affirmation of being or of one's essential nature in spite of the limits of existence. Only when anxiety is transformed into fear may courage challenge it. Fear structures anxiety enabling courage to confront it directly. By accepting the necessity of nonbeing and making it an acknowledged fear, the effects of anxiety become transcendable. Without courage, the only escape from the threat of nonbeing is through neurosis. This is always inadequate, however, because successful neurotic distortions also distort being as well. Being and nonbeing must be taken together or not at all. Unfortunately, according to Tillich, the anxiety of nonbeing is never fully surmountable, being ontological, therefore feelings of threat and dread are always a feature of the human experience.

Tillich has categorized types of anxiety by the type of being negated by nonbeing:

Nonbeing threatens man's ontic self-affirmation, relatively in terms of fate, absolutely in terms of death. It threatens man's spiritual self-affirmation, relatively in terms of emptiness, absolutely in terms of meaninglessness. It threatens man's moral self-affirmation, relatively in terms of guilt, absolutely in terms of condemnation (p. 41).

By whatever form taken, these manifestations of nonbeing within being are all existentially-based and, therefore, all anxiety is existential. Psychopathological anxiety is existential anxiety under conditions of avoidance or misdirected self-affirmation. Neurosis is a failure of the 'courage to be' in the face of the ontological certainty of nonbeing. Yet, paradoxically, Tillich also concludes that the source or basis for this self-affirmation of finite beings comes from the creativity involved in confronting and transcending nonbeing. Rather than to escape from nonbeing, which is impossible, courage finds strength from the limits of existence. The awareness and acceptance of the inevitability of death, for example, drives the individual to affirm their life with vitality and courage. The same goes for the existential threats of meaninglessness and condemnation.

This work of Tillich serves as a basis for the theoretical approach to existential psychotherapy given by James Bugental (1965). To Bugental, existential psychology is distinguished by: (a) the axiom that human experience is

the central fact of human existence, (b) the examination of the vicissitudes of human existence from the perspective of the basic nature of being, and (c) a strategy of therapeutic change that is oriented towards a growth-inducing effort toward maximum accord with the whole of life. The central thesis of Bugental's work is that to live in accord with 'the way things really are' is the primary value of human life. This is achievable through the power of awareness. He writes that "confrontation of the ontological givens of living can facilitate the actualization of that (human) potential" (p. 15). In other words, awareness of the conditions of being puts us in harmony with being.

The authenticity of being is the fundamental human concern. It is, therefore, critical to distinguish the characteristics or the ontological givens of being accessible through awareness. Bugental categorizes these as (a) finiteness and the experience of contingency, leading to the existential anxieties of the sense of fate and the threat of death; (b) the potential to act and the experience of responsibility, where the existential anxieties involve the sense of guilt and the threat of condemnation; (c) choice and the experience of limited autonomy, with the underlying existential anxieties of the sense of emptiness and the threat of meaninglessness; and (d) separateness and the experience of 'a-part-ness', leading to the existential anxieties of the sense of loneliness and the threat of total

isolation. With the exception of the separateness category, which Bugental sees as incorporated in each of Tillich's three sources of anxiety, these categories parallel the conceptualizations offered by Tillich. Confrontation means the acknowledgement and acceptance of these ontological givens into being. Awareness of these dimensions is the first step to recognizing the responsibilities and opportunities for authentic being in the world despite the ontological limits of existence. As with Nietzsche and Tillich, avoidance of these existential concerns is possible only by the distortion of reality and by the suffering of neurotic or pathological anxiety.

Last in this series is the recent work of Irvin Yalom (1980), who shares many of the ideas of Nietzsche, Tillich, and Bugental. Yalom has written on dynamic existential psychotherapy, where the existential dynamic involves the conflict originating from the confrontation with the givens of existence, rather than with, for example, instinctive drives. Like Bugental, he discusses four types of existential givens: (a) Death, which involves the conflict between the awareness of the inevitability of death and the wish to continue to be; (b) Freedom, which implies the conflict between the 'groundlessness' of existence and the absence of external structure with our wish for 'ground' and structure; (c) Existential Isolation, which involves the conflict between our awareness of the 'unbridgeable gap'

between ourselves and all others and our wish for connection to a larger whole or community; and (d) Meaninglessness, with the existential conflict involved with being 'thrown' into a universe devoid of meaning while actively seeking meaning or pattern. These 'ultimate concerns' or 'deep structures' are knowable through the reflection upon the phenomenon of experience. Awareness of these is inescapable and leads to existential anxiety. In the case of psychopathology, this anxiety is diverted through the response of a variety of defense mechanisms, similar to those discussed in the more traditional dynamic theories. Therapy, according to Yalom, operates by mechanisms of awareness, acceptance, and transcendence of ultimate concerns. Essentially this is identical to the confrontation approach elaborated upon by Bugental, Tillich, and Nietzsche.³

Each of these theorists regard these existential concerns as unavoidable challenges to be confronted and transcended. They argue that we are unique as a species because of our awareness of these issues and for our efforts to surmount them. According to existentialism, we will ultimately lose

³ Interestingly, Yalom is not completely consistent on this. In the case of the confrontation of meaninglessness he diverts from his regular strategy and encourages his patients to 'look away' from this existential problem and to construct some meaning to life. He offers no convincing justification for this and I wonder if he has reached the limit of his own existential confrontation on this issue and is avoiding the acceptance of an ontological given.

against these threats to our existence but the struggle to exist, in spite of the futility of it, defines humanity in the present. Only when the finite and infinite limits of existence are courageously confronted does life become meaningful.

Existentialism as a philosophy

To understand the context of this thesis, it is important to review the historical context of existentialism. There remains no easy way to define existentialism. This is largely because existentialism is not a systematic school of philosophy with explicit constructs or refined principles to define it. It is, rather, a way of perceiving which transcends philosophical systems. For example, atheistic and theistic existentialists show clear similarities in style and perspective yet profess radically different metaphysical assumptions about the universe. Various writers, artists, and thinkers have been labelled existentialists (often without their approval) because they share a perception of the human condition and not because they have demonstrated some particular theoretical expertise. It is the nature of existentialism to reject intellectualized abstractions and this foils a more academic treatment of it.

It is possible, however, to observe certain characteristic features of existentialism's method of

philosophical inquiry, through the opaque screen that surrounds it. An existentialist's empiricism is characterized by two components: (a) metaphysical or 'what' issues and (b) epistemological or 'how' issues. The 'what' refers to the human predicament of existing. Existentialists are interested in the human reaction to the conditions of existence, the inescapable certainties of our ontological status. They ask: What is the experience of confronting the necessities of life? They examine the intellectual and, especially, the emotional impact of being existentially aware. Existentialists are interested in the immediate and concrete issues of existence as a dynamic process of 'becoming'. Existence is free and fluid, therefore inconsistent, they believe, with any conception of a universal law of behavior or fixed human nature. Abstractions corrupt human integrity, they argue. Existentialists begin with the inner perspective of the individual, an autonomous agent limitlessly free to choose from among life's alternatives yet limited by inescapable ontological certainties, of which death is the ultimate. This leads to the 'how' of existentialism, which is phenomenology. Phenomenological knowledge about human beings is sought through an open and nonintellectual understanding of the inner experience of another person. Care is taken to eliminate a priori hypothetical constructs so that the meaning of another's experience is encountered immediately and concretely. The goal is to achieve a

participatory involvement with another person which short circuits theoretical abstractions.

Relevant here is the distinction between existentialism and essentialism. Barrett (1958) and Tillich (1944) have argued that these represent two opposite but complimentary philosophical perspectives and that to understand one demands an understanding of the other. Essentialism is the view that knowledge must be based on the abstract, the permanent, and the universal. Only pure essence is truth. The immediate experience of the external world via the senses or the internal awareness of thoughts and emotions of any individual is merely a crude reflection of some higher realm of essential truth. Naturalism and idealism are typical examples of the essentialist perspective. In fact, essentialism really represents what has been the dominant epistemological orientation of western philosophy and science. It is the opinion of essentialism that reality or true being is accountable through the powers of intellectual reason and through the rules of logic. An essence, Tillich writes, is the "non-temporal object of knowledge in a temporal and changing thing" (p. 47). Rationality distills from the stream of experience that which is constant and universal. Truth is the calculated inference of the disciplined thinker.

Existentialism, by definition, opposes essentialism. "Existence precedes essence", Sartre said, meaning human

beings have no fixed nature or essence, rather they continually 'become' according to an ontological freedom. Existence to existentialism is not understood to mean some static quality but rather a process of emergence: the immediate and tangible product of a dynamic autonomy. A human turned into a 'mechanism' or into an 'idea' is no longer human. Abstracted knowledge is a false construction; only immediate experience has any validity. Knowing reality, according to existentialism, can not be the product of cognition alone, but of Kierkegaard's "most passionate personal experience" as well. Prior to splitting reality and experience, as the essentialists have done, there is existence. "Sum ergo cogito" (I am therefore I think), as Heidegger cleverly put it.

The relationship between existentialism and essentialism is an ancient one, although the labels are newer. For example, Plato's theory of forms assumes an essentialist epistemology. The pre-Socratic Heraclitus of Ephesus, on the other hand, shows an existential orientation.⁴ Later

⁴ Consider the following illustrations: In Plato's Phaedo (fifth century B.C./1954), Socrates attributes the truest perception of reality to one who:

approaches each object, as far as possible, with the unaided intellect, without taking account of any sense of sight in his thinking, or dragging any other sense into his reckoning - the man who pursues the truth by applying his pure and unadulterated thought to the pure and unadulterated object, cutting himself off as much as possible from his eyes and ears and virtually all the rest of his body, as an impediment which by its presence prevents the soul from attaining

existentialism and essentialism came into more direct conflict, for example with the confrontations between Pascal and Descartes. Then came Kierkegaard's attack on the systems of Hegel, which in many ways initiated the form of contemporary existentialism. Kierkegaard was followed by those such as Nietzsche, Heidegger, and Sartre who have succeeded in pushing existentialism into a dominant philosophical position. This has been particularly true since the Second World War in that existentialism has become an intrinsic part of the modern Zeitgeist.

Existentialism and scientific psychology

Despite the growing prominence of existentialism, its effect on psychology has remained fairly indirect. The metaphysical and epistemological principles of mainstream psychology, especially experimental psychology, have little in common with existential theory. In the broadest sense, the subject material may be similar but the approach is quite different. Only in some areas of clinical psychology has existentialism had significant impact. Originally this impact was felt by a number of European psychotherapists.

to truth and clear thinking. (p.110)

Compare this to a statement by the Pre-Socratic philosopher Heraclitus of Ephesus (see Kahn, 1979), who said:

Most men do not think things in the way they encounter them, nor do they recognize what they experience, but believe their own opinions.

Frankl's (1969) logotherapy and Binswanger's daseinanalysis (see Needleman, 1963) are examples of well known clinical approaches which rely heavily on existential theory. Later, existentialism was felt more strongly within North America through the humanistic-existential theories of such psychologists as Rogers (1961), Bugental (1965), Maslow (1968), and May (1969). Other examples exist, of course, but these are fewer than would be expected from two disciplines with such affinity of interest.

The attention of scientific psychology onto existential issues has been especially limited. This is regrettable because each has much to offer the other. The empirical methods of psychology are remarkably effective for learning about the human experience and existentialism provides a perspective on the human condition which is exceptionally rich in potentially researchable psychological material. A marriage between them should flourish, if only a proposal were made.

Why has this not happened? A number of factors are relevant in keeping existentialism and scientific psychology apart. There is the historical division of psychology and philosophy, for example. To legitimize their activities, many early psychologists supported a paradigm modelled after the natural sciences and abandoned philosophical methods. As a consequence, psychologists today tend to regard 'philosophical' topics as mere subjective fancies and

outside of the bounds of good science. There is also resistance from many existentialists, who typically reject the objectivity of the scientific method as a valid means of inquiry into existential concerns. They argue that the natural science model is essentialist in its intentions and, therefore, inconsistent with the goals of existentialism. Existentialists are especially critical of the S-R model of human behavior, which continues to be popular in contemporary psychology, and encourage no cooperation with those 'dehumanizing mechanists'. Another more practical reason for the split between psychology and existentialism is that existential constructs are highly resistant to the operationalization necessary to research them. Existentialists are notoriously elusive, often inventing their own vocabularies, and the fact that most of them also do not write in English makes existential theory particularly vague to the average North American scientific psychologist. Also, the existential experience is a deeply private phenomenon so that even if the theory were straightforward it would be difficult to measure. In short, all of these factors contribute to the continued estrangement of existentialism and scientific psychology.

To address the discrepancy in empirical work on existential topics this thesis has been designed to fulfill two purposes: (a) to develop an instrument with which to describe various aspects of the existential experience, and

(b) to test this instrument with a population of research subjects. If such an instrument can be used successfully, then scientific research on existential issues could be facilitated. I am sensitive to the criticisms by existentialists about relying on structured empirical methods, such as questionnaires, for investigating existential concerns, however, science has proven that there is value to these rigorous techniques, so I choose to use them here.

Although rare, research using questionnaire measures of existential issues does exist in the literature. For the remainder of this section I will review most of the published studies that I have located which attempt to develop instruments for measuring existential constructs.

Empirical measures of existential issues

Some of the earliest research on existential issues was performed by Theodore Kotchen (1960) who developed the Existential Mental Health Questionnaire. This 27-item questionnaire was constructed to measure seven theoretically derived components of meaning: Uniqueness, Responsibility, Self-Affirmation, Courage, Transcendence, Faith-Commitment, and World View. These components draw on the work of Frankl, Sartre, Tillich, May, Nietzsche, and Allport. Kotchen's questionnaire distinguished between psychiatric and non-psychiatric groups of subjects. A problem with this

instrument, however, is that some of the items require open-ended responses, so scoring is sometimes ambiguous. Brown and Smith (1968) report "eliminating" this problem by having subjects score the items themselves.

Although not as explicitly existential, Shostrom's Personal Orientation Inventory (POI) (1963) and Personal Orientation Dimensions (POD) (1977) are relevant measures. The POD is essentially a refined version of the POI, although the POI still remains the best known and is the most used. The POI has emerged as a popular assessment device for clinical practise and for research (see Knapp, 1971). Both the POI and the POD are designed to measure intrapersonal actualization, as discussed by humanistic, gestalt, and existential psychologists. The POI employs 150 two-choice comparative-value-judgement items. It measures two global scales, Time Competence (the extent the person lives in the present) and Inner Support (the degree the person relies on self), and ten specific scales: Self-Actualizing Value, Existentiality, Feeling Reactivity, Spontaneity, Self Regard, Self Acceptance, Nature of Man, Synergy, Acceptance of Aggression, and Capacity for Intimate Contact. The POI has demonstrated test-retest stability coefficients ranging from .55 to .85 and subscale internal consistency coefficients (Cronbach's alpha) ranging from .65 to .80. The POD has 260 items and measures 13 subscales: Being, Weakness, Synergetic Integration, Time Orientation,

Core Centeredness, Love, Trust in Humanity, Creative Living, Mission, Strength, Manipulation Awareness, Anger, and Potentiation. To the extent that the researcher is interested in self-actualization as an existential variable, these instruments are useful.

Another paper and pencil measure is Crumbaugh and Maholick's (1964) Purpose in Life Test (Part A) (PIL). The PIL was developed to improve on Kotchen's work on measuring existential mental health. The PIL is considered to be a psychometric approach to Frankl's concept of noogenic neurosis, defined as emptiness of purpose in life. It is designed to distinguish between persons experiencing a satisfying life purpose from those experiencing the existential frustration and boredom created by a vacuum of perceived meaning in personal existence. A person's PIL score should depend on the extent to which their 'will to meaning' is thwarted. The PIL is composed of 20 items rated on 7-point scales. A split-half reliability correlation for the PIL was shown to be .81.

Crumbaugh and Maholick (1964) also mention the Frankl Questionnaire, which is an informal series of questions used by Frankl in his clinical practise to assess existential frustration. Six of the questionnaire's 13 items were given quantified ratings by Crumbaugh and Maholick and used as an alternative measure for purpose in life. Use of this instrument for research, however, has been minimal, since the development of the PIL.

Good and Good (1974) introduced the Existential Anxiety Scale which, again, is intended to empirically address Frankl's work. Essentially, this effort parallels Crumbaugh and Maholick's work on the PIL. The scale is composed of 32 true-false items designed to measure such factors as despair, alienation, and emptiness. The authors report a reliability estimate (KR-20) of .89.

Another scale, related to the PIL and also developed by Crumbaugh, is the Seeking of Noetic Goals scale or SONG (Crumbaugh, 1977). This scale is designed to measure the strength of motivation to find meaning and purpose in life, as opposed to the PIL which indicates the degree of meaning or purpose achieved. Theoretically the SONG and the PIL measure Frankl's 'will to meaning' and 'existential vacuum', respectively. The SONG is composed of 20 items rated on 7-point scales. A split-half reliability correlation of .71 was reported.

Reker and Cousins (1979) have examined the factor structure of the PIL and SONG together, with a sample of 248 undergraduates. A principal components factor analysis with varimax rotation derived ten factors. These were labelled as follows (percentages indicate proportion of variance accounted for): (1) Purpose in Life (21.8%), (2) Goal Seeking (11.4%), (3) Goal Achievement (4.9%), (4) Contentedness with Life (4.4%), (5) Existential Vacuum (3.7%), (6) Search for Adventure (3.4%), (7) Futuristic

Aspirations (3.1%), (8) Internal-External Locus of Control (2.8%), (9) Self-fulfillment (2.8%), and (10) Life View (2.6%). Overall this ten factor solution accounted for 60.9% of the total variance. Split-half correlations yielded internal consistency coefficients of .76 for the SONG and .77 for the PIL. This study also showed the test-retest correlations over a six-week period to be 0.78 (SONG) and 0.79 (PIL).

Reker and Peacock have expanded upon this factor analytic work and have developed their own multidimensional instrument for assessing attitudes toward life, called the Life Attitude Profile or LAP (Reker & Peacock, 1981; Peacock & Reker, 1982). This scale includes items from the PIL, the SONG, the POI, and the Death Perspective Scale (Lowe et al., 1979). The LAP is designed to assess the degree of existential meaning and purpose in life and the strength of motivation to find meaning and purpose. The full scale has 56 items rated on 7-point Likert-type scales. The LAP is also considered to be an operationalization of Frankl's concepts of logotherapy. Reker and Peacock (1981) examined the factor structure of the LAP on the responses of 219 undergraduates. Using a principal components factor analysis⁵ with varimax rotation they derived seven factors:

⁵ The use of principal components analysis in this study and in Reker and Cousins (1979) may be questionable. Factor analysis based on the common factor model would have been more appropriate since these researchers are assuming underlying constructs.

