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IX. Early infancy and the evolutionary theory of socialization

Introduction

The evolutionary theory of socialization by Belsky, Steinberg and Draper (1991) assumes divergent developmental pathways considered to promote reproductive success in the context in which they have arisen (see Figure 1). Some of the basic assumptions are: Childhood experiences can be seen as determinants of the individual psychosocial and somatic development. If the family context is characterized by marital discord and by inadequate resources, behavioral problems in the child are more likely to occur. Such a stressful rearing environment during childhood leads to behavioral disorders during childhood, to an earlier pubertal development, to unstable pair bonds and to insensitive parenting towards the own child(ren). Thus, childhood experience, psychosocial and somatic development can be seen as determinants of individual reproductive strategies on a continuum ranging between a more 'quantitative' (Type 1) and a more 'qualitative'

(Type 2) reproductive strategy. In sum, the theory assumes intra-individual and intergenerational continuity of mating and parenting behavior: If a parent had a stressful childhood (e.g., divorce of the parents), insensitive parenting is predicted towards his/her children. The two studies described here are aimed at testing the developmental significance of contextual variables in early childhood. It is not only assumed that (the representation of) childhood experiences is decisive for individual development, but also that these representations can lead to intergenerational continuity of behavioral pathways.

Assumptions

Ultimately, the assumption of intra- and intergenerational continuity can only be tested with longitudinal data. Results from two studies will be reported here. In the first study, questionnaire data are collected to test the assumptions stated below. The second longitudinal study can be seen as a pilot study to determine the validity of the questionnaire data of the first study.

The assumptions are:

1. Representations of childhood experiences have a significant influence on intraindividual development and on (the representation of) actual behavior (study 1).
2. If maternal behavior is influenced by the representation of childhood experiences, and if maternal behavior has an impact on attachment formation of the child, then these representations can influence the resulting quality of infant attachment (study 2).

3. Since the intergenerational continuity assumptions relate also to somatic development and sexual behavior,

quality of infant attachment is related to the onset of a) puberty and b) sexual experiences (study 2).

Type 1

Type 2

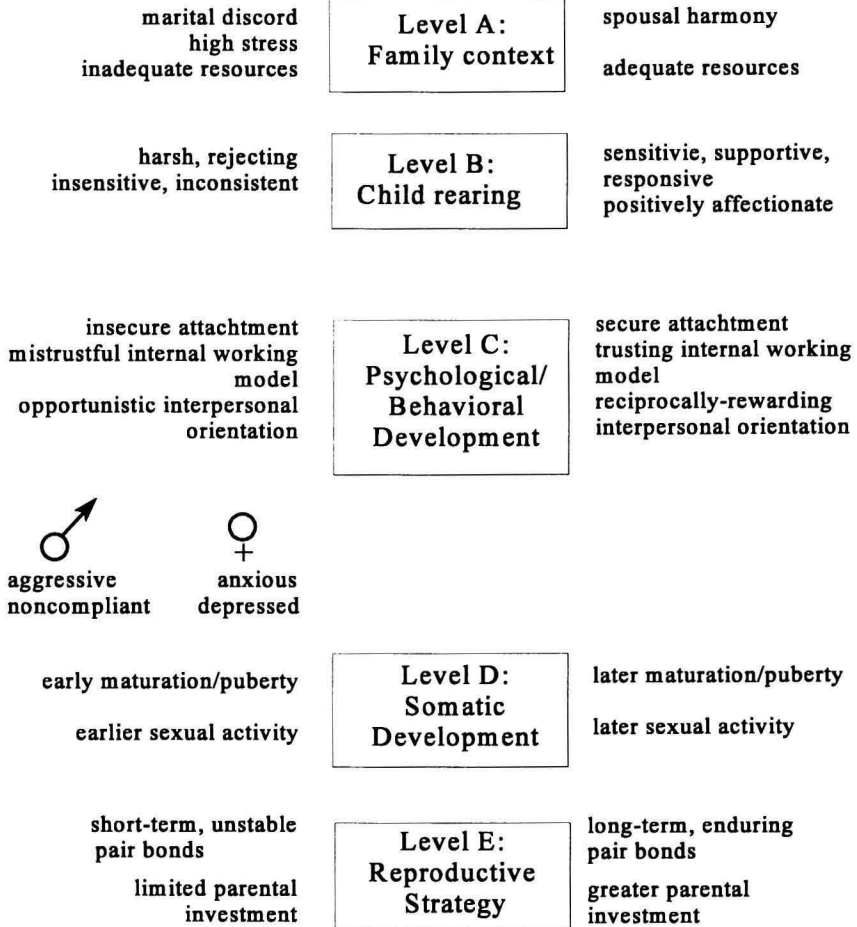


Fig. 1. Developmental pathways of different reproductive strategies.

