

SOCIAL BONDING AND LONELINESS AFTER NETWORK
DISRUPTION: A LONGITUDINAL STUDY OF EAST
GERMAN REFUGEES

(Received 6 July, 1994)

ABSTRACT. After the 1989 breakdown of the communist system, 235 East Germans were interviewed three times during the two years following their transition to West Berlin. In moving to the west, the migrants had to deal with various stressors, among them the lack of social ties in their new environment. Fortunately, the number of their new friends increased steadily, and loneliness declined. These changes, however, differed between sexes and age groups. Men made more friends than women, in particular same-sex friends, whereas women knitted ties with both sexes. The young built larger networks than the intermediate age group. Loneliness emerged as an inhibiting factor in the bonding process. The study demonstrates how well these refugees coped with a social crisis. It also examines the roles that loneliness and social bonding played in the readjustment process.

KEY WORDS: migrants, refugees, life crisis, friendship, social networks, loneliness

Human beings establish and change personal relationships throughout their life courses, due partly to an innate affiliation motive and partly to a number of functions that serve pleasure, reproduction, and social survival (for an overview, see: Adams and Blieszner, 1989; Bell, 1991; Duck, 1990; Kelley et al., 1983). In times of crisis, social bonds can dissolve, which would make a stressful reestablishment of networks necessary. This process has been documented by recent research on critical life events, coping with stress, and social support (cf. Albrecht and Adelman, 1987; Auhagen, 1990; Bell, 1991; Cohen, 1988; Duck and Silver, 1990; Eckenrode, 1991; Hobfoll, 1988; Schwarzer and Leppin, 1989, 1991, 1992). The breakdown of close dyadic relationships, for example by divorce or death (Stroebe and Stroebe, 1983), has been studied extensively, but the consequences of network disruption of large groups by migration is not that well documented (Kim, 1987; Lin, 1988).

The present study deals with changes in social integration and loneliness within a sample of migrants and refugees who have been facing a stressful life event. It is argued that the experience of migra-

tion stress as well as the experience of macrosocial changes are reflected in the unique way how individuals cope with network losses and how they attempt to rebuild their social resources to regain their previous levels of quality of life. Moreover, it is examined how the quality of one's social life is expressed in the degree of loneliness. The social bonding process following severe network losses can be understood as a striving for quality of life by overcoming recent social deprivation. In turn, the emergence of a new network and the prevalence of low levels of loneliness can be considered as social indicators among others. Knowledge about network size, network density, frequency of contacts, and subjective feelings about one's embeddedness serves to gauge mental health and human functioning, thus, contributing to social indicators research.

The decision to flee one's home country has far-reaching and severe consequences. This can be considered a non-normative critical life event (see Cohen, 1988; Montada et al., 1992). As with other critical events (such as loss, accident, divorce, illness, etc.), the corresponding psychological crisis may have a tremendous impact on an individual's personality development, psychosocial functioning, and health. It is not only necessary to cope with daily hassles that arise after migration, especially crowded living conditions in camps or gyms upon arrival, but also with the threat of long-term unemployment and the need to establish a new social network. Thus, the migrants are disadvantaged not only by higher demands than previously, but also by their heightened individual vulnerability towards stress because they have to deal with the loss of their vocational and social ties as well (Hobfoll, 1988, 1989; Jerusalem and Schwarzer, 1989, 1992; Lazarus, 1991).

After migration, people are in need of a substantial reestablishment of networks, including friendships and intimate relationships. The migrants lose their home environment – sometimes under dangerous circumstances – and are no longer sheltered by protective factors such as family, jobs and housing. This delineates a situation of cumulative stress. Leaving behind one's friends and family can sometimes be a relief or a challenge, but in most cases it is a loss. Although the anticipated benefits in the new community may outweigh the social losses, another support system has to be created from scratch nevertheless.

There are also individual differences in making friends. Not everyone is successful in social bonding after network disruption. Those who remain unemployed, for example, are at a disadvantage compared to those who can meet people on the job. Persons who migrate with a spouse, a relative or a friend could benefit reciprocally from each other's attempts at meeting people. Extravert, outgoing and gregarious people would find it easier to get in touch with others than introvert, anxious and lonely ones (Jones and Carver, 1991; Jones et al., 1986).

