

Maltreated Children's Representations of Mother and an Additional Caregiver: A Longitudinal Study

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In the current longitudinal investigation, we explored the continuity of and changes in the mental representations of the mother and an additional caregiver among forty-five 9- to 11-year-old children who had been severely maltreated and subsequently placed in long-term residential care, as well as the relationships between the content and structure of these representations and teacher's assessments of the child's externalizing and internalizing symptoms. At Time 1, a nonmaltreated comparison group was assessed concomitantly. Compared to nonmaltreated children, maltreated children scored higher for externalizing and internalizing symptoms and their maternal representations were found to be significantly less benevolent and integrated and more punitive. In addition, among the maltreated children, the additional caregiver representations were found to be more benevolent and integrated, and less punitive, than the maternal representations. After 30 months, the maltreated children's levels of externalizing and internalizing symptoms diminished and their maternal representations become more benevolent and less punitive, and the additional caregiver representations became less benevolent. Moreover, the Benevolence of the additional caregiver representation was found to predict these children's changes in externalizing symptoms beyond the effects of their symptomatology and its associations with the Benevolence of these representations at Time 1.

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1 the mental representations of nonmaltreated children (Shields et al.,
2 2001; Westen, 1991).

3 The long-term effects of parental representations have been in-
4 terpreted as being related to the active role of children in structuring
5 their own environments and experiences, as well as to the tendency
6 to interpret new experiences congruently with earlier ones (Sroufe,
7 Carlson, Levy, & Egeland, 1999). This continuity has been seen as
8 sometimes distorting perceptions of newer relationships, and these
9 distortions have been explained as schematic sensitivity (Baldwin,
10 1992) or defensive strategies (Blatt, 1995; Bretherton & Munholland,
11 1999).

12 Although there is strong evidence of long-term continuity of rep-
13 resentational patterns, a transactional perspective on child develop-
14 ment suggests that significantly different environmental conditions
15 might promote the construction of additional, different caregiver
16 representations (Sameroff, 1995). That is, changes in the child's
17 proximal ecology (Cicchetti & Toth, 2002) may consequently moder-
18 ate maltreatment sequelae. Research findings may strengthen this
19 assumption. In a survey of studies of resilience among children
20 raised in adverse environments, E. E. Werner (2000) listed the affect
21 and encouragement of additional caregivers among the major pro-
22 tective factors. Moreover, secure attachment within a network of
23 attachments has been found to positively affect children's adjust-
24 ment, suggesting better outcomes if different attachment represen-
25 tations are integrated (Fonagy & Target, 1997). In a longitudinal
26 study, Egeland, Jacobovitz, and Sroufe (1988) showed that the
27 women who had been maltreated as children—but did not abuse
28 their own children—were those who had experienced a close rela-
29 tionship in their childhood with a positive figure (teacher, neighbor,
30 etc.) or therapy as an adult.

31 However, the question of the continuity–discontinuity of internal
32 representations of main caregivers is still open, and the controversy
33 has been reiterated in recent literature (Weinfield, Whaley, & Ege-
34 land, 2004). Studies have shown that maltreated children tend to
35 perceive new relationships through the prism of their parental
36 representations (Howes & Segal, 1993; Lynch & Cicchetti, 1991;
37 McCrone et al., 1994; Toth & Cicchetti, 1996). These findings have
38 been interpreted as resulting from a hierarchical organization of
39 representations, in which subsequent representations are assumed
40 to be constructed following the model of former ones. Accordingly, a

1 formation of more benign relationships with an additional caregiver
2 in particular, less is known about how different models of relation-
3 ships change with time or about the predictive power of different
4 coexistent internal models of relationships among maltreated chil-
5 dren removed from their homes.

7 8 The Present Study

9 In the present study, we intended to compare maternal and
10 additional caregiver representations and their effects on the symp-
11 tomatic behavior of maltreated children in long-term residential
12 care. Following a transactional developmental perspective (Samer-
13 off, 1995) and the conceptualization of children's representations of
14 **Q1** their caregivers as developing constructs (Thompson, 2004), we as-
15 sumed that children exposed to a new environment and sensitive
16 caregiving may construct positive representations of a new addi-
17 tional caregiver. Moreover, in the present study we assumed that
18 these children's representations of their mother and of their addi-
19 tional caregiver will predict the children's behavioral problems
20 across time.

