

Continuity and Discontinuity of Attachment from Infancy through Adolescence

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This study reports relations between infant Ainsworth Strange Situation classifications, negative life events, and Adolescent Attachment Interview classifications. Overall, the stability of secure versus insecure classification was 77%, and infant attachment classification was a significant predictor of adolescent attachment classification. Chi-square analyses indicate that negative life events are significantly related to change in attachment classification. The sample ($n = 30$) is drawn from the Family Lifestyles Project (FLS), an ongoing longitudinal study of children's development within the context of nonconventional family lifestyles. The distribution of family lifestyles within this study, unlike those in the full FLS sample, represent a higher proportion of conventional two-parent families (40%). There were no differences between adolescents reared in conventional or nonconventional families in the distribution of adolescent attachment security, the experience of negative life events, or the continuity of attachment from infancy through adolescence.

INTRODUCTION

This study examines the stability and continuity of attachment security from infancy through adolescence. It extends our understanding of attachment by exploring continuity beyond childhood in adolescents who have been reared in both conventional and nonconventional family contexts. By studying attachment in this group we can examine how attachment functions within a broader definition of family and family life. The adolescents in this study are drawn from the Family Lifestyle Project (FLS),¹ ongoing longitudinal study of the influence of nonconventional family lifestyles on children's development. The FLS families at the beginning of the project were evenly distributed across five major lifestyles: single mothers, domestic living groups (loosely affiliated groups of nonrelated adults and children), creedal communal groups, unmarried cohabitating couples ("social contract" couples), and a comparison group of conventional two-parent families. The subsample of families and adolescents included in this study represent a higher proportion of conventional families (40%) than that found in the full FLS Project. Never-

theless, the sample does differ from the more traditional family contexts usually included in developmental research.

Generally it is assumed that attachment should remain stable over time. Various models may account for this stability. Bowlby (1982) proposed that infants in their development of attachment relationships also form internal working models of themselves and the social world. Although change in this internal working model is possible, over the course of early childhood the internal working model becomes less flexible and consciously accessible and so may be less susceptible to change. An alternative model focuses on the environmental supports for attachment; stability in this framework rests on the notion that environments tend to be relatively stable and so continuity of attachment is maintained by the environment rather than a within-person characteristic (Lamb, Thompson, Gardner, & Charnov, 1985). These two models are difficult to isolate in the real world and are not directly tested in the current study. However, the study does examine environmental circumstances that might support or disrupt attachment continuity. In general, we would expect that factors influencing change in attachment would include disruption in the caregiver-child relationship through separation or loss and general family stressors, which may reduce the caregiver's ability to provide. In this study, these factors are more likely to occur in the families with nonconventional lifestyles.

¹ FLS began in 1973 under the leadership of Bernice T. Eiduson and colleagues (Alexander, 1978; Eiduson, Cohen, & Alexander, 1973; Eiduson & Weisner, 1978). The project is currently directed by Thomas S. Weisner, Department of Psychiatry, University of California, Los Angeles.

This is one of three long-term longitudinal studies assessing infant attachment. See Waters, Hamilton, & Weinfield, "The Stability of Attachment Security from Infancy to Adolescence and Early Adulthood: General Introduction," for an overall view of study design, measures, and supporting references.

There were no initial differences in the distribution of infant attachment classifications across the various family lifestyles. Over the sample as a whole the proportions of secure and insecure infant attachment classifications were similar to those found generally in the United States (Bernstein, Zimmerman, & Eiduson, 1981). Although potential risk factors associated with nonconventional lifestyles did not seem to influence initial infant attachment security, these potential risks may have a greater impact on the continuity of attachment over time. Nonetheless, changes in family circumstances occurred at a much higher rate in nonconventional families than would be expected in more traditional families with young children. Throughout their early childhoods, children in the nonconventional families experienced more frequent changes in family composition (e.g., by the time children were 4 years old, 84% of the conventional families remained intact versus only 52% of the social-contract families; Eiduson, Kornfein, Zimmerman, & Weisner, 1982). These patterns of instability in family configuration persisted throughout childhood. Financial stresses were also more prevalent in nonconventional families; overall household income was lower and less predictable than that found in conventional families. Nonconventional parents were also more likely to experiment with and regularly use drugs themselves and to expose or involve their children in drug use (Garnier & Weisner, 1992).

Elevated life stresses and changes in family circumstances may pose challenges for children as they develop. Although no differences due to family lifestyle were found in early childhood across a variety of cognitive, physical, or socioemotional outcomes in the FLS Project (Weisner, 1986), some differences did begin to emerge as children entered school. Children in more unstable families with lower commitment to their alternative lifestyles had lower academic achievement than those from conventional families or from nonconventional families with more commitment to their alternative values (Weisner & Garnier, 1992). Children in nonconventional families were also exposed to or involved in more parental drug use than those in conventional families and this exposure was associated with less competent behavior in elementary school (Weisner & Garnier, 1992) and in later increased rates of adolescent drug use (Garnier & Weisner, 1995).