Study Context and Research Questions

In 1989, more than 300,000 East German citizens left their country and moved to West Germany. As part of this exodus, more than 50,000 migrants settled in West Berlin. Some came via the West German embassies in Warsaw, Prague or Budapest, or fled the country under other dubious and dangerous conditions, whereas a larger number crossed the border after the fall of the Berlin Wall on November 9, 1989. The aim of this study was to investigate the coping and adaptation processes of these migrants in their new environment. It was expected that during the readjustment process the number of new friends would increase significantly. Sex differences in social bonding were also expected because the literature documents gender-specific friendship patterns (Bell, 1991). Since same-sex friendship is commonly preferred, it was assumed that women would make more female friends and men more male friends. Since social integration is considered an antidote to loneliness, this finding should be expected in the present data set. Negative associations between loneliness and number of friends were hypothesized. The focus of the present analysis lies on the research questions of (a) whether individuals overcome loneliness and succeed in knitting new ties, (b) how well men and women do so, and (c) whether there are age differences, and (d) whether loneliness may inhibit social bonding.

METHOD

In early November, 1989, before the opening of the Berlin Wall, a study was launched to gain more detailed knowledge about the adaptation and coping processes of refugees from East Germany. The

project was planned as a longitudinal study with three measurement points during the first two years after moving. Shortly after their arrival in West Berlin, the East Germans were individually contacted in their temporary living quarters and were asked to take part in a psychological investigation on their adaptation process in the West. Participation was voluntary and was guaranteed anonymous. Instead of indicating names or addresses, a numerical code was agreed upon in order to correctly assign each person to the longitudinal data set. The first wave took place in Fall/Winter 1989/1990, the second-wave data were obtained in Summer 1990, and the third wave was collected in Summer 1991. The participants filled out a questionnaire measuring, among other variables, loneliness and number of friends since migration.

Participants

The present analysis was performed on the basis of 235 migrants who had participated in all three waves. These 126 males (mean age = 31 years, $SD = 9.25$) and 109 females (mean age = 32 years, $SD = 10.39$) had arrived in West Berlin in 1989. At the onset, 63 of the men and 72 of the women were either married or had a partner.

Measures

Social bonding was assessed in the following way: At each wave, it was asked whether the person had met new friends in the West since arriving and whether these were men or women. The options were "1", "2", "3", "4", and "5" or more." This choice was preferred over an open format in order to avoid unrealistic numbers. It is of note that Germans usually have less than five friends since – unlike the American meaning of the expression – the term "friends" refers to "close or best friends." It would have been even better to let the respondents write down the initials and indicate the quality and function of the specific relationships, but the study was originally designed for other purposes and the instrument, therefore, had to be brief.

Loneliness was measured by our German adaptation of the UCLA loneliness scale (Russell et al., 1984), which contains 20 items such as "I fell alone" or "I feel isolated from others." All items were

endorsed on a four-point Likert-type scale. Its internal consistency was $\alpha = 0.88$.

RESULTS

At Wave 1, the migrations met an average of 2.07 new friends. This increased cumulatively to 3.71 at Wave 2, and to 4.59 at Wave 3. Obviously, a great amount of social bonding took place after the migration to West Berlin. The gender of the new friends was predominantly male, with an average of 1.40 at Wave 1, 2.41 at Wave 2, and 2.69 at Wave 3. The corresponding averages for women were 0.68, 1.29, and 1.91, respectively. The following sections will describe this change process in more detail.

Men Made More Male than Female Friends

The bonding process for men is reflected by an increasing number of friends over the two-year period with an average number of new female/male friends of 0.59/1.53 at Wave 1, 0.94/2.65 at Wave 2, and 1.52/3.15 at Wave 3. Thus, the number of their male friends was more than twice as large as that for their female friends at each point in time. It was expected that males would differ from females in their affiliation behaviors, but the psychological cause for these differences cannot be determined here completely. Commonly, men meet several buddies at work or leisure, whereas they rarely have more than one female friend or spouse. The present data, however, do not allow a clear distinction between the roles that friends play in the life of the migrants. For example, one cannot find out whether a man met a woman for dating purposes or for companionship on the job.

Women Made Initially More Male than Female Friends

While the men met more same-sex friends, the females met more opposite-sex friends. The average number of women's new female/male friends is 0.78/1.24 at Wave 1, 1.70/2.14 at Wave 2, and 2.15/2.10 at Wave 3. This bonding pattern of women can have several reasons. Women could, for example, be more inclined to seek potential life partners to secure their emotional or other needs, or they could have been attractive targets for male wooing attempts.