21 This study centers on changes in the structure and content of the
22 internal representations of mother and additional caregiver among
23 maltreated school-age children placed in long-term residential care.
24 To this effect, we used a semistructured interview technique, the
25 Object Relations Inventory (ORI; Blatt, Chevron, Quinlan, Schaffer,
26 & Wein, 1992). The ORI narratives provide an account of the care-
27 giver or parental figure as experienced by the child. A major aspect
28 of this technique is the differentiation made between content and
29 structural aspects of mental representations, a procedure that has
30 also been followed by other researchers of child development (see
31 Shields et al., 2001). The content dimension is assumed to capture
32 children's caretaking experiences, the affective tone of parent-child
33 relationships, and the child's expectations. Content categories were
34 thought to involve references to parental support, affection, and in-
35 volvement (Benevolence factor) as well as to parental restrictions,
36 critical, and punitive stance (Punitiveness factor). The structural di-
37 mension is assumed to reflect the representation's basic cognitive
38 organizing principles within the perspectives of Piaget (1955, 1962)
39 and H. Werner (1948), indicating the level of processing of the in-
40 formation the child has gathered about significant others. This is a

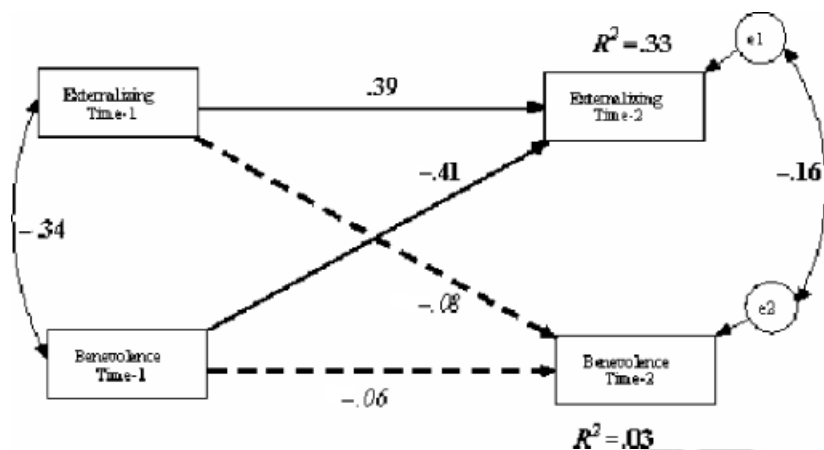


Figure 1

The Crossed-Lagged Model. Rectangles indicate measured variables. Small circles reflect residuals (e); bold numbers above or near endogenous variables represent the amount of variance explained (R^2). Unidirectional arrows depict hypothesized directional, or "causal," links/associations. Standardized maximum likelihood parameters are used. Bold estimates are statistically significant. The dotted paths indicate nonsignificant, "causal" links/associations.

METHOD

Participants

Participants were 45 children (23 girls and 22 boys) who had been removed from their homes by court order because of maltreatment and referred to a long-term residential care by social service agencies and a matched comparison group of 45 nonmaltreated children (23 girls and 22 boys) from a similar socioeconomic background. The socioeconomic status of the children was calculated using the Israel Central Statistical Bureau Index (ratio between the number of persons living in the same household and the number of rooms in the home). The age of the participants in both groups ranged from 9 to 11 years, with maltreated children averaging 9 years 4 months ($SD = 0.90$). The average age of the nonmaltreated children was 9 years 6 months ($SD = 0.61$). Additional caregivers were aged 41–57 (mean = 51.17, $SD = 4.86$) and had a mean 12.5 years ($SD = 2.5$) of formal education. Six of the caregivers were born in Eastern Europe, three in Israel, and one in Asia.

The maltreated children were approached in an institution that provides a substitute home environment for children who have been removed

1 28.9% of the children ($n = 13$), maltreatment began during the preschool
2 years (3–5 years). For the remainder of the sample, in 28.9% ($n = 13$) of
3 the cases, maltreatment began during the school-age years (6–11 years).
4 In all cases, maltreatment continued until the children were removed from
5 their homes and placed in long-term residential care. It is important to
6 note here that none of the maltreated children in our sample, including
7 those exposed to physical abuse, were reported to have been exposed to
8 sexual abuse.

9 After creating a comfortable atmosphere and rapport and assuring
10 anonymity, participants in the nonmaltreated group were asked to tell the
11 interviewer about their mothers, and the maltreated children were asked
12 to tell the interviewer about their mothers and additional caregivers.

13 The order of collecting mother and additional caregiver narratives
14 among maltreated children was randomized, and no narrative immedi-
15 ately followed another. Children's descriptions of their mothers and
16 additional caregivers were recorded and transcribed verbatim. These
17 transcripts were then coded. The interviewer encouraged children with
18 nondirective probes; additional questions were asked only when the in-
19 terviewer needed to make sure he or she understood what the child meant
20 by a specific expression or phrase. The answers to these questions were
21 taken into account only as clarifications of the meaning of the child's
22 narrative. Verbal fluency was measured by the mean number of words
23 included in the spontaneous description.