This study examines the continuity of attachment from infancy through adolescence in a sample of families many of whom were actively experimenting with family lifestyles and social roles. This study also examines the influence of negative life events by using the common events identified by Waters, Hamil-

ton, and Weinfield (2000) as well as extended maternal-child separations and parental drug use. These two events have particular relevance to this sample. Some of the communal families featured periods of maternal-child separation as part of their structure. Parental drug use has been more frequent among the nonconventional parents and does seem to have some negative effect on child outcomes.

METHOD

Sample. The original FLS sample consisted of 205 American families representing conventional two-parent families ($n = 51$) and nonconventional families (53 social contract couples, 26 families in domestic living groups, 45 single mothers, and 30 families in creedal communes). Families were recruited during the mothers' third trimester of pregnancy (see Weisner & Garnier, 1992, and Weisner & Wilson-Mitchell, 1990, for a full description of the sample and sampling methodology). Through middle childhood there was very little sample attrition, and 95% of the data on school achievement are complete through age 12. The adolescent follow-up of these families was primarily based on mailed questionnaires and surveys. Limited resources were available to conduct the in-depth interviews required for the administration of the Adult Attachment Interview (AAI), therefore, a subsample of the FLS adolescents was selected. Three strategies for subsampling were considered: randomly sampling from the full FLS sample, sampling based on representing the overall distribution of infant attachment, and sampling to overrepresent adolescents with insecure infant attachment classifications. The third strategy was used to ensure that the less frequently occurring insecure classifications were represented adequately in the analyses.

Method. Families were contacted by mail as part of the larger follow up of FLS families that was in progress. Forty-nine adolescents within the full FLS sample had insecure infant attachment classifications. Twenty-nine of those adolescents were inaccessible because of family relocation outside of the project location. Twenty adolescents with insecure infant attachment classifications (6 with resistant classifications and 14 with avoidant classifications) were targeted for inclusion in the current study. Two families were not located. Twelve adolescents with avoidant infant attachment classifications and 6 adolescents with resistant infant attachment classifications were included in the final subsample. Twelve adolescents with secure infant attachment classifications were also included. In contacting the adolescents with secure attachment histories, four adolescents initially identi-

fied for inclusion in the subsample were subsequently excluded and replaced. In two of these families the adolescent was attending college outside of the geographical area, one family declined to participate, and the fourth family and adolescent, although agreeable, proved difficult to schedule. One set of fraternal twins (both boys) was included in the subsample; both had been classified as avoidant in infancy.²

The distribution of family lifestyles in the subsample is disproportionate to the full sample in which only 25% of the families were categorized as conventional. The distribution of family lifestyles across the subsample at birth was 17% ($n = 5$) social contract couples, 7% ($n = 2$) domestic living groups, 27% ($n = 8$) single mothers, 10% ($n = 2$) creedal communes, and 40% conventional. Although in the full sample there was no association between family lifestyle group and infant attachment classification, in the subsample infant insecurity in the subsample was significantly associated with conventional lifestyles.

At the adolescent follow-up, family organization included 14 two-parent married couples (including one lesbian couple and two stepparent families), 15 single parents (including two fathers) and one communal group (both biological parents, now divorced, and with new partners were present in the household). The adolescents' average age was 17½ years ($range = 17$ to 19 years).

PROCEDURES AND MEASURES

Infant attachment. Infant attachment was assessed at 12 months by using the Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978). In the full FLS sample, 76% ($n = 153$) of the infants were classified as secure, 15% ($n = 30$) as avoidant, and 10% ($n = 19$) as resistant. Reliability was initially established through pilot samples and careful and systematic training of raters. Raters obtained 90% agreement before data collection. Reliability was assessed periodically throughout the data collection and differences were resolved by consensus (see Bernstein et al., 1981, for a full description of the 12-month procedures).

Negative life events. The negative life events were those identified in Waters et al. (2000). Two additional negative life events were included because of the particular nature of this sample: prolonged physical separation of mother and child in early childhood (greater than 6 months), which was a feature associated particularly with some communal groups and parental drug

² All analyses were run separately including only one of the twins. Results did not differ from those conducted with the full sample.

use. Scoring of these events was based on a full review of all case materials, which included contemporaneous interviews with parents and adolescents about changes in their lives, as well as summaries of the interviews conducted with the parents(s) at child ages 12 months, 3 years, and 6 years; descriptive notes of home observations and testing at child age 6 years; summaries of school observations and interviews with teachers at grades 1/2, 3/4, and 5/6; school records, and logs of phone contacts made by project staff from birth through adolescence. The full case history of each adolescent was reviewed and the presence of each discrete negative life event was noted. The presence or absence of negative life events was unambiguous and all coding was done by the author.