Another reason could be that they did not meet many other women in the early stage after migration before they found a job, whereas later on they met women at work.

Initially, there were differences in women and men when it came to bonding. In a repeated measures ANOVA with Gender as the between-subjects factor, the number of new male friends did not differ significantly (1.53 by males versus 1.24 by females) at Wave 1. The same applied to new female friends (0.59 by males versus 0.78 by females) at Wave 1. One year later, the difference between men and women in terms of social bonding reached borderline significance ($p = 0.05$), with 2.65 same-sex and 2.14 opposite-sex male friends. Bonds with female targets were tied differently: 0.94 opposite-sex and 1.70 same-sex female friends. At the third point in time, again two very significant differences emerged: Men made 3.15 male friends, and women made 2.15 male friends. In addition, men made 1.52 female friends, and women made 2.35 same-sex friends.

The interaction between gender and time was very significant for *new female friends* as the dependent variable ($F(2,466) = 3.98$; $p = 0.019$). This is reflected by a “scissor effect” with continuously more same-sex female friends as time passed by. For *new male friends* as the dependent variable, a scissor effect also emerged as indicated by a significant Time \times Gender interaction ($F(2,466) = 3.35$; $p = 0.036$).

More Intimate Relationships were Established

The majority of migrants did not come as signals to West Berlin. Half of the men and two thirds of the women had a partner. A “partner” could be a married or an unmarried intimate partner, whereas couples who were separated or divorced counted as singles. However, many close relationships broke down during or shortly after the migration and, therefore, a high degree of social mobility took place. The percentages of women/men who reported to have a partner at each point in time was 67%/63% at Wave 1, 71%/60% at Wave 2, and 73%/64% at Wave 3. There is an increase over time ($F[2,444] = 3.22$; $p = 0.041$), and more women than men had a partner ($F[1,222] = 3.99$; $p = 0.047$). This does not mean that it was always the same partner. For example, those who broke up after the migration could

have found a new partner at Waves 2 or 3. A person who was counted as a friend at Wave 1 could have become an intimate partner at Wave 3. It even could not be excluded that a specific network member had been counted twice, once as a close friend and again as an intimate partner, since the line between the two roles is sometimes hard to draw.

Young People Made More Friends than the Intermediate Age Group

The variability in age in the present sample ranged from 13 to 67 years at the onset of the study; the median age was 29. Two thirds of the migrants were between 19 and 39 years old. It was expected that the young would be more likely to recruit a larger number of network members than the old. Quantity and quality of personal relationships can differ not only by gender but also by age. Therefore, a two-way repeated measures ANOVA was computed with Gender and Age as between-subjects factors. Age was trichotomized with 89 persons below 28 years, 74 between 28 and 37, and 72 above 37 years. The Time factor comprised the three waves. Dependent variables were the numbers of new male and female friends, respectively.

For *new male friends*, two main effects emerged: Gender ($F(1,229) = 6.52$; $p < 0.001$) and Age ($F(2,229) = 9.71$; $p < 0.001$). Men made more same-sex friends, and younger people were more successful in knitting ties. Within subjects, there was a strong increase of bonding over time ($F(2,458) = 41.92$; $p < 0.001$), whereas the interactions failed to reach significance: Gender \times Age, $F(1,229) = 1.05$; $p = 0.35$, Gender \times Time, $F(2,458) = 2.79$; $p = 0.063$, Age \times Time, $F(4,458) = 2.07$; $p = 0.084$, and Gender \times Age \times Time, $F(4,458) = 2.07$; $p = 0.084$. Men tended to make more male friends over time than women, and younger people – especially males – tended to be more successful than older ones.

For *new female friends*, the pattern was somewhat different. There was a main effect for Gender ($F(1,229) = 13.70$; $p < 0.001$), but Age was not significant ($F(2,229) = 2.63$; $p = 0.074$). The Time factor was the strongest ($F(2,458) = 47.76$; $p < 0.001$), and an interaction between Time and Gender emerged ($F(2,458) = 4.67$; $p < 0.01$). Women made continuously more same-sex friends over time, as already shown above.