24 *Measures*

25 *Assessment of maternal and additional caregiver representations.* We
26 evaluated children's representations of their mothers using the Children's
27 Object Representation Inventory (CORI; see Waniel et al., 2006). This
28 measure is an adaptation of the ORI, a procedure devised for the eval-
29 uation of adult and adolescent representations of significant others (Blatt
30 et al., 1992). The adaptation of the ORI procedure for use with children
31 has been found to have adequate reliability and validity among popula-
32 tions of children (Avery & Ryan, 1988; Besser & Blatt, 2007; Diamond
33 et al., 2005; Priel, 2005; Priel, Besser, & Kantor, 2000; Priel, Myodovnick,
34 & Rivlin-Beniaminy, 1995; Waniel et al., 2006) as well as cross-culturally
35 (for a review, see Priel, 2005). The CORI system allows for the assessment
36 of and comparison between maternal and additional caregiving figures.

37 The coding procedure for the CORI included seven qualitative or
38 content categories and a structural scale (for a detailed description, see
39 Waniel et al., 2006). The content categories were rated on a 7-point scale.
40 The seven content scales have been shown to converge into two factors
defined as Punitive and Benevolent. The Benevolent factor consists of the

1 characteristics or activities. The description primarily involves internal
2 psychological dimensions. *Conceptual Level (9)*: Using a range of levels,
3 the description integrates external appearances and activities (behavior)
4 with internal dimensions (feelings, thoughts, and values). Apparent con-
5 tradictions are resolved in an integrated, complex, coherent synthesis.

6 Interviewers and coders were recruited and trained especially for this
7 project. Interviewers were randomly assigned to children. Two indepen-
8 dent, trained coders rated all maternal and additional caregiver repre-
9 sentations. Children's narratives were coded for each indicator separately,
10 coders being blind to the child's group (maltreated or nonmaltreated) and
11 to the expected factor structure as well as to the fact that we had two
12 measures taken at different times. The interrater intraclass correlation
13 reliability coefficients (Shrout & Fleiss, 1979) obtained for each of the
14 seven qualitative or content categories in the present study ranged from
15 .78 to .90. The interrater reliability coefficients for the coding of each
16 factor of the maternal and additional caregiver representations were
17 $r = .83$ and $r = .89$ for Benevolence, $r = .81$ and $r = .90$ for Punitiveness,
18 and $r = .85$ and $r = .87$ for conceptual level, for the maternal and addi-
19 tional caregiver, respectively.

20 *Child symptomatology.* We assessed children's symptomatology by
21 means of teachers' reports of behavioral and emotional problems using
22 the Externalizing and Internalizing factors of the TRF of the Child
23 Behavior Checklist (Achenbach, 1991), a widely used teacher-report
24 questionnaire designed to assess behavioral problems in children between
25 5 and 18 years of age. The Externalizing Problems factor of the TRF
26 includes the presence of delinquent and aggressive behavior. The Inter-
27 nalizing Problems factor relates to withdrawal, anxiety or depression, and
28 somatic complaints. The TRF has high concurrent validity (above .80)
29 and is associated significantly with the *Diagnostic and Statistical Manual*
30 *of Mental Disorders* criteria (Achenbach, 1991; American Psychiatric As-
31 sociation, 1994). In the present study, we obtained internal consistency
32 coefficient Cronbach's scores of .73 and .64 for Externalizing and Inter-
33 nalizing symptoms, respectively.

34 RESULTS

35 *Overview of Results*

36 The findings are presented in three main sections. First, we discuss
37 potential differences between maltreated and nonmaltreated children
38

1 in relation to demographic variables. The following demographic
2 variables were considered: child's age and gender, mother's and fa-
3 ther's ages and years of formal education, child's birth order, family
4 size and socioeconomic status, and verbal fluency. Within the mal-
5 treated children group, we also explored the differences among the
6 foster homes within the Institution (i.e., repeated measure of children
7 within the same home), as well as among subtypes of maltreatment
8 and different ages of onset of maltreatment. Although there were no
9 a priori hypotheses regarding these variables, they could affect the
10 findings obtained. Therefore, we explored whether any of these
11 variables were associated with the main study variables in order to
12 ensure that any covariance could be accounted for in subsequent
13 analyses of our main hypotheses.

14 Next, we present a comparison of the symptoms and maternal
15 representations of the two groups of children (maltreated vs. non-
16 maltreated) at Time 1 and the results of our study of the associations
17 between symptoms and dimensions of mental representations.
18 Within the group of maltreated children, we also compared repre-
19 sentations of mothers with those of additional caregivers.

