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CHAPTER 2

Toward a Social Psychology of Loneliness

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Loneliness is a common experience — probably few people avoid being lonely at some time in their life. It is also a distressing experience as many individual accounts bear out. For example, in interviews with journalist Suzanne Gordon (1976) one retired surgeon commented on the loneliness of old age, that, "You are alone, people have died and you look in the mirror and you look awful . . ."; while a middle-aged woman describing her unhappy marriage noted that "There was no one to talk to . . . To me, loneliness and depression were absolutely synonymous". Yet, despite the pervasiveness and importance of the phenomenon, it is only recently that social scientists have attempted a suitably empirical, theoretically-derived study of loneliness (e.g. see Hartog *et al.*, 1980; Peplau and Perlman, in press).

The intention of the present chapter is to review the literature, drawing mainly on current empirical research, and to provide a conceptual perspective on loneliness. We start, therefore, by considering a more formal definition of the concept; in our view loneliness is the unpleasant experience that occurs when a person's network of social relations is deficient in some important way, either quantitatively or **qualitatively**; and although

loneliness may at times reach pathological proportions, we are mostly concerned with "normal" ranges of loneliness among the general public. In this definition there are three general points to be noticed, which are also shared by other definitions that have been offered (see Peplau and Perlman, in press): first, loneliness results from deficiencies in the person's social relations; second, loneliness is a subjective phenomenon (it is not necessarily synonymous with objective isolation, so that people can be alone without being lonely); third, loneliness is unpleasant and distressing.

Conceptually, we draw upon an attributional approach (see Peplau *et al.*, 1979) and view loneliness as a discrepancy between one's desired and achieved levels of social relations. One advantage of this approach is that it draws attention to the levels of social contact that people need or desire as an important set of conditions producing loneliness, whereas, all too often, social scientists have ignored this aspect of the problem and focused solely on the low levels of social contact that people actually achieve. A discrepancy perspective thus gives a more comprehensive picture of the factors that contribute to loneliness and helps us to understand phenomena which might otherwise be anomalous.

A second major advantage of the discrepancy-attributional approach is that it takes account of cognitive factors mediating between interpersonal deficiency and emotional response. Cognitive processes such as causal attributions and perceived control are seen as affecting how we experience our situation subjectively. Most traditional views of loneliness (see Peplau and Perlman, in press), however, emphasize our human needs for intimacy, so that loneliness is seen as the inevitable direct consequence of failure to satisfy these needs and any intervening cognitive processes are almost entirely ignored.

In developing the approach indicated above the chapter will be divided into six parts: (1) the forms and measurement of loneliness, (2) manifestations of loneliness, (3) antecedents of loneliness, (4) cognitive processes that modulate the lonely experience, (5) how people react to loneliness in others, and (6) coping with loneliness.

Forms and Measurement of Loneliness

Forms

Various typologies have been used to distinguish different forms of loneliness (see de Jong-Gierveld and Raadschelders, in **press**) and three underlying factors have each been used in articulating types of **loneliness**.

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The first factor used in classifying types of loneliness can be seen in the writing of Moustakas (1961). He distinguished between *loneliness anxiety* and *existential loneliness*. According to him, *loneliness anxiety* is aversive and results from "a basic alienation between man and man", whereas *existential loneliness* is an inevitable part of the human experience, involving periods of self-confrontation and providing an avenue for self-growth. While it can be painful, it can also lead to "triumphant creation". Thus, Moustakas, like others, sees a positive–negative dimension running through loneliness is the positive form. In this chapter, we will primarily be concerned with what Moustakas calls *loneliness anxiety*.

Time has been used as a second basis of classification schemes. Loneliness can be seen as a temporary "state" perhaps linked to specific events such as moving to a new community; or, it can be seen as a more chronic "trait". The individual can have a short-term loneliness "experience", or s/he can be a "lonely person".

A third way of categorizing forms of loneliness has been on the basis of the social deficiency involved. Weiss (1973) distinguished emotional loneliness (based on the absence of a personal, intimate relationship) from social loneliness (based on the lack of social "connectedness" or sense of community). He believes emotional loneliness is a more acutely painful form of isolation; social loneliness is experienced as a mixture of feeling rejected or unacceptable, together with a sense of boredom.

In all these forms, loneliness is assumed to be an emotionally intense experience. Empirical work by de Jong-Gierveld and Raadschelders (in press) has identified yet one other type of loneliness. People in this group are passively resigned to their fate. Although they may lack both an intimate partner and friendshipsand they may see no end to their condition, they accept their social deprivations as unavoidable and are apathetic in their response.

Measuring loneliness

Researchers have used single items, uni-dimensional scales, and multidimensional approaches to measure loneliness (Russell, in press). In all cases, paper and pencil techniques (or verbal questioning) have been used, probably the most thoroughly developed and widely accepted of which is the University of California, Los Angeles (UCLA) Scale. This consists of twenty statements such as "I lack companionship" and "I am an outgoing person" and respondents taking the scale are instructed: "Indicate how often (never, rarely, sometimes or often) each of the following statements describes you'. Scoring is done in an uni-dimensional manner.

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The UCLA scale performs well on traditional psychometriccriteria. It has a coefficient alpha of 0.94 and reasonably high test-retest reliability. An earlier form of the UCLA Scale correlated 0.74 and 0.72 with two other loneliness measures (Bradley's and Ellison and Paloutzian's). Several "at risk" groups of individuals (divorced adults, prison inmates, individuals seeking help with their social skills) have been administered the scale and, as expected, scored high on loneliness. The scale also has construct validity in that it correlates with activities (e.g. time alone per day) and feelings (e.g. sad) that theorists have linked with loneliness.

Finally, Russell and his colleagues have demonstrated the UCLA Scale's discriminant validity. It measures loneliness, *per se*, not related concepts such as depression, anxiety, or self-esteem. This is crucial not only for measuring loneliness but also for providing confidence in the importance of research findings in this area. If loneliness were inextricably confounded with another concept such as depression, one would always have lingering doubts that the presumed effects of loneliness were really only the result of the other factor. In real life it is probable that loneliness often occurs together with depression, anxiety and/or low self-esteem, but fortunately, the UCLA Scale in combination with careful research techniques permits the identification of loneliness *per se* and its unique consequences.

Manifestations of Loneliness

Several manifestations of loneliness can be identified. In the following section, manifestations of loneliness are divided into four categories: affective, motivational, behavioural and social problems associated with loneliness, of which the emotional or affective manifestations have been the most thoroughly studied.