Method

Study 1: The subjects of the first study were taken from a cross-cultural sample of 510 subjects (353 females and 157 males) from Germany, Greece and Great Britain (cf. Chasiotis & Riemenschneider, 1995). Mean age is 30 years, with a range of 17 to 73 years. The subjects answered a questionnaire consisting of 289 items based on the assumptions of Belsky, Steinberg and Draper (1991). The variables of interest are the following:

- Level A (family context): a) financial resources during preschool years; b) (positive and negative items on) spousal harmony; c) (positive and negative items on) family climate.
- Level B (child rearing): (positive and negative items on) parental attitudes during childhood.
- Level C (psychosocial/behavioral development): a) behavioral disorders during childhood; b) financial resources during school years; c) behavioral problems during puberty.
- Level D (somatic development): a) onset of acceleration of growth, b) onset of menarche.
- Level E (reproductive strategy): a) age at first sexual experience; b) age at first sexual intercourse; c) (positive and negative items on) own spousal harmony; d) (positive and negative items on) parental attitudes toward own children; e) personality disorder.

The last variable on personality disorder is the only one which is not composed from the items of the questionnaire on the evolutionary theory of socialization. Its values are based on a questionnaire on the sense of socioemotional reciprocity which was answered by a subset (N=152)

of the subjects. The higher the score on this scale, the higher the distortion of socioemotional reciprocity, which is related to many personality disorders of the DSM-III-R and DSM IV (cf. Chasiotis, 1995). All variables are composed from items with sufficiently high reliability. The assumptions of the first study will be tested using multiple regression analysis. *Study 2:* The subjects of the second study were taken from a sample of 60 German middle class married mothers with their firstborn healthy children. Mean age of the mothers is 31.5 years with a range of 20 to 44. The mothers were videotaped with their children at home at the age of three months and during the strange situation when the children were twelve months of age. Additionally, the mothers answered the questionnaire on the evolutionary theory of socialization. Maternal sensitivity when the children were three months of age was rated by two trained observers. Attachment classifications were made by two other trained observers who were unaware of the aims of the study. Since the differentiation between insecure-avoidant and insecure-ambivalent attachment is not of interest here, statistical analyses will be restricted to t-tests between securely and insecurely attached children.

Results

First assumption: Table 1 shows the results of the first assumption.

Table 1. Childhood representation, intraindividual development and intergenerational continuity. (Multiple linear regression analysis, N=between 82 and 137).

Dependent Variables (Level)	Multiple R	R ²	Adjusted R Square	F	sign. F	beta	sign. T	Significant Independent Variables
Level B: Positive parental attitudes	.74	.56	.53	19.8	.0001	.48 .30	.0001 .0048	1. Positive family climate 2. Positive spousal harmony
Level B: Negative parental attitudes during childhood	.80	.64	.61	27.8	.0001	.47 -.29 -.22 .20	.0001 .0001 .0079 .0150	1. Negative family climate 2. Financial resources 3. Positive family climate 4. Negative spousal harmony
Level C: Behavioral disorders during childhood	.46	.22	.15	3.21	.0029	.43	.120	Negative parental attitudes during childhood
Level C: Behavioral problems during puberty	.54	.29	.22	3.78	.0003	.27	.0430	Negative family climate during childhood
Level D: Onset of menarche	.38	.15	.03	1.23	n.s.	-.39	.0410	Financial resources during late childhood
Level E: Positive parental attitudes towards own child(ren)								No significant effects
Level E: Negative parental attitudes towards own child(ren)	.82	.67	.66	230	.0001	.68	.0001	1. Negative parental attitudes of own parents 2. Negative own spousal harmony 3. Positive own spousal harmony 4. Negative family climate during childhood
	.83	.69	.68	125	.0001	.25	.0023	
	.84	.70	.70	89.5	.0001	-.12	.0140	
	.85	.72	.71	71.8	.0001	-.13	.0160	
Level E: Sense of socio-emotional reciprocity	.40	.16	.15	18.5	.0001	.39	.0001	Parental negative attitudes during childhood

Overall, the assumptions could be confirmed. Only the positive parental attitudes towards the own child(ren) could not be explained with any variable. But an even more remarkable drawback is the seemingly lacking influence of early childhood variables on the onset of menarche, one of the core assumptions of the model. This is even more surprising given the fact that if the onset of menarche of subjects who experienced a divorce of the parents during childhood is compared to the onset of those who grew up in intact families, female subjects who experienced a divorce of their parents during childhood got into puberty *seven months earlier* than those from intact families (12.5 compared to 13.1 years, see Figure 2).