20 Finally, we discuss the findings of our analysis of changes in the
21 maltreated children's symptoms and their representations of their
22 mothers and additional caregivers over time as well as the associa-
23 tions between these children's symptoms and their representations of
24 their mothers and additional caregiver over time.

25 26 *Preliminary Analysis*

27 The main demographic variables for maltreated and nonmaltreated
28 children are presented in Table 1. The results of analyses of variance
29 (ANOVA) indicated that the two groups did not differ significantly
30 in terms of the examined demographic variables: child's age,
31 mother's and father's ages and years of formal education, child's
32 birth order, family size, and socioeconomic status. The sex ratios of
33 the two groups were also not significantly different from one an-
34 other. After a full Bonferroni correction was applied, a significant
35 difference was found between the verbal fluency of the narratives of
36 the two groups, $F(1, 88) = 12.49, p < .001$ (for means, standard devi-
37 ations, and F values, see Table 1). Analyses of the associations of the
38 demographic variables and verbal fluency with the study's dependent
39 variables (representations and symptomology scores) indicated sig-
40

Table 1
Demographic Characteristics of the Sample

Variable	Maltreated children		Nonmaltreated children		<i>F</i> (1, 88)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Father's age	41.00	1.14	40.89	1.16	0.18, <i>ns</i>
Father's years of education	11.89	1.30	12.46	1.73	0.43, <i>ns</i>
Mother's age	36.52	0.83	37.02	0.88	0.17, <i>ns</i>
Mother's years of education	12.05	1.99	12.99	1.52	0.42, <i>ns</i>
Child's age	9.40	0.83	9.60	0.65	6.40, <i>ns</i>
Family size	3.12	0.22	2.73	0.20	1.62, <i>ns</i>
Birth order	2.28	0.20	2.14	0.27	0.24, <i>ns</i>
SES	1.04	0.75	0.91	0.80	0.35, <i>ns</i>
Verbal fluency	26.37	2.43	2.43	35.03	12.49*

* $p < .05$ (two-tailed test).

nificant associations only between verbal fluency and children's maternal representation variables. Specifically, the correlations between verbal fluency and Benevolence scores were $r = .36$ ($p < .05$) and $r = .31$ ($p < .05$) for maternal and additional caregiver in the maltreated group, respectively; the correlation between verbal fluency and Benevolence was $r = .28$ ($p < .05$) in the nonmaltreated group. The correlations between verbal fluency and conceptual level were $r = .28$ ($p < .04$) and $r = .26$ ($p < .04$) for additional caregiver representation and maternal representations among maltreated children, respectively, and $r = .27$ ($p < .04$) for maternal representation among nonmaltreated children. Thus, in the subsequent analyses of maltreated versus nonmaltreated children's representation scores, the verbal fluency (i.e., length of the narratives) was covaried.

Within the sample of maltreated children, we also explored the possible associations between subtype of maltreatment and age of onset of maltreatment and the study variables. No significant associations were found. We also explored the possible effects of the different foster homes (i.e., repeated measures of children within the same home in the Institution) and the study variables. Thus children are nested within the 10 caretakers. Hierarchical Linear Modeling

analysis with caretakers and children levels revealed no significant effect for children or caretakers or for a Children \times Caretakers interaction effect on study variables. Thus there is no specific household or children that are the source of the effects obtained for the maltreated sample. Even though children are nested within the 10 caretakers, these were found to be statistically independent.

Analysis of Data at Time 1

Externalizing and internalizing symptoms. To explore the effect of maltreatment status on children's externalizing and internalizing behavioral problems, ANOVAs were conducted with maltreatment status (maltreated vs. nonmaltreated) as the independent variable and symptomatology (Externalizing and Internalizing behavioral problems scores) as the dependent variables. After a full Bonferroni correction was applied, these analyses revealed that maltreated children scored higher for Externalizing, $F(1, 88) = 26.98$, $p < .0001$ ($M = 29.09$, $SD = 2.25$, and $M = 12.56$, $SD = 2.24$, for maltreated and nonmaltreated, respectively), and Internalizing behavior problems, $F(1, 88) = 6.29$, $p < .01$ ($M = 16.88$, $SD = 1.32$, and $M = 12.26$, $SD = 1.03$, for maltreated and nonmaltreated, respectively).

