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**ABSTRACT**

Researchers are divided as to whether loneliness is a result of diminished quantity or quality of social interaction. Although results have been produced which support each position, few studies have examined the relationship between the two. To qualify the relationship between the quantitative and qualitative aspects of loneliness by exploring the individual difference variables of self-consciousness and social anxiety, behavioral contact, and avoidance mechanisms, 109 undergraduates participated in a study. Subjects completed questionnaires which assessed loneliness, contact and avoidance mechanisms, self-consciousness, and social anxiety. A path analysis was performed on the data. The path coefficients from contact and avoidance mechanisms to loneliness showed that behaviors which minimized interpersonal contact were associated with high levels of loneliness, while behaviors which increased interpersonal contact were associated with lower levels of loneliness. When the individual difference variables of private self-consciousness and social anxiety were included in the model, it was revealed that persons high in self-consciousness used more avoidance mechanisms, yet did not experience loneliness, and socially anxious subjects used more contact seeking behaviors, yet did experience loneliness.  
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**Quantitative and Qualitative Aspect of Loneliness:**

**An Individual Difference Perspective**

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## Quantitative and Qualitative Aspects of Loneliness:

### An Individual Difference Perspective

Loneliness researchers are divided as to whether loneliness is a result of diminished quantity or quality of social interaction. While results in support of each position have been produced, few studies explore the relationship between the two. The present study introduces an individual difference variable that may help qualify the relationship between the quantitative and qualitative aspects of loneliness.

In support of the quantitative position, there is some evidence that lonely college students have less social contact than their non-lonely counterparts in terms of frequency of dating, participation in social activities, number of friends, and duration of time spent alone (Jones, Hansson, & Smith, 1980). In contrast, a study of daily interactions revealed that lonely students have the same number and duration of social interactions as non-lonely students (Jones, 1981). As a result of the latter study, Jones (1982) stated that "the experience of loneliness has less to do with the objective characteristics of the lonely person's social milieu than with the process by which loneliness affects how people perceive, evaluate, and respond to interpersonal reality"(p.296). Other researchers (Cutrona & Peplau, 1979) agree that the quality of social interactions is a more sensitive gauge of the interpersonal problems of the lonely than is the quantity of such interaction.

While it seems clear that some researchers are willing to discount the quantitative findings in favor of a qualitative interpretation of loneliness, the available data are far from conclusive. Clearly, in some instances social isolation will predict subjective reports of loneliness. Yet, researchers have not specified the conditions under which qualitative

and quantitative indices will be congruent or incongruent. Thus, it may be premature to discount either a quantitative or qualitative interpretation of loneliness until the relationship between the two is clarified.

In the present study, the relationship is addressed with a framework which involves both quantitative and qualitative aspects of social contact (Altman, 1975). Privacy regulation theory is based on the assumption that individuals experience simultaneous desires to be open and accessible to others and closed or shut off from others. The ideal blend of openness and closedness is a subjective judgement that changes over time. To achieve a desired level of privacy, individuals engage in privacy regulation behaviors which allow them to contact or avoid others. Because the desired level of privacy is individually defined, two individuals may exhibit the same amount of social contact yet experience very different degrees of openness or closedness. Loneliness can be viewed as an instance where the desired level of privacy is more open or intimate than the actual level (Altman, Vinsel, & Brown, 1981). What is still needed is a framework for understanding what mediates the desired level of privacy.

It is hypothesized that individual differences in self-consciousness and social anxiety (Buss, 1980) may differentially influence quantitative amounts of social contact and qualitative reports of loneliness. Self-consciousness can be broken down into public and private aspects, reflecting differences in the extent to which an individual is aware of and concerned with internal versus external processes. A private self-conscious person is generally self-reflective, introspective, and aware of internal moods, motives, and mental processes (Buss, 1980). The public self-conscious person is concerned with appearances, styles of behavior, and the impressions they make on others. The socially anxious person is similar to a public self-conscious person in terms of concerns with appearances and impressions,

but is also shy, easily embarrassed, and anxious in the presence of others. Buss (1980) suggests that the private self-conscious person has a relatively weak need to be with others, while the public self-conscious and socially anxious individuals have a stronger need to be with others.

It follows from the preceding discussion that including the individual difference measures of self-consciousness and social anxiety with the concept of privacy regulation provides a coherent framework for exploring the experiences of lonely and non-lonely individuals. Given the private self-conscious person's weak need to be with others, one would expect them to desire a relatively closed level of privacy. Consequently, they may use behaviors which minimize interpersonal contact. Although such behavior may appear to reflect loneliness when measured quantitatively, private self-conscious individuals may not report feelings of loneliness when measured qualitatively. In a similar vein, given the public self-conscious person's higher need for others, one would expect a relatively open level of desired privacy. Consequently, they may also use behaviors which increase their contact with others. Measured quantitatively, the public self-conscious individual would probably not manifest behaviors traditionally linked to loneliness, yet may or may not report feelings of loneliness depending upon the perceived quality of his or her interactions. The socially anxious individual is a somewhat special case. Whereas they have a relatively high need for social contact, their anxious styles may thwart attempts to achieve satisfactory social interactions. Despite behaviors designed to achieve interpersonal openness, the socially anxious individual may report loneliness due to the poor quality of the achieved contacts.