This significant difference in the onset of menarche is neither a) due to age differences between the two groups (ANOVA with age as covariate shows no effect) nor b) to characteristics of the sample (randomization of a subsample even down to 30% of the whole sample still shows a significant difference). Additionally, not only the financial resources during childhood were (perceived as) significantly lower in families of divorced parents than in families with parents of subjects who did not divorce during childhood (N=274; $t=2.74$, $p=.007$), but the onset of the first sexual intercourse was also reported to be more than *13 months earlier* in the group of subjects with divorced parents (17.25 years compared to 18.38; N=327; $t=2.35$, $p=.019$, see Figure 2).

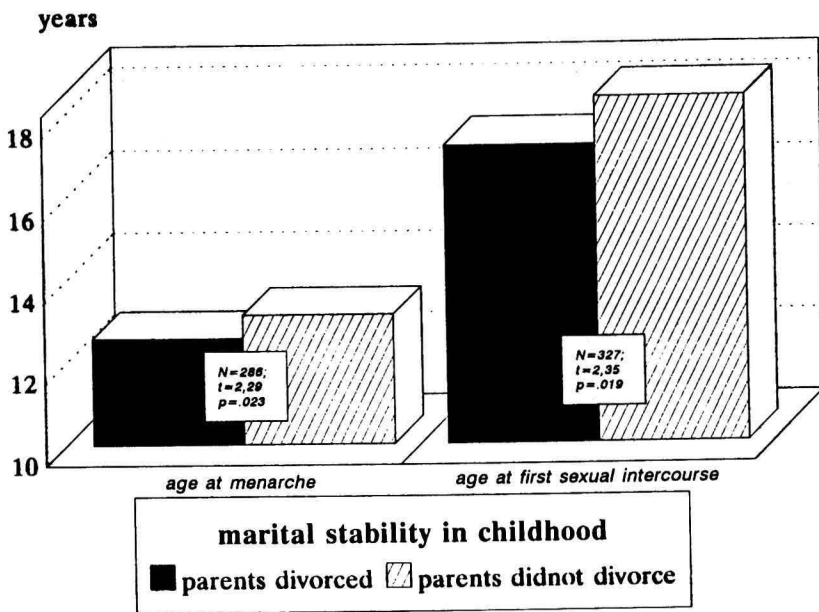


Fig. 2. Marital stability in childhood and somatic development.

Since these findings are all concordant with the predictions of the model but are in contrast with the results of the multiple regression analysis testing the influence of childhood variables on the onset of menarche, these incompatible results might be due to a still insufficient operationalization of the relevant childhood variables.

Second assumption: As can be seen in Figure 3, securely attached children have mothers who remember having perceived significantly more spousal harmony between their parents during childhood than mothers of insecurely attached infants.

Although all variables show a trend in the expected direction, maternal sensitivity at an early age does not predict later attachment. Actual contextual variables like actual spousal harmony show no significant difference either. This lack of influence makes the reported difference in the representation of spousal harmony of the own parents during childhood even more remarkable.

Third assumption: As can be seen in Figure 4, although none of the variables reaches a significant difference, all variables show a trend in the expected direction.

