

## DIFFERENTIAL ASPECTS OF LOCUS OF CONTROL AND ATTITUDES TOWARDS DEATH

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*The relationship between locus of control and death anxiety was investigated in a sample of 99 college students. The results indicate a significant relationship between an external locus of control and concern about death. In addition, there is a specific differential patterning between various dimensions of locus of control and death anxiety items. No sex differences were found for death anxiety, but significant sex differences were found on four of the seven locus of control dimensions.*

The notion of control is not only one of the most fundamental aspects of human experience but is also a central feature of much psychological theory and empirical investigation. The writings of theorists such as those of Adler (1927) and of White (1959) are representative; Adler spoke of striving for control and for superiority while White spoke of the motivating forces of effectance and competence. Themes highly related to control can also be found in such disparate writings as those of Erikson (1963), Piaget (Flavelle, 1963), Berne (1964) and Ellis (1974).

Empirically, the notion of control has been programatically explored in a number of efforts, most notably the work of Rotter (1966) on locus of control, and the work of Seligman (1975) on learned helplessness.

Rotter devised an Internal-External (I-E) Locus of Control Scale that originally encompassed four areas of control (chance, social events, achievement, and leadership) but a factor analysis failed to produce more than one significant factor, so the scale was presented and utilized as a unitary dimension. Despite its wide use, the I-E locus of control scale has been criticized on several grounds, including its inappropriate apparent unidimensionality (Lefcourt, 1966; Phares, 1976).

One of the many constructs studied in conjunction with locus of control is death anxiety. Recently, the number of studies related to death and dying has greatly increased, and death appears to have lost some of its status as a taboo topic. Several investigators have examined the relationship between locus of control and death anxiety but the results have been somewhat contradictory and limited by the instruments used.

Tolor and Reznikoff (1967) in a study of 79 male subjects found a significant, albeit small ( $r = 0.24$ ,  $p < 0.05$ ), correlation between the Rotter I-E scale and a 20-item Death Anxiety Scale, indicating that a belief in external control is significantly related to overt death anxiety. Berman and Hays (1973) tested 300 college-age subjects, but found no relationship between the Rotter I-E scale and two death anxiety scales. Yet quite clearly, the evidence suggests that individuals who possess an internal locus of control are more effective in dealing with both the physical, outer environment as well as the inner, affective environment (e.g., Burnes, Brown, & Keating, 1971; Powell & Vega, 1972; Ray & Katahn, 1968).

Finally, the notion of sex differences is an important one yet to be explored. As Gough (1965) suggested some time ago, the variable of sex should be routinely investigated in any validation efforts. Rotter (1966) reported that only one of five studies on the I-E scale found significant sex differences; yet Coan, Fairchild, & Dobyns, (1973) in the development of their locus of control scale, found significant sex differences on 4 of their 7 subscales. Similarly, Berman and Hays (1973) found that females scored significantly higher than males on death anxiety, but not on a fear of death scale. The present study, then, was undertaken to: (1) examine the relationship between laws of control and death anxiety in a more systematic manner; (2) explore the utility of a multidimensional approach in assessing locus of control; and (3) assess any possible sex differences.

## METHOD

### SUBJECTS AND PROCEDURE

The subjects were 99 University of Arizona students enrolled in two humanities classes. There were 42 males and 57 females, with a mean age of 22 and a range from 18 to 50. The students were quite heterogeneous as to major and geographical background. Questionnaires were administered during class under conditions of anonymity, and were completed in counterbalanced randomized order.

### INSTRUMENTS

The Personal Opinion Survey (POS; Coan et al., 1973; Coan & Fairchild, 1977) is designed to assess several major aspects of the experience of control. While similar to Rotter's I-E scale, the POS differs in its theoretical foundations and method of development. The authors of the POS believed that individual differences in the experience of control could not be adequately described in terms of a single, broad dimension, and chose a content analysis approach rather than the social learning theory that guided Rotter. A preliminary pool of 130 true-false items was first constructed to cover a wide range of content areas as well as both personal experience and general expectancies. On the basis of several revisions based on a series of factor analyses and item analyses, a 120-item 7-factor scale was developed. Briefly, the 7 factors encompass: (1) achievement through conscientious effort; (2) personal confidence in ability to achieve mastery; (3) capacity of mankind to control its destiny; (4) successful planning and organization; (5) self-control over internal processes; (6) control over large-scale social and political events; (7) control in immediate social interaction. The POS manual presents considerable validation evidence, much of it in support of the utility of differential subscales rather than a unidimensional approach. Reliability appears quite satisfactory, in terms of both internal consistency as well as test-retest.