(1) Life Purpose (15.8%), (2) Existential Vacuum (10.6%), (3) Life Control (5.9%), (4) Death Acceptance (4.9%), (5) Will to Meaning (4.4%), (6) Goal Seeking (3.4%), and (7) Future Meaning to Fulfill (3.3%). Notice that several of these factors are similar to those derived from the combined PIL and SONG, which is to be expected given the many common items used. This seven factor solution accounted for 48% of the total variance. Cronbach's alpha internal consistency estimates ranged from .83 (life purpose) to .55 (future meaning to fulfill). Three higher-order factors were also extracted; (a) Striving for Meaning, (b) Noological Actualization,⁶ and (c) Existential Transcendence. Peacock and Reker (1982) have, in addition, successfully revised the LAP and improved the internal consistency of two dimensions and clarified a third. They also obtained test-retest coefficients ranging from .56 (goal seeking) to .83 (life purpose), with an overall stability coefficient of .75.

Some other interesting work has been done with the PIL by Nawas (1971). He has developed a 50-item instrument which translates PIL items into specific and concrete elements that an individual can imagine. These elements refer to behaviors relating to (a) relations with authority, (b) inability to assert self, (c) problems with the opposite sex, (d) general interpersonal problems, (e) fear of self-disclosure, and (f) general lack of self confidence. Nawas

⁶ Noological is a term of Frankl's to describe a higher or transcendental realm of meaning.

uses the instrument with behavioral interventions on "existential" anxiety, by which he means a widespread emotional disturbance with ill-defined antecedents. Although this approach is not consistent with the existential view of anxiety as related to the ultimate concerns of being, it is a creative use of existential concepts in therapy.

Another scale that is designed to measure the meaningfulness of life, as discussed by humanistic and existential psychologists, is the Life Regard Index (Battista & Almond, 1973). This instrument has 28 items rated on 5-point scales and contains two 14-item subscales. The first subscale is labelled Framework and assesses the nature of life goals, purpose, and life view. The second subscale is labelled Fulfillment and assesses the degree of fulfillment of the Framework or life goals. The authors of this scale consider it to be superior to the Purpose in Life test and the Personal Orientation Inventory as a measure of life purpose because it assesses the experience of "life validation" rather than referring to a priori standards of meaning and fulfillment, as determined by the researchers. Despite this, Battista and Almond report that the PIL, the POI, and the LRI appear to be measuring the same thing.

Hazell (1984, 1984) reports developing an 18 item Likert-scaled questionnaire designed to evaluate existential emptiness and existential concern. He confirmed the

existence of these two dimensions within his scale by a principal components factor analysis with varimax rotation on the responses of 270 subjects. The existential emptiness dimension is itself composed of three components: (a) an inner sense of "hollowness", (b) a generalized feeling of emotional "numbness", and (c) a feeling that part of the self is missing. The existential concern dimension also separates into three components: (a) concern about authenticity or the true nature of self, (b) concern about death, and (c) concern about the meaning and purpose of life. Cronbach's alpha coefficients were .92 for existential emptiness and .90 for existential concern. Hazell has observed a significant correlation between his scale and a measure of emotional development.

Orcutt (1984) discusses a questionnaire designed to measure types of boredom. In particular, one scale of this instrument measures "existential boredom", as indicated, for example, by the frequency of boredom and by a lack of purpose in life. Existential boredom was observed to be related to frequency of alcohol use among males.

Giorgi (1982) discusses the Belfast Test, a 20-item questionnaire designed to measure subjects' difficulty in finding meaning to circumstances beyond their control (e.g., disease and death) and in actualizing creative values to overcome problems, such as war and discrimination. This questionnaire is similar to the PIL, in terms of what it

seeks to measure, and is also based on the constructs of Frankl's logotherapy, such as existential frustration, alienation, and perceived meaning.

Other attempts to measure meaning in life have tried more open-ended formats. For example, Sharpe and Viney (1973) asked subjects to write for 30 minutes in response to the question: "Everyone has a picture of reality, even those who have not thought about it as such. What are the essentials of your picture? Include what beliefs, doubts, and life purpose you may have, and what meaning, if any, life has to you." This question was designed to tap the subject's "world-view" or "Weltanschauung". Three experienced clinicians then rated each protocol on three criteria: (a) Evaluation of the World, (b) Purpose, and (c) Self-Transcendent Goals. The authors observed that low PIL scores were related to negative evaluations of the world, a lack of purpose, and a lack of transcendent goals.

Similar to this research by Sharpe and Viney (1973) is the work of DeVogler and Ebersole (1980) and DeVogler-Ebersole and Ebersole (1985). In the 1980 study, they used a free-response essay format in which subjects were asked to describe and rank their three most important meanings and give a concrete experience associated with each. These results were then classified according to a revision of Battista and Almond's (1973) Life-Orientation categories. According to these criteria the total number of meanings

reported by college students were: 36% for Relationships, 14% for Service, 13% for Growth, 12% for Belief, 10% for Expression, 2% for Understanding, and 5% said they had no meaning in life. In the 1985 study, participants' self-reports were again rated for meaning by external judges, however more explicit rating criteria were used. Each of the 86 participants were asked: (a) "Write in detail about the thing that you find gives you greatest meaning in your life. Tell why this is meaningful to you and try to provide an example of it.", and (b) "Support to the best of your ability why you feel your meaning in life is deep or not deep. Use examples, tell how much you are involved (or not)." The authors observed interrater agreement to be adequate. They suggested that one advantage of this method was the broader frame of reference concerning depth of meaning that was available when judges were used.

Based on the work of Nietzsche (1964), Tillich (1952), and Bugental (1965), Patrick Thauberger and his associates have produced a significant proportion of the research relating to existential constructs. Essentially, Thauberger is interested in the phenomenon of avoidance on ontological confrontation, that is, an "awareness of reality and of the harsh inevitabilities of life" (see Thauberger, Ruznisky, & Cleland, 1981, for a review). This research program has focussed on general existential avoidance (Thauberger, 1969; Thauberger and Sydiaha-Symour, 1977), the avoidance of

ontological confrontation of death (Thauberger, 1974; Thauberger, Thauberger, and Cleland, 1977; Thauberger, Cleland, and Thauberger, 1979), and the avoidance of the ontological confrontation of loneliness (Thauberger & Cleland, 1979; Thauberger, Ruznisky, and Cleland, 1981). Three scales have emerged out of this research. First, the Avoidance of Existential Confrontation scale (AEC) (Thauberger, 1969) which contains 36 items, rated on 7-point semantic differential scales, evaluating the degree of avoidance of such existential issues as failure, meaninglessness, uncertainty, frustration, and suffering. Reliability indices range between .62 and .73 (odd-even) and the scale gives a test-retest correlation coefficient of .75 across two weeks. Second, the Avoidance of the Ontological Confrontation of Death scales (AOCd) (forms A, B, and C) (Thauberger, 1974), each of which has 20 true-false items relating to death avoidance. Reliability coefficients for these scales are good (KR-20: 0.82 to 0.96; odd-even: 0.82 to 0.89; test-retest: 0.76 to 0.91). Third, the Avoidance of Ontological Confrontation of Loneliness scale (AOC1) (Thauberger & Cleland, 1979), composed of 40 true-false items. This scale has shown a Cronbach alpha of .81 and an odd-even coefficient of .78.

A factor analysis (principal factor extraction, oblique rotation on 133 subjects) by Thauberger, Cleland, & Nicholson (1982) involving Thauberger's ontological

avoidance scales, the PIL, the POI, and Koestenbaum's Existential Sexuality Scale,⁷ which, apart from Kotchen's scale, they claim represent all of the existential measures available to them at the time of the study, produced only two noteworthy factors. The first factor involved the 10 POI subscales and was labelled "Existential Vulnerability". The second represented what the authors describe as "Self-Enhancement in the midst of Conflicting Value". They conclude from this analysis that the ontological avoidance scales are distinct from the other existential measures.

In addition to the ontological confrontation scales described above, Thauberger's group has produced one other relevant measure, the Incidents of Reality Scale (IRS) (Ruznisky & Thauberger, 1982). This scale consists of 70 items, the majority of which relate to ontological issues such as death, guilt, loneliness, meaninglessness, and suffering. Bugental's (1965) eight existential givens are also represented. Subjects evaluate 69 of these items against a reference item (an appendectomy) for relative degree of personal stress and concern. Results showed that deaths of family members were ranked among the most stressful incidents and that generally the existential givens discussed by Tillich (1952) and Bugental (1965) were

⁷ Koestenbaum's Existential Sexuality Scale (Koestenbaum, 1974) is an 87 item questionnaire designed to measure openness to sexual communication. The items follow from Koestenbaum's own theorizing and I mention only it to make this review as thorough as possible.

ranked lower.

Larsen and Giles (1976) report developing a 50-item Likert-type scale for measuring Existential and Social Courage. Again, this work follows Frankl, Tillich, and Bugental. Existential Courage refers to making self-defined choices independent of survival or social motivations whereas Social Courage is defined as risk-taking in pursuit of socially valued goals.

Some empirical work which is especially relevant to this thesis has been done by Frederick Thorne and Vladimir Pishkin (Thorne, 1973; Thorne & Pishkin, 1973; Pishkin & Thorne, 1973). Their research also involves dimensionalizing the ontological belief structure of human beings. They have developed a 200-item questionnaire called the Existential Study which is designed to measure such things as self-concept, self-status, self-esteem, self-actualization, existential morale, meaning in life, attitudes toward the human condition, destiny, suicide, and existential success-failure. In other words, the individual's existential status or state of being-in-the-world. Items in the Existential Study are derived from actual patient communications and it is intended to objectify Frankl's descriptions of existential neurosis. This questionnaire is divided into three sections: (a) reactions to self, (b) reactions to others, and (c) reactions to the human condition. Thorne has examined the

factor structure of the scale on the combined responses of 193 felons, 89 alcoholics, 314 university students, 336 unmarried mothers, and 388 psychiatric patients. A principal components factor analysis⁸ with varimax rotation on the responses of the total sample revealed five factors: (1) Demoralization State/ Existential Neurosis (13.5%), (2) Religious Dependency Defenses (6.2%), (3) Existential Confidence/Morale (3.0%), (4) Self-Actualization Esteem (2.5%), and (5) Concern over the Human Condition (1.8%). The authors consider the Existential Study to be a step towards more effectively measuring areas of concern which have shown clinical relevance to problems of existential adjustment. However, the Existential Study does not explicitly address the issues of death, meaninglessness, freedom, and isolation, therefore, it is not clear whether this instrument taps the scope of concern addressed by existential theorists, such as Tillich, Bugental, and Yalom.

Paloutzian and Ellison (1982) have constructed the Spiritual Well-Being Scale (SWB), which is divided into two dimensions: (a) Religious Well-Being (RWB), and (b) Existential Well-Being (EWB). Overall the SWB scale is designed to measure quality of life. Religious Well-Being makes reference to one's relationship with god while Existential Well-Being refers more to life in general. The

⁸ Not only did Thorne and Pishkin use an inappropriate factor analysis (principal components) but they also combined several highly divergent samples into a single analysis, which is also questionable.

scale has 20 items in total, rated on 6-point scales. The correlation between RWB and EWB was observed to be $r=.32$ ($p<.001$). Test-retest correlations were .86 (EWB), .96 (RWB), and .93 (SWB) and internal consistency alpha coefficients were .78 (EWB), .87 (RWB), and .89 (SWB). The SWB scale has been shown to correlate positively with the PIL. A factor analysis of the SWB (using an orthogonal rotation on the data of 206 subjects) showed that the RWB items clustered together as expected and that the EWB items loaded on two factors, one connoting life direction and the other life satisfaction.

Not all empirical work relevant to existential issues has been explicitly existential or from psychology. Garfield (1973), for example, investigated the relationship between existential vacuum or failure to experience a sense of meaning and purpose, as measured by the PIL, and the sociological concept of anomia or loss of sense of social cohesion, as measured by the Srole Anomia Scale (Srole, 1956) and the McClosky-Schaar Anomia Scale (McClosky & Schaar, 1965). Both of these anomia scales examine this sociological construct from a more psychological orientation. The Srole Anomia Scale is a five-item scale designed to measure the subject's sense of social malintegration or self-to-others alienation. The McClosky-Schaar Anomia Scale is a nine-item scale designed to measure the subject's failure of socialization, means to

socialization, and, in particular, the tendency to perceive society as normless, morally chaotic, and adrift. This latter scale has demonstrated a split-half reliability coefficient of .76. Garfield's hypothesis was that, as a sense of normlessness and as a sign of impaired socialization, anomia should be related to purpose in life. His final conclusion was that the PIL and the anomia scales do not measure identical attributes but that they are significantly correlated.

Similar to anomia is the construct of alienation, around which a body of research exists. For example, the Dean Alienation Scale (Dean, 1961) is designed to measure feelings of powerlessness, normlessness, and social isolation. Another relevant example is the Alienation Test of Maddi, Kobasa, and Hooker (1979). This 60-item questionnaire measures four types of alienation (Powerlessness, Adventurousness, Nihilism, and Negativeness) in five contexts (work, social institutions, family, other persons, and self) (see also Maddi, Hoover, & Kobasa, 1982; Kobasa & Maddi, 1977). Although I have not reviewed the literature pertaining to the empirical measurement of anomia and alienation as thoroughly as I have for explicitly existential issues, I mention these for their obvious kinship to existential concerns. In some cases the difference is more a matter of terminology than of theoretical distinctiveness.

One final scale, which I will mention, is the Ames Philosophical Belief Inventory (Ames, 1968), designed to measure the philosophical positions of counselors. I include this scale because among it's five subscales is one labelled Existentialism, the others being Idealism, Realism, Pragmatism, and Phenomenology.

This concludes the review of the instruments designed to measure existential constructs (see Table 1 for a summary). Undoubtably others exist, but the measures discussed here account for the majority of those in the literature. What these instruments indicate is that a number of researchers consider the study of existential concerns to be possible with conventional empirical techniques, such as questionnaires. The appropriateness of using such methods in this thesis, therefore, is supported.

Why add another instrument to those already in use, however? The most important reason is that the the explicit reference to the issues of death, meaninglessness, freedom, and isolation makes the instrument developed here unique. Most of the previous attempts to empirically address existential issues have been based on the theories of Victor Frankl and are, therefore, strongly oriented towards the issue of life meaning. A few instruments have been based on the theories of Tillich and Bugental but these have tended to be more narrowly focused on particular issues, such as courage, death, and loneliness. None of these instruments

TABLE 1
Summary of existential measures

Name	Author	Date	Items	Scoring	Construct Measured
Frankl Questionnaire	Frankl	unpub	13	open ended	Existential frustration.
Existential Mental Health Questionnaire	Kotchen	1960	27	open/closed ended	Seven components of meaning.
Personal Orientation Inventory	Shostrom	1963	150	forced choice	Intrapersonal actualization.
Purpose in Life test (Part A)	Crumbaugh & Maholick	1964	20	7-point scale	Frankl's noogenic neurosis: purposelessness in life.
McClosky-Schaar Anomia Scale	McClosky & Schaar	1965	9	agree/disagree	Perception of society.
Avoidance of Existential Confrontation scale	Thauberger	1969	36	7-point scales	Avoidance of existential issues.
Nawas Scale	Nawas	1971	50	unknown	Existential anxiety.
Life Regard Index	Battista & Almond	1973	28	5-point scales	Nature and fulfillment of life goals.
The Existential Study	Thorne	1973	200	unknown	Existential beliefs and status.
Koestenbaum's Existential Sexuality Scale	Koestenbaum	1974	87	unknown	Openness to sexual communication.
Avoidance of the Ontological Confrontation of Death scales	Thauberger	1974	20	T-F	Death avoidance.
Existential Anxiety Scale	Good & Good	1974	32	T-F	Existential anxiety.
Existential and Social Courage scale	Larsen & Giles	1976	50	Likert scales	Courage.
Seeking of Noetic Goals scale	Crumbaugh	1977	20	7-point scale	Achieved meaning.
Personal Orientation Dimensions	Shostrom	1977	260	forced choice	Intrapersonal actualization.
Avoidance of Ontological Confrontation of Loneliness scale	Thauberger & Cleland	1979	40	T-F	Loneliness avoidance.
Alienation Test	Maddi, Kobasa, & Hooker	1979	60	rating scales	Alienation.
Life Attitude Profile	Reker & Peacock	1981	56	7-point Likert scales	Existential meaning and purpose.

Belfast Test	Giorgi	1982	20	unknown	Purpose and meaning in life
Incidents of Reality Scale	Ruznisky & Thauberger	1982	70	rating 1-1000	Stress of life events.
Spiritual Well-Being Scale	Paloutzian & Ellison	1982	20	6-point scale	Religious and existential well-being.
unnamed	Hazell	1984	18	9-point Likert scale	Existential emptiness and concern.

have attempted to simultaneously measure all four of the basic existential concerns, as discussed by Tillich (1952), Bugental (1965), and Yalom (1980).

Design issues

The question arises of how research on existential issues should proceed. Ideally, I believe, both qualitative and quantitative empirical approaches should be used. Qualitative methods, for example phenomenologically oriented in-depth interviews, are especially suited to studying existential concerns. It is also appropriate to use the more traditional quantitative methods, such as questionnaire surveys of large numbers of subjects, so that the advantages of broad sampling and summary statistics may be exploited. Although existential purists favor only the former approach, I believe that any single approach is too narrow and that the most appropriate practise should be to utilize a variety of methods in combination.

Despite my eclectic beliefs, however, I have limited this thesis to quantitative procedures. I feel justified in this for I conceive of this project as a platform for later research. Essentially this thesis is an attempt to describe, through correlational multivariate statistics of questionnaire data, some aspects of the existential belief

structure of a large sample of university undergraduates. This data will lay the groundwork for refining a measure of existential beliefs which will have clinical and research utility. Later, I foresee this more structured approach serving as a framework or guide for more qualitative research.

To measure existential beliefs, a questionnaire was constructed comprised of a list of statements which subjects rate for agreement. These statements are written to broadly represent the four categories of existential concern: death, meaninglessness, freedom, and isolation, as discussed by Tillich (1952), Bugental (1965), and Yalom (1980). The items were written to represent these categories as broadly as possible. The intention was to sample a wide range of existential beliefs, using the four categories as overall regions of content. From such diverse material I expected the analyses to determine the natural dimensions of existential belief, before too many a priori limits were set. The number of items in each category were roughly equivalent, although this proved difficult to establish in some cases. For example, the item "death gives meaning to my life" taps both the categories of death and meaninglessness, so it is difficult to categorize. Rather than delete such ambiguous items I retained them for the sake of breadth.

I also tried to construct items according to a dimension of existential awareness or authenticity. This was, unfortunately, even more difficult to operationalize at this stage. To illustrate, consider the item "My life has meaning". Does this mean the person has confronted the absurdities and uncertainties of existence and courageously chosen an existential purpose or does it mean they believe in values external to them or, worse, that they support the statement simply because it sounds good to say it? Nevertheless, I tried to build in some range of authenticity, even if only crudely, in order to diversify the items. Authenticity was operationalized, in this case, by statements indicating greater similarity to the ideas and values of existential theory, such as death is inevitable, freedom is inescapable, meaning is arbitrary, and isolation is fundamental. Authenticity was also regarded to be indicated if this existential awareness was supplemented by some kind of mature realization or confrontation, for example death motivates me to live, freedom is an opportunity, meaning can be constructed, and isolation is transcendable. Other items were written to indicate less confrontation and more fearful avoidance of existential givens.