The present study explores these hypothesized relationships among self-consciousness, social anxiety, behavioral contact and avoidance mechanisms, and loneliness.

## Method

### Participants

Questionnaire data were gathered from 125 students during introductory psychology classes at Texas Christian University. Students received experimental credit for their participation. Sixteen (13%) questionnaires were discarded due to incomplete data. The final sample consisted of 109 subjects (74 female, 35 male), with a mean age of 19 years.

### Measures

In addition to assessing loneliness, the questionnaires contained reports of behaviors and individual difference measures hypothesized to relate to loneliness.

Loneliness Scale: Loneliness was assessed by the 20-item Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980) which has been demonstrated to be a highly reliable and valid measure (Russell, 1982; Russell et al., 1980). Individual items included feelings of social isolation, being misunderstood, and lacking companionship or people to talk with. The present sample yielded a reliability (alpha) coefficient of .91 which is similar to previous research.

Contact-Avoidance Mechanisms: An 18 item scale assessed the behaviors students use to seek out or avoid contact with others (Vinsel, Brown, Altman, & Foss, 1980). The scale indicates frequency of use for nine contact-seeking and nine contact-avoiding behaviors during a one week period. Contact-seeking behaviors included telephoning or inviting over friends. Contact-avoiding behaviors included asking visitors to leave and seeking out places to be alone. Reliability (alpha) coefficients for the contact and avoidance mechanisms were .71 and .76 respectively.

Self-Consciousness and Social Anxiety Scale: Self-consciousness, broken down by private and public subscales, and social anxiety were assessed by

the Self-Consciousness and Social Anxiety Scale (Fenigstein, Scherer, & Buss, 1975). Private self-consciousness reflects an awareness of one's attitudes, thoughts, and feelings and is indicative of individuals who examine moods and motives and are generally self-reflective. Public self-consciousness reflects an awareness of one's appearance, style of behavior, and about the impressions made on others. Social anxiety also reflects an awareness of the self as a social object, but includes an anxiety component, indicative of individuals who are shy, easily embarrassed, and anxious in the presence of others. The reliability (alpha) coefficients for the private, public, and social anxiety subscales were .74, .83, and .83 respectively.

#### Results and Discussion

Loneliness scores obtained in the present sample (overall  $M = 37.25$ , male  $M = 39.82$ , female  $M = 36.04$ ) were similar to those obtained in larger samples from other universities (Russell et al., 1980). In the present study, males reported more loneliness than females ( $t(107) = 1.95$ ,  $p = .05$ ), although some studies report greater loneliness for females (Donson & Georges, 1967; Weiss, 1973) and others report no sex differences (Williams & Solano, 1983).

To relate individual differences to both quantitative and qualitative indices of loneliness, a path analysis was performed on the data. Path analysis can reveal patterns of causality among several variables. It is a model-testing procedure which relies on correlations and partial correlations among a set of variables in which hypotheses can be made regarding the existence and direction of presumed influences among variables (Appelbaum & McCall, 1983).

The model chosen in the present study (See Figure 1) focuses on three individual difference variables hypothesized to relate differently to the behavioral and subjective indices of loneliness (Franzoi & Davis, 1984). As indicated in Figure 1, the individual difference variables of self-consciousness



and social anxiety are believed to be stable and enduring (Buss, 1980) and thus precede the behavioral mechanisms in time. Hence, the model specifies that private and public self-consciousness and social anxiety predict tendencies to engage in contact and avoidance behaviors, which in turn mediate the subjective experience of loneliness.

Both the direct and indirect effects of the variables are shown in Figure 1. The path coefficients reported above the arrows represent the unique contribution of one variable to the other with all other variables held constant. The simple correlations, reported in parentheses below the arrows, represent effects which may include other variables. The difference between these two effects can be illustrated by examining the path from avoidance to loneliness. The simple correlation between these two variables is .23,  $p < .05$ . However, when the influence of the three individual difference variables are taken into account, the relationship decreases slightly to .21,  $p < .05$ . This suggests that the simple correlation between avoidance mechanisms and loneliness includes some influence from self-consciousness and social anxiety.

An examination of the direct and indirect effects of the predictor variables on the criterion variable of loneliness presents an ideal method for resolving the conflicting results concerning the behavioral versus subjective aspects of the loneliness experience. The path coefficients from contact and avoidance mechanisms to loneliness show that behaviors which minimize interpersonal contact are associated with higher levels of loneliness, while behaviors which increase interpersonal contact are associated with lower levels of loneliness. While these results are in line with earlier research which states that low levels of social contact lead to loneliness (Jones et al., 1980; McCormack & Kahn, 1980; Russell et al., 1980) they do



not tell the whole story.