Assessment in the field of thanatology is still in its infancy, and the better known death anxiety scales (e.g., Templer, 1970) have been severely criticized (Kurlycheck, 1978). For this study, it was arbitrarily decided to use a new instrument, the Health and Illness Survey (HIS; Wren, 1980) that appears quite promising. The HIS consists of 62 questions, 42 of which are answered on a 5-point attitudinal scale from *strongly agree* to *strongly disagree*, the others by selection of one of several response options. As the title indicates, the HIS covers a wide variety of areas, including fears of illness, the role of religion in one's daily life, present physical and mental health, and fears and concerns about death. Ten of the HIS items appear directly related to death anxiety (e.g., I am afraid to die; I fear for my health) and these were scored as a measure of death anxiety.

### ANALYSIS

A correlational analysis between the 7 POS scales and the HIS items was first undertaken, then POS subscale scores were changed into standard scores and summed for each subject to derive a total POS control index. The scores on the death anxiety HIS items were then compared for the 25 top scoring subjects and 25 bottom scoring subjects on the total POS control index. Finally, a sex analysis of POS subscales and

death anxiety scores was undertaken.

## RESULTS

Table 1 presents the results of the correlation analysis between the POS factors and the HIS items. Given 7 POS factors and a total POS index, and 62 HIS items, the resulting 496 correlations (8 x 62) should have produced 25 significant coefficients, or 3 significant coefficients per POS score by chance alone. In fact there were 81 significant correlation coefficients obtained. POS Factor 1 correlates significantly with only 2 HIS questions, and so that finding may be dismissed as chance. POS Factors 2 through 7 do correlate significantly with from 8 to 15 questions each; total POS correlates significantly with 20 questions.

TABLE 1: CORRELATIONS OF POS FACTORS WITH HIS ITEMS  
(N= 99)

<i>POS factor</i>	<i>Correlates with - HIS items</i>	<i>Representative HIS items and Correlation Coefficients</i>
2. Achievement of mastery	9	I am afraid to die ( $r = -0.26$ )* I am often distressed by the way time flies so very rapidly ( $r = -0.23$ )**
3. Mankind destiny	11	The health of patients is theirs to do with as they see fit ( $r = 0.27$ )* Religion plays a strong role in my work ( $r = -0.65$ )*
4. Successful planning	8	I often think how short life really is ( $r = -0.28$ )* Regular attendance at church means a lot to me ( $r = 0.26$ )*
5. Internal processes	15	Tension is my worst enemy ( $r = -0.45$ )* Death seems far removed from my everyday life ( $r = 0.31$ )*
6. Social-political events	8	Would you want to know the exact date of your death? (No, $r = -0.25$ )* I want to die suddenly, without knowing what hit me. ( $r = -0.21$ )**
7. Social interaction	8	Death was never openly discussed when I was growing up. ( $r = -0.25$ )* I would rather die than become hopelessly crippled or paralyzed. ( $r = -0.25$ )*
Total index	20	The thought of death occurs to me often. ( $r = -0.25$ )* I feel that the future holds nothing for me to fear. ( $r = 0.23$ )**

\* $p > 0.01$  \*\* $p > 0.05$

As can be seen in Table 1, which gives only representative items, the correlation pattern is a highly meaningful one, not only in relating concerns about death to the general dimension of control, but also in providing a specific differential patterning within the various control dimensions. Thus, the individual who scores in the internal direction on Achievement of mastery, is less concerned than his external peer about death and the flight of time; the individual who is more internal about self-control over his own internal (psychological) processes expresses lesser concern about tension and sees death as more removed from everyday life.

A meaningful pattern also emerges when the HIS questions that correlate with at least 3 factors each are identified. There are 12 such items: (No. 5) I am afraid to die; (8) The main emotional support in my life comes from God; (9) I am often distressed by the way time flies so very rapidly; (12) I fear dying a painful death; (17) I wish death had been more openly discussed when I was growing up; (25) I worry about dying suddenly; (39) Being in a doctor's office makes me feel uneasy; (45) How often do you think about your own death? (46) Has there been time in your life when you wanted to die? (49) How do you rate your present mental health? (*Excellent to extremely bad*); (54) How do you feel about having an autopsy done on your body? (55) To what extent has the possibility of massive human destruction by nuclear war influenced your present attitudes toward death or life? (*Enormously to not at all*). Thus an external locus of control is clearly related to fears of death and dying, and to poorer mental and physical health.