Maternal representations. To explore the effect of maltreatment status on children's maternal representation scores, analyses of covariance were conducted with maltreatment status (maltreated vs. nonmaltreated) as the independent variable and the maternal representations' dimensions scores (Benevolence, Punitiveness, and conceptual level score) as the dependent variables. Verbal fluency was covaried. After a full Bonferroni correction was applied, univariate F results indicated that, as compared to the nonmaltreated children, the maltreated participants' maternal representations scored significantly lower for conceptual level, $F(1, 88) = 8.78$, $p < .001$, and Benevolence, $F(1, 88) = 45.48$, $p < .0001$, and higher for Punitiveness, $F(1, 88) = 6.75$, $p < .01$ (for means and standard deviations, see Table 2).

Maternal and additional caregiver representations. To compare representations of mothers with those of additional caregivers (Benevolence and Punitiveness and conceptual level) within the maltreated group, three dependent t tests were computed. After a full Bonferroni correction was applied, the results indicated that, as compared

1 to their maternal representations, maltreated children's representa-
2 tions of their additional caregiver scored significantly higher in terms
3 of conceptual level, $t(1, 44) = 3.56$, $p < .001$, and Benevolence,
4 $t(1, 44) = 16.82$, $p < .0001$, and lower in terms of Punitiveness,
5 $t(1, 44) = -2.93$, $p < .001$ (for means and standard deviations, see
6 Table 2).

7
8 *Maternal and additional caregiver representations and symp-*
9 *toms.* We first computed a full zero-order person correlation
10 matrix among the dimensions of maternal and additional caregiver
11 representations (Benevolence, Punitiveness, and conceptual level)
12 and Externalizing and Internalizing behavioral problems among the
13 maltreated children. The following correlations were the only ones
14 found to be statistically significant.

15 Significant negative associations were found between the Benevolent
16 and the Punitive factors of both the maternal representations and the
17 additional caregiver representations ($r = -.50$, $p < .01$ and $r = -.54$,
18 $p < .01$, respectively). In addition, positive correlations were found be-
19 tween Externalizing and Internalizing behavior problems ($r = .53$,
20 $p < .01$) among maltreated children. Moreover, the Benevolence factor
21 of the additional caregiver representations was negatively associated
22 with Externalizing behavioral problems ($r = -.34$, $p < .05$). No sig-
23 nificant associations were found between the additional caregiver rep-
24 resentations and Internalizing behavioral problems.

25 A different pattern of correlations was found for the maltreated
26 children's representations of their mothers. No correlations whatsoever
27 were found between Externalizing and Internalizing behavioral prob-
28 lems and the content factors or the conceptual level of maternal
29 representations. Moreover, nonsignificant correlations were noted
30 between maltreated children's representations of their additional care-
31 giver and mother (Pearson r correlation coefficients between Benevo-
32 lence, Punitiveness, and conceptual level of maternal and additional
33 caregiver representations were .05, .20, and $-.04$, respectively).

34 These findings seem to indicate that, among maltreated children,
35 the Benevolence of the additional caregiver representation, but not
36 of the maternal representation, is associated with the child's behav-
37 ior. These findings do not, however, rule out the possible interaction
38 effect by which the effect of the Benevolence of the additional care-
39 giver representation on a child's Externalizing problems might be
40 qualified by the level of Benevolence of that child's maternal repre-

1 between the caregiver representations at Time 1 and Time 2 and ex-
2 ternalizing and internalizing as measured at Time 2. Finally, we
3 explored the direction of the assumed causal associations between
4 maternal and additional caregiver representations and children's
5 symptomatology as reported by the teacher.
6

7 *Changes over time in the maternal and additional caregiver represen-*
8 *tations of maltreated children.* To compare maltreated children's
9 representations of their mothers and additional caregivers at Times 1
10 and 2, a 2×2 ANOVA with repeated measures was conducted. The
11 independent repeated measures variables were Time Period (Time 1
12 and Time 2) and the Type of Figure (mother vs. additional caregiv-
13 er). The representations' dimensions (Benevolence, Punitiveness, and
14 conceptual level) served as the dependent variables (for means and
15 standard deviations, see Table 2).

16 After a full Bonferroni correction was applied, results for concep-
17 tual level indicated no significant effects for Type of Figure,
18 $F(1, 44) = 1.24$, *ns*, or for Time Period, $F(1, 44) = 3.32$, $p < .06$. But
19 we did find a significant Type of Figure \times Time Period interaction
20 effect, $F(1, 44) = 18.75$, $p < .0001$. Results for Benevolence indicated
21 significant main effects for Time Period, $F(1, 44) = 8.44$, $p < .0001$, and
22 for Type of Figure, $F(1, 44) = 224.74$, $p < .0001$, as well as a significant
23 Type of Figure \times Time Period interaction, $F(1, 44) = 33.75$, $p < .0001$.