The social bonding pattern of the young subsample is reflected by an average number of new female/male friends of 0.70/1.65

TABLE I
Correlations between age and number of new friends

	Women (<i>n</i> = 109)	Men (<i>n</i> = 126)
Number of new male friends		
Time 1	-0.17	-0.12
Time 2	-0.17	-0.43**
Time 3	-0.29*	-0.40**
Number of new female friends		
Time 1	-0.10	-0.20
Time 2	-0.12	-0.22*
Time 3	-0.14	-0.20

Note. * $p < 0.05$; ** $p < 0.01$

at Wave 1, 1.57/2.93 at Wave 2, and 2.25/3.37 at Wave 3. The corresponding average scores of the intermediate subsample are 0.72/1.30, 1.18/2.57, and 1.74/2.58, and those of the older subsample are 0.61/1.08, 1.15/1.60, and 1.65/1.96, respectively. The young group (below 28 years) delineates an impressive augmentation of social ties within the two-year observation period. The trend is the same for both male and female new friends but the level is higher for male targets. In the intermediate group (28 to 37 years) almost the same pattern emerged, but it was less pronounced. In the older group (above 37 years) the increase has flattened. There were fewer friendships acquired over time. Although all three age groups started out with similarly small friendships networks ("floor effect"), the younger migrants made up for it quickly within two years. It is speculated that at least the young migrants have socially adapted after two years and further network enlargement has become less likely.

Another approach to identify the possible influence of age on the bonding process is to correlate age with number of friends at three points in time, separately for men and women. Table 1 shows the results.

All coefficients are negative and indicate decreasing bonding with age. But age is not relevant at the onset of the study, which may be due to specific circumstances of Wave 1 that reached part of the sample immediately after arrival in West Berlin. The strongest association

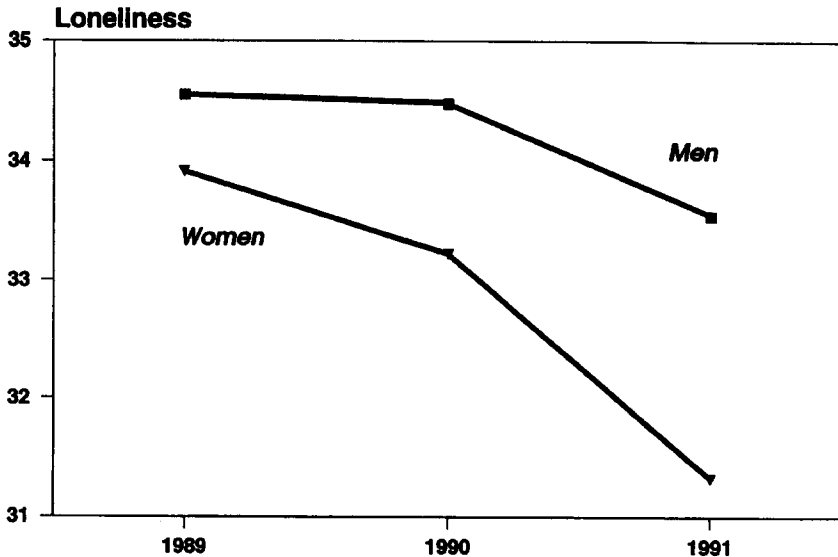


Figure 1. Loneliness in men and women.

surfaced for men who met same-sex friends preceding Wave 2 and Wave 3. Being a young man seems to be a favorable prerequisite for social network reestablishment.

Women Tended to Feel Less Lonely Over Time

It was expected that men might be somewhat more lonely than women because Borys and Perlman (1985) had found in a meta-analysis of 28 studies with the UCLA Loneliness scale that men scored higher in four of these. But more important here was the expectation that the more the migrants knitted ties with friends in the West, the less lonely they would feel. A one-way repeated measures ANOVA with Gender as between-subjects factor was computed for loneliness at three times. No between-subjects main effect emerged, but a Time effect ($F(2,446) = 7.56; p < 0.001$). Although there was no interaction between Time and Gender, a downward trend for women became visible, but hardly for men. Figure 1 displays the cell means. The 20-item UCLA loneliness scale scores could range from 20 to 80.