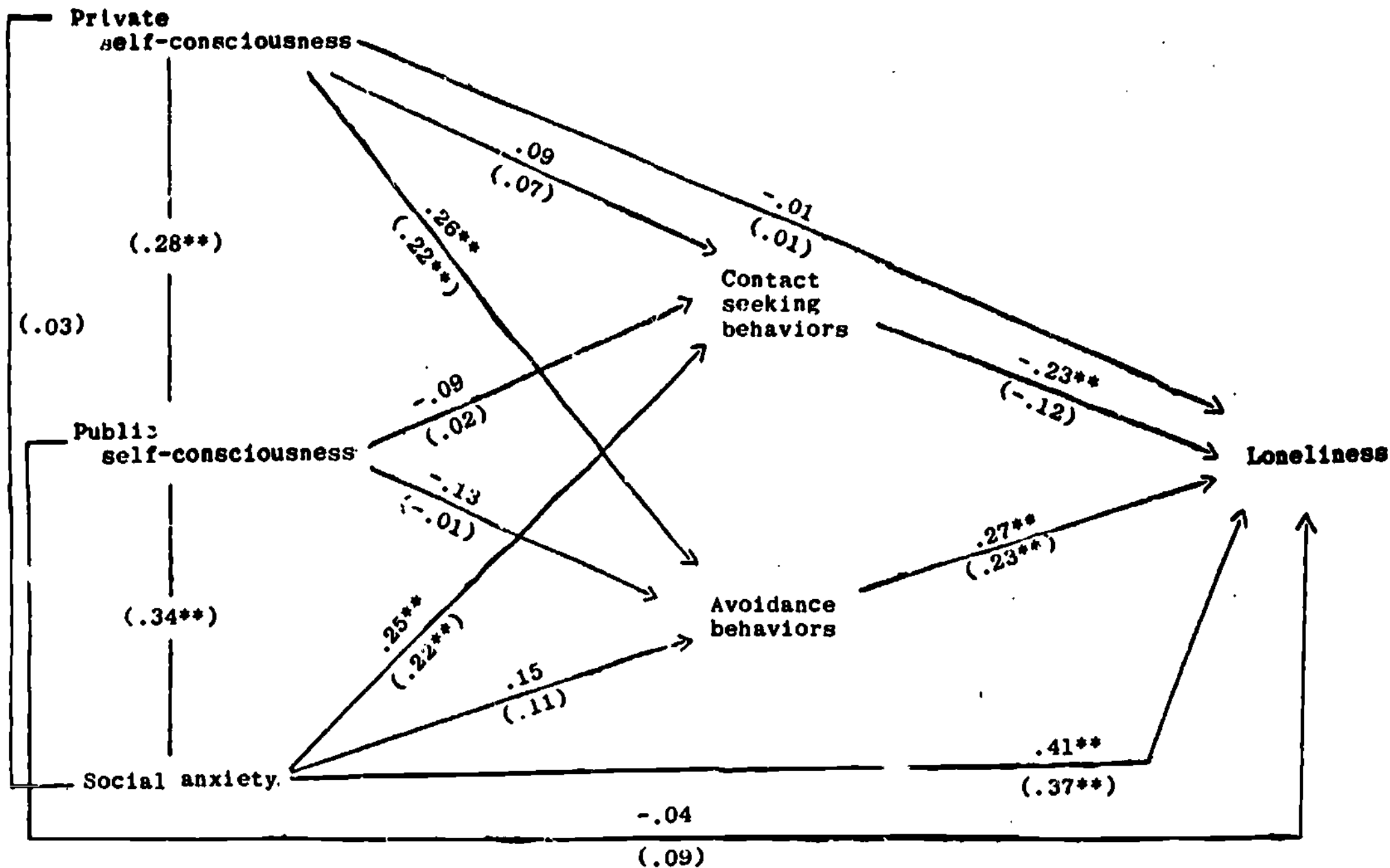
The general association between contact seeking or avoiding and loneliness does not hold for all types of individuals. For example, those high in private self-consciousness use more avoidance mechanisms ( $B = .22$ ,  $p < .05$ ), yet do not experience loneliness ( $B = -.01$ , ns.). Thus although the use of avoidance behaviors generally relates to loneliness, the present results show that certain individuals, those high in private self-consciousness, may engage in avoidance behaviors without becoming lonely. The opposite effect occurs for socially anxious individuals. These individuals use more contact seeking behaviors ( $B = .25$ ,  $p < .05$ ), yet do experience loneliness. Although the use of contact seeking behaviors generally relates to the absence of loneliness, socially anxious individuals establish social contacts but do not alleviate their loneliness ( $B = .41$ ,  $p < .01$ )

The present results demonstrate that strict reliance on behaviors related to social isolation produce misleading conclusions concerning the identification of lonely individuals. As predicted, when the individual difference measures of private self-consciousness and social anxiety are included in the model, the relationship between the quantity of interpersonal contact and loneliness is clarified. In summary, although previous research has noted discrepancies between quantitative and qualitative indices of loneliness, the present research suggests that these discrepancies can be understood when individual differences influence either the amount of social contact needed or the satisfaction of social contact achieved.

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**Figure 1.** Path analysis model linking individual differences to behavioral mechanisms and loneliness.  
**Note.** Numbers above the arrow are path coefficients. Numbers in parentheses are simple correlations.

\*  $p < .05$   
 \*\*  $p < .01$