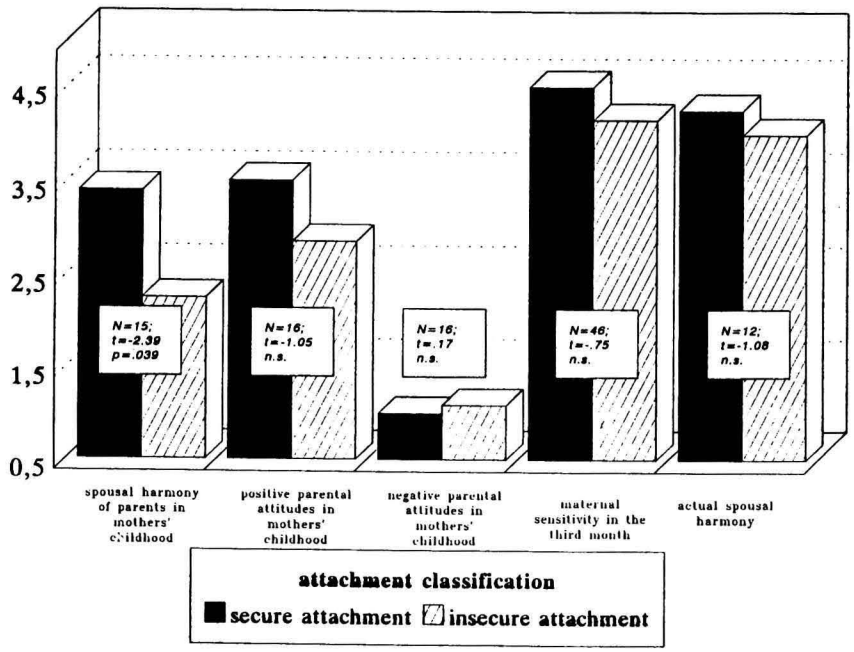


Fig. 3. Mothers' childhood and infants' attachment.

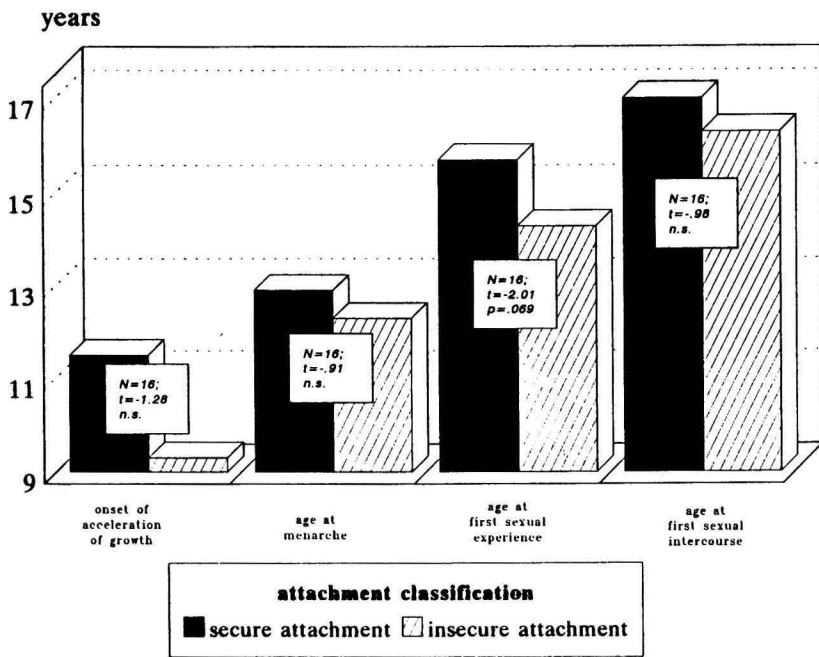


Fig. 4. Mothers' somatic development and infants' attachment.

The descriptive differences in our opinion are impressive enough, though: In mothers of insecurely attached children a) the onset of the acceleration of growth occurred more than *two years earlier* (9.33 years compared to 11.5 years), b) menarche occurred more than *seven months earlier* (12.29 compared to 12.9 years), c) the first sexual experience took place more than *one year and four months earlier* (14.29 compared to 15.7 years) and d) the first sexual intercourse occurred almost *nine months earlier* (16.29 compared to 17 years) in the group of mothers with insecurely attached children.

Conclusion

Overall, the results of the first study are mainly concordant with the assumptions

derived from the evolutionary theory of socialization. The second assumption could be confirmed too. Perhaps partly due to the small sample size of the second study, the results concerning the third assumption show only a trend - although impressive enough - in the expected direction.

The disadvantage of questionnaire data is that one cannot decide whether patterns are only due to similar subjective representations of actual and past experiences rather than mirroring influences of 'real' childhood experiences on 'real' actual behavior. Although the second study reveals promising interconnections between questionnaire data and behavioral ratings, the question concerning the relation between 'real' experience, representation and intergenerational continuity

can only be answered in large-scale longitudinal studies.

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