Affective manifestations

Virtually by definition, loneliness is an unpleasant experience. Fromm-Reichmann (1959) described it as "painful and frightening" and other clinicians have commented on the frequent association of loneliness and depression. Further writers have associated loneliness with such feelings as dissatisfaction (Rubenstein *et al.*, 1979), anxiety (Moustakas, 1961), boredom (Weiss, 1973) and interpersonal hostility (Zilboorg, 1938).

Research provides empirical support for many of these postulated emotional correlates: for example, Sermat (1980) as well as Loucks (1974) reported data linking loneliness with hostility. In a study done at UCLA, Russell *et al.*, (1978) found lonely students were apt to feel "angry", "selfenclosed", "empty", and "awkward". These students also described themselves as tense, restless and anxious. Similar results were obtained among a sample of senior citizens studied by Perlman, Gerson and Spinner (1978).

Another consistent finding has been that lonely individuals have a basically negative outlook: for instance, lonely respondents report being less happy, less satisfied, and more pessimistic (Russell *et al.*, 1978; Perlman *et al.*, 1978). When asked to list and then rate ten activities they did over the proceeding weekend, lonely respondents were less satisfied with how they spent their time (Perlman *et al.*, 1979).

Motivational and cognitive manifestations

Two seemingly contradictory viewpoints have been expressed concerning the motivational aspects of loneliness. On the one hand, some authors consider loneliness arousing: for instance, Sullivan (1953) believed loneliness was a "driving" force. He observed that loneliness motivates individuals to initiate social interaction despite the anxiety such interactions hold for lonely people. On the other hand, some authors believe that loneliness decreases motivation: for instance, Fromm-Reichmann (1959) contended that true loneliness creates a sense of "paralyzing hopelessness and unalterable futility". Similarly, Weiss (1973) claimed that for lonely people, tasks lose their meaning.

In one unpublished survey by Perlman, the answers of lonely respondents indicated apathy: for instance, lonely individuals endorsed such items as "At times 1 feel worn out for no special reason", and "My strength often seems to drain away from me", but rejected the statement "I have a lot of energy". In another study (Loucks, 1974), lonely students were found lacking in "vigor". Naturally, the despondency apparent in this evidence contrasts with the hyperactivity which can be engendered by anxiety.

Several factors may be helpful in resolving the apparently paradoxical motivational properties of loneliness. First, loneliness may arouse motivation for interpersonal contact but diminish motivation for other tasks. Secondly, loneliness may be arousing yet interfere with the effective channeling of one's energies to complete tasks. Thirdly, loneliness may have different motivational properties over time. Perhaps having perceived control over one's loneliness motivates people to seek ways of alleviating their experience. Last, but equally plausible, loneliness may influence the fluctuation in one's motivational state more than its "average" level. In other words, lonely individuals may alternate between periods of high and low motivational arousal.

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Some of the motivational manifestations of loneliness emphasize cognitive processes. Perhaps the most salient of these is vigilance about interpersonal relationships. Weiss (1973, p. 21) commented on vigilance as follows:

"The individual **is** forever appraising others for their potential as providers of the needed relationships, and forever appraising situations in terms of their potential for making the needed relationships available . . . (Loneliness) produces an **oversensitivity** to minimal cues and a tendency to misinterpret or to exaggerate the hostile or affectionate intent of others."

To date, very little systematic evidence has been presented to support these claims. What has, however, been established in several samples (see Jones *et al.*, in press) is that lonely respondents are high in self-consciousness: that is, they dwell on their actions, as well as the impression they think they are making on others.

Besides this vigilance, clinicians have observed that lonely individuals often have difficulty concentrating. The Manitoba data (i.e. Perlman's study) support this insight: lonely respondents were more apt to report being "easily distracted from a task", and, indeed, under distracting conditions, lonely subjects in a lab experiment made more errors in learning a list of paired associates than did non-lonely subjects (Perlman *et al.*, 1979). (There were no differences between the two groups in a non-distracting condition.)

Behavioural manifestations

In thinking about the behavioural manifestations of loneliness, it is at times difficult to distinguish behaviours that accompany loneliness, behaviours that lead to loneliness in the first place, and behavioural strategies for coping with loneliness. In this discussion, we consider social skill deficits in the context of antecedents of loneliness, and we consider affiliative behaviours such as attempting to meet new people, in a section on coping with loneliness.

Three possible behavioural manifestations of loneliness warrant attention. First, to the extent that loneliness creates anxiety or depression, lonely individuals may exhibit some of the characteristic behaviours which frequently accompany these states. Second, evidence shows that loneliness is correlated with a lack of assertiveness (Jones *et al.*, in press). The direction of causality here, is of course, open to debate: while being submissive may predispose people to loneliness, lonely people may also have difficulty mobilizing assertive behaviours. Third, it has been suggested (e.g. Fromm-Reichmann, 1959) that lonely people have difficulty talking about their loneliness with others.

Finally, while some research has been done on manifestations of loneliness, several crucial questions remain unanswered. For instance, do these manifestations inevitably accompany loneliness? Do the various manifestations occur together in one or more cohesive clusters of symptoms? If there is more than one cluster, what are these patterns or types of loneliness? While one tempting research strategy is to identify lonely people via their symptoms, such a technique appears premature. Possibly, such a technique will never be practical.

Social and medical problems

Popular writers have associated loneliness with a variety of social problems such as suicide, alcoholism and even illness: for instance, it has been noted that the death rate for surviving marital partners is atypically high in the period following their spouse's death; and some observers regard this as a consequence of loneliness. In his book, *The Broken Heart: The Medical Consequences of Loneliness*, James Lynch (1977) argued that loneliness also makes people susceptible to serious illness and promotes overuse of medical services. Lynch provided provocative evidence in behalf of his thesis, but it was mostly based on people who were socially isolated and, from our perspective, these individuals need not necessarily be lonely. Rubenstein and Shaver (1980) report a strong relationship between loneliness and a checklist of psychosomatic symptoms such as headaches, poor appetite and feeling tired. However, this checklist combines medical symptoms with cognitive problems (e.g., "worrying") and feelings of self worth.

Further evidence for the link between loneliness and social problems has been reported by Brennan and Auslander (1979). Their study was based on secondary analyses of several large scale surveys of American adolescents, and they found that loneliness was associated with poor grades, expulsion from school, running away from home, and engaging in delinquent acts such as theft, gambling and vandalism.