Along with our new existential belief items, a number of items from existentially-oriented instruments developed by other researchers were mixed into the final questionnaire to

serve as marker variables. The use of marker variables is a technique of factor analysis in which a selected item serves as a prominent indicator for a construct or dimension established by earlier research. This facilitates the comparison of separate studies. Although the supporting literature is small, five references were used as sources for obtaining marker variables: three factor analytic studies and two full scales. These markers represent a variety of attempts to study existential issues. The factor and scale labels attached to each marker will assist in interpreting the meaning of the results of this thesis.

Items from the factor analytic studies were selected if (a) the item was one of the two top loading items of the factor and (b) this loading equalled or exceeded 0.6. These were as follows: (a) Five items from a factor analysis of the Existential Study, representing three factors (Pishkin & Thorne, 1973); (b) Twelve items, representing seven factors, from a factor analysis of the Life Attitudes Profile (Reker & Peacock, 1981); and (c) Eighteen items, representing ten factors, from a factor analysis of the Purpose in Life test and Seeking Noetic Goals test (combined) (Reker & Cousins, 1979). No other appropriate factor analyses were identified. Eight of the markers from the PIL/SONG analysis overlapped with markers from the LAP (i.e., some markers will represent two factors) so the final number of factor markers used was 27.

The full scale items were: (a) the ten-item Existential Well Being Scale, a subscale of Paloutzian and Ellison's (1982) Spiritual Well Being Scale; and (b) the nine-item McClosky-Schaar Anomia Scale (McClosky & Schaar, 1965). These scales were selected because of their relevance to existential concerns and because they were both brief. The total number of marker variables was, therefore, 46.

Measuring desirable responding

The Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1984) was included following the existential-type items and the markers. This is a rationally-derived 40-item scale which is divided into two 20-item subscales: Self-Deception and Other-Deception/Impression Management. The BIDR is designed to measure the tendency for subjects to report attractive but inaccurate personal qualities or behaviors due to either self-deception or other-deception. It is based on the Self Deception (SDQ) and Other Deception (ODQ) questionnaires of Sackeim and Gur (1979). Paulhus has altered the original items to be (a) statements instead of questions, (b) trait affirmations rather than trait negations, and (c) to have equal numbers of attribution and denial items in each subscale. He argues that these revisions offer an improved measure of desirable responding. Paulhus used the results of a confirmatory factor analysis to support the two-dimensional structure of the BIDR,

observing the best fit for a model distinguishing self and other-deception items.

Self-Deception, as it pertains to the BIDR, is defined as desirable (i.e., false) responding that is motivated by the psychologically threatening nature of behaviors which are judged to be universally true (Sackeim & Gur, 1978; Sackeim & Gur, 1979). The person holds two contradictory beliefs simultaneously, yet he or she is aware of only one of these beliefs. For example, affirming the BIDR item "I am always free of guilt" or denying the item "I often have sexual fantasies" is thought to indicate greater self-deception, since guilt and sexual fantasies are presumed to be universal but often self-threatening phenomenon.

Other-Deception, or impression management, is defined as responding motivated by a desire to appear more socially desirable by claiming statistically infrequent behaviors. Unlike self-deception, the person is presumably aware of their intent to deceive. For example, affirming the BIDR item "I always tell the truth" or denying the item "I am sometimes late for appointments" indicates greater other-deception. According to Paulhus, these are not threatening enough to warrant self-deception but a person may consciously lie about these behaviors in order to look good.

The BIDR was included because it is theoretically related to human deception as discussed by existentialism. For

example, Sartre referred to "bad faith", Tillich to failed courage, and Bugental to "inauthenticity" for describing a form of existence characterized by the avoidance of ontological conditions. This form of existence is highly relevant to existentialists because existential awareness is regarded to be the essential quality of humanness. To avoid confronting issues of death, meaninglessness, freedom, and isolation, they would say, threatens the root of our very being. Distorted perception means a distorted self and possible psychopathology.

The BIDR is an especially interesting instrument because there are differing opinions about the consequences of self-deception. Most notably, Sackeim (1983) has developed the view that self-deception has adaptive value and is perhaps necessary for psychological well-being. Sackeim reports a negative correlation between his Self-Deception Questionnaire and the Beck Depression Inventory, a finding replicated by Roth and Ingram (1985). Rather than leading to psychopathological consequences, this view of self-deception attributes it with a power to preserve and enhance psychological health. Sackeim might argue, for example, that realizing the negative aspects of one's true existential status is dangerous and that it would be better to deceive oneself about such unpleasantness and remain happy. This position obviously contradicts that of existentialism, for which the anxiety and guilt of

existential awareness are the inescapable and necessary costs of being human. To avoid existential givens may feel more comfortable but the price of such a bargain is exorbitant, they say; self-deceivers exchange a false feeling of security for their humanity.

Hypotheses

A number of hypotheses about the results of these measures were possible. First, I expected the items of the existential survey to covary in a way that indicates that the issues of death, meaninglessness, freedom, and isolation are basic categories of existential cognition. Since this categorization was intentionally broad to begin with, some splitting and overlapping of categories was anticipated. In addition, Yalom's issues were expected to appear in factors where different degrees of awareness and concern were indicated. Second, I expected the markers to correlate with the new items in ways which were theoretically appropriate. For example, if a dimension of "life purpose" were to emerge then the "life purpose" markers should be associated with it. Third, I expected the analysis of the BIDR items to identify two components of desirable responding motivated by self and other deception. Fourth, I expected the BIDR items to relate to the existential items in a way which addressed the opposing views on the effect of self-deception. Data would be correlational, so any conclusions would be limited,

however I expected desirable responding (i.e., less deception) to be associated with greater inauthenticity and avoidance of ontological confrontation.

Method

Subjects

The responses of 690 Introductory psychology students were used in the analyses. Of these, 298 were identified as male and 320 were identified as female. The remaining 72 subjects failed to indicate their gender but were still included in the results. Subjects understood the study to be a take-home survey of general "life issues" for which they would receive course credit equivalent to one percent of their final grade.

A total of 896 questionnaire packages were distributed and of those 716 were returned (80%). Twenty-six of the returns had to be eliminated from the analyses due to spoilage, usually because the questionnaire was only partially completed.

Materials

The questionnaire booklet given to each subject was divided into three parts (see Appendix A). The first was the introductory cover sheet which explained the task and provided space for the subject to give identifying information.

The second part was the 160-item existential belief questionnaire. This was composed of 114 new items, written to reflect Yalom's four categories of existential givens, and 46 marker items, selected to represent constructs identified in previous research. The markers and the new items were randomly mixed together into two forms, used to test for order effects. Subjects responded to each item on a 5-point Likert-type scale: (1) strongly disagree, (2) moderately disagree, (3) neutral, (4) moderately agree, and (5) strongly agree. Responses were recorded on an attached computer-scoreable answer sheet. It was to accommodate this answering format that the questionnaire was limited to 160 items and the 5-point response scale was used. In the case of the marker items, this meant that the response scale was different from the original scale used with the item, however a common format was chosen to simplify the task and to ease scoring. Subjects also used a line in the answer sheet's identification field to indicate their gender.

The third part of the package was the 40-item Balanced Inventory of Desirable Responding (Paulhus, 1984). All subjects received these items in only one order: the first 20 being Other-Deception items and the last 20 being Self-Deception items. Subjects responded directly onto the questionnaire sheet according to a 7-point Likert-type scale, anchored by "not true", "somewhat", and "very true" for "1", "4", and "7" respectively.

Procedure

Questionnaire packages, with one of two random orders of the 160 existential belief items followed by the 40-item BIDR and one IBM answer sheet, were distributed to subjects with instructions to complete the questionnaires at home and return them to a depository in the Psychology Department. The questionnaire packages were distributed to classes or left to be picked up at a central location (the Psychology Main Office). Each subject received one credit hour for participation by returning the identification sheet separately. This honor system was used to guarantee to subjects that their responses were to remain anonymous. The only identifying information that was associated with their responses was their gender.

The take-home procedure was used for several reasons. First, the procedure was efficient, in that a great deal of data could be collected in a short period of time. Second, it was hoped that this procedure would be the most convenient for subjects and that the participation rate would be high. Third, the take-home procedure allowed subjects to complete the questionnaires at their own pace, without the social pressures of group administration. Given that some of the issues of inquiry could involve substantial personal reflection, the latitude available with this procedure was regarded as an advantage.

Disadvantages of this procedure should also be acknowledged. Most critical is that subjects responded when unsupervised and therefore it must be assumed that they understood the instructions and were careful in their work. Generally my expectations were optimistic on this issue because the majority of subjects did return material which demonstrated conscientious and thorough work. They seemed to follow directions and record legible responses to the same degree as subjects in other studies I have conducted with similar questionnaires in supervised settings.

Results

Missing values

Of the 690 subjects, 101 failed to answer every existential belief question. When a missing value was found it was replaced with the item mean, as determined from the rest of the sample (Gorsuch, 1983). This procedure was used because the statistical package employed (SAS) uses a list-wise deletion procedure with missing values when calculating a correlation matrix. This meant the data from the 101 offending subjects would be eliminated, therefore lessening the overall stability of the results. Substituting each missing value with the corresponding mean allowed all 690 subjects to be used in the analyses. This procedure was not used for the BIDR items, however, since the amount of missing data was greater.

To evaluate the effects of replacing missing data with the item means, separate principal component analyses were performed on the existential items before and after replacement. From these analyses, correlations of the first 13 component scores were calculated. If major differences in the component scores were observed (i.e., low correlations) then replacing the missing values would have to be reconsidered.

Overall, results showed that replacing missing values had little impact. The component eigenvalues, representing the proportion-of-variance-accounted for, were lower for the altered data set but only slightly. The component scores were highly intercorrelated, with an average correlation coefficient of .90 for 13 components. Therefore, altering the missing values of the existential items was regarded as an acceptable procedure and the altered data was used in further analyses.

Factor analysis of existential items

Factor analyses were performed separately on the 160 existential belief items and on the 40 BIDR items. Factor analysis produces weighted linear combinations of variables, called factors, which account for more variance than do single variables. Salient (high loading) variables on a factor define the factor's meaning. One major advantage of factor analysis is that data variance may be more

parsimoniously described with fewer 'sources' of variance. Therefore, factor analysis was used for two reasons: first, to explore the item covariation for larger latent variables from which to infer underlying dimensions; and, second, to summarize the data into fewer and more manageable entities for other analyses. The factor analysis⁹ of the existential items will be presented first.

The ratio of subjects to variables for the existential items was 4.3, which should be sufficient for normal factor analysis to proceed (Cattell, 1978). Prior to selecting a final method of factor analysis, a number of extraction and rotation procedures were examined. Comparison of various extraction methods generally showed very similar results. For example, the scores of a principal component analysis (using communality estimates of one) with promax rotation and a principal factor analysis (using communality estimates defined by the squared multiple correlation) with promax rotation were highly intercorrelated, with a mean correlation coefficient of .82 for the first 20 components/factors. This means that for each component there was a corresponding factor which was essentially the same.

⁹ There is a special absurdity with using factor analysis for investigating existential questions. What could be more essentialist than a 'higher dimension' or 'latent factor'? I can only hope that this contradiction will be tolerated with an open mind.

Similar results were obtained for more sophisticated extraction procedures. For example, alpha factor analysis, iterated principal factor analysis, and unweighted least squares factor analysis were each compared to the results of a maximum likelihood factor analysis, each after a varimax rotation. Correlating factor scores showed that the results of all four analyses were highly similar and that for up to 12 factors these correlations exceeded .85. After 12 factors matching factors were still easy to identify between different extractions but the factor score correlations tended to be more moderate and the order of factors more different. These results indicate that the solutions for the extraction methods tested are essentially interchangeable, especially for the first dozen factors.

A number of rotation solutions were also compared.¹⁰ A maximum likelihood extraction of 30 factors was rotated with varimax, quartimax, promax, and Harris-Kaiser case II orthoblique rotation methods. When the rotated factor scores of the oblique promax solution (power=3) were correlated with the factor scores of the other rotations the promax solution was found to be very similar to the varimax orthogonal solution, moderately similar to the quartimax orthogonal solution, and quite different from the Harris-Kaiser solution. An examination of the factor structure of

¹⁰ Note that rotating factors does not make them any more accurate, only more interpretable. A choice between different rotations depends more on theoretical, rather than statistical, criteria.

the Harris-Kaiser solution and the promax solution showed that, although the individual factors were conceptually related across the rotations, the two solutions were not interchangeable.

From these results a judgement was made regarding the primary method of factor analysis to use. First, the maximum likelihood extraction method (ML) was selected. This procedure represents the state-of-the-art of exploratory factor analysis and has the advantages of iteratively estimating communalities and of performing a chi-square test on the number of significant factors. The objective of the ML procedure is to determine a configuration of parameter estimates (factor loadings) with the greatest likelihood of producing the observed item correlations. Second, the promax oblique rotation method was chosen. Promax gives a solution which is based on the popular varimax orthogonal rotation, except that the factors are permitted to intercorrelate. Since there is no reason to believe that dimensions of existential belief should be independent the oblique solution was used.

Therefore, a maximum likelihood (ML) factor analysis (converging in eight iterations) with a promax rotation of 13 factors was performed on the existential items and factor scores¹¹ for each subject were calculated. This solution

¹¹ A factor score is an individual's score on a particular factor, just as they have scores on particular items in a questionnaire. The difference is that a factor score

accounted for 74% of the common variance (see Table 2 and Table 3).

Thirteen factors were selected as the most appropriate number for extraction according to several criteria, as follows. The chi-square test of the ML procedure was ignored since too many factors were indicated (exceeding 40). The eigenvalues greater than one and proportion of variance criteria also appeared to be too liberal, indicating 38 and 42 factors respectively. More reasonable, was the scree test (Cattell, 1978) on the common factor eigenvalues which indicated that between 10 and 15 factors should be retained (see Appendix B). This was more concordant, as well, with the correlational results of the factor scores of the various extraction methods, which indicated maximum similarity for approximately 10 to 13 factors.

Ultimately, 10, 11, 12, 13, 14, and 15 factors were extracted, rotated, and separately interpreted. Of these, the 13 factor solution was judged to be superior. It tapered off elegantly to two final couplets, in contrast to the 14 factor solution which ended in an awkward and uninformative factor related to life meaning. Thirteen factors appeared, therefore, to offer the most parsimonious

refers to a latent, rather than an observable, variable. The primary utility of factor scores is for use in subsequent analyses, when a factor may be treated as a variable in itself.

TABLE 2
Existential factors

Key to item types (and number of items).

New items

- d - Death (31)
- m - Meaning (32)
- f - Freedom (28)
- i - Isolation (23)

The Existential Study (Thorne, 1973)

- ds/en - Demoralization state/existential neurosis (2)
- rdd - Religious dependency defenses (2)
- ec/m - Existential confidence/morale (1)

The Existential Well-Being Scale (Paloutzian & Ellison, 1982)

- ewb - all items (10)

Life Attitude Profile (Reker & Peacock, 1981)

- lp - Life purpose (2)
- exv - Existential vacuum (2)
- lc - Life control (2)
- da - Death acceptance (2)
- wtm - Will to meaning (1)
- gs - Goal-seeking (1)
- fmtf - Future meaning to fulfill (2)

Purpose in life plus Seeking Noetic Goals (Reker & Cousins, 1979)

- pil - Purpose in life (3)
- gs - Goal-seeking (2)
- ga - Goal achievement (3)
- cwl - Contentedness with life (2)
- ev - Existential vacuum (1)
- sfa - Search for adventure (1)
- fa - Future aspirations (2)
- loc - Internal-external locus of control (2)
- sf - Self fulfillment (1)
- lv - Life-view (1)

McClosky-Schaar Anomia Scale (McClosky & Schaar, 1965)

- ano - all items (9)

TABLE 2
First-order existential factors. (factor structure)

Variable	Type	r
Factor I: "<u>Existential Wellbeing</u>"		
(eigenvalue=36.88, proportion of variance=23.2%, cumulative=23.2%)		
1. My life lacks purpose and direction.	m	-723
2. I feel a sense of well-being about the direction my life is headed in.	ewb	700
3. I feel very fulfilled and satisfied with life.	ewb	689
4. I feel good about my future.	ewb	673
5. Life to me seems very exciting.	lp, pil	648
6. I have discovered clear cut goals and a satisfying life purpose.	ga	638
7. In life I have very clear goals and aims.	ga	611
8. My life is running over with exciting good things.	lp, pil	600
9. I feel that life is a positive experience.	ewb	578
10. My life has meaning.	m	571
11. I don't enjoy much about life.	ewb	-562
12. Life doesn't have much meaning.	ewb	-548
13. I feel the lack of and a need to find a real meaning and purpose in my life.	exv, ev	-531
14. I know who I really am.	m	522
15. I don't know who I am, where I come from, or where I am going.	ewb	-521
16. My life is phony and artificial.	m	-512
17. I am glad to be alive.	ec/m	504
18. In thinking of my life, I always see a reason for being here.	cwl	498
19. I feel unsettled about my future.	ewb	-496
20. I live as fully as I can.	m	477
21. I am usually exuberant and enthusiastic.	pil	470
22. I sense some kind of void in my life.	m	-469
23. I believe there is some real purpose for my life.	ewb	467
24. I often feel awkward and out of place.	ano	-433
25. Life is tragic and there is no escaping life's pain.	d	-432
26. Often I just don't know what to do with myself.	ds/en	-424
27. I feel that life is full of conflict and unhappiness.	ewb	-410

28. Sometimes I wonder whether I could ever have a meaningful relationship.	i	-394
29. Compared to others, I typically have more control of my life.	f	391
30. For the most important decisions I have had to make, the principles and standards I was taught have served me well.	f	373
31. Sometimes life seems unbearable to me.	ds/en	-368
32. I have often felt very close to someone.	i	365
33. I am a very responsible person.	sf	361
34. I sometimes wonder whether this is all there is to life.	m	-360
35. I can rarely get as much love as I want.	i	-360
36. I do not dwell on my mistakes--the past is past.	f	346
37. I will live on in my life's accomplishments and in my children.	d	339
38. It seems to me that other people find it easier to decide what is right than I do.	ano	-338
39. With everything in such a state of disorder it's hard for a person to know where he or she stands from one day to the next.	ano	-330
40. I have no genuine connection with any other human being.	i	-326
41. I believe that I was born for a reason.	m	319
42. Living means more than just passing the time between birth and death.	m	308

Factor II: "Existential Neurosis"

(eigenvalue=22.79, proportion of variance=14.4%, cumulative=37.6%)

1. With everything in such a state of disorder it's hard for a person to know where he or she stands from one day to the next.	ano	625
2. Often I just don't know what to do with myself.	ds/en	599
3. Everything changes so quickly these days that I often have trouble deciding which are the right rules to follow.	ano	546
4. Some of my decisions are too difficult to make.	f	529
5. Sometimes life seems unbearable to me.	ds/en	527
6. It seems to me that other people find it easier to decide what is right than I do.	ano	505