24 Finally, results for Punitiveness indicated significant main effects
25 for Time Period, $F(1, 44) = 12.89$, $p < .001$, but not for Type of Fig-
26 ure, $F(1, 44) = .79$, *ns*, as well as a significant Figure \times Time Period
27 interaction, $F(1, 44) = 16.12$, $p < .0001$.

28 Univariate *F*s indicated that both maternal and additional care-
29 giver representations changed with time. At Time 2, children's rep-
30 resentations of their mothers had a higher conceptual level, $F(1, 44)$
31 $= 23.77$, $p < .0001$, and were more Benevolent, $F(1, 44) = 25.82$,
32 $p < .0001$, and less Punitive, $F(1, 44) = 19.57$, $p < .0001$, than their
33 maternal representations at Time 1. Children's representations of
34 the additional caregiver at Time 2 were significantly less Benevolent
35 than their representations of the additional caregiver at Time 1,
36 $F(1, 44) = 13.18$, $p < .0001$. No significant differences were found
37 between Time 1 and Time 2 for the conceptual level or Punitiveness
38 of the representations of the additional caregivers.

39 Finally, the comparison of maternal and caregiver representations
40 at Time 2 indicated that the additional caregiver representations

1 were still more Benevolent, $F(1, 44) = 28.01, p < .0001$, but also more
2 Punitive, $F(1, 44) = 7.49, p < .0001$, than the maternal representa-
3 tions. No significant difference in the conceptual level of the repre-
4 sentations was noted at Time 2.

5
6 *Changes over time in maltreated children's symptomatology.* To
7 evaluate changes over time in levels of symptoms, ANOVAs with
8 repeated measures were calculated with Time (Time 1 and Time 2) as
9 the independent repeated measure variable and Externalizing and In-
10 ternalizing scores as dependent variables. After a full Bonferroni cor-
11 rection was applied, results of the analysis of the Internalizing scores
12 indicated significant effects of Time, $F(1, 44) = 13.00, p < .0001$, with a
13 significant decline at Time 2, $t(1, 44) = -2.89, p < .0001$ ($M = 16.88$,
14 $SD = 1.32$ vs. $M = 10.02, SD = 1.15$ for Time 1 and Time 2, respec-
15 tively). The analysis of the Externalizing scores indicated a significant
16 effect of Time period, $F(1, 44) = 8.54, p < .0001$, with significant
17 decline at Time 2, $t(1, 44) = -2.22, p < .03$ ($M = 29.09, SD = 2.25$
18 vs. $M = 20.60, SD = 2.05$, at Times 1 and 2, respectively).

19
20 *Associations between representations' dimensions and symptomatology*
21 *of maltreated children at Time 2.* A full Pearson correlations matrix
22 was calculated between the dimensions of maternal and additional
23 caregiver representations and Externalizing and Internalizing behav-
24 ior problems among maltreated children at Time 2. Among these
25 correlations, the following associations were the only ones found to
26 be statistically significant.

27 In contrast to Time 1, at Time 2 dimensions of representations
28 of mothers and additional caregivers were significantly correlated:
29 Significant positive correlations were found between the conceptual
30 level of the mother and that of the additional caregiver ($r = .35$,
31 $p < .02$) and between the maternal Benevolence factor and the
32 additional caregiver representation's Punitiveness factor ($r = .43$,
33 $p < .001$). However, only a marginal association was found between
34 the Benevolence factor of the maternal representation and that of the
35 additional caregiver representation ($r = -.26, p = .07$).

36 In addition, the Benevolence factor of the additional caregiver
37 representations was negatively associated with Externalizing behav-
38 ioral problems ($r = -.33, p < .05$), and the Punitiveness factor of the
39 additional caregiver representation was positively correlated with
40 Internalizing behavioral problems ($r = .34, p < .01$). Moreover, in

2. To explore whether the Benevolence of the caregiver representation at Time 1 predicted Externalizing symptoms at Time 2, while assessing measurement errors in the dependent variables and controlling for the association between the Benevolence factor and Externalizing symptoms at both times, two path models were constructed using Structural Equation Modeling (Hoyle & Smith, 1994). Using Amos 4.0 software based on the variance-covariance matrix (Aurbuckle, 1994), we tested the fit of these models using maximum likelihood estimations.

In the following models, both Externalizing symptoms and the Benevolence of the additional caregiver representation at Time 1 were the predictors and Externalizing symptoms and the additional caregiver Benevolence at Time 2 were the criteria. In addition, we controlled for the association between Externalizing symptoms and the Benevolence factor of the additional caregiver representation at Time 1 and for their shared measurement error terms at Time 2 (see Figure 1).