Antecedents of Loneliness

The possible antecedents of loneliness are numerous and it is useful to distinguish events that *precipitate* the onset of loneliness from factors that *predispose* individuals to become lonely or to persist in being lonely over time. Based on our definition of loneliness, precipitating events may be broadly categorized into changes in a person's achieved social relations and changes in a person's desired or expected social relations. Predisposing

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factors include the usual quantity and quality of one's social relationships, characteristics of the individual (e.g. personality, physical attributes) and more general characteristics of a given situation or culture. Predisposing variables are typically enduring aspects of the person's situation.

From a discrepancy viewpoint, most of these predisposing factors can be conceptualized as variables underlying the amount of social contact that the individual typically achieves and/or desires. Predisposing factors also shape and limit how people react to life changes that might alter the individual's desired or achieved levels of social contact. Thus, we see predisposing factors as putting people at risk of being lonely, but such factors are not necessarily the immediate cause of loneliness. However, independently of the way one conceptualizes the causal chain leading to loneliness, we would expect predisposing variables to be statistically associated with loneliness.

Changes in achieved social relations

Loneliness is frequently precipitated by changes in a person's social relationships that lead to a sub-optimal level of achieved social interaction. These changes may affect a single relationship, or may affect a person's total network of social relations.

Termination. The ending of a close emotional relationship is a common cause of loneliness so that, for example, widowhood has been associated with loneliness by several researchers (e.g. Weiss, 1973). Lopata (1969) reports that 48% of a random sample of urban widows viewed loneliness as the major problem in widowhood, while an additional 22% referred to loneliness in conjunction with other problems. Divorce is an increasingly common phenomenon which is also associated with loneliness (e.g. Weiss, 1973; Gordon, 1976); and at least one study (Hill *et al.*, 1976) finds that the breakup of dating relationships, too, is accompanied by feelings of lone-liness and depression.

Physical separation. In a mobile society, separation from family and friends is a common occurrence. Separation reduces the frequency of interaction, makes the satisfactions provided by a relationship less available, and may raise fears that the relationship will be weakened by absence. Such events as moving to a new community, going away from home to summer camp or to university, or spending extended periods in institutions such as hospitals or prisons all affect social relationships, in addition the requirements of work often impinge on social relations outside of work in the form of business trips, extended hours spent working overtime, or the necessity of moving as part of career advancement. Evidence that physical separation

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Situational changes. A person's desire to be with others is not constant. Instead, it fluctuates frequently depending on the task, the physical setting, the person's mood and the like. Middlebrook (1974) found that nearly all students preferred being alone when tired or embarrassed, and being with companions when happy. **Schachter's** (1959) classic studies demonstrated that situations of stress or uncertainty can influencedesire to be with others. Even holidays and seasonal changes can be important (Gilger, 1976).

Changes in expectations. A person's desired level of social relations is tempered, to some extent, by expectations about the sorts of relations that are possible or likely in a given situation. In some instances, expectations about future social contact help to prevent or minimize loneliness. For example, a woman entering hospital for surgery may correctly anticipate reduced social contacts, and so moderate her desired level of interaction in that situation. In other instances, however, expectations may increase the likelihood of loneliness. A young boy going away to camp may inappropriately expect to make friends quickly, and so raise his desires for social relationships to unrealistically high levels. By affecting the desired level of social contact, expectations may influence the extent of loneliness a person experiences.

The quantity and quality of social contacts

Quantity. Perhaps the most obvious determinant of loneliness is the level of a person's social relationships. Changes in social contacts have already been treated as a precipitating factor in loneliness. Here, we wish to discuss levels of contact, **per se**, as another causal ingredient in loneliness. Naturally, in cross-sectional surveys, reports of one's social relationships can reflect recent changes in one's situation: but, for the most part, we believe such reports reflect on-going levels of one's contacts. We therefore regard the quantitative aspects of one's social relationships as a predisposing factor in loneliness.

There are several indications that lonely people have fewer social contacts than do other people (see Jones, in press). For instance, lonely students have been found to date less, and report fewer social activities, and to spend more time alone; whilst lonely senior citizens have less frequent contacts with their friends (Perlman *et al.*, 1978).

Two interesting anomalies in the overall pattern of results are worth noting. First, in some surveys where global indices have been used, lonely and non-lonely respondents have reported a similar total number of friends. This may be because lonely respondents have a reasonable number of acquaintances but aren't actually very close to these "friends". Secondly, in

puts people at risk for loneliness is readily available: for example Weiss (1973) has noted the difficulties experienced by wives forced to move by their husband's work. However, Rubenstein *et al.* (1979) maintain that the loneliness passes quickly for most people who move to a new community.

Status change. An individual's position within a group or organization has considerable impact on interaction with others both inside and outside the group. As a result, changes in status may lead to loneliness. For example, promotion in a business may weaken ties with former peers, and create loneliness until new peer relations are established. Persons who complete a term as president or chair of a group may also find that their contacts with others are reduced. Similarly, role loss through retirement or unemployment typically disrupts social ties with former co-workers and so may precipitate loneliness (see Rubenstein et al., 1979). Bart (1972) documented the distress felt by mothers when their grown children leave home, and indicated that women who had invested the most in the maternal role suffered the most from having an "empty nest". The acquisition of new roles can also disrupt established social networks. For young adults, both marriage and parenthood may lead to major and often unanticipated changes in contact with friends and relatives (see Dickens and Perlman, 1981).

Changes in desired social relations

Loneliness may be precipitated when an increase in a person's desired social relations is not accompanied by an increase in achieved social relations.

Developmental changes. Age-related changes in a person's capacities and desire for social relations may precipitate loneliness. Sullivan (1953) posited a developmental sequence in which children of different ages have different needs and social skills. In his view, loneliness first becomes possible during the pre-adolescent era, in which a "need for intimacy" is added to earlier needs for tenderness, for peers and for acceptance. A rather different developmental approach is provided by cognitive psychologists who emphasize the growing child's changing intellectual capacities, such as role-taking ability (see Dickens and Perlman, 1981).