7. My life lacks purpose and direction.	m	503
8. I feel the lack of and a need to find a real meaning and purpose in my life.	exv, ev	492
9. I feel unsettled about my future.	ewb	474
10. On occasion I have thought that I had found what I was looking for in life, only to have it vanish later.	loc	461
11. I sense some kind of void in my life.	m	457
12. I feel that life is full of conflict and unhappiness.	ewb	451
13. There are things about myself I would rather not know.	m	446
14. I am constantly being forced to make another decision about something.	f	438
15. The worst part about being alone is the thought that no one would miss me.	i	434
16. I don't know who I am, where I come from, or where I am going.	ewb	434
17. Sometimes I wonder whether I could ever have a meaningful relationship.	i	423
18. Often I know what I am supposed to do, but I do not know what I want to do.	f	421
19. Sometimes I think that I am too afraid of being alone.	i	419
20. I sometimes wonder whether this is all there is to life.	m	418
21. Life is tragic and there is no escaping life's pain.	d	405
22. I seem to change my main objectives in life.	exv, ga	399
23. My life is phony and artificial.	m	392
24. I can rarely get as much love as I want.	i	388
25. I often feel awkward and out of place.	ano	387
26. Everything I consider fixed, precious, and good can suddenly vanish.	m	383
27. My life is too caught up in the trivialities of everyday life.	m	380
28. I feel a sense of well-being about the direction my life is headed in.	ewb	-379
29. People were better off in the old days when everyone knew just how he or she was expected to act.	ano	373

30. Sometimes I think about death too much.	d	372
31. I feel good about my future.	ewb	-364
32. When I must make an important decision I worry more about what I will lose than about what I will gain.	f	363
33. Lately I have begun to question some of my most personal values and beliefs.	m	361
34. I know who I really am.	m	-361
35. I have discovered clear cut goals and a satisfying life purpose.	ga	-353
36. Life is a series of difficult choices and unavoidable decisions.	f	351
37. Sometimes what keeps me committed to a poor course of action is the regret I would feel about not being able to justify the time and energy I had spent.	f	349
38. I don't enjoy much about life.	ewb	342
39. With everything so uncertain these days it almost seems as though anything could happen.	ano	342
40. In life I have very clear goals and aims.	ga	-337
41. I wish that I could be more intimate with other people.	i	330
42. I feel very fulfilled and satisfied with life.	ewb	-328
43. I rely heavily on the advice and guidance of other people.	f	327
44. Sometimes I do things that are so unexpected that I surprise even myself.	m	325
45. I often feel that many things our parents stood for are just going to ruin before our very eyes.	ano	324
46. In the deepest sense, I think we are all alone in this world.	i	322
47. I hesitate to make decisions because I always try to keep as many options open as long as I can.	f	322
48. Much of my life was determined by forces beyond my control.	f	319
49. I struggle to give my life meaning and purpose.	m	302

Factor III: "Positive Realism"

(eigenvalue=16.07, proportion of variance=10.1%, cumulative=47.7%)

1. I am glad to be alive.	ec/m	615
2. Living means more than just passing the time between birth and death.	m	544
3. I am free to believe or doubt anything that I choose.	m	517
4. Sometimes I just want to be alone.	i	499
5. My most meaningful experiences come from my relationships with others.	i	486
6. Even when its important not to be, I can expect to be wrong sometimes.	f	486
7. I believe there is some real purpose for my life.	ewb	474
8. I find periods of solitude rewarding.	i	467
9. Personal failures can be valuable experiences.	f	462
10. I hope for something exciting in the future.	gs, fa	458
11. I don't enjoy much about life.	ewb	-452
12. For the most important decisions I have had to make, the principles and standards I was taught have served me well.	f	451
13. My life has meaning.	m	451
14. I have pretty well accepted the fact that I will die.	d	425
15. I feel good about my future.	ewb	418
16. The worst pain is losing someone you love.	i	408
17. Death is a natural part of life.	d	407
18. I have no genuine connection with any other human being.	i	-399
19. Life doesn't have much meaning.	ewb	-395
20. There is a real chance that I could die at anytime.	d	392
21. Losses are important because through them I will be able to grow.	f	386
22. I cannot change certain things about my life, but I can at least change the way I think and feel about them.	f	383
23. I have often felt very close to someone.	i	382

24. Life without love would not be worth living.	i	380
25. I am responsible for my life since I am free to make decisions about it.	f	378
26. I believe that I was born for a reason.	m	373
27. Someday medical science may find the "cure" for death.	d	-372
28. My life is phony and artificial.	m	-363
29. I feel that life is a positive experience.	ewb	362
30. I am just as responsible when I do not act as when I do.	f	361
31. The responsibility for who I am is my own.	f	361
32. Somewhere there exists a man or woman with whom I could become "one".	i	360
33. I am a very responsible person.	sf	359
34. Life to me seems very exciting.	lp, pil	357
35. I don't know who I am, where I come from, or where I am going.	ewb	-348
36. How the world appears depends on how I choose to see it.	f	341
37. I feel that the greatest fulfillment of my life lies yet in the future.	fmtf, fa	327
38. My life lacks purpose and direction.	m	-327
39. I feel a sense of well-being about the direction my life is headed in.	ewb	320
40. I expect the future to promise more for me than the past has.	fmtf	301
41. I will live on in my life's accomplishments and in my children.	d	300

Factor IV: "Religiosity"

(eigenvalue=10.12, proportion of variance=6.4%, cumulative=54.1%)

1. My trust is in God.	rdd	906
2. God is my ultimate authority.	f	858
3. God exists.	m	849
4. God gives purpose to my life.	m	842

5. When I die I believe my soul will go to heaven.	d	754
6. Belief in God saves us from ultimate loneliness.	i	735
7. I hope to go to heaven.	rdd	721
8. I believe that death is the absolute end of my existence in all respects.	d	-525
9. I believe that I was born for a reason.	m	481
10. I believe there is some real purpose for my life.	ewb	335

Factor V: "Death Acceptance"

(eigenvalue=6.58, proportion of variance=4.2%, cumulative=58.3%)

1. Some people are very frightened of death, but I am not.	da	777
2. I am afraid of dying even a painless death.	d	-770
3. With regard to death, I am prepared and unafraid.	lv	757
4. I know that I will die, but I do not worry about it.	d	638
5. Even though death is inevitable, I cannot help but be concerned about dying.	da	-617
6. I am generally more at ease talking about death than most people.	d	475
7. I have pretty well accepted the fact that I will die.	d	429
8. Sometimes I think about death too much.	d	-377
9. I would willingly accept my death after a long and full life.	d	371
10. What concerns me about dying is that all my hopes and dreams will come to an end.	d	-352
11. I am becoming more prepared for death.	d	325
12. If I had a choice, I would want to live forever.	d	-316

Factor VI: "Existential Aloneness/Uncertainty"

(eigenvalue=4.85, proportion of variance=3.1%, cumulative=61.3%)

1. In the long run, we can only rely on ourselves.	i	519
2. Nothing is certain.	m	500
3. There are no absolutes--everything depends on how you look at it.	m	492
4. There are no final answers--just new questions.	m	462
5. In the deepest sense, I think we are all alone in this world.	i	431
6. I value my freedom above all else.	f	345
7. What concerns me about dying is that all my hopes and dreams will come to an end.	d	340
8. There is always significant uncertainty in all important life decisions.	f	333
9. I don't know who I am, where I come from, or where I am going.	ewb	326
10. I sense some kind of void in my life.	m	323
11. With everything in such a state of disorder it's hard for a person to know where he or she stands from one day to the next.	ano	307
12. The world is always changing and can never be the same again.	m	307
13. On occasion I have thought that I had found what I was looking for in life, only to have it vanish later.	loc	301

Factor VII: "Romantic Ideals"

(eigenvalue=4.03, proportion of variance=2.5%, cumulative=63.8%)

1. True love is the perfect union between two people.	i	517
2. Somewhere there exists a man or woman with whom I could become "one".	i	501
3. I would find it impossible to live without the caring and acceptance of certain people.	i	474

4. The worst death is a lonely death.	i	443
5. Life without love would not be worth living.	i	433
6. The worst pain is losing someone you love.	i	433
7. My most meaningful experiences come from my relationships with others.	i	427
8. I hope for something exciting in the future.	gs, fa	424
9. Living means more than just passing the time between birth and death.	m	381
10. I could not be happy being alone.	i	378
11. I don't enjoy much about life.	ewb	-363
12. I have often felt very close to someone.	i	354
13. I have no genuine connection with any other human being.	i	-305
14. When I die I believe my soul will go to heaven.	d	301

Factor VIII: "Death Thoughts"

(eigenvalue=3.31, proportion of variance=2.1%, cumulative=65.9%)

1. Death seems so far away that I never even think about it.	d	-493
2. It is pointless for me to think about death until I have to.	d	-450
3. I am becoming more prepared for death.	d	436
4. I think about the ultimate meaning of life.	wtm, gs	418
5. Sometimes I think about death too much.	d	356
6. Right now I am not ready to die.	d	-319

Factor IX: "Inner Locus of Control"

(eigenvalue=3.16, proportion of variance=2.0%, cumulative=67.9%)

1. My life is in my hands and I am in control of it.	lc, loc	696
2. I determine what happens in my life.	lc	675
3. The responsibility for who I am is my own.	f	384
4. I am responsible for my life since I am free to make decisions about it.	f	322

5. In the long run, we can only rely on ourselves.	i	307
6. I value my freedom above all else.	f	301

Factor X: "Intimacy Needs"

(eigenvalue=2.98, proportion of variance=1.9%, cumulative=69.8%)

1. I wish that I could be more intimate with other people.	i	477
2. Sometimes I wonder whether I could ever have a meaningful relationship.	i	471
3. I can rarely get as much love as I want.	i	450
4. Often I am reluctant to show others what I am really feeling.	i	433
5. I sense some kind of void in my life.	m	383
6. I sense a basic separateness between myself and all others.	i	366
7. I have often felt very close to someone.	i	-334
8. I often feel awkward and out of place.	ano	325
9. I expect the future to promise more for me than the past has.	fntf	324
10. I feel that the greatest fulfillment of my life lies yet in the future.	fntf, fa	303

Factor XI: "Seeking Destiny"

(eigenvalue=2.50, proportion of variance=1.6%, cumulative=71.3%)

1. I have experienced the feeling that while I am destined to accomplish something important, I cannot quite put my finger on it.	gs	507
2. I believe there is some real purpose for my life.	ewb	490
3. I believe that I was born for a reason.	m	395

Factor XII: "Suicide Rejection"

(eigenvalue=2.42, proportion of variance=1.5%, cumulative=72.9%)

- | | | |
|---|-----|-----|
| 1. I would not consider suicide under any circumstances. | d | 743 |
| 2. With regard to suicide, I never have given it
a second thought. | cw1 | 647 |

Factor XIII: "Goal Achievement"

(eigenvalue=2.38, proportion of variance=1.5%, cumulative=74.4%)

- | | | |
|--|----|-----|
| 1. I have discovered clear cut goals and a satisfying
life purpose. | ga | 327 |
| 2. In life I have very clear goals and aims. | ga | 305 |

Note. Coefficients are multiplied by 1000.

Note. Analysis by ML extraction (priors=smc), with promax rotation.

Note. Preliminary eigenvalues reported.

Note. N=690.

solution.

This interpretation was based on the rotated factor structure; that is, on the correlations of the variables to the factors. The factor structure was chosen over the factor pattern (the standardized regression coefficients) on the recommendation of Gorsuch (1983). Actually, the overall interpretation was much the same for both matrices, so this choice became arbitrary. Items which correlated .30 or greater on the factor structure were examined as representative of the factor meaning. Interpretations of each factor follow.

Factor I represents a dimension of well-being and satisfaction with life. All ten items of the Existential Well Being Scale correlate with this factor. Other clear markers are for "Purpose in Life" and "Goal Achievement" from the PIL/SONG factor analysis. Also high are the two "Life Purpose" markers from the LAP. Several "Existential Neurosis" and "Existential Vacuum" markers show negative correlations. Other markers for "Existential Confidence/Morale" and "Contentment" are also noteworthy. The majority of the highest new existential belief items (6 of 7 of those exceeding .40; 9 of 18 of those exceeding .30) come from the "Meaning" category.

TABLE 3

Interfactor correlations of existential factors

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13
F1 Ex. Wellbeing	*												
F2 Ex. Neurosis	-46	*											
F3 Positive Realism	36	-8	*										
F4 Religiosity	19	7	24	*									
F5 Death Acceptance	12	-24	12	2	*								
F6 Ex. Alone/Uncert	-21	37	-4	-25	-7	*							
F7 Romantic Ideals	29	-1	34	17	-6	-2	*						
F8 Death Thoughts	-8	10	-3	7	9	-2	-19	*					
F9 Inner L. of C.	7	6	7	-16	-5	29	6	-7	*				
F10 Intimacy Needs	-22	17	-2	-14	-6	26	-1	13	19	*			
F11 Seeking Destiny	8	16	16	15	3	11	14	0	10	-4	*		
F12 Suicide Rejection	19	-5	1	25	6	-5	-2	-2	8	-9	11	*	
F13 Goal Achievement	-1	-1	-7	13	7	-2	-6	10	1	2	0	5	*

Note. Coefficients multiplied by 100.

Note. N=690

This factor has been detected before. It strongly represents an important underlying dimension of the PIL based measures (i.e., the PIL/SONG combined and the LAP) and of the EWBS. This cluster of beliefs indicate a near unflinching positive regard for life. Existence is considered to be purposeful, meaningful, and goal directed. Life is viewed as happy, exciting, and fulfilling. The emotional tone of the factor is optimistic and confident. Items suggest high self-esteem and interpersonal relationships that are rewarding and satisfactory. Generally high scorers seem to be very secure in themselves and in the world. Absent from the factor is any hint that existence is in any way negative or limited. This factor will be labelled "Existential Well-Being".

Factor II represents a dimension of existential angst, despair, and uncertainty. Seven of the nine Anomia Scale markers are present. These indicate beliefs that the world is viewed as unstable and in a process of decay. The "Demoralization State/Existential Neurosis" markers of the Existential Study are also top loaders. Other notable markers are for "Existential Vacuum" from the LAP and the PIL/SONG, a "Locus of Control" marker from the PIL/SONG, and some negatively worded items from the EWBS. Categories for the new items are mixed. Central to this dimension are beliefs that existence is difficult, unpredictable,

unfulfilling, painful, fearful, and empty. These are beliefs which come from someone who feels alienated from themselves and others, who is filled with anxiety and doubt, and who regards life as an unbearable burden, void of anything pleasurable. The emotional tone is one of feeling helpless, hopeless, lonely, and lost. Nothing is firm or certain. There is no sense of purpose and direction. Decisions are especially difficult and high scorers on this dimension would probably appear stuck in their misery.

Notice that Factor II shows an interfactor correlation with Factor I of $r = -.46$, suggesting that, theoretically, a person could report "well-being" and "ill-being" simultaneously. Realistically, however, these two factors are inversely related and each may represent an endpoint of a more fundamental dimension. Nevertheless, Factor II is different because it suggests greater impairment than does Factor I (i.e., scoring low on I is not as bad as scoring high on II). This factor is labelled "Existential Neurosis" to indicate a general emotional distress with debilitating consequences (in this case, indecision and fearful avoidance).

Factor III is similar to Factor I (with an interfactor correlation of $r = .36$), in that existence is generally well regarded, however, there appears a simultaneous awareness of the limiting effects of existential contingencies. High loading markers identify such factors as "Existential

Confidence/Morale", "Goal Seeking", and "Future Aspirations". Several EWBS markers are also present. The tone of the items is optimistic while being aware of reality. There appears to be a strong orientation towards the future. Existence is viewed as relative: both positive and negative, yet open to the effects of personal will. There is an acceptance of life's tragedies as natural. The high scorer experiences an inner awareness and acceptance of personal failures. Solitude is valued yet emphasis is also placed on love and intimacy as necessary for happiness. High scorers feel free and responsible in life within acknowledged limits. Life is meaningful when it is made that way through choice and through relationships. Factor III is labelled "Positive Realism".

Factor IV represents religious beliefs. Both markers for the "Religious Dependency Defenses" factor of the Existential Study load here. These markers imply that religion may be used as a means for coping with existential anxiety. God is attributed with giving the person a higher meaning and purpose. Security in life comes from god, who is esteemed as a trusted and respected authority. Heaven and an afterlife are also believed in. The factor seems unblemished by anything negative or limiting. Factor IV is labelled "Religiosity".

Factor V indicates a courageous confrontation with death and dying. Both markers for the LAP's "Death Acceptance"

factor are present, as is one uninformatively labelled "Life View" marker from the PIL/SONG. All new existential belief items are from the death category (4 of 4 of those exceeding .40; 9 of 9 of those exceeding .30). The tone of the factor is a fearless, almost reckless, acceptance of death. High scorers consider themselves to be more comfortable than average with knowing they will die. Excessive worries or concerns do not bother them. Factor V is labelled "Death Acceptance".

Factor VI represents a dimension of Sartrean-like beliefs regarding the world as relativistic, uncertain, and isolating. A few markers load on it but the primary items are new (the majority of which relate to meaning, 3 of 5 of those exceeding .40; 5 of 10 of those exceeding .30), indicating that the marker studies have not explicitly identified this dimension before. High scorers on this factor view existence as intrinsically unstable. There are no higher purposes or meanings which transcend the individual; only an isolated self alone in a hostile, or at least indifferent, universe. The emotional tone is one of anxiety and loneliness, although to some extent this condition may be acceptable because freedom is prized. Not surprisingly there is a $r=.37$ correlation with the "Existential Neurosis" factor (II). What makes this factor different is that the judgement of the world being uncertain and unpredictable has less emotional pain associated with it

than does Factor II. Factor VI also implies more potential freedom than does Factor II. High scorers are less trapped in uncertainty and indecision than they are free to drift alone in it. Factor VI is labelled "Existential Aloneness/Uncertainty".

Factor VII represents beliefs in the importance of love and intimacy with a significant other. Again, marker variables are less important than new items, although one marking "Goal Seeking" and "Future Aspirations" does appear. Almost all of the new items (7 of 7 of those exceeding .40; 10 of 12 of those exceeding .30) are of the isolation category. There is a $r=.34$ correlation with "Positive Realism" (Factor III) indicating that interpersonal needs tend to be regarded with an aware optimism. Loving relationships are idealized as essential to happiness. Life is meaningful only through relationships with other people. Life without love is not worth living. In the future, high scorers expect to achieve a "oneness" or "union" with someone, suggesting strong romantic values. Certain items also indicate that high scorers have been in love and that they desire more of it. Factor VII is labelled "Romantic Ideals".

Factor VIII represents a dimension of thoughtful consideration of ontological issues relating to life and death. All of the new items (3 of 3 of those exceeding .40; 5 of 5 of those exceeding .30) are from the death category.

A marker appears for "Will to Meaning" and "Goal Seeking". Essentially, high scorers think about their ultimate death. Interestingly this factor has a very low correlation ($r=+.09$) with "Death Acceptance" (Factor V) indicating that this factor is not on a dimension of courage-fear but primarily reflects intellectual awareness. High scorers are becoming "more prepared" but sometimes view themselves as pre-occupied with thoughts of death as well, indicating emotional ambivalence. Generally death is approached on a cognitive level. Factor VIII is labelled "Death Thoughts".