Adolescent Attachment Interview (AAI). The author interviewed adolescents by using the adolescent version of the AAI (George, Kaplan, & Main, 1984). All interviews were audiotaped and later transcribed for analysis. The author, trained by Mary Main and Erik Hesse, scored the transcripts in accordance with the procedures developed by Main and Goldwyn (1991). Interrater agreement, based on a subset of the cases ($n = 15$) was 80% ($\kappa = .67$) across the three scoring categories, Secure, Dismissing, and Preoccupied. Percent agreement across the classifications ranged from 75% (Dismissing) to 100% (Preoccupied). The second rater was trained by the author; in all cases the scores of the more experienced rater were used.

RESULTS

Adolescent attachment. Nine adolescents were classified as secure and 21 as insecure (13 Dismissing and 8 Preoccupied). No adolescent received a primary Unresolved classification.

Attachment stability. Table 1 contains the crosstabulation of infant and adolescent attachment classification. Sixteen of the adolescents classified as insecure in infancy were also classified as insecure in adolescence. Seven adolescents remained secure. Overall,

Table 1 Infant and Adolescent Attachment Classifications

| Adolescent Attachment | Infant Attachment | | | Totals |
|-----------------------|-------------------|--------|-----------|--------|
| | Avoidant | Secure | Resistant | |
| Dismissing | 8 | 4 | 1 | 13 |
| Secure | 1 | 7 | 1 | 9 |
| Preoccupied | 3 | 1 | 4 | 8 |
| Totals | 12 | 12 | 6 | 30 |

Note: $t(4) = .23, p < .01$.

77% of the adolescents retained the same classification over time (54% expected by chance, $\kappa = .49$, $p < .01$). Analysis based on three-way classifications was similar. Sixty-three percent of the adolescents retained the same classification. Continuity of attachment from infancy through adolescence was assessed by using Goodman and Kruskals τ . τ is a measure of predictive association and is robust to uneven distributions in the dependent variable (Reynolds, 1984). Infant attachment classification predicted adolescent attachment classification, $t(4, n = 30) = .23$, $p < .01$.

Negative life events. The total number of negative life events ranged from 0 to 4 ($M = 1.27$). The incidence of individual events varied considerably. Divorce was the most frequently occurring event; fully half of the families experienced a divorce or mate separation sometime before adolescent follow-up. Parental substance abuse also had a high frequency and was present in nine families. The remaining events were infrequent (one or two occurrences across the sample as a whole) and no adolescent experienced the death of a parent.

The influence of negative life events on the continuity of attachment was assessed by using a 2 (no event versus one or more events) \times 4 (stable secure, stable insecure, secure in infancy-insecure in adolescence, insecure in infancy-secure in adolescence) χ^2 analysis. Negative life events were associated with the continuity of attachment, $\chi^2(3, n = 30) = 10.70$, $p < .05$. Negative life events seemed to operate primarily in terms of maintaining insecure attachments. Adolescents with stable insecure attachments were most likely to have experienced one or more negative life events (Table 2). In contrast, negative life events were equally likely to have occurred in adolescents with stable secure classifications.

Family lifestyles. There were no differences in the distribution of adolescent security in nonconventional and conventional families, $\chi^2(1, n = 30) = .52$, *ns*) or the experience of negative life events, $\chi^2(1, n =$

30) = .81, *ns* or in the likelihood of retaining the same attachment classification, $\chi^2(1, n = 30) = 3.14$, *ns*.

DISCUSSION

The relevance of early experience to later development is one of the basic questions raised in developmental research. What, if any, continuity exists across the lifespan and what processes influence change and continuity? In this study the quality of the relationship formed by infants with their mothers was meaningfully associated with their attachment representations in adolescence. Change in attachment classification to some extent was related to the presence or absence of negative life events. However, negative life events seemed primarily to support an early trajectory identified by insecure infant attachment.

Bowlby (1982) has suggested that the continuity of attachment is maintained primarily through the infant's formation of an internal working model of self and other that is then carried forward by the individual. The results from the present study do not rule out the internal working model as the process underlying continuity but they do suggest that, at least for insecure infants, the environment may also exert an influence. Adolescents who retained an insecure attachment classification were also more likely to have experienced negative life events. Whether internal or external forces supported this continuity is unclear. For infants with secure attachment relationships the picture is less clear. Half of these children did experience negative life events, which suggests that secure attachment may serve as a protective factor and that these children were possibly more resilient to life stresses. A more in-depth examination of the stresses experienced by these adolescents suggests that the negative life events experienced by secure adolescents were qualitatively different and potentially less stressful than those experienced by those who became insecure.