Developmental changes in desired social relations undoubtedly occur after adolescence as well. For example, Gail Sheehy (1976, p. 415) suggested that for many professionally successful people, "midlife may be a time to relax ... and put more ... into cultivating friendships, being a companion ..., being more active in the community". Other experiences, such as psychotherapyor consciousness-raising groups, may also encourage individuals to re-assess the importance and the quality of their social relations.

a study where college students recorded their social interactions in a diary for two days, loneliness was not related to the total number of interactions the students had. The lonely diary-keepers did, however, report more interactions with strangers and casual acquaintances and fewer interactions with family and friends. Thus, even if lonely people have a number of brief **superficial** contacts, the overall pattern of data suggests their social contacts are deficient as one would suspect.

The quality of relationships. Loneliness is affected not only by the existence of social relationships and the frequency of social interaction, but also by the quality of relationships and the needs that they meet. For example, among senior citizens, marital dissatisfaction was associated with greater loneliness (Perlman *et* al., 1978). Similarly, in Cutrona's (in press) study of UCLA students, dissatisfaction with one's friendships, dating life, and family relationships were all significant predictors of loneliness. Sermat (1980) suggested that loneliness is fostered by poor communication.

Our contact must also satisfy our needs. Weiss (1973) has delineated six "provisions" supplied by social relationships, which include feelings of

personal attachment (as in intimate relations), social integration, the opportunity to receive nurturance, re-assurance of one's worth, and guidance. In Wess' view, no one relationship is apt to satisfy all these needs and, instead, different kinds of relationships are apt to satisfy different needs. In the aforementioned UCLA study (Cutrona, in press), students rated how well their current relationships supplied them with each of Weiss' six provisions. As predicted, students whose needs were well met tended to be less lonely: in particular, having a set of relationships that provided social integration, a sense of worth, and guidance helped students avoid being lonely.

Thus. both the quantity and quality of social contacts do contribute to loneliness. However, it is worth re-iterating that according to our viewpoint, it is not achieved levels of contact *per se* that are crucial: rather, the relationship of achieved to desired (or needed) levels of contact should be taken into consideration. More will be said about this later in the chapter.

Personal factors contributing to loneliness

Individual characteristics that make it difficult for a person to establish or maintain satisfactory relationships increase the likelihood of loneliness. Such characteristics as shyness, self-esteem and physical attractiveness may affect loneliness in several related ways. First, characteristics that reduce a person's social desirability may limit the person's opportunities for social relations; secondly, personal characteristics influence a person's own behaviour in social situations; thirdly, personal qualities may determine how a person reacts to changes in his or her achieved social relations and so influence how effective the person is in avoiding, minimizing or alleviating loneliness. This section discusses characteristics that predispose individuals to loneliness.

Shyness. Shyness, defined *as* a "tendency to avoid social interactions and to fail to participate appropriately in social situations" (Pilkonis, 1977), may be an important contributor to loneliness. Significant correlations between self-reports of shyness and loneliness have been found by Zimbardo (1977) and Jones *et al.* (in press). Recent work by Pilkonis (1977) has begun to document ways in which shy people's verbal and nonverbal behaviours may hinder social interaction, for instance, by not taking the initiative in conversation. Work by Sermat (1980) has indicated that lonely men are lower in a measure of social risk-taking: while **Cutrona's** research (in press) has indicated that lonely students are introverted and lacking in assertiveness. Thus a cluster of related factors — shyness, low social risk-taking, lack of assertiveness, self-consciousness in social situations — may well contribute to loneliness.

Self-esteem. There is considerable evidence that low self-esteem goes hand in hand with greater loneliness (Loucks, 1974; Cutrona, in press). Jones *et al.* (in press) found a significant correlation between scores on the UCLA loneliness scale and on Coopersmith's self-esteem scale. Sermat (1980) reported that lonely individuals scored lower on the self-regard, self-actualization and inner-directedness subscales of the ShostromPersonal Orientation Inventory. Eddy (1961) found a significant correlation between loneliness and an indirect measure of self-esteem, the discrepancy between the person's actual and ideal self concepts.

The link between self-esteem and loneliness is reciprocal such that low self-esteem (and correlated factors such as shyness and unwillingness to take social risks) may foster loneliness but, at the same time, people with low self-esteem may blame themselves for social "failures" or for having low levels of social contact, and thus reinforce their own low self opinion.

Social skiffs. Weiss (1973) and others have suggested that a lack of social skills, perhaps stemmingfrom childhood, may be associated with loneliness. In some instances, people with adequate social skills may be inhibited from performing effectively by anxiety or shyness. In other instances, individuals may not have learned essential social skills. Whatever the cause, lonely students (see Horowitz *et al.*, in press) report "inhibited sociability", that is, they report problems making friends, introducing themselves, participating in groups, enjoying parties, making phone calls to initiate social activities, and the like.

The argument here is that people with poor social skills have fewer or less satisfying social relationships, and so experience loneliness. A potential

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difficulty with the reasoning is evidence that loneliness is not invariably correlated with objective characteristics of a person's social life. For instance, young adults appear to have mote contacts with friends than do senior citizens (see Dickens and Perlman, 1981) yet loneliness is more prevalent in young adulthood than in old age, Several factors may operate to produce these results. First, measures of "objective" social relationships, corresponding to the achieved level of social relations in our definition, do not consider the individual's desires for the number and kind of relationships to have. Perhaps seniors have fewer social needs than young adults. Our position suggests that objective indices of frequency of interaction are less appropriate predictors of loneliness than are indications. In addition, it seems likely that over time, people with very low levels of social relations.

Regardless of the quantity of their social contacts, emerging evidence suggests that lonely people have a different style of interacting. Warren Jones (in press) videotaped conversations between strangers. Ratings of these tapes showed important differences between the social behaviours of lonely and non-lonely subjects. Lonely subjects made more self-statements, they asked fewer questions of their partners, and they changed the topic more frequently. Furthermore, lonely subjects responded more slowly to their partners' statements. Overall, Jones characterized the interaction style of lonely individuals as "self-focused and non-responsive", and concluded that this style had detrimental effects for the establishment and maintenance of relationships.

Similarity. A consistent finding in research on interpersonal attraction is that, other things being equal, similarity leads to liking (e.g. Dickens and **Perlman**, 1981). This suggests that the match between an individual and the social groups in which he or she participates will affect loneliness. In any given social situation, people who are "different" because of their racial or ethnic background, nationality, religion, age, or interests may be more likely to be lonely.