Factor IX represents a dimension of locus of control. Markers appear for "Locus of Control" factors and most of the new items (3 of 4 of those exceeding .30) are from the freedom category. High scorers consider themselves to be in control of their lives. Their feeling is one of responsibility and self-determination. Freedom and autonomy are valued. Factor IX is labelled "Inner Locus of Control".

Factor X represents failed intimacy and relationship problems. Most of the items are new (7 of 10) and of the isolation category (6 of 7 of those exceeding .30). High scorers consider their social life to be unsatisfactory. They wish they could get closer to others but they feel awkward and out of place. A healthy intimacy seems unattainable and generally life is regarded as unfulfilling, although there are some hopes that this will change in the future. Social ineptness and fear of intimacy are also

indicated. Interestingly, there is minimal correlation (-0.01) with "Romantic Ideals" (Factor VII) showing clear independence between them. One difference is that high scorers on Factor VII want more of what they have already experienced while high scorers on Factor X look at love and intimacy as beyond their scope of experience or expertise. Expectations are also much lower. Factor X is labelled "Intimacy Needs".

Factor XI is a 3-item factor representing beliefs in an ultimate purpose to life. A marker for "Goal Seeking" is prominent. High scorers consider themselves to be destined to accomplish something significant, although they do not know, yet, what this will be. Factor XI is labelled "Seeking Destiny".

Factor XII is a doublet (two-item factor) indicating suicide rejection. High scorers never consider taking their lives. One of these items marks "Contentedness With Life". There is some correlation to the "Religiosity" dimension ($r=.25$). Factor XII is labelled "Suicide Rejection".

Factor XIII is another doublet containing the two "Goal Achievement" markers of the PIL/SONG. High scorers indicate very clear goals and aims. Factor XIII is labelled "Goal Achievement".

Random Subgroups

In order to evaluate the stability of the 13 existential factors the total sample of 690 subjects was divided into two groups and factor analyzed separately. A computer-based statistical function was used to randomly assign subjects to groups, resulting in one group of 344 subjects and another of 346. A maximum likelihood factor analysis of 13 factors with promax rotation was performed on each group. The ratio of subjects to variables is lower than for the full sample, thus reducing the reliability of the separate solutions. There should, however, still be enough subjects in each subgroup for a legitimate factor analysis.

The rationale for this procedure is that if a factor is genuinely stable or invariant within a population then independent factor analyses on samples of that population should always detect it. Factors which are identified in only one of the samples are presumed to be less representative of the population dimensions as a whole.

The primary means for assessing factor similarity was to interpret the rotated factor structures of each analysis (labelled A and B). In addition, to supplement this more subjective evaluation, the salient variable similarity index (s) was calculated for selected factors to provide a more objective indicator of relationship (Cattell, 1978). The s index begins by distinguishing between salient and

nonsalient variables (in this case a criteria of .30 on the factor structure was used). When these salient and nonsalient variables are compared between factors a perfect agreement will result in an s index of +1.0 or, for a perfect reflection, an s index of -1.0. Chance agreement gives an s index of 0.0. It is also possible to make statistical inferences about the degree of variable overlap. Cattell (1978) has published tables for this purpose. What follows are descriptions of the resulting factors of the two analyses.

Analysis A.

(1) Factor I(A) represents feelings of wellbeing and satisfaction with life and with the future. High scorers look ahead to exciting and fulfilling times and currently consider their lives to be purposeful and meaningful. The tone is self-confident. Low scorers would indicate more dissatisfaction with the meaning and direction of their lives and would feel more personally incompetent. Clearly Factor I(A) is tapping "Existential Wellbeing".

(2) Factor II(A) represents feelings of unease and indecision. Life is evaluated by high scorers as alienating and hostile. They believe themselves to be personally inadequate to cope with the decisions facing them. They are dissatisfied but uncertain about how to change things. Factor II(A) represents the dimension of "Existential

Neurosis". The correlation between Factor I(A) and Factor II(A) ($r=-.38$) is also of the same order as for the main analysis, giving further evidence that these factors tap the same underlying dimensions.

(3) Factor III(A) represents religious beliefs about a protecting god, like "Religiosity" in the main analysis.

(4) Factor IV(A) indicates romantic needs. The tone is positive and the future is regarded with optimism. High scorers also feel a sense of responsibility for their outcomes while expressing an awareness of the limits of existence. This factor seems to combine some of the features of "Positive Realism" and "Romantic Ideals".

(5) Factor V(A) represents lack of fear and concern over death and dying. It is very similar to the "Death Acceptance" dimension.

(6) Factor VI(A) represents desires for independence and solitude. Life is regarded positively however there is also an awareness of the vicissitudes of life. This factor is similar to "Positive Realism", as is Factor IV(A) (with which it shares a correlation of $r=.35$).

(7) Factor VII(A) represents thinking of issues of life and death, as in the "Death Thoughts" factor.

(8) Factor VIII(A) represents beliefs in an internal locus of control and in personal responsibility. It appears to be the same as the "Inner Locus of Control" factor.

(9) Factor IX(A) is a small factor indicating feelings of alienation and nostalgia for old times. It is not similar to any of the main factors.

(10) Factor X(A) refers to intimacy troubles, in terms of giving and receiving, and dissatisfaction with life due to poor social relationships. It is related to "Intimacy Needs".

(11) Factor XI(A) represents feelings of uncertainty and doubt about the world and the self. Change is the only constant and the tone is fearful and lonely. This factor is very similar to "Existential Aloneness/Uncertainty".

(12) Factor XII(A) refers to seeking meaning and purpose in life through uncovering one's destiny and is similar to "Seeking Destiny".

(13) Factor XIII(A) represents suicide rejection and is the same as the "Suicide Rejection" factor.

Analysis B.

(1) Factor I(B) represents a dimension combining Factor I(A) (s index=-.81, $p<.001$) and Factor II(A) (s index=+.60, $p<.001$) (see Table 4 for a summary). In other words, this factor contains both reversed items from the "Existential Wellbeing" dimension and items from the "Existential Neurosis" dimension. In analysis B, therefore, dimensions which were separated by the main analysis and by the other

TABLE 4

Summary of salient indices (s) between analysis A and analysis B

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13
B1	-81**	60**											
B2	39**			64**		51**							
B3			80**										
B4					87**								
B5							48**						
B6											31**		
B7		22*		24*									
B8	26*												
B9							-83**						
B10								50**					
B11	22*												
B12													
B13													

Note. All values of s multiplied by 100.

Note. ** p<.001

* p<.01.

subgroup analysis (A) have become amalgamated as endpoints of some broader factor. This is not really surprising, since in the other analyses these factors were among the most highly negatively intercorrelated. Combined, these factors describe a big dimension of emotional state, with high scorers reporting less wellbeing.

(2) Factor II(B) represents mostly items from the factors IV(A) (s index=+.64, $p<.001$), VI(B) (s index=+.51, $p<.001$), and I(A) (s index=+.39, $p<.001$). This factor, therefore, appears to recombine the "Positive Realism" factor of the main analysis, with some "Existential Wellbeing" items mixed in. High scorers on this factor retain a positive optimism and social interest in the face of an awareness of existential limits. Interestingly, Factor II(B) is negatively correlated ($r=-.33$) with Factor I(B) indicating that, again, a positive factor compliments a negative factor, suggesting, perhaps, a more fundamental dimension.

(3) Factor III(B) represents the familiar religious dimension seen in Factor III(A) (s index=+.80, $p<.001$) and in the main analysis. Beliefs about immortality and of life's meaningfulness are also indicated.

(4) Factor IV(B) refers to death acceptance and fearlessness as in Factor V(A) (s index=+.87, $p<.001$) and in the main analysis.

(5) Factor V(B) indicates the internal locus of control and responsibility of Factor VII(A) (s index=+.48, $p<.001$).

(6) Factor VI(B) appears to represent Factor XI(A) (s index=+.31, $p<.001$), indicating existential aloneness/uncertainty.

(7) Factor VII(B) refers to fears of loneliness, romantic ideals, and indecision. It appears to combine Factor II(A) (s index=+.22, $P<.01$) and Factor IV(A) (s index=+.24, $p<.01$) and represents, therefore, a new configuration of some of these items. The top loading items indicate anxieties and indecisions over loneliness, as seen in the "Existential Neurosis" dimension, except that this time romantic goals and wishes are added.

(8) Factor VIII(B) represents a dimension of confidence in oneself and in the direction that life is headed in. It shows some similarity to Factor I(A) (s index=+.26, $p<.01$) and is probably unstable (i.e., unlikely to be easily distinguished from the emotional state factors).

(9) Factor IX(B) represents avoiding thoughts of death and of being prepared for death. It is strongly related to Factor VII(A) (s index=-.83, $p<.001$), except in the reverse.

(10) Factor X(B) refers to suicide rejection and is related to Factor XIII(A) (s index=+.50, $p<.001$).

(11) Factor XI(B) represents a dimension of life purpose and excitement but with some indication of personal uncertainties. As with Factor VIII(B) this factor seems to be a variant of the "Existential Wellbeing" seen in Factor I(A) (s index=+.22, $p < .01$) and is probably unstable.

(12) Factor XII(B) represents unrealistic hopes that death can be avoided and a tendency to shift to new activities. It is unique and certainly unstable.

(13) Factor XIII(B) is a singlet and is uninterpretable.

Certain inferences can be made regarding these two factor analyses. It appears that, although the configurations of some of these factors are different between the analyses, there are distinct commonalities which suggest some fairly stable factors among the existential items. There is a dimension of "Emotional Wellbeing" in both cases which appears as either a single large factor or as two intercorrelating factors representing 'wellness' and 'illness'. The "Positive Realism" dimension appears in both, represented by hope and optimism in the face of existential limits. Religious beliefs are distinctly present in both, as are the more existential and atheistic ideas of free isolation and relativistic uncertainties. Romantic values and intimacy difficulties are apparent in both analyses, as are the death confrontation/acceptance and the intellectual "Death Thoughts" dimensions. Beliefs

regarding personal responsibility and locus of control appear. Even the smaller factors of suicide rejection, goal seeking, and goal achievement are indicated. In short, the factors of the main analysis are supported in their most essential form within these independent analyses and they can probably be regarded as stable.

Higher-order factor analysis of existential factors

From an examination of the results of the 13-factor solution (N=690) of the existential items, it was apparent that there was sufficient interfactor correlation and similarity of meaning among the factors to warrant a higher-order factor analysis. A higher-order analysis is a factor analysis, as described already, except that, instead of factoring variable scores, this procedure factors factor scores. The rationale for this analysis is that a higher-order analysis may provide an even simpler description of the overall interrelationships within the data. Therefore a maximum likelihood factor analysis¹² with promax rotation of three factors (as determined by eigenvalues-greater-than-one, proportion-of-variance-accounted-for, and a scree test) was performed on the 13 factor scores of the 690 subjects (see Table 5). Again, the rotated factor structure was used for interpreting these factors.

¹² In this case the prior communality estimate was set at maximum r , since the smc default produced a cumulative variance exceeding one, for three factors.

TABLE 5

Higher-order factor analysis of existential factors

First-Order Existential Factors	Higher-Order Factors		
	I	II	III
Existential Wellbeing	-59*	60*	-3
Existential Neurosis	96*	-3	5
Positive Realism	-16	62*	3
Religiosity	-2	47*	-56*
Death Acceptance	-28	4	-5
Existential Aloneness/Uncertainty	49*	-7	59*
Romantic Ideals	-6	58*	5
Death Thoughts	12	-11	-15
Inner Locus of Control	9	15	52*
Intimacy Needs	28	-14	34*
Seeking Destiny	17	36*	3
Suicide Rejection	-11	24	-16
Goal Achievement	2	0	-12
Eigenvalue	3.42	2.08	1.20
Proportion of variance	47.1%	28.6%	16.5%
Cumulative	47.1%	75.6%	92.1%

Inter-Factor Correlations

	I	II	III
I	*		
II	-15	*	
III	13	-8	*

Note. Coefficients multiplied by 100.

Note. Analysis by ML extraction (priors=max) with promax rotation.

Note. Preliminary eigenvalues reported.

Note. N=690.

The first higher factor represents a dimension of emotional wellbeing-illbeing. "Existential Neurosis" has a strong positive correlation with the dimension, along with "Existential Aloneness/Uncertainty". At the other end of the dimension is "Existential Wellbeing". High scorers, therefore, feel anxious, indecisive, isolated, and unsure. Life for them is either painful or empty; lacking in meaning or purpose. Low scorers feel satisfied and fulfilled by life. Existence is viewed as exciting, meaningful, and free from limits. This factor is noteworthy for the unequivocal tone of its extremes. At one end, life is all good and, at the other, all bad. In either case, the experience involves a passionate and emotional state. This also implies a consistent perceptual orientation, either positive or negative. This factor is labelled "Emotional State".

The second higher-order factor is characterized by "Positive Realism", "Existential Wellbeing", "Romantic Ideals", "Religiosity", and "Seeking Destiny". These factors imply a dimension representing a recognition of existential limits, in particular of one's social needs, but with an overall optimism and positiveness which rises above doubt. High scorers seem to find security in self-transcendent purposes or higher meanings which offer hope and direction. This factor has much in common with the construct of self actualization, as discussed by humanistic psychologists. It is labelled "Self Actualization".

The last higher-order factor extracted shows a remarkable parallel to the philosophical dichotomy between atheistic existentialism and theism. Positive correlates are "Existential Aloneness/Uncertainty", "Internal Locus of Control", and, to a lesser extent, "Intimacy Needs". "Religiosity" correlates negatively. High scorers, therefore, are Sartrean figures who hold atheistic beliefs, consider themselves to be alone in the world, view existence as uncertain, and attribute their outcomes to their own free choices. Generally, the emotional tone is negative. Low scorers hold religious beliefs, feel connected to god and others, resign their fate to external controls, and regard the world as stable and ordered. For them the emotional tone is more positive. This factor is labelled "Atheism".

Overall the "Emotional State" factor dominates this three-factor solution (proportion of common variance=47.1%) and represents the most important underlying dimension of the existential items. It appears to map the range of psychological health which is of most interest to clinicians. It is obvious from examining the factor that it parallels the main avenue of change when psychotherapy is successful.

Interestingly, the second factor (Self-Actualization) is only weakly related to the "Emotional State" factor ($r=-.15$). Humanistic and existential theories of psychopathology typically put great emphasis on self-

actualization, or some paraphrase of it, as an intrinsic part of psychological wellbeing. Psychotherapeutic techniques derived from these theories regard facilitating the self-actualizing potentials of clients to be the basis for helping them. Given this, it is surprising that self actualization, as conceptualized here, emerges as so weakly correlated to the emotional state factor. It is true that "Existential Wellbeing" does load on "Self Actualization", but it seems to mean something different here than the opposite of mental illness or emotional "dis-ease", as it does in the first higher-order factor. Self-actualization is obviously still important, but according to this data it may or may not be associated with an improved emotional state.

It is noteworthy, as well, that the third factor ,Atheism, also shows a low correlation with the other factors ($r=.13$ with "Emotional State" and $r=-.07$ with "Self-Actualization"). The metaphysical beliefs associated with this dimension also do not seem to be the answer for emotional pain or the sole way to find life fulfillment.

Factor analysis of BIDR

The BIDR items were separately factor analyzed with an ML extraction of 5 factors with promax rotation¹³ (see Table 6

¹³ The scoring procedure for the BIDR items was not according to Paulhus's method. He also uses a 7-point scale, however, desirable responding is determined by

and Table 7). Factor scores were also determined. Five factors were selected according to the following criteria: eigenvalues-greater-than-one, proportion-of-variance-accounted-for, and a scree test on the preliminary eigenvalues (see Appendix C). Interpretation of the BIDR factors was based on the rotated factor structure.

Factor I represents straightforward honesty. Fifteen of the 17 top correlating items come from the Other-Deception subscale suggesting, according to Paulhus's (1984) theory, that this factor indicates a response tendency based on motives to consciously deceive others. High scorers, therefore, seem to present an inflated impression of high morales and unwavering honesty. They "always" obey laws, tell the truth, and act fairly and courteously towards others. This applies, they claim, even if secrecy were certain. Overall the factor shows a simplistic and obvious attempt to look good. For example, the top item, which reads "I always obey traffic laws, even if I could not be caught", is unlikely to be true for anyone who drives. Factor I is labelled "Simple Honesty"

summing the number of extreme responses (6's and 7's for positive items; 1's and 2's for negative items). I did not recode in this manner and, instead, factor analyzed the entire response distribution (1 through 7), as was done with the existential items. I assumed that either scoring procedure would produce the same basic results.

TABLE 6

First-order BIDR factors (factor structure)

Key to item types

odpos - Other deception (positive)

odneg - Other deception (negative)

sdpos - Self deception (positive)

sdneg - Self deception (negative)

Item	Type	r
Factor I: "Simple Honesty"		
(eigenvalue=7.28, proportion of variance=48.8% , cumulative=48.8%)		
1. I always obey traffic laws even if I'm unlikely to be caught.	odpos	544
2. I sometimes tell lies if I have to.	odneg	-526
3. I always tell the truth.	odpos	517
4. I always throw my litter into waste baskets on the street.	odpos	502
5. I have never cheated on a test or assignment in any way.	odpos	458
6. I always declare everything at customs.	odpos	431
7. I have felt joy over someone else's failure.	sdneg	-430
8. I have taken things that didn't belong to me.	odneg	-424
9. I am always polite to others including my friends and family.	odpos	423
10. I have received too much change from a salesperson without telling him/her.	odneg	-414
11. I like to gossip about other people's business.	odneg	-397
12. When I hear people talking privately I avoid listening.	odpos	392
13. I say only good things about my friends behind their backs.	odpos	368

14. I have taken a sick leave from work or school even though I wasn't really sick.	odneg	-362
15. I have sometimes felt like I wanted to kill someone.	sdneg	-344
16. When I was a child I obeyed my parents.	odpos	335
17. I always keep my promises, no matter how inconvenient it might be to do so.	odpos	333

Factor II: "Admitting Flaws"

(eigenvalue=2.54, proportion of variance= 17.1%, cumulative=65.9%)

1. I sometimes tell lies if I have to.	odneg	610
2. I have taken things that didn't belong to me.	odneg	501
3. I sometimes put off until tomorrow what I should do today.	odneg	478
4. I have done things that I don't tell other people about.	odneg	468
5. I have some pretty awful habits.	odneg	418
6. I have taken a sick leave from work or school even though I wasn't really sick.	odneg	416
7. I am always free of guilt.	sdpos	-388
8. I have felt joy over someone else's failure.	sdneg	373
9. I always tell the truth.	odpos	-360
10. I often have sexual fantasies.	sdneg	359
11. I like to gossip about other people's business.	odneg	346
12. I have never cheated on a test or assignment in any way.	odpos	-342
13. I sometimes get jealous over the good fortune of others.	sdneg	326

Factor III: "Sex Fantasies"

(eigenvalue=1.83, proportion of variance=12.2%, cumulative=78.1%)

1. I often have sexual fantasies.	sdneg	760
2. Seeing an attractive person of the opposite sex makes me think about having sex.	sdneg	723
3. At times I have wanted to rape or be raped by someone.	sdneg	506
4. I have taken things that didn't belong to me.	odneg	347
5. I usually enjoy my bowel movements very much.	sdneg	343
6. I have felt joy over someone else's failure.	sdneg	336
7. I sometimes pick my nose.	odneg	332
8. I always obey traffic laws even if I'm unlikely to be caught.	odpos	-301

Factor IV: "Parent Esteem"

(eigenvalue=1.35, proportion of variance=9.1%, cumulative=87.3%)

1. My parents always loved me no matter what I did.	sdpos	661
2. My parents only punished me when I really deserved it.	sdpos	615
3. I have sometimes hated one or both of my parents.	sdneg	-398
4. When I was a child I obeyed my parents.	odpos	365
5. I have thought of committing suicide to get back at someone.	sdneg	-357

Factor V: "Character"

(eigenvalue=1.15, proportion of variance=7.7%, cumulative=94.9%)

1. I always accept criticism if it is accurate.	sdpos	467
2. I could easily quit any of my bad habits if I wanted to.	sdpos	439
3. I always return a favor without hesitation.	sdpos	419
4. I always keep my promises, no matter how inconvenient it might be to do so.	odpos	413

5. I say only good things about my friends behind their backs.	odpos	367
6. I like to gossip about other people's business.	odneg	-363
7. I am always free of guilt.	sdpos	348
8. I am always polite to others including my friends and family.	odpos	343

Note. Coefficients multiplied by 1000.