We first examined the full model, delineating the direct effects (i.e., the effect of the Benevolence of the additional caregiver's representation at Time 1 on the Benevolence of the additional caregiver's representation at Time 2 and the effect of Externalizing symptoms at Time 1 on Externalizing symptoms at Time 2) and the cross effects (the effects of the Benevolence factor at Time 1 on the Externalizing Symptoms at Time 2 and the effects of the Externalizing Symptoms at Time 1 on the Benevolence factor at Time 2) and controlling for the predictors' associations and outcome error terms (see Figure 1).

The full model showed a nonsignificant effect of Time 1 Benevolence on Time 2 Benevolence ($\beta = -.06$, $t = -.42$, *ns*), whereas Time 1 Benevolence was found to have a significant effect on Externalizing symptoms at Time 2 ($\beta = -.41$, $t = -3.01$, $p < .001$). The effect of Externalizing symptoms at Time 1 on Externalizing symptoms at Time 2 was also significant ($\beta = .39$, $t = 2.87$, $p < .001$), but the effect of Externalizing symptoms at Time 1 on the Benevolence factor at Time 2 was not significant ($\beta = -.08$, $t = -.56$, *ns*). This model significantly explained 0% and 33% of the variance in the additional caregiver's Benevolence factor and of children's Externalizing symptoms, respectively, at Time 2 (see Figure 1). However, this model had zero degrees of freedom, so fit could not be estimated.

1 addition, a marginal association was found between the Be-
2 nevolence of the representations of the mother and that of the
3 caregiver representations.

- 4 3. Over time, significant declines in both Externalizing and
5 Internalizing scores were observed.
- 6 4. The Benevolence of the representation of the additional care-
7 giver (but not of the mother) at Time 1 predicted maltreated
8 children's Externalizing symptoms at Time 2, beyond Time 1
9 symptomatology.

10 DISCUSSION

11 The present study focused on the exploration of characteristics of
12 maternal and additional caregiver representations among maltreated
13 children in long-term residential care as well as the continuity of
14 these characteristics over time and their effects on children's symp-
15 tomatology. Our findings indicate the plausibility of the construction
16 of a new, more benign additional caregiver representation among
17 school-age children who have suffered severe maltreatment and been
18 subsequently placed in long-term residential care as well as the plau-
19 sibility of changes in the maternal representations. These changes were
20 accompanied by a significant reduction in children's overall symptom-
21 atology. Moreover, the Benevolence of the additional caregiver re-
22 presentations was found to predict maltreated children's levels of
23 Externalizing symptom after 30 months, beyond the effect of the
24 Externalizing symptoms present at the time of the first measurement.
25
26

27 *Maltreated Children's Maternal and Additional Caregiver* 28 *Representations*

29 After 18 months in long-term residential care, maltreated children's
30 maternal representations were found to be less cognitively complex,
31 less benevolent, and more punitive than their representations of their
32 additional caregivers. Given the similarity of assessment procedures,
33 the differences between maternal and additional caregiver represen-
34 tations at Time 1 are rather conspicuous. These differences may
35 reflect children's real experiences with each caregiver as well as
36 their need to maintain a clear differentiation between these two
37 relationships, thus accommodating to the difficulties they face
38 in dwelling far from home in a very different environment. The
39 additional caregiver's marked benevolence may reflect a positive
40

1 aspects of the children's development. This last possibility merits
2 further investigation.

3 It is important to note here the lack of findings on specific effects
4 of subtypes or time of onset of maltreatment. This lack of findings
5 may reflect the overall severity of the maltreatment that the children
6 in our sample had suffered, maltreatment severe enough to result in
7 court-ordered removal from their homes and placement in long-term
8 residential care. This might have created a ceiling effect that covered
9 possible differences.

10 The findings that lower associations appear between dimensions
11 of representations of both mother and additional caregiver and
12 Internalizing symptoms may be attributed to the fact that data on
13 symptoms was collected from the children's teachers, who may be
14 more acquainted with children's Externalizing behaviors than with
15 their Internalizing behaviors.

16 *The Prediction of Externalizing Symptomatology*

17 Findings concerning the associations between the additional care-
18 giver's Benevolence and Externalizing symptoms were corroborated
19 longitudinally. The analysis of causal patterns shows the predictive
20 power of the Benevolence of the additional caregiver representa-
21 tions, beyond the levels of symptomatology measured at Time 1.
22 These findings are based on a fairly conservative analysis using
23 a design that is longitudinal and based on different sources for the
24 assessment of the independent and the dependent variables. These
25 findings turn us back to the problem of the conspicuous Benevolence
26 scores of additional caregivers' representations 18 to 21 months after
27 children had entered into the foster homes. These findings under-
28 score the positive effects of the Benevolence of the representation, be
29 it a reflection of the real quality of caregiver-child relationships or a
30 defensive strategy to ensure continuity of care. Perhaps these are not
31 always competing explanations but are different aspects of the com-
32 plexity of the interactions involved in maltreated children's ways of
33 coping with new, different care-giving relationships.