Demographic characteristics. Some data indicate that loneliness is correlated with gender, marital status, income and age. Although it may only reflect greater willingness to reveal their feelings, more women than men state that they are lonely (e.g. Weiss, 1973). For the UCLA loneliness scale, gender effects are small and usually nonsignificant. Loneliness is lower among married people than unmarried (Weiss, 1973). In one study, when the unmarried group was further subdivided, loneliness was higher among widowed and divorced people than among singles, who did not differ from marrieds (Gubrium, 1974). There is some indication that loneliness is

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higher among the poor (Weiss, 1973). Finally, while loneliness can occur at any age, it may be more common at particular points in the life cycle, especially late adolescence (Rubenstein *et al.*, 1979).

Childhood antecedents. Two findings from surveys (see Rubenstein *et al.*, 1979) regarding the childhood antecedents of loneliness are worth noting. First, people whose parents got divorced experience greater loneliness: the earlier the divorce occurred, the greater the sense of loneliness. Secondly, lonely respondents remembered their parents as being remote, less trustworthy, and disagreeable, whilst other respondents remembered their parents as warm, close, and helpful. Similar findings have been reported by Brennan and Auslander (1979, p. 200). They sum up their evidence by saying that lonely adolescents come from families manifesting "an absence of emotional nurturance, guidance or support. The climate is cold, violent, undisciplined, and irrational". Among other findings, their lonely adolescents reported higher levels of parental rejection, more parental use of rejection as a form of punishment and greater parental dissatisfaction with their choice of friends. Finally, lonely offspring felt their parents gave them very little encouragement to strive for popularity.

Cultural and situational factors contributing to loneliness

Both broad cultural values and characteristics of specific social situations may contribute to loneliness.

Cultural values. Sociologically oriented theorists have seen loneliness as resulting from cultural factors that prevent people from establishing satisfactory relationships. Bowman (1975) identified increased social mobility and decreased contacts with primary groups as key sources of loneliness. Riesman *et al.* (1961) characterized Americans as "other-directed", overconcerned about the evaluation of others to validate self worth: yet Riesman noted that "paradoxically (the other-directed person) remains a lonely member of the crowd because he never really comes close to others or to himself" (1961, p. 22). Slater (1970) emphasized a basic conflict between American values of competition, uninvolvement and independence on the one hand, and human needs for community, engagement and dependence on the other.

The conclusion reached by many sociologists is that pervasive cultural values emphasizing competition, rugged individualism and personal success increase the incidence of loneliness. These values affect the behaviour of individuals, and are reflected in the structuring of social institutions. Thus we might expect that in cultures such as China, where co-operation and group

achievement are stressed, loneliness is less frequent (cf. Zimbardo's discussion of shyness, 1977).

Social norms. An individual's own expectations and desires for social relations are importantly affected by social norms. According to Gordon:

"It is clear to the teenager that he or she should have a date after school, and it is clear to the average man or woman that he should have a mate, **family**, a circle of friends." (1976, p. 15)

Cultural expectations for social relationships change with age. For instance, while it is appropriate for young children to have their primary emotional attachment to their parents, young adults are expected to develop new attachments to dating partners and later to a spouse. When a person's social relationships do not keep pace with age-related changes in normative standards for relationships, he or she is likely to feel lonely.

One illustration of social norms can be seen in research by Larson *et al.* (in press). High school students were asked to wear electronic paging devices and, whenever they were paged, they indicated whether they were alone or with others and they indicated how lonely they were feeling. If students were alone on week nights, they reported only moderate feelings of loneliness, but students who were alone on Friday or Saturday nights reported intense feelings of loneliness. Here the expectation that weekends are for social activities appears to be changing students' reactions.

Situational constraints. In any social setting, factors that increase the frequency of interaction and foster group cohesiveness should affect the incidence of loneliness. This includes values (e.g. the extent to which a work group is competitive), but extends to other normative and structured factors in the situation as well. For example, a well-documented finding (e.g. Dickens and Perlman, 1981) is that physical proximity fosters liking. As a result, the architecture of housing units affects social interaction and friend-ship formation. The individual who lives or works in a physically isolated location may tend to be socially isolated as well.

Cognitive Processes that Modulate the Loneliness Experience

As indicated earlier, the discrepancy between desired and achieved social relations is typically perceived by the individual and labelled as loneliness. But, according to a cognitive perspective, this discrepancy does not lead directly and inevitably to loneliness. Several factors may affect the self-labelling process and the intensity of the person's reactions to their situation, and cognitive processes play a central role in modulating the loneliness

experience. This section discusses how causal attributions, social comparison processes and perceptions of personal control affect loneliness. We will start however, with labelling.

Labelling

It is sometimes difficult to label subjective experiences accurately i.e. to decide if one is really lonely, or to distinguish loneliness from other psychological states such as anxiety or depression. Cultural beliefs about the nature of loneliness and when loneliness typically occurs may affect self-labelling. For instance, it is considered reasonable for a child to be homesick and lonely on a first trip to camp; and it is appropriate to feel lonely when a person has just moved to a new city. To some extent, people may match their own social situation with cultural definitions of loneliness, and so use social cues as guides to labelling their personal experience.

Cross-cultural studies suggest that language may also play a part in the self-labelling of loneliness. According to Robert Levy's (1973) ethnography of the Tahitians, there exist "no . . . terms for loneliness in the sense of being depressed or sad because of the lack of friends, companionship, and so on" (p. 306). Although Levy notes that the lack of specific vocabularly does not mean that this state is unexpressible, themes of loneliness were nonetheless rare in his interviews. In contrast, Jean Briggs' (1970) portrait of Eskimo life suggests that the Eskimo have several different words for loneliness. Hujuujaq is the most general term, meaning "to be unhappy because of the absence of other people". Pai refers more specifically to "being or feeling left behind; to miss a person who has gone". Finally tumak indicates being "silent and withdrawn in unhappiness, especially because of the absence of other people." It is interesting to note that the first term suggests a sort of angry loneliness including "hostility" whereas the latter suggests a more sad and depressed pattern of loneliness. The ways in which linguistic categories and folk understandings affect the experience of loneliness is an interesting area for further investigation.

Causal attributions

The search to understand the causes of lonelinessis not limited to researchers and mental health professionals since lonely people are themselves also motivated to explain the reasons for their loneliness. For both groups, understanding the causes of loneliness is a first step toward predicting, controlling and ultimately alleviating loneliness. The growing body of psychological research on attribution theory indicates that people's own explanations for the causes of their behaviour can have important effects on their self esteem, expectancies for the future, affective reactions, and coping behaviour.