Note. Analysis by ML extraction (priors=smc), with promax rotation.

Note. Preliminary eigenvalues reported.

Note. N=616.

Factor II is similar to Factor I (with a correlation of $r=-.44$) except that high scorers report being less honest and morally pure. They confess to lying, laziness, theft, deception, and inner weaknesses. What distinguishes this factor from the first is an inner-directed awareness, in this case of unflattering thoughts and behaviors. Rather than automatically claiming honesty, persons operating along this dimension are likely to reflect upon themselves first. Again most of the items are of the Other-Deception type (9 of 13). Factor II is labelled "Admitting Flaws"

Factor III primarily represents sexual fantasies and, to a lesser extent, reporting minor dishonesties and bodily functions. High scorers are more willing to admit having sexual fantasies, implying less desirable responding. Like Factor II this factor negatively correlates with Factor I ($r=-.38$). Factor II is labelled "Sex Fantasies"

Factor IV represents esteem for one's parents. High scorers report loving and respecting their parents and that their parents love and respect them in return. They seem to remember very little that was negative or unfair about their mother and father. Four of the 5 items are Self-Deception type suggesting that, theoretically, this is an unconscious defensive idealization of family history. Factor IV is labelled "Parent Esteem".

TABLE 8
Interfactor correlations of BIDR factors

	F1	F2	F3	F4	F5
F1	*				
F2	-44	*			
F3	-38	28	*		
F4	24	-7	-14	*	
F5	25	-16	-6	26	*

Note. Coefficients multiplied by 100.
Note. N=616

Factor V represents inner fortitude and discipline. High scorers are tolerant, courteous, and generous with others. They are in control of themselves and feel confident in maintaining this high standard. The top correlating items are of the Self-Deception type. Factor V is labelled "Character".

Higher-order analysis of BIDR factors

Given the relatively strong intercorrelations of the five BIDR factors, a higher-order factor analysis was performed on the first-order factor scores to explore underlying dimensions among them. A maximum likelihood factor analysis was used to extract a single factor, as determined by the eigenvalues-greater-than-one criteria (see Table 8). An examination of the resulting factor pattern indicated a single dimension of desirable responding. High scorers on this second-order factor claim to be more honest, less flawed, less inclined to fantasize sexually, higher in character, and freer of negative feelings towards their parents, in that order.

All BIDR items which are worded to indicate greater desirable responding load positively on this super-factor and all items which are worded to indicate less desirable responding load negatively. Since the first two first-order

TABLE 8

Higher-order factor analysis of BIDR factors

First-Order BIDR Factors	Higher-Order Factor Pattern
	I
Simple Honesty	91
Admitting Flaws	-65
Sex Fantasies	-51
Parent Esteem	33
Character	38
Eigenvalue	3.90
Proportion of variance	80.2%
Cumulative	80.2%

Note. Coefficients multiplied by 100.

Note. Analysis by ML (priors=max).

Note. Preliminary eigenvalues reported.

Note. N=616.

factors account for more variance and load highest on this second-order factor it is safe to conclude that honesty-dishonesty represents a primary underlying dimension of the BIDR.

Canonical discriminant analysis

Although not addressed in the opening theoretical discussion, the effects of gender on factor scores was explored. First, canonical discriminant analysis¹⁴ was used to examine the effects of subject gender on the 13 existential factors. This analytic procedure determines a weighted linear combination of variables such that the multiple correlation between these variables and a class or nominal variable is maximized, thus summarizing between-class variation. In this case, the combination of factors which is most related to gender differences will be derived.

With gender serving as the class variable, a significant canonical correlation was obtained with the first canonical variable of existential factors (canonical correlation = .34, $F = 6.12$, $p < .0001$) (see Table 9). An examination of the total canonical structure indicated that this canonical

¹⁴ Separate factor analyses of the male and female samples would have been appropriate as well, since canonical discriminant analysis will not show differences in factor structure. However, discriminant analysis is a simpler way to examine some gender effects.

TABLE 9

Canonical discriminant analysis on existential factors (sex)

	Canonical Correlation	F	PR > F
I	0.34	3.72	0.0001

Class Variable: Sex

Code	Sex	Freq	Prop	Class Mean on C.V.
1	male	298	48.2%	-0.376
2	female	320	51.8%	0.350

Factor	Canonical Variable	
	Total Canonical Structure	Standardized Canonical Coefficients
Existential Wellbeing	14	12
Existential Neurosis	33*	41
Positive Realism	59*	60
Religiosity	33*	14
Death Acceptance	-17	-15
Existential Aloneness/Uncertainty	8	26
Romantic Ideals	36*	19
Death Thoughts	33*	44
Inner Locus of Control	-28	-31
Intimacy Needs	-24	-39
Seeking Destiny	-1	-28
Suicide Rejection	-14	-10
Goal Achievement	-23	-22

Note. Coefficients multiplied by 100.

Note. Subjects with no gender information (N=72) were excluded.

Note. N=618.

variable was represented by females having higher scores on "Positive Realism", "Romantic Ideals", "Religiosity", "Existential Neurosis", "Death Thoughts" and lower scores on "Internal Locus of Control" and "Intimacy Needs" than males. These loadings suggest that females show more existential awareness than do males. They are more likely to acknowledge limits to their existence, such as interpersonal needs and death. Females also seem to invest more in transcendental ideals, such as romantic love and god. They report more fear and indecision but generally do not seem to be overall deficient in beliefs that life is fulfilling and satisfying relative to males. Males report stronger beliefs about the extent to which they can control and influence existence. Males and females, therefore, indicate some differences on the dimensions of existential belief, especially on "Positive Realism".

A similar canonical discriminant analysis was performed to evaluate the effects of questionnaire form, that is, whether the two random orders of existential items resulted in factor score differences. If the items behave independently then no differences should be found. However, a significant canonical correlation was obtained (canonical correlation = .30, $F = 5.11$, $p < .0001$) (see Table 10). This effect was primarily due to the "Locus of Control" factor, with lesser differences observed with "Death Acceptance",

TABLE 10

Canonical discriminant analysis on existential factors (form)

Canonical Correlation	F	P > F
0.30	5.11	0.0001

Class Variable: Form			
Form	Freq	Prop	Class Means on C.V.
1	327	47.4%	-0.33
2	363	52.6%	0.30

Factor	Canonical Variable	
	Total Canonical Structure	Standardized Canonical Coefficients
Existential Wellbeing	-11	-9
Existential Neurosis	-19	-26
Positive Realism	-34*	-55
Religiosity	-19	26
Death Acceptance	34*	48
Existential Aloneness/Uncertainty	12	-8
Romantic Ideals	-18	-10
Death Thoughts	-23	-26
Inner Locus of Control	63*	75
Intimacy Needs	33*	33
Seeking Destiny	-3	4
Suicide Rejection	-7	-18
Goal Achievement	-12	-24

Note. Coefficients multiplied by 100.
Note. N=690.

"Positive Realism", and "Intimacy Needs". There is no theoretical justification for this effect or reason to believe that it would replicate with different random orders. An examination of the item locations revealed nothing to warrant such a result. What this does indicate, however, is that the existential variables are susceptible to order effects. In this case, ratings of control and responsibility depended to some degree on the items previously seen by the subject.

A canonical discriminant analysis was also used to evaluate gender effects on the five BIDR factors. A significant canonical correlation was obtained (canonical correlation = .52, $F = 40.82$, $p < .0001$) (see Table 11). This effect was primarily due to males scoring higher on the "Sexual Fantasies" factor. Theoretically, this means males show less desirable responding over this issue. Whether this is actually the case or whether there are general sex differences on the amount and type of sexual fantasy that males and females engage in is unclear. Perhaps the "Sexual Fantasies" factor is a reflection of "macho" attitudes that are simply more typical for males.

TABLE 11

Canonical discriminant analysis on BIDR factors (sex)

Canonical Correlation	F	PR > F
0.519	40.82	0.0001

Class Variable: Sex

Code	Sex	Freq	Prop	Class Mean on C.V.
1	male	265	47.3%	0.693
2	female	295	52.7%	-0.574

Factor	Canonical Variable	
	Total Canonical Structure	Standardized Canonical Coefficients
Simple Honesty	-22	-20
Admitting Flaws	-10	-61
Sex Fantasies	85*	119
Parent Esteem	3	17
Character	21	22

Note. Coefficients multiplied by 100.

Note. Subjects no gender information (N=56) were excluded.

Note. N=560.

Canonical correlation of first-order factors

A canonical correlation analysis was performed on the 13 existential and five BIDR factors. This analysis produces a weighted linear combination of the variables in two sets of variables such that the correlation between the two sets is maximized. In this case, the sets of existential and BIDR factors were related to one another. The resulting linear combinations or canonical variables summarize the important interrelationships among the various factors. All five of the canonical correlations obtained were significant (see Table 12). According to the standardized canonical coefficients, the first canonical variable primarily represents greater "Existential Wellbeing" , "Suicide Rejection", and "Religiosity" and lesser "Existential Neurosis" associated with greater "Parent Esteem" and lesser "Admitting Flaws". Furthermore, the canonical structure suggests that this canonical variable is essentially a confident and certain positive evaluation of overall existence, minimally qualified by doubts or limits, and is related to a general denial of undesirable behaviors. High scorers report being extremely happy and satisfied with life and regard existence as ontologically safe and secure. They apply similar "rose tinted" perceptions to their own character and qualify their self presentation with little that could be interpreted negatively. What this implies is

TABLE 12

Canonical correlations of first-order factors

	Canonical Correlation	Approx F	PR > F
I	0.552	8.65	.0001
II	0.428	6.55	.0001
III	0.370	5.53	.0001
IV	0.287	4.44	.0001
V	0.235	3.90	.0001

Standardized Canonical Coefficients

Factors	I	II	III	IV	V
Existential Wellbeing	40	-39	41	-20	-19
Existential Neurosis	-26	19	-3	-55	-35
Positive Realism	-12	76	33	64	-4
Religiosity	22	30	-14	-1	-2
Death Acceptance	-1	-4	22	-10	-12
Existential Aloneness/Uncertainty	-8	-21	43	26	-58
Romantic Ideals	9	20	-25	-21	-14
Death Thoughts	-22	-12	-11	36	-4
Inner Locus of Control	4	2	37	-38	15
Intimacy Needs	-15	8	18	-5	89
Seeking Destiny	-11	-17	21	-11	22
Suicide Rejection	40	15	-3	-16	20
Goal Achievement	20	-28	0	48	2
Simple Honesty	-20	67	6	84	86
Admitting Flaws	-60	88	52	36	-25
Sex Fantasies	-15	-21	40	-32	100
Parent Regard	66	54	8	-69	7
Character	22	-48	80	40	-42

(table continues)

Table 12.

Canonical Structure

Factors	I	II	III	IV	V
Existential Wellbeing	72*	0	38*	8	-10
Existential Neurosis	-57*	22	-6	-35*	-26
Positive Realism	12	74*	46*	39*	-9
Religiosity	42*	47*	-24	9	-4
Death Acceptance	12	-9	27	20	-3
Existential Aloneness/Uncertainty	-43*	-14	55*	-9	-32*
Romantic Ideals	24	47*	4	-20	-16
Death Thoughts	-32*	-14	-10	46*	9
Inner Locus of Control	-1	-3	66*	-35*	14
Intimacy Needs	-43*	7	27	-1	69*
Seeking Destiny	-5	4	33*	-18	2
Suicide Rejection	62*	11	5	-21	17
Goal Achievement	24	-33*	-2	46*	6
Simple Honesty	51*	25	-13	71*	41*
Admitting Flaws	-67*	45*	44*	-27	-27
Sex Fantasies	-43*	-23	50*	-49*	53*
Parent Regard	78*	51*	25	-28	4
Character	54*	-24	70*	39*	-12

Note. Coefficients multiplied by 100.

Note. N=616.

that an overall positive bias may be operating with high scorers and that, to some extent, their wellbeing may be based on self and/or other deception. Flaws in oneself and in life in general seem to be minimized. Low scorers, of course, show the opposite trend. Life for them is generally viewed as negative, as are they themselves. Overall, therefore, this canonical variable would seem to represent a dimension of a general perceptual orientation.

According to its canonical structure, the second canonical variable indicates a relationship between "Positive Realism", and to a lesser extent "Religiosity" and "Romantic Ideals", and more "Admitting Flaws" and "Parent Esteem". High scorers on this canonical variable are therefore generally positive and optimistic about life, but show more realistic awareness of existential limits. Hope is placed more on abstract ideals, such as romantic love and god. This existential attitude is associated with greater willingness to acknowledge some personal inadequacies. This canonical variable suggests that undesirable responding of a particular type, relating to admitting some inner weaknesses and minor moral transgressions, is associated with a more mature existential perspective in which limits are confronted and surmounted, rather being ignored. Like the first canonical variable family history is again regarded positively. Whether this represents a distortion of reality

or indicates a genuinely more positive upbringing is unclear.

The third canonical variable shows that beliefs in "Inner locus of Control", "Existential Aloneness/Uncertainty", "Positive Realism", and "Existential Wellbeing" are related to "Character", "Sex Fantasies", and "Admitting Flaws". This canonical variable is similar to the second except that the existentially aware wellbeing is supported more by perceived inner strength and security and less by external values and future hopes. High scorers consider themselves to be more separate from the world yet free to control more of their life as well. They admit lapses in following moral standards but generally regard themselves with esteem and as secure enough to reveal their flaws to others.

The fourth canonical variable involves more "Positive Realism", "Goal Achievement", "Death Thoughts", and less "Existential Neurosis" and "Inner Locus of Control", associated with more "Simple Honesty", "Character", and less "Sex Fantasies" and "Parent Esteem". The nature of this canonical variable is reminiscent of the first canonical variable, in the sense of the wellbeing-illbeing dimension being related to more desirable responding, except that the tone is less certain and qualified more by doubts and the awareness of limits.

The last canonical variable involves higher "Intimacy Needs" and lower "Existential Aloneness/Uncertainty" associated with greater "Sex Fantasies" and "Simple Honesty". Essentially this canonical variable shows a relationship between desiring more intimate relationships and engaging in sexual fantasies.

Canonical correlation of higher-order factors

As an overall summary of the relationship between existential beliefs and desirable responding, a canonical correlation was performed on the three existential and one BIDR higher-order factors. This analysis yielded a canonical correlation of .37 ($F= 31.50$, $p<.0001$) (see Table 13). Examination of the resulting canonical correlation variable showed that more desirable responding was related to a less negative "Emotional State", fewer existential beliefs (of the atheistic and high individual freedom type), and higher "Self Actualization".

Overall, therefore, perceptions about the quality of one's existence and perceptions about the quality of one's own character and behavior are concordant, either generally positive or generally negative. The validity of this observation, which makes intuitive sense, may be scrutinized at a number of levels. First, are subjects being honest at either extreme? They may have consciously chosen to minimize either the good or the bad aspects of their true

TABLE 13

Canonical correlation of higher-order factors

Canonical Correlation	Approx F	PR > F
0.366	31.50	.0001

Standardized Canonical Coefficients: Higher-Order Variables.

Higher-Order Factors	Canonical Variable
	I
Emotional State	-70
Self Actualization	32
Atheism	-46
Desirable Responding	100

Canonical Structure: Higher-Order Variables.

Higher-Order Factor	Canonical Variable
	I
Emotional State	-81
Self Actualization	49
Atheism	-60
Desirable Responding	100

Note. Coefficients multiplied by 100.

Note. N=616

experience. Second, if subjects are reporting honestly, are their perceptions biased or distorted in one direction or another? The broad character and consistency of the perceptual tendencies indicated in this analysis support this hypothesis. Third, perhaps deception, of either others or of self, is minimal here and it is simply the case that the lives of some people are pretty wonderful and that they are also exceptionally good people and that the lives of some others are pretty awful and that they also happen to be the bad people in this world. If the world is just then perhaps this is the case, although I doubt it.

Q-technique: factors of subjects

One of the more interesting applications of factor analysis is to use it to determine dimensions or types of subjects, as is done with questionnaire variables. This is referred to as the Q-technique and has been developed by Cattell (1978). Basically the factor analytic procedures are the same as when variables are factored, except that the initial subject by variable data matrix is transposed (i.e., rows become columns and columns become rows). The resulting factors are interpreted as factors of subject type. In this case, the transposition was performed with the existential variables so that these subject factors should be distinguishable according to the patterns of existential

belief that individuals in each factor report. Before describing this procedure, it should be noted that some inferences have already been made regarding individual differences of existential belief, when reference was made to high and low scorers on the various dimensions extracted. This previous work should parallel the results of the Q-technique except that now specific subjects can be identified and the identified belief structure will be multidimensional.

Prior to running this analysis, a subsample of the 690 subjects was selected. This was necessary to produce an adequate variable to subject ratio for the factor analysis. A computer-based statistical function was used to randomly select 54 subjects, producing a variable to subject ratio of 2.96 for the 160 existential variables. The proportion of male to female subjects in this subsample was about the same as for the full sample (27 females, 23 males, and 4 for whom no gender information was available). The data matrix of the existential variables on these 54 subjects was then transposed.