As might be expected, subjects scoring in the internal direction on the total POS control index show substantially lower death anxiety scores than do subjects scoring in the external direction (means of 31.8 and 25.7, respectively;  $SD = 5.0$  and  $5.1$ ;  $t = 4.3$   $p < 0.01$ ); yet an item analysis indicated that only three of the ten HIS death anxiety items showed a significant correlation between choice of response option and total POS scores. The three items are: I worry about dying suddenly ( $r = 0.20$ ,  $p < 0.05$ ); Death seems far removed from my everyday life ( $r = -0.20$ ,  $p < 0.05$ ); How often do you think about your own death? (responses ranged from *very frequently* to *very rarely* or *never*;  $r = 0.26$ ,  $p < 0.05$ ).

An analysis of sex differences indicated no significant sex differences for the total POS control index, nor for the death anxiety score on the HIS. However, significant sex differences were obtained on 4 of the 7 POS subscales. Males scored towards the more internal direction than females on: (1) factor 2, personal confidence in ability to achieve mastery ( $M = 53.5$ ,  $SD = 8$  vs.  $M = 47.4$ ,  $SD = 10.6$ ,  $t = 3.14$ ,  $p < 0.01$ ); (2) factor 3, capacity of mankind to control its density ( $M = 53.9$   $SD = 10$  vs.  $M = 47$ ,  $SD = 9.1$ ,  $t = 3.55$   $p < 0.01$ ); (3) factor 5, self-control over internal processes ( $M = 54.3$ ,  $SD = 9.3$  vs.  $M = 46.9$   $SD = 9.5$ ,  $t = 3.86$ ,  $p < 0.01$ ). Females, however, scored significantly higher in the internal direction than males on the POS factor 7, control in immediate social interaction (for females the  $M = 51.8$ ,  $SD = 10.3$  vs.  $M = 47.3$ ,  $SD = 9$   $t = 2.27$   $p < 0.05$ ).

## DISCUSSION

The results of this study do support the central hypothesis that subjects with a more internal locus of control report less anxiety about death than do their peers who have a more external locus of control. These results agree closely with the findings of Tolor and Reznikoff (1967) and lend support to their notion that there are individual differences among persons in their ability to comprehend the causative factors that underlie or determine feelings, attitudes and behaviors. These differences, according to Tolor and Reznikoff center on the concept of insight and involve relative freedom from self-deception. Conceptually, a number of personality dimensions are related to this central notion, including the generalized expectancy or belief in internal or external control of reinforcement, and the degree of overt anxiety experienced in relation to death. The difference between internals on the death anxiety scale in this study appears somewhat larger in magnitude than the one obtained by Tolor and

Reznikoff although based on a smaller sample. Perhaps the methodology of contrasted groups as well as the instruments used joined to yield a more robust finding; at any rate, it would appear there is support for the hypothesized relationship between locus of control and death anxiety.

The results of the analysis of sex differences also agree quite closely with the results of other investigators. For example, Fairchild (1971) found that male subjects scored significantly higher than female subjects on 3 of the 7 POS factors (Nos. 2, 3, and 5); all 3 factors show similar sex differences in our study. Thus the males in this study show greater confidence in their capacity for accomplishment in a variety of intellectual realms (factor 2), a greater belief in the human capacity to control destiny (factor 3), a greater self-reported ability to control one's own somatic, affective, and cognitive processes (factor 5), but a lesser experience of control in social situations (factor 7). Despite the current sensitivity to sex differences that may be the result of cultural conditioning and may reflect differential opportunities, these results have an intuitive immediacy that supports the validity of the POS and suggests the usefulness of considering control as a multi-dimensional variable.

Several implications arise from these results. First, locus of control is a multi-dimensional phenomenon that needs to be investigated from a multifaceted perspective. Treating it as a unitary dimension may still produce significant results, but may ignore the more meaningful interactive patterning. Secondly, sex differences need to be routinely investigated and accounted for, particularly in order to establish more clearly their etiological basis. Finally, these results may be quite relevant to an area of psychology that is currently receiving substantial attention, namely stress management. The manner in which individuals interpret and react to stress is probably related to the amount of control one perceives over such stress-causing factors as one's health, and ultimately death.

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