Of various attributional models, the work of Weiner and his colleagues (see Weiner *et al.*, 1978) is most relevant to our purposes. He has applied attribution theory to the achievement domain and this focus is useful for understanding loneliness because, in most western societies, one's social relationships are an indication of success; as Gordon (1976) observed about Americans, "To be lonely is to have failed". Weiner has demonstrated that causal attributions can be classified along two primary dimensions: locus of causality (internal or personal, versus external or situational) and stability (stable versus variable over time). For instance, saying "Tm lonely because I'm unattractive" would represent an internal, stable attribution whereas saying "I'm lonely because I've just moved" would represent an external, unstable attribution. More recently, Weiner has proposed the addition of a third dimension of *controllability*, which concerns whether or not people perceive themselves as having control over the factors that caused their behaviour.

Consequences of attributions

According to Weiner's model, the stability dimension is especially important for the person's future expectancies. Perceiving that loneliness is due to stable causes should lead a person to anticipate prolonged loneliness; unstable causes should lead to greater optimism about improving one's social life. The locus of attributions should have greater impact on the person's self-esteem, with self-blame and lowered self-worth accompanying internal attributions. Predictions linking attributions to affective states are somewhat more complicated (Weiner *et al.* 1978): internal attributions for loneliness should magnify feelings of shame and inadequacy but stable, internal attributions should heighten depression-related affects of feeling hopeless, helpless, aimless, or depressed. Finally, Weiner suggests that the , dimension of controllability is most closely related to other people's evaluations of and liking for the lonely individual.

Several studies conducted at UCLA (Michela *et al.*, 1980; Peplau *et al.* 1979) have tested the applicability of Weiner's model to loneliness. One study (Michela et *al.*, 1980) examined students' perceptions of common causes of loneliness and found that dimensions of internality, stability and control were salient in lay conceptions of loneliness. Other studies of self-attributions for loneliness (summarized in Peplau *et &.*, 1979) have corroborated the proposed link between stable causes for loneliness and pessimism or low expectancies for the future. Evidence has also been found

that feelings of depression are most likely to accompany loneliness when self-attributions are stable and internal. In the college samples, such relatively infrequent attributions for loneliness as low physical attractiveness and fear of rejection were associated with particularly high levels of depression.

Antecedents of attributions

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Given the potential importance of attributions for the experience of loneliness, it is useful to consider how people make inferences about causality. Kelley (1967) and others have identified a number of principles concerning the attribution process. Their work suggests that lonely people should be most likely to make internal or personal attributions when they (1) feel lonely in many different situations (low distinctiveness), (2) know that most other people in similar situations are not lonely (low consensus), and (3) feel lonely over time (high consistency). In contrast, if loneliness is felt in only a few situations and is felt by others in those same situations, then external or situational attributions are more likely.

Two important implications of this analysis should be noted: first, prolonged loneliness should foster internal, stable attributions (results from studies of college students, Peplau *et al.* 1979, indicate that the duration of loneliness is related to internality of attributions); secondly, people may avoid talking about their loneliness, thereby creating a situation of pluralistic ignorance. If this is the case, lonely people may overestimate the uniqueness of their response, and assume that most other people have satisfactory social lives. This should also foster internal attributions.

Social comparison and perceived control

In the process of evaluating a social deficiency, several factors besides attributions may act to modulate one's experience of loneliness. In assessing one's social relations, social comparisons with others in similar situations may be important (Pettigrew, 1967). The lonely new college student may compare his or her success in making new friends to that of other students, and believing that others are doing better at making friends may increase feelings of loneliness. Evidence in support of this view comes from a longitudinal study of new students at college (Cutrona, in press). She found that loneliness was strongly related to satisfaction with one's social relationships, which in turn was related to comparisons with both one's peers and one's own previous relationships. It appears that social comparison processes may affect how large or important a social deficit is believed to be.

A final modulator of the loneliness experience is the extent to which an individual can exercise *personal control* over his or her relationships to

achieve a desired level of contact. Existing evidence suggests that feelings of personal control may generally reduce stress (Averill, 1973) and enhance performance. More directly relevant evidence that personal control affects loneliness comes from a field study conducted in a nursing home for the aged, where the investigator, Schulz (1976), had undergraduates visit the elderly for a two-month period. The elderly residents who could choose or predict when their visitors would come reported less loneliness than residents whose visitor just dropped in, even though the total interaction time in both conditions was identical. Additional evidence bearing on this theme comes from a study of the break-up of college dating relationships where, although both members of a couple typically reported loneliness and depression as a result of the break-up, partners who wanted the relationship to end and initiated the break-up were less distressed (Hill *et al.*, 1976).

How People React to Loneliness in Others

Once people have become lonely, their friends and acquaintances may perceive and react to them in distinctive ways. On the one hand, these reactions can be considered the consequence of loneliness, so we have waited to discuss reactions to lonely people until after having considered the antecedents and moderators of their condition. However, on the other hand, reactions to lonely people can also become self-fulfilling prophecies that cause or perpetuate loneliness. Thus, these reactions could also have been discussed in the section of the chapter on the antecedents of loneliness.

How do others react to lonely individuals? While friends and acquaintances sometimes respond with warmth and compassion, this is not invariably the case, and the opposite tendency (for others to reject and avoid lonely people) has frequently been noted. Fromm-Reichmann (1959, p.6). suggested that "the lonely person may be displeasing if not frightening to his hearers, who may erect a psychological wall of ostracism and isolation around him as a means of protecting themselves". In her view, an attempt to defend against loneliness may also explain why so few researchers have investigated loneliness. Weiss has observed that "our image of the lonely often casts them as justifiably rejected" (1973, p. 12). An analysis of how people respond to lonely others must consider the interplay of several factors.

Stereotypes of lonely people. It has commonly been suggested that stereotypes of the lonely are harsh and negative, and Weiss (1973, p. 12) asserted that lonely people are seen as "unattractive, shy, intentionally reclusive, undignified in their complaints, self-absorbed and self-pitying". Gordon

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(1976, p. 217) stated that even being "single" may be suspect: "to admit to being single would be to admit to having committed a cardinal sin in our culture — that of being unable to attract or hold a mate". Reactions may be especially harsh for single women. Lonely people are unsuccessful, inadequate people whom Riesman *et al.* (1961) characterized as "somehow pathetic without being tragic". If these postulated, stigmatizing stereotypes are widely held, they undoubtedly make it difficult for people to acknowledge their loneliness to others.