For example, divorce rates were quite high in this sample and occurred in both adolescents with insecure and secure attachment representations. Three families of adolescents with secure attachment representations experienced divorce; these divorces happened late in childhood or adolescence and were reported by parents to be relatively free of acrimony. In contrast, divorce in the families of adolescents who remained or became insecure was more likely to occur in early childhood (10 out of 13 divorces were in early childhood) and was often accompanied by contemporaneous reports by parents and observers of high degrees of marital conflict (eight families reported such conflict). Five of the mothers in these

Table 2 Association between Attachment Continuity and Negative Life Events

| Infant-adolescent Attachment | Negative Life Events | | Total |
|------------------------------|----------------------|-------------|-------|
| | None | One or More | |
| Secure-secure | 3 | 4 | 7 |
| Secure-insecure | 1 | 4 | 5 |
| Insecure-insecure | 1 | 15 | 16 |
| Insecure-secure | 2 | 0 | 2 |

Note: $\chi^2(3, n = 30) = 10.70$, $p < .05$.

families, and none of the mothers of secure adolescents, reported incidents of spousal abuse. Divorce, as well as other negative life events in the families of adolescents with insecure representations, was likely tied to a constellation of negative life stressors, which in turn supported and maintained insecure parent-child relationships. Negative life events in the families of adolescents with secure representations were more likely to be isolated events.

Identifying connectedness between early experience and later development points to the important role of attachment in development. This continuity is not a phenomenon limited to more traditional middle-class patterns of childrearing. Continuity of attachment does not seem to be a factor unique to conventional family structures. What is not clear from this study and what should be pursued in future are the processes that maintain continuity and stability.

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REFERENCES

- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Alexander, J. (1978). Marriages without weddings: Changes in the American family. Unpublished manuscript, Institute for Clinical Social Work, Los Angeles.
- Bernstein, M., Zimmerman, I. L., & Eiduson, B. T. (1981, August). Attachment behaviors of infants reared in alternative life styles. Paper presented at the annual meeting of the American Psychological Association, Los Angeles.
- Bowlby, J. (1982). *Attachment and loss*. New York: Basic Books.
- Eiduson, B. T., Cohen, J., & Alexander, J. (1973). Alternatives in child rearing in the 1970s. *American Journal of Orthopsychiatry*, 43, 720-731.
- Eiduson, B. T., Kornfein, M., Zimmerman, I. L., & Weisner, T. S. (1982). Comparative socialization practices in traditional and alternative families. In M. E. Lamb (Ed.), *Non-traditional families: Parenting and child development* (pp. 315-346). Hillsdale, NJ: Erlbaum.
- Eiduson, B. T., & Weisner, T. S. (1978). Alternative family styles: Effects on young children. In J. H. Stevens, Jr. & M. Mathews (Eds.), *Mother/Child father/child relationships* (pp. 197-221). Washington, DC: National Association for the Education of Young Children.
- Garnier, H. E., & Weisner, T. S. (1995, April). Countercultural and nonconventional family lifestyles, family values, and adolescent substance use. Paper presented at the biennial meeting of the Society for Research in Child Development, Indianapolis.
- Garnier, H. E., & Weisner, T. S. (1992). Countercultural drug use then and now: A 16-year longitudinal study of children growing up in drug-using families. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- George, C., Kaplan, N., & Main, M. (1984). *Attachment interview for adults*. Unpublished manuscript, University of California at Berkeley.
- Lamb, M. E., Thompson, R. A., Gardner, W., & Charnov, E. L. (1985). *Infant-mother attachment*. Hillsdale, NJ: Erlbaum.
- Main, M., & Goldwyn, R. (1991). *Adult attachment rating and classification*. Unpublished manuscript.
- Reynolds, H. T. (1984). *Analysis of nominal data*. Newbury Park, CA: Sage Publications.
- Waters, E., Hamilton, C. E., & Weinfeld, N. S. (2000). The stability of attachment security from infancy to adolescence and early adulthood: General introduction. *Child Development*, 71, 678-683.
- Weisner, T. S. (1986). Implementing new relationship styles in conventional and nonconventional American families. In W. Hartup & Z. Rubin (Eds.), *Relationships and development* (pp. 185-206). Hillsdale, NJ: LEA Press.
- Weisner, T. S., & Garnier, H. (1992). Nonconventional family lifestyles and school achievement. *American Educational Research Journal*, 29(3), 605-632.
- Weisner, T. S., & Wilson-Mitchell, J. E. (1990). Nonconventional family life-styles and sex typing in six-year-olds. *Child Development*, 61(6), 1915-1933.