Initial Loneliness Appeared to be a Socially Inhibiting Factor

The process of knitting ties is partly determined by situation factors such as availability of potential friends or attractive mates at work, school or other places. But there are also psychological factors that influence the likelihood of making friends. Extraverted and outgoing people get more easily in touch with others than shy and withdrawn people (Jones and Carver, 1991). Loneliness could be considered a motivating force because one can expect lonely persons to feel a desire to reach out and make contact in order to overcome loneliness. However, loneliness represents also a negative emotional state that could inhibit instrumental social action. Loneliness is usually associated with anxiety and depression. In the present data set, the correlations ranged from 0.34 to 0.58 with anxiety, and from 0.50 to 0.66 with depression, depending on the measurement point in time. Therefore, loneliness is more likely to impair bonding attempts than to facilitate them.

Loneliness was measured at each wave and was related to the number of new friends. Table 2 contains the correlations between loneliness and network building, separately for men and women. All coefficients were negative, indicating that lonely people made less friends than sociable people (the label "sociable" serves here to indicate the opposite pole of loneliness).

Most important are the lagged correlations because they can indicate a possible causal influence, although they cannot prove it. In particular, loneliness at Time 1 predicted less bonding at Time 2 (-0.30 for women) and loneliness at Time 2 predicted less bonding with new male friends (-0.29 for women and -0.34 for men) and with new female friends (-0.29 for men) at Wave 3.

Another approach to clarify this connection was done with a two-way repeated measures ANOVA with Gender and Loneliness as between-subjects factors. Loneliness at Time 1 (dichotomized) was chosen to allow predications of later bonding. Dependent variables were new male and female friends, respectively. The earlier found Time main effect and the Gender \times Time interaction were replicated in both within-subjects analyses (see above). For new male friends, two between-subjects main effects emerged, Gender ($F(1,226) = 10.17$; $p < 0.002$) and Loneliness ($F(1,226) = 11.84$; $p < 0.001$). For new female friends, also two between-subjects main effects emerged,

TABLE II
Correlations between loneliness and number of new friends

		Loneliness		
		Time 1	Time 2	Time 2
Number of new male friends				
Time 1:	Men ^a	-0.22	-0.20	-0.19
	Women ^b	-0.28*	-0.13	-0.16
Time 2:	Men ^a	-0.21	-0.31**	-0.24
	Women ^b	-0.30*	-0.33*	-0.31**
Time 3:	Men ^a	-0.19	-0.34**	-0.33**
	Women ^b	-0.22	-0.29*	-0.35**
Number of new female friends				
Time 1:	Men ^a	-0.16	-0.16	-0.15
	Women ^b	-0.22	-0.04	-0.06
Time 2:	Men ^a	-0.15	-0.18	-0.19
	Women ^b	-0.28*	-0.35**	-0.30**
Time 3:	Men ^a	-0.16	-0.29**	-0.23*
	Women ^b	-0.21	-0.19	-0.24

Note. ^a $n = 123$; ^b $n = 102$

* $p < 0.05$; ** $p < 0.01$.

Gender ($F(1,226) = 11.68$; $p < 0.001$) and Loneliness ($F(1,226) = 9.30$; $p < 0.003$). There were no interactions with the loneliness factor. Figures 2 and 3 display the cell means.

Figure 2 (new male friends) illustrates that the loneliness effect is mainly due to the particular social bonding of women at Wave 2. Sociable women gained more friends than lonely women between the first two points in time. The same appears in Figure 3 (new female friends). The major difference between these two figures is that men made more same-sex friends and women made more opposite-sex friends, as was already demonstrated above.

DISCUSSION

This study provides an abundant research example of social bonding after a breakdown of social networks by migration. Integrating into an unfamiliar community and foreign society can be considered a