The available evidence suggests that Weiss, Gordon and Riesman were essentially correct. For instance Horowitz *et al.* (in press) had students describe a person they considered to be lonely, by writing down statements describing that person's thoughts, feelings and behaviour. Via cluster analysis, the predominant features of the lonely person were grouped into three main categories. According to the first set of descriptions, lonely people are stereotyped as isolated, different, separate from others, unloved and inferior; secondly, lonely people are perceived as bringing their condition upon themselves by avoiding social contacts and isolating themselves; thirdly, lonely people are seen as lacking trust in others as well as feeling angry and depressed.

Normative factors. Social norms help to define who should receive sympathy, and what situations merit support rather than rejection. For example, relatives and close friends should be accorded understanding and support in times of suffering. Similarly, norms prescribe that some situations, such as being recently widowed, are occasions for sympathy. Negative reactions should be more common when the lonely person is not known well, when the circumstances leading to loneliness are unknown or somehow suspect, and when the loneliness has continued for a long time.

Cost-reward considerations. Interaction with lonely people may often entail many costs and provide few rewards. To the extent that a lonely person lacks social skills, is highly anxious or depressed, or is unusually self-focused, interaction with him or her may not be very enjoyable. In interactions with a lonely person, others may feel constrained, for example, not to talk about their own successful social life or not to suggest activities that may make loneliness more salient. Lonely people may be perceived as making demands for emotional support, for advice, and ultimately for the establishment of a new relationship with the non-lonely other. While attention from a lonely person may be rewarding, there may be doubts about the lonely person's motives. Gordon (1976, p. 29) comments that "whomever is sought out of desperation will feel degraded by the sense that he or she is being used". It is more flattering to be sought out by a popular person than by one without friends. Thus in general the rewards of interacting with a lonely person may be limited but two major exceptions to this generalization should be noted. First, people may react more positively if the lonely person is a high status or very attractive newcomer. In this instance, loneliness is attributable to situational factors, and the possibility of establishing an enduring relationship may have considerable appeal. Second, reactions to loneliness should be more positive if there is a pre-existing relationship with the lonely other. If the lonely person is a spouse, relative or friend, there may be a long history of shared helping and support, and the expectation of future reciprocity of nurturance. In this instance, being able to help an intimate may be perceived as rewarding.

Attributional factors. Reactions to a lonely person are affected by causal attributions about why the person became lonely or has continued to be lonely. Gordon (1976) suggested that, just as lonely people blame themselves for loneliness, so, too, observers may also blame the lonely, and hence react negatively. There are some data (Peplau *et al.*, 1979) to document the impact of perceived causal attributions on evaluations of lonely people. It appears that sympathy and liking are greatest for lonely people who are judged to have had little control over the initiation of their loneliness, and who have made an effort to overcome their loneliness.

Personality factors. Certain people may be more likely to sympathize with lonely individuals and this capacity to empathize with the lonely may be facilitated by personal experiences of loneliness, and by perceptions of being similar to the lonely individual. In a study of psychological androgyny, Bem *et al.* (1976) found that students whose self-conceptions were androgynous or feminine reacted more effectively in interactions with a confederate describing himself as a lonely transfer student than did those with masculine self-conceptions. Individual differences in beliefs about the extent to which people can control their outcomes as measured by scales of locus of control (e.g. Rotter, 1966) or belief in a just world (e.g. Rubin and Peplau, 1975) may also be relevant.

Regardless of whatever individual differences there may be in responses to lonely people, as we indicated earlier, we believe these responses may have implications for the persistence of loneliness since negative stereotypes and reactions may aggravate loneliness whilst sympathy and efforts to extend social support may help alleviate the problem of loneliness.

Of course, other people's reactions are not the only factor in how well people deal with loneliness: lonely people use a number of strategies to alleviate their condition, and helping professionals also have various therapeutic techniques for intervening (see Rook and Peplau, in press). In the last section of this chapter, we will review people's own efforts to

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overcome loneliness and consider outcome research done to evaluate the success of therapy for alleviating loneliness.

Coping with Loneliness

In line with our definition of loneliness, it is convenient to categorize coping strategies into three broad groups. Coping strategies may alter (1) the desired level of social contact, (2) the achieved level of social contact, and (3) the importance and/or perceived magnitude of the gap between desired and achieved levels of contact.

Changing one's desired level of social contact

One general approach to "loneliness management" is to reduce one's desired level of contact, which may be accomplished in at least three different ways.

Adaptation. Over time, people's expected and desired levels for social relations tend to converge to their achieved level. For instance, Lowenthal (1964) found that old people with a long history of social isolation, who had been "loners" for some time, were less likely to report feeling lonely than old people with higher levels of social participation. Weiss (1973, p. 228) commented on the possibility that over time lonely individuals might "change their standards for appraising their situations and feelings, and, in particular, that standards might shrink to conform more closely to the shape of bleak reality". Weiss does not, however, view this as an adequate solution to loneliness.

Task choice. A second way people can alter their desired level of social contact is to select tasks and situations that they enjoy alone. Consider a person who enjoys reading alone, but only likes to go to movies with a companion: this person might avoid arousing feelings of loneliness by spending the evening reading rather than going to the movies alone. Interviews that Robert Brown (1979) has conducted with hermits and other loners suggest that people who seek prolonged solitude have well-developed repertoires of activities they find enjoyable doing alone. Some clinicians (see Rook and Peplau, in press) have gone so far as to suggest greater involvement in solitary activities as a useful way of alleviating loneliness. People who use this response to loneliness, report getting lonely less often (Rubenstein and Shaver, 1980).

Changed standards. A third technique which people use to reduce their desired level of social contact is to change their standards for who is acceptable as a friend. **As** an example of this phenomenon, consider a professional who usually forms friendships with other high status professionals: if this person became lonely, he or she might be willing, even happy, to form friendships with a **much** wider set of people. In the UCLA study (Cutrona, in press), increased satisfaction with one's friendships was a strong predictor of recovering from loneliness.

Achieving higher levels of social contact

Perhaps the most obvious way of overcoming loneliness is to establish or improve social relationships, and in the UCLA study, "finding a boyfriend1 girlfriend" was perceived as being the best way to overcome loneliness. One can think of many ways of achieving higher social contact: making oneself more physically attractive, joining clubs, initiating conversations with other people, deepening existing relationships and the like.