An iterated principal factor analysis was used to extract five factors, followed by a varimax rotation (see Table 14). The choice of five factors was determined by a preliminary scree test on the principal component eigenvalues. The first conclusion from this analysis is that five distinct types of subjects have been identified in the sample. The

TABLE 14
Q-technique analysis (factor pattern)

Subject	Subject Factor				
	I	II	III	IV	V
1	69*	17	17	20	6
2	10	-3	59*	-2	5
3	21	19	36	37	-11
4	74*	14	-8	12	0
5	30	53*	4	36	3
6	11	6	2	10	-11
7	-14	14	56*	35	17
8	27	48*	21	20	-15
9	44*	18	-8	7	8
10	34	23	-12	25	13
11	46*	63*	-9	0	18
12	9	42*	10	12	6
13	11	2	37	47*	21
14	29	35	34	31	6
15	28	50*	14	16	27
16	12	62*	14	-6	-6
17	34	15	10	28	41*
18	40*	18	29	3	-22
19	15	8	-1	41*	8
20	13	3	8	35	-1
21	53*	52*	-3	23	1
22	28	56*	26	18	-2
23	63*	14	14	27	24
24	67*	23	-1	26	10
25	61*	-6	21	30	23
26	56*	25	30	7	16
27	-3	37	57*	25	15
28	38	23	1	43*	6
29	40*	10	15	49*	1
30	22	3	31	11	52*
31	28	44*	49*	12	-3
32	46*	33	-1	38	17
33	40*	29	8	21	3
34	27	0	60*	-13	8
35	67*	9	23	19	-9
36	58*	11	25	14	2
37	29	28	13	39	-7
38	34	22	47*	25	-1
39	-1	43*	48*	30	-12
40	4	4	5	33	4
41	20	43*	42*	-5	11
42	61*	26	29	5	5

(Table continues)

Table 14.

43	66*	16	-5	15	6
44	46*	48*	14	19	6
45	-9	23	50*	26	13
46	51*	38	0	9	8
47	10	29	54*	15	27
48	22	15	38	28	58*
49	57*	30	28	17	0
50	51*	14	10	46*	30
51	16	43*	15	30	14
52	30	30	15	47*	13
53	35	24	14	19	11
54	16	7	-17	0	11

eigenvalue	15.83	3.75	2.36	2.04	1.60
prop of var	29.3%	7.0%	4.4%	3.8%	3.0%
cumulative	29.3%	36.3%	40.7%	44.4%	47.4%

Note. Coefficients multiplied by 100.

Note. Analysis by iterated principal factors, with varimax rotation.

Means of Existential Factor Scores for Subject Classes.

Existential Factors	Means				
	I	II	III	IV	V
Existential Wellbeing	30	-37	-92	22	127
Existential Neurosis	-40	73	80	-21	-63
Positive Realism	56	43	-4	-23	5
Religiosity	75	36	-110	-43	-189
Death Acceptance	42	-95	6	36	-2
Existential Aloneness/Uncertainty	-51	-17	65	16	-42
Romantic Ideals	32	67	21	6	44
Death Thoughts	48	6	-33	-78	-3
Inner Locus of Control	-33	-6	31	64	44
Intimacy Needs	-12	12	66	-3	36
Seeking Destiny	-12	39	-18	-30	33
Suicide Rejection	3	13	-89	74	-124
Goal Achievement	1	-60	-85	49	-10

Note. N=160.

rotated factor pattern of this analysis was then used to explicitly assign subjects to factors. A loading of .40 or greater was used as the criteria for determining which factor or factors a subject belonged to. With this criteria, 38 subjects were assigned to a single factor, eight were assigned to two factors, and eight were assigned to none. The final result was that Factors I through V were represented by 21, 13, 10, 6, and 3 subjects respectively. Means were then calculated on the 13 existential factor scores, as determined in previous analyses, for each of these subject groupings. These means then became the basis for interpreting the characteristic existential belief patterns of subjects in each factor.

Factor I subjects are distinguished from the others by being higher in "Religiosity", "Positive Realism", "Death Thoughts", and "Death Acceptance" and lower in "Existential Aloneness/Uncertainty", "Inner Locus of Control", and "Intimacy Needs". They also tend to be lower in "Existential Neurosis" and higher in "Existential Wellbeing". Overall, therefore, these subjects view existence as more positive than negative. They show an awareness of the limits of existence, especially death, but, despite this, find life meaningful and satisfying. In particular, they rely on religious beliefs to provide them with ontological security and reject the Sartrean values of

freedom and isolation. God accompanies and guides them always. The 21 subjects in this factor were evenly divided into males and females (10 females, 9 males, and 2 unknown). The size of this factor suggests that it is one of the more typical patterns of belief among the undergraduate population sampled. The factor is labelled "Religious".

Factor II subjects are distinguished from the others by being lower in "Death Acceptance" and higher in "Romantic Ideals" and "Seeking Destiny". They are among the highest in "Existential Neurosis" and lowest in "Existential Wellbeing" and "Goal Achievement". Eight of this group were female and five were male. Three of this group also shared membership with Factor I and presumably they have characteristics of both. Generally these subjects experience their present existence as negative but place strong hopes in future fulfillment, primarily through romantic relationships. Interestingly, this reliance on the future is associated with more overt fears of death. They acknowledge death as a real concern which they have not resolved. They tend to be religious and to try to stay positive despite a fairly realistic awareness of existential limits. Notably these subjects are not remarkable in their "Intimacy Needs" suggesting that they have the skills to form close relationships but that they may be lacking in opportunity. This factor is labelled "Hopeful Romantics".

Factor III subjects are distinguished from the others by being lower in "Existential Wellbeing" and "Goal Achievement" and higher in "Existential Neurosis", "Intimacy Needs", and "Existential Aloneness/Uncertainty". They are also among the lowest in "Religiosity" and "Suicide Rejection". Seven of the ten subjects in this group were female, two were male, and one was unknown. Three of these subjects shared membership with Factor II. Obviously the experience of these subjects is quite negative. They feel anxious, unfulfilled, and alone. Relationships with others, both social and spiritual, are poor. Courage has left them and they have few hopes for the future. They are considering killing themselves. This factor is labelled "In Crisis".

Factor IV subjects are distinguished from the others by being higher in "Suicide Rejection", "Inner Locus of Control", "Goal Achievement" and lower in "Death Thoughts", "Seeking Destiny", "Positive Realism", and "Romantic Ideals". They also tend to be higher in "Existential Wellbeing", lower in "Existential Neurosis", and to be less religious. Of the six subjects in this group, three were male, two were female, and one was unknown. Two of these subjects shared membership with Factor I. The picture these subjects present is of an overall wellbeing which is not based on much existential awareness or intellectual reflection. This wellbeing seems to take the form of

goal achievement and feelings of self-efficacy and relies less on more philosophical criteria, like meaning and purpose. They seem to be concerned by little except the immediate present and how they can manipulate their environment? Generally, other people seem to be less important. Their firm rejection of suicide and high internal locus of control suggest that their self-regard is also quite high. This factor is labelled "Controllers".

Factor V subjects are distinguished by being higher on "Existential Wellbeing" and lower on "Religiosity", "Suicide Rejection", and "Existential Neurosis". They also tend to be lower in "Existential Aloneness/Uncertainty" and higher in "Romantic Ideals", "Inner Locus of Control", "Intimacy Needs", and "Seeking Destiny". Of the three subjects in this group, two were male and one was unknown. This group is interesting for its extremes. Existence is regarded as good overall, with very little acknowledgment of its negative aspects. The metaphysics of these subjects is strongly atheistic but is not especially existential. Interestingly, they are remarkable neither for "Death Thoughts" nor "Death Acceptance", but show strong support for suicide as a legitimate human activity. Certainly this has more to do with their rejection of religious morals than any wish to end their lives. With only three subjects in this factor, it is likely that this represents a chance grouping of individuals so it may be less stable than the

other factors. Nevertheless, I offer the label "Fanatics", to describe this group.

Discussion

A number of aspects of these results are worth commenting on. Of primary interest is the factor analysis of the existential items. This analysis did not show a simple separation of items into the four categories of death, freedom, meaningless, and isolation. Nevertheless these issues are clearly relevant to the factors that were obtained. In particular, meaning and meaninglessness emerge as central issues to a number of important factors, most notably "Existential Wellbeing", "Existential Neurosis", "Positive Realism", "Seeking Destiny", and "Goal Achievement". Overall, identifying a purpose to life or finding meaning to existence is strongly related to emotional wellbeing. The causal relationship between emotional state and life purpose is, of course, unclear. It is easily conceivable for one to cause the other or vice versa, or even that other causes determine both. In any case, this data argues that the existential issue of meaning has a relevance to the human experience which cannot be ignored. This is consistent with the work of Victor Frankl, who considers meaning and purpose to be central to wellbeing.

It is interesting, also, to observe the different niches that meaning inhabits in this data. With "Existential Wellbeing", the assessment of existence as meaningful appears to be a function, in part, of a cognitive/emotional schemata: an idea or abstraction which is detached from ontological reality. This is indicated when "Existential Wellbeing" is contrasted to "Positive Realism", in which items indicating some existential awareness of limits are present along with the judgements of meaningfulness. More choice in determining meaning seems to be involved with "Positive Realism", rather than due to some automatic intellectual correlate of a general state of happiness. "Positive Realism" is more like Tillich's "courage to be", an existential decision to exist in spite of an awareness of the vicissitudes of existence. Finally, in terms of "Existential Neurosis", meaningfulness emerges as a symptom of psychopathology and is, therefore, a potent factor in the psychological functioning of an individual. Meaning, in this case, becomes a variable of particular interest to clinicians.

If not as obviously important, the other existential categories do have significant roles to play in the belief structures observed. Death appears as a fairly distinct issue in "Death Acceptance", "Death Thoughts", and "Suicide Rejection". Many existentialists, such as Heidegger(1962) and Yalom(1980), have argued that death is central to the

human experience but, according to this data, it occupies a relatively confined domain. Death issues make an appearance in "Positive Realism" but basically avoid "Existential Wellbeing" and "Existential Neurosis". On an explicit level, therefore, death does not appear to be a central issue. Perhaps the ultimate importance of death lies in unconscious regions, thus making it difficult to measure, or perhaps the impact of death is simply not a major part of the emotional wellbeing of most undergraduates.

Death does appear in a dimension of acceptance-rejection or confrontation-avoidance which fits with the theoretical expectations of existentialism (i.e., "Death Acceptance"). However this acceptance or confrontation has an element of bravado about it which makes this courageous response seem rather ingenuine, or at least unsophisticated. This hypothesis is qualified, however, by the observation that "Death Acceptance" is not strongly related to the desirable responding factors. However, again, the fact that it does not play a major role anywhere, suggests that this factor is not exactly what the existentialists dissect so passionately when they speak of confronting ultimate nonbeing. The role of death needs to be examined in more detail in the future.

Social isolation emerges as an issue in "Romantic Ideals", and "Intimacy Needs". These factors involve concerns of romance and intimacy that are less philosophical and more practical in orientation. Ontological isolation,

as existentialism discusses it, is apparent in "Existential Aloneness/Uncertainty". A fundamental aloneness is accepted as a given, an ontological fact which loosens the bonds of a stable universe. Interestingly, the emotional correlates of this factor tend to be negative, suggesting that, in this case, existential values may be less attractive options when choosing the components of a personal philosophy.

Freedom is the least clear of the four categories. Attributions of responsibility and free will are manifested in the "Inner Locus of Control" factor but sophisticated beliefs of freedom, as described by Sartre for instance, do not show prominence. Perhaps a similar argument can be made for freedom as was made for death: this existential issue is so fundamental to the human condition that it is less visible to conscious awareness. Alternatively, appropriate items may not have been included in the questionnaire.

It is also readily apparent that many factors combine categories. "Religiosity" is a good example because this factor includes both freedom, meaning, and isolation issues within it. Other examples are the problems of decision making in "Existential Neurosis", meaning concerns in "Existential Aloneness/Uncertainty", death awareness in "Positive Realism", and relationship satisfaction in "Existential Wellbeing". It is obvious that Yalom's four issues are not mutually exclusive and that in actual experience they are often linked together.

Overall, the 13-factor solution of the existential items has indicated some factors which reproduce dimensions observed in the marker studies and some which are more unique. Clear markers are associated with "Existential Wellbeing", "Existential Neurosis", "Positive Realism", "Religiosity", "Death Acceptance", "Inner Locus of Control", "Seeking Destiny", "Suicide Rejection", and "Goal Achievement", implying that these dimensions have been identified before. Actually, "Positive Realism" is a special case because the markers associated with it do not seem to be very distinct from those loading on "Existential Wellbeing" and "Existential Neurosis". The unique quality of this factor comes more from the new items loading on it.

The other factors involve fewer markers and are presumably dimensions of existential belief which were not explicitly identified by those previous studies. These factors are "Existential Aloneness/Uncertainty", "Romantic Ideals", "Death Thoughts", and "Intimacy Needs". Notice that three of these involve isolation issues, suggesting that this area of existential concern is particularly underdeveloped by the marker research.

In terms of the broad underlying structure of existential belief, the higher-order analysis on the 13-factor solution is especially helpful. The largest of the three resulting factors indicates a dimension of emotional wellbeing-illbeing. This "Emotional State" factor fits with the

existential perspective, which puts emphasis on the affective nature of experience. This factor also suggests that some of the items on this questionnaire may have application to clinical practise, in which the client's emotional condition is of central importance. The second factor, "Self Actualization", indicates a future-oriented growth potential which is anchored to transcendent values and is obviously within the existential and, in particular, humanistic traditions. Finally, "Atheism" taps the dimension of secular and religious beliefs within which existentialists themselves range. In short, the questionnaire used in this study is tapping major themes of existentialism, even if death, freedom, meaninglessness, and isolation do not condense into four neat packages.

For the BIDR items, the factor analysis also did not show unequivocal support for theoretical expectations. The Self and Other-Deception items did not split into two clean factors, although the positive and negative wordings of these items did show perfect congruence. More Other-Deception items did load on the first two factors but no factor contained purely one type of item nor did a simple 2-factor solution emerge. Rather than distinguish between underlying motivations, the five factors extracted represented topic areas for desirable responding instead. In particular, honesty-dishonesty emerged as a central feature. This results in the paradoxical outcome that,

according to the theory, honest subjects report being dishonest and dishonest subjects report being honest. This becomes tricky and indicates that the BIDR needs to be validated further. Nevertheless, the higher-order analysis did demonstrate a consistent dimension of responding where subjects present themselves in either a more or a less favourable light, for whatever motivation.

I suspect that extreme responding at either end of this dimension represents a bias of what is true. Both high and low scorers may be distorting their experience. When subjects report being all good or all bad they can not be regarded as realistic. At this point it is impossible to say whether any distortion is motivated by unconscious threats to self esteem or by conscious attempts to deceive others because, unfortunately, the BIDR items failed to sort out along these theoretical lines. The critical issue is probably in operationalizing the degree of psychological threat¹⁵ that Paulhus used to differentiate Self and Other-Deception. Nevertheless, a consistent pattern was found where self-glorification and self-condemnation do emerge as complementary opposites and both of these appear equally excessive.

¹⁵ Self-deception, by definition, involves greater personal threat. The problem is to predict what issues will be so threatening, since individual differences are likely to be substantial.

Other evidence for a pattern of distorted responding comes from the canonical correlation analyses, especially of the higher-order factors. When existence is reported to be the most secure, the self is reported to be the most attractive. The same applies for negative perceptions of existence and of self. The multiplicity of positive and negative regard implies that a general personal bias is operating. There is also little reason to believe that either extreme is superior to the other in terms of validity, therefore, to regard either as a distortion logically requires that the other must be as well.

This picture does become more complicated, however, when the canonical correlations of the first-order factors are examined. Some of the resulting canonical variables show a mixture of factors which suggest less perceptual biasing. For example, in the second canonical variable "Positive Realism" is associated with "Admitting Flaws" and in the third canonical variable "Existential Aloneness/Uncertainty" is associated with "Character". Clearly, in these cases, there is more operating than a simple perceptual bias. Nevertheless, the general rule with this data is that regard for life and regard for self are concordant.

If it is true that distorted perceptions account for some of these results, what does this imply for psychological prognosis? Obviously few would condone a negative perceptual bias. The relationship between irrational

negative cognitive schemata and psychopathology is well documented. What about a positive bias? Some, such as Sackeim (1983), hypothesize that positive distortion or self deception has psychological benefits. According to this view, emotional wellbeing depends on avoiding some aspects of reality, especially the threatening ones. If the extreme positives in this sample do need to distort reality, then at least on the surface, this certainly seems to be successful and worthwhile. Who wouldn't want to be high on "Existential Wellbeing"? Existentialists, of course, argue that distorting reality distorts the self as well and leaves the individual rigid and unprepared for existential contingencies. This is an area where more research is crucial. Is any distortion of reality necessarily bad, or is there some optimal level of self deception which should be encouraged?

Turning to a different issue, two factors from these results deserve extra attention, namely "Positive Realism" and "Existential Aloneness/Uncertainty". These factors appear to be more related to existential philosophy than many of the other factors. Both acknowledge a basic aloneness in the world, personal responsibility for one's outcomes, and an awareness of existential limits. Therefore, they represent some of the more typical views of existential theory. The world outside and the self inside seem to be regarded more accurately as both positive and

negative. These factors differ in that "Positive Realism" involves a more secure optimism based on transcendental values. Defined higher ideals, often in the form of romance and religion, seem to have a strengthening effect along this dimension, allowing for a more realistic confrontation with the limits and vicissitudes of immediate existence. With "Existential Aloneness/Uncertainty", the universe is regarded as more isolating and unstable, therefore more ontologically insecure. Awareness of this is tolerated by a reliance on personal freedom and control, rather than on transcendental abstractions or future hopes. Generally, however, this reliance on inner resources may be less secure, in terms of emotional wellbeing. This suggests the hypothesis that optimal adjustment to existential contingencies may depend on finding secure transcendental objectives or values of some kind. In other words, emotional wellness may require both existential and essential components, as originally suggested by Tillich (1944).

Evidence for this hypothesis can also be seen with the Q-technique data. "Religious" subjects appear to be supported by their faith in the presence and guidance of god, despite a stronger death awareness. "Hopeful Romantics" suffer more in the present but seem to find salvation in the potential of love and in future fulfillment. "Controllers", for their part, adapt by avoiding philosophical reflection and choose,

instead, a course of active independent achievement in the present.

These coping subjects are contrasted, however, with the "In Crisis" subjects. The depression and anxiety of these individuals can derive little relief from higher essential ideals. Life is meaningless, relationships are poor, and spiritual supports are lacking. The vicissitudes of existence are suffered directly and without protection. Is a perceptual bias the answer for these people? The previous subject groups suggest that existential limits are manageable when existence includes essential elements on which to attach. Higher ideals or transcendent abstractions may give enough support so that conscious awareness does not need to be severely distorted. Perhaps when human beings have things to live for which transcend existence they can endure more effectively the anxieties of existential knowledge. These comments assume, of course, that the perceived lack of transcendental meaning is accurate and not a distortion based on emotional pain or a biasing cognitive schemata. More work needs to be done to clarify these possibilities.

In conclusion, this thesis further demonstrates that existential issues are open to empirical research. Even this relatively simple correlational study was able to produce a variety of findings which address central concerns in existentialism. Some questions were answered although,

perhaps, many more have been generated. The next obvious step is to take some of these new questions to the main field of interest, the experience of individuals. Much data is possible through large questionnaire surveys but an exploration of many aspects of existence requires more direct phenomenological contact. Ideally, multiple paradigms will continue to be used to address the issues of existence.