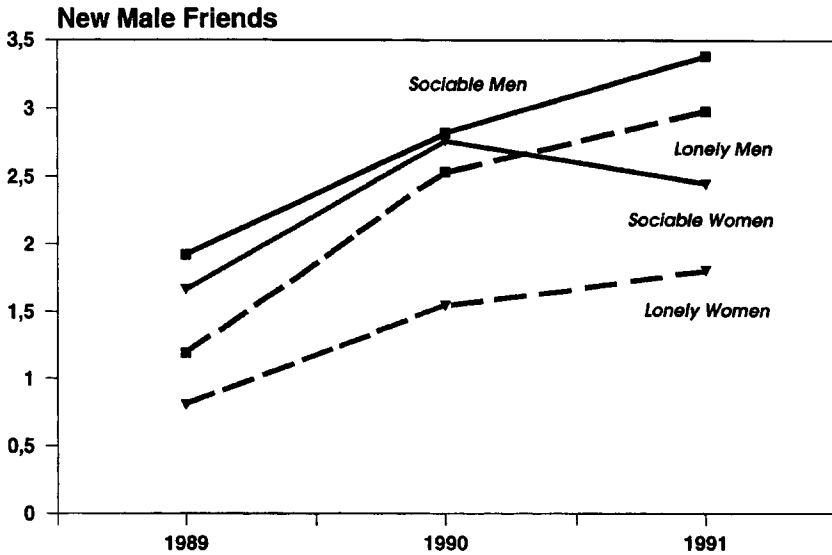


Figure 2. Number of new male friends by differently lonely men and women.

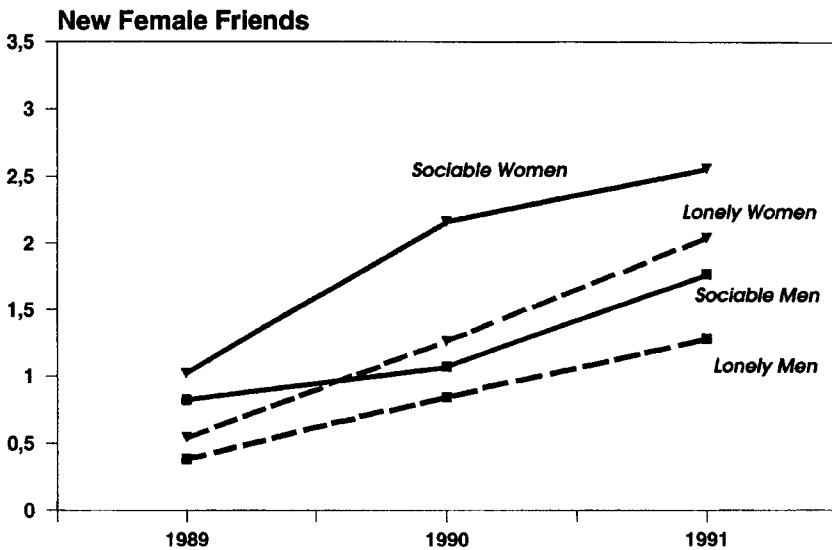


Figure 3. Number of new female friends by differently lonely men and women.

stressful experience that adds to other stressors of migration such as unemployment, financial insecurity, and lack of housing. The East Germans under study have been successful in establishing new social ties, a process that occurred in conjunction with a continuous

decline in anxiety and depression, as was found in a different analysis (Schwarzer et al. 1993). In such a situation, active networking represents an instrumental way of coping with a social crisis. Due to missing language barriers the process of social integration most probably was made easier than it is for those migrants who cross language and cultural borders.

It turned out that loneliness seemed to operate as an inhibiting factor, predicating poorer social bonding at subsequent points in time. It would be important in further analyses to search for facilitating factors, for instance interpersonal self-efficacy (Schwarzer, 1992). People who firmly believe that they are capable of initiating social contacts and regulating social interactions should be more efficient in establishing support networks. Loneliness is somewhat confounded with social integration and social support and thus hardly appears to be suitable to serve as a clearly identifiable causal antecedent of these two phenomena.

The present analysis was limited to social bonding and loneliness and did not aim at further effects. But it is obvious that friendship can have beneficial effects on psychosocial adaptation, well-being, and health. Self-reported health was indeed superior in persons who received social support compared to those who lacked support; in particular, support was able to buffer the deleterious impact of prolonged unemployment, as we have shown recently (Schwarzer et al., in press). Further analyses should deal with the possible effects of friendships on these variables.

The main limitation of this study lies in the lack of information about detailed social encounters that took place after migration. It would have been an advantage to know more about the frequencies of social contacts, ratings of social distance, and perceptions about the distinct roles that friends played in the coping and adaptation process. More data on the quality of interpersonal relationships and its dynamics are required to get the full picture (Bradbury and Fincham, 1991; Clark and Reis, 1988). Further studies on the migrants' social bonding should take this into account.

ACKNOWLEDGEMENT

We are grateful to Ann E. Auhagen, Dietmar Kleine and Mary Wegner for their assistance in this research.

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