In the UCLA study, Cutrona (in press) divided the initially lonely students into those who, during the year, did and did not overcome loneliness. In this study, neither a change in dating statusnor the strategies used to form relationships had statistically significant effects on overcoming loneliness. However, as we would expect, a change in number of friendships was important: students increasing their friendship networks decreased their loneliness. Similarly, loneliness is less frequent and more transient for people who react to it by visiting or calling a friend (Rubenstein and Shaver, 1980).

Minimizing loneliness

A third major way to cope with loneliness is to alter the importance and/or perceived magnitude of the gap between desired and achieved levels of social interaction. At least four variations on this theme can be identified: first, lonely people may simply deny that there is a discrepancy between their desired and achieved levels of social relations; secondly, lonely people can devalue social contact and rationalize their plight by saying that other objectives are more important, or by contending that loneliness is a "positive growth experience", thirdly, people can try to reduce lonelinessinduced deficits by gratifying their needs in alternative ways (for instance, if loneliness threatens a person's sense of self-esteem, he or she might engage in non-social means of bolstering self-regard); finally, people can engage in behaviours designed to alleviate the negative impact of loneliness. One

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example of this, consistent with speculation linking loneliness to alcoholism and drug use, would be drinking "to drown one's sorrows".

Therapeutic interventions

Given the diversity of factors that may precipitate and perpetuate loneliness, no single cure-all is likely to be found, but many strategies may be useful when appropriately employed (Rook and Peplau, in press). Our analysis of loneliness suggests a few guidelines for their use.

First, to be effective, interventions should be tailored to the specific problems of the lonely individual: a recent widow may need temporary social support whereas a college student who has never been on a date may need help with his/her social skills. The fairly extensive research on "hetero-sexual-social anxiety" (reviewed by Curran, 1977) suggests three specific approaches to aiding students who are fearful of dating. Depending on the individual, therapy might emphasize desensitization to overcome anxiety, the correction of faulty self-evaluations of performance in social settings, or social skills training to build a more adequate behavioural repertoire. A comprehensive analysis of the antecedents of loneliness and of the interactional styles of lonely people (Jones, in press) will undoubtedly facilitate the design of successful therapeutic interventions.

Second, interventions to help the lonely may need to consider the lonely individual's own explanations for the causes of his or her distress. Peplau et al. (1979) suggest that people may often underestimate the importance of *situational causes* of loneliness and overestimate the role of personal factors. On theoretical grounds, we would expect this tendency to be especially clear in cases where loneliness is severe and enduring. Consistent with this view in Cutrona's (in press) longitudinal study of UCIA students, attributing loneliness to internal, personal causes in the fall was associated with loneliness persisting over the academic year. Overestimating the importance of personal factors is encouraged by the emphasis in both folk wisdom and psychological thinking on a characterological theory of loneliness (Weiss, 1973). In fact, loneliness typically results from a poor match between the individual's interests, social skills or personal characteristics and his or her social environment. Careful consideration should be given to the interaction of both personal and situational causes for loneliness. Lonely people may also tend to underestimate the potential changeability of causes of loneliness. For example, they may focus on irrevocable precipitating events (e.g., the death of a spouse), rather than on factors that impede the development of a new, more satisfactory social life. These maintaining causes of loneliness, such as shyness or limited opportunities to meet people, may be more

Summary and Conclusions

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We have now come full cycle in this review. We started with defining the concept and analyzing what leads up to it; then we indicated how cognitive factors moderate the intensity of affective reactions to deficits in sociability, and subsequently indicated how others react to lonely people; finally, we have indicated ways of reversing the process or alleviating loneliness.

At this time (circa 1981), loneliness is a topic ripe for research. Studies have documented that loneliness is an unpleasant and widespread experience. Loneliness is also associated with a variety of social problems, such as juvenile delinquency, alcohol abuse and suicide. The research literature on loneliness is relatively small (and thus easier to master) yet flourishing: and useful theoretical concepts and data collection instruments have been developed. Although the experimental manipulation of loneliness by researchers may be difficult and raises ethical issues, alternative research strategies have proved fruitful. Initial efforts to investigate loneliness empirically have been rewarded and available evidence suggests that psychologists are beginning to learn how to help people alleviate loneliness. Yet despite these advances in the field, many important questions remain unanswered.

All these factors make loneliness an attractive topic for research. Whatever else happened to the study of loneliness in the later 1970s, perhaps the most important development was that this research came "out of the closet". Loneliness is now justifiably a social science topic in good currency!

amenable to change. We would advise directing clients' attention to factors they can control.

Third, we believe lonely individuals should be encouraged to view their world more positively. Some degree of negativism may reflect the reality of their situations, but some of it is undoubtedly due to a negativity bias in their evaluations. For instance, after interacting with a randomly assigned stranger, lonely subjects rated their partners more negatively than did non-lonely subjects, an effect that appears to be in the eye of the beholder (Jones, in press). We believe that curbing such negative perceptions should help people overcome their loneliness.

Finally, efforts to reduce loneliness must go beyond the individual to consider social and cultural factors that foster loneliness. As Gordon (1976, p. 21) noted, "Mass lonelinessis not just a problem that can be coped with by the particular individuals involved; it is an indication that things are dramatically amiss on a societal level". Social institutions might consider ways to assist such at-risk groups as new students, transferred business executives and their families, or nursing home residents. In addition, social programs for other groups such as the newly divorced or widowed who are not associated with a particular institution are useful. Indeed, it seems likely that interventions aimed at specific problems — such as retirement or moving to a new community — may be more effective than interventionsdirected more globally at "loneliness".

Outcome research on the success of therapy for alleviating loneliness

Although therapy outcome research on the treatment of loneliness is limited, it is encouraging. In our opinion, one of the most noteworthy studies was done by Jones (in press) and his colleagues. Jones' research group had identified three unique characteristics of the way lonely people interact in conversations: (a) they make fewer other-references and ask fewer questions of their partner; (b) they change the topic more often; and (c) they delay longer in filling gaps in the conversation. Jones therefore developed a short "social skills training program" to help studentsovercome these interpersonal deficits, incorporating explanation, modelling, practice with prompting, and feedback on the students' performance of target behaviours. Compared with a no treatment and a placebo treatment (conversation only) control group, the skills training produced desired changes in the participants' interactional styles and it reduced their loneliness. Indeed, the magnitude of the reduction in loneliness was appreciable compared to that reported in most psychological research.