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Appendix A
QUESTIONNAIRE

LIFE ISSUES: Cover Sheet

Thank you for participating in this research project. Your efforts are very much appreciated. This is a questionnaire about some general life issues. There are no right or wrong answers. Answer each question as it is most true for you yourself. Try to answer all questions, even if you must "guess" sometimes. For the first part, respond on the IBM sheet provided. Before you start, indicate a "1" if you are male or "2" if you are female on the first line of the IBM identification field in the upper right corner. Next, to answer each question, record your choice in the appropriate slot on the IBM sheet. Please be careful to check that the item numbers correspond, otherwise your work will be invalidated. Put no identifying information on the IBM sheets. Please respond in pencil on the IBM sheets, since this is required for computer scoring. For the second part answer directly on the questionnaire sheet.

When you are finished, complete the student-identification portion of this cover sheet. This is how you will receive the one hour of experimental credit for participating. To ensure that you receive credit, be accurate and complete. Detach this completed cover sheet from the questionnaire booklet. Return the questionnaire booklet and the IBM answer sheet to the original envelope (unsealed). Deposit this in the box marked "QUESTIONNAIRE" outside the Department of Psychology General Office (located on the 4th floor of the Duff Roblin Building). Deposit the cover sheet in the separate box marked "COVER SHEET". This is done to ensure your anonymity. I will use these cover sheets to record your experimental credit on your Professor's class list. You must turn all of this in by 5:00 pm., Thursday, April 10. If you are interested in the overall results of the study you may read a summary posted outside P423 DR after July 1. Again, thank you.

Harold R. Wallbridge
Department of Psychology

NAME (PLEASE PRINT).....

STUDENT NUMBER.....

LECTURE SLOT.....

PROFESSOR.....

SIGNATURE.....

1	2	3	4	5
STRONGLY DISAGREE	MODERATELY DISAGREE	NEUTRAL	MODERATELY AGREE	STRONGLY AGREE

1. I have no heros.
2. If I do not lead as full and satisfying a life as I am able, I will blame only myself.
3. Lately I have begun to question some of my most personal values and beliefs.
4. I believe that death is the absolute end of my existence in all respects.
5. I seem to change my main objectives in life.
6. I value my freedom above all else.
7. For the most important decisions I have had to make, the principles and standards I was taught have served me well.
8. Knowing that I will die encourages me to live my life more fully.
9. I am responsible for my life since I am free to make decisions about it.
10. I sense some kind of void in my life.
11. Children should have death and dying explained to them as early as early as possible.
12. Everyone--including me--cheats and pretends.
13. What is lacking in the world today is the old kind of friendship that lasted for a lifetime.
14. There are no absolutes--everything depends on how you look at it.
15. In the long run, we can only rely on ourselves.
16. Even when its important not to be, I can expect to be wrong sometimes.
17. Someday medical science may find the "cure" for death.
18. There are things about myself I would rather not know.
19. I don't know who I am, where I come from, or where I am going.
20. Personal failures can be valuable experiences.
21. My most meaningful experiences come from my relationships with others.
22. Often I know what I am supposed to do, but I do not know what I want to do.
23. If I had a choice, I would want to live forever.
24. There is always significant uncertainty in all important life decisions.
25. I often feel that many things our parents stood for are just going to ruin before our very eyes.
26. I live as fully as I can.

1	2	3	4	5
STRONGLY DISAGREE	MODERATELY DISAGREE	NEUTRAL	MODERATELY AGREE	STRONGLY AGREE

27. I struggle to give my life meaning and purpose.
28. I am glad to be alive.
29. Losses are important because through them I will be able to grow.
30. I am afraid of dying even a painless death.
31. Good requires evil.
32. I think about the ultimate meaning of life.
33. The world would be little different if I had never been born.
34. Some people are very frightened of death, but I am not.
35. My life lacks purpose and direction.
36. I am constantly being forced to make another decision about something.
37. Nothing is certain.
38. Compared to others, I typically have more control of my life.
39. I know who I really am.
40. I cannot predict what is going to happen in life with any any degree of certainty.
41. There are some things for which I would sacrifice my life.
42. What concerns me about dying is that all my hopes and dreams will come to an end.
43. There are no final answers--just new questions.
44. Nothing will ever change my mind about some of my beliefs.
45. Sometimes I just want to be alone.
46. I do not dwell on my mistakes--the past is past.
47. With regard to suicide, I never have given it a second thought.
48. Life would be meaningless without death.
49. My life will be meaningful only when I accept who I really am.
50. God is my ultimate authority.
51. I have pretty well accepted the fact that I will die.
52. God exists.
53. Much of my life was determined by forces beyond my control.
54. With regard to death, I am prepared and unafraid.
55. I feel that life is full of conflict and unhappiness.

1	2	3	4	5
STRONGLY DISAGREE	MODERATELY DISAGREE	NEUTRAL	MODERATELY AGREE	STRONGLY AGREE

56. I feel good about my future.
57. Life to me seems very exciting.
58. I hope to go to heaven.
59. Often I just don't know what to do with myself.
60. Even though death is inevitable, I cannot help but be concerned about dying.
61. I am a very responsible person.
62. Life without love would not be worth living.
63. I find periods of solitude rewarding.
64. In life I have very clear goals and aims.
65. I have experienced the feeling that while I am destined to accomplish something important, I cannot quite put my finger on it.
66. I am usually exuberant and enthusiastic.
67. Life is tragic and there is no escaping life's pain.
68. My life is running over with exciting good things.
69. I have often felt very close to someone.
70. Sometimes I think that I am too afraid of being alone.
71. Right now I am not ready to die.
72. My life is in my hands and I am in control of it.
73. I feel the lack of and a need to find a real meaning and purpose in my life.
74. I know that I will die, but I do not worry about it.
75. I expect the future to promise more for me than the past has.
76. I feel that the greatest fulfillment of my life lies yet in the future.
77. Everything changes so quickly these days that I often have trouble deciding which are the right rules to follow.
78. With everything in such a state of disorder it's hard for a person to know where he or she stands from one day to the next.
79. Before I achieve one goal, I start out towards a different one.
80. On occasion I have thought that I had found what I was looking for in life, only to have it vanish later.
81. My life is phony and artificial.
82. Sometimes when I have been unhappy, I have made myself unhappy.
83. In the deepest sense, I think we are all alone in this world.
84. There is a real chance that I could die at anytime.

1	2	3	4	5
STRONGLY DISAGREE	MODERATELY DISAGREE	NEUTRAL	MODERATELY AGREE	STRONGLY AGREE

85. I sense a basic separateness between myself and all others.
86. Life doesn't have much meaning.
87. I will live on in my life's accomplishments and in my children.
88. I feel a sense of well-being about the direction my life is headed in.
89. I feel very fulfilled and satisfied with life.
90. I feel unsettled about my future.
91. I believe there is some real purpose for my life.
92. My trust is in God.
93. When I must make an important decision I worry more about what I will lose than about what I will gain.
94. The trouble with the world today is that most people really don't believe in anything.
95. Death seems so far away that I never even think about it.
96. I sometimes wonder whether this is all there is to life.
97. It is pointless for me to think about death until I have to.
98. The world is always changing and can never be the same again.
99. If it was discovered that I was terminally ill, I would not want to be told.
100. Sometimes life seems unbearable to me.
101. I cannot change certain things about my life, but I can at least change the way I think and feel about them.
102. I hope for something exciting in the future.
103. Sometimes what keeps me committed to a poor course of action is the regret I would feel about not being able to justify the time and energy I had spent.
104. Death is a natural part of life.
105. The worst part about being alone is the thought that no one would miss me.
106. I would willingly accept my death after a long and full life.
107. In thinking of my life, I always see a reason for being here.
108. Sometimes I just have to be with other people, even if I do not know them.
109. I am becoming more prepared for death.
110. The worst pain is losing someone you love.
111. I determine what happens in my life.
112. With everything so uncertain these days it almost seems as though anything could happen.
113. I rely heavily on the advice and guidance of other people.

1	2	3	4	5
STRONGLY DISAGREE	MODERATELY DISAGREE	NEUTRAL	MODERATELY AGREE	STRONGLY AGREE

114. It is a random universe to which I give meaning.
115. I would not consider suicide under any circumstances.
116. The worst death is a lonely death.
117. I have experienced an awareness of the true nature of reality.
118. How the world appears depends on how I choose to see it.
119. Some of my decisions are too difficult to make.
120. My life has meaning.
121. I have no genuine connection with any other human being.
122. Sometimes I do things that are so unexpected that I surprise even myself.
123. Sometimes I wonder whether I could ever have a meaningful relationship.
124. I feel that life is a positive experience.
125. I am free to believe or doubt anything that I choose.
126. Everything I consider fixed, precious, and good can suddenly vanish.
127. I wish that I could be more intimate with other people.
128. I can rarely get as much love as I want.
129. True love is the perfect union between two people.
130. My life is too caught up in the trivialities of everyday life.
131. I have discovered clear cut goals and a satisfying life purpose.
132. I believe that I was born for a reason.
133. I am just as responsible when I do not act as when I do.
134. When I die I believe my soul will go to heaven.
135. If I was terminally ill and on life support, I would want the machines turned off.
136. I could not be happy being alone.
137. Living means more than just passing the time between birth and death.
138. I know that some of the things I do are risky to my life and health, but I do them anyway.
139. To think the world is fair and just is deluding oneself.
140. Often I am reluctant to show others what I am really feeling.
141. I am generally more at ease talking about death than most people.
142. Life is a series of difficult choices and unavoidable decisions.
143. If it were possible, I would want to know how long I will live.

1	2	3	4	5
STRONGLY DISAGREE	MODERATELY DISAGREE	NEUTRAL	MODERATELY AGREE	STRONGLY AGREE

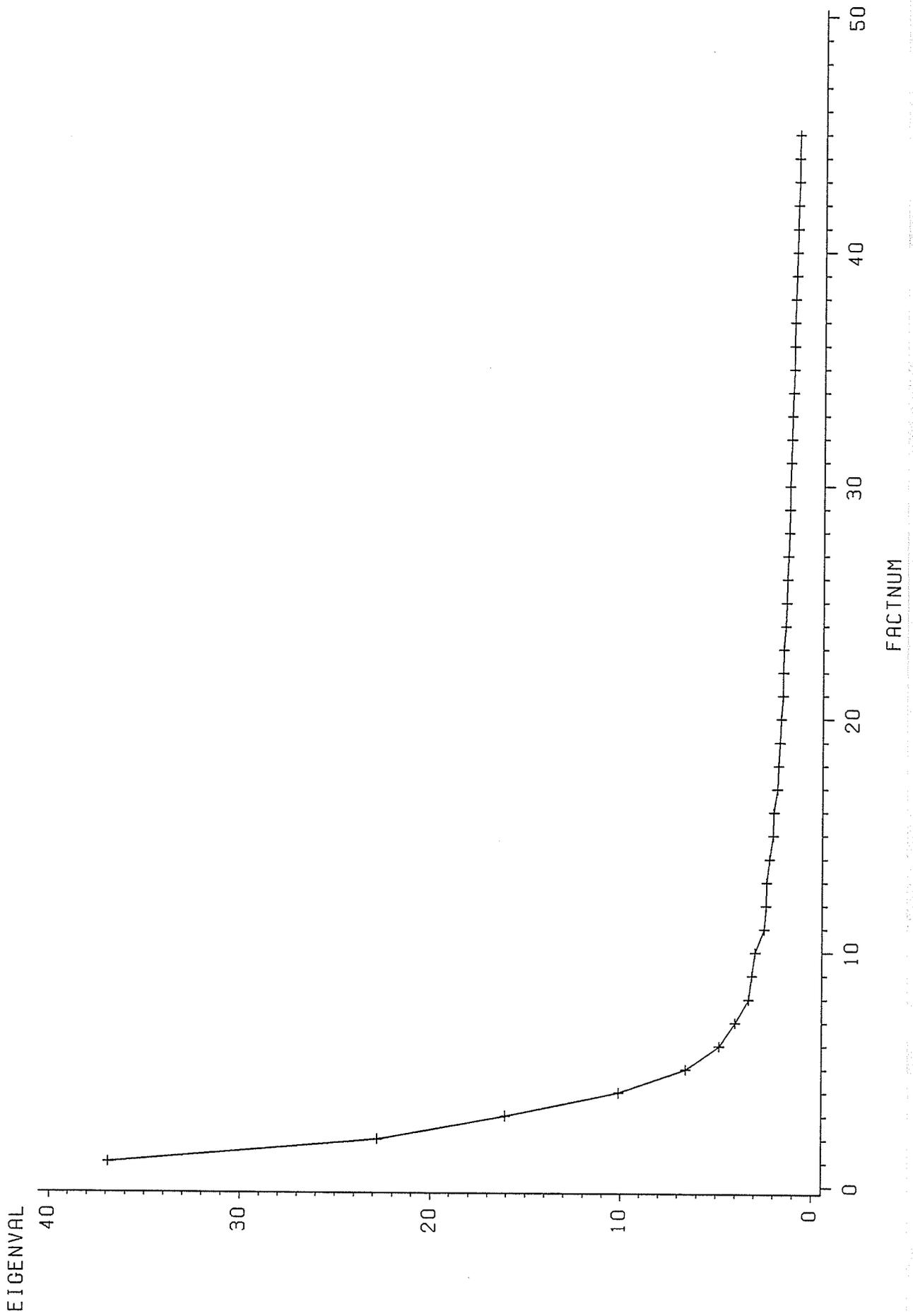
144. Sometimes I think about death too much.
145. There is no particular reason why I lost out on some things.
146. The responsibility for who I am is my own.
147. I would find it impossible to live without the caring and acceptance of certain people.
148. God gives purpose to my life.
149. Chance has not been an important factor in my life.
150. I will probably live longer than most people.
151. The threat of perishing in a nuclear holocaust is often on my mind.
152. My dying is a process that began the day I was born.
153. Belief in God saves us from ultimate loneliness.
154. I often feel awkward and out of place.
155. People were better off in the old days when everyone knew just how he or she was expected to act.
156. It seems to me that other people find it easier to decide what is right than I do.
157. I hesitate to make decisions because I always try to keep as many options open as long as I can.
158. I don't enjoy much about life.
159. Somewhere there exists a man or woman with whom I could become "one".
160. I will be reincarnated in another body after this body dies.

27. () I have felt physically attracted to at least one person of the same sex.
28. () I have felt joy over someone else's failure.
29. () I always return a favor without hesitation.
30. () It's alright with me if some people happen to dislike me.
31. () I'm not interested in knowing what other people really think about me.
32. () My parents only punished me when I really deserved it.
33. () I sometimes get jealous over the good fortune of others.
34. () My parents always loved me no matter what I did.
35. () I often have sexual fantasies.
36. () I have always been certain that I am not homosexual.
37. () I have always been confident about my ability as a sex partner.
38. () I usually enjoy my bowel movements very much.
39. () At times I have wanted to rape or be raped by someone.
40. () I have thought of committing suicide to get back at someone.

Appendix B

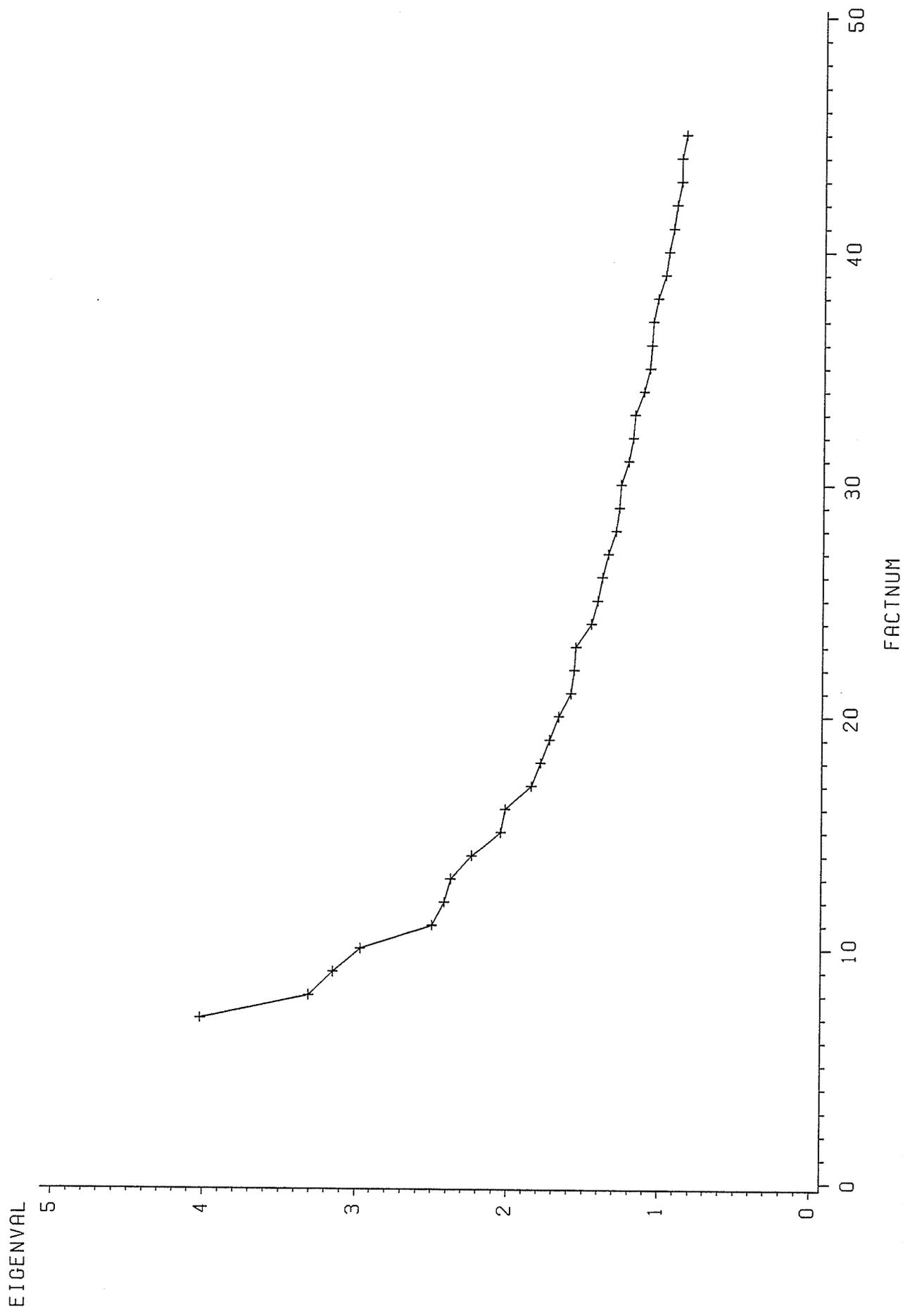
SCREE TEST: EXISTENTIAL FACTORS

PLOT OF EIGENVALUES AND FACTOR NUMBER: FIRST-ORDER EXISTENTIAL FACTORS



PLOT OF EIGENVALUES AND FACTOR NUMBER (close up):

FIRST-ORDER EXISTENTIAL FACTORS



Appendix C

SCREE TEST: BIDR FACTORS

PLOT OF EIGENVALUES AND FACTOR NUMBER: FIRST-ORDER BIDR FACTORS