34 Findings concerning the positive effects of the additional caregiver
35 representations are congruent with previous findings on the associa-
36 tions between positive representations of therapists and outcomes
37 of psychotherapy (Blatt, Auerbach, & Levy, 1997). However, the
38 causal link found between the additional caregiver Benevolence and
39
40

1 children's Externalizing symptoms does not eliminate the possible
2 effects of additional variables, such as impulsiveness, that could
3 affect children's narratives as well as teachers' reports. Further re-
4 search should include additional mediating or moderating variables
5 that may affect the association between representations' dimensions
6 and children's behavior.

8 *Study Limitations*

9
10 Despite the strengths of our study, at least three caveats should guide
11 the interpretation of these findings. First, the interpretation of our
12 findings is limited by the confounding between the effects of mal-
13 treatment and those of being away from home (Dozier et al., 2002).
14 Further research is needed to disentangle these related but different
15 sources of effects on children's adjustment, and preplacement data
16 collection may be very helpful in clearing up this confounding. The
17 longitudinal study of an additional sample of maltreated children
18 living with their birth parents may provide a partial answer to this
19 question, but it should be taken into account that children who have
20 been placed in long-term residential care as a result of maltreatment
21 constitute, by definition, a special population growing up in more
22 severely adverse circumstances than most other maltreated children.

23 Second, another limitation to the generalizability of our findings
24 might be the lack of IQ assessments, even though all the children were
25 attending regular schools and important deviations for normal IQ are
26 highly improbable. Even though the use of children's verbal fluency as
27 a covariate in between-groups' analyses reduces the magnitude of this
28 omission, detailed information about children's specific intellectual
29 capabilities might be relevant, mainly as a resilience factor.

30 Third, no sexual abuse was reported for our sample. It is impor-
31 tant to include this variable in further research.

32 Fourth, our findings, although centered on assessments of repre-
33 sentations of caregivers, reflected a specific aspect of an extensive
34 environmental change that needs further broad investigation. This
35 process might include the evolving relationships with new peers, the
36 effects of the changes that took place in the school environment, the
37 quality of the relationships the children keep with their parents, and
38 so forth. All of these factors (and plausibly many more) might affect
39 children's adjustment, together with the aspects of internal repre-
40 sentations reported here. In addition, future studies should include

1 also evaluations of children's self-representations, because changing
2 representations of self in addition to representations of others might
3 affect children's adjustment.

4 Finally, the design utilized did not include a second wave of mea-
5 surement of nonmaltreated children that could have added relevant
6 information, and nonmaltreated children were asked to provide one
7 narrative (mother) whereas maltreated children were asked to tell
8 about their mother and additional caregiver. Even though the order
9 of narratives was controlled for and, in reality, only the maltreated
10 children had an additional caregiver, future research may improve
11 on this design by asking both samples to provide the same number of
12 narratives.

13 In summary, the pattern of findings obtained corroborates evi-
14 dence from extant literature on the importance of at least one
15 positive caregiver representation for children's self-regulation of be-
16 havior and suggests the dynamic nature of all existing representa-
17 tions. This study allowed us to look "from the inside out" (Brinich,
18 1990) at the ways in which aspects of internal representations affect
19 the development and psychopathology of maltreated children. Our
20 findings show positive changes over time in children's maternal rep-
21 resentations and behavior, as well as the development of more
22 realistic additional caregiver representations. Maltreated children
23 living out of their homes seem to be able, over time, to overcome, at
24 least in part, their basic negative representations of early caregiving
25 relationships. However, although new relationship patterns may
26 play a prominent role in defining children's actual adjustment, all
27 their relationship representations seem to continue to develop and
28 play crucial but as-of-yet unclear roles in their development.

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Q2

Q3

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APPENDIX

		Examples of coding categories of maternal and additional caregiver representations		
Scale	Description	Rating scale	Low score	High score
Affectionate	Degree of parent's active display of affection	1 (<i>not at all affectionate</i>) to 7 (<i>very affectionate</i>)	She hates to kiss or hug us, she does nothing with us, and she never bought me a birthday present (score 2).	She spoils me and buys me candy. She sings songs that I like and she talks with me every night (score 6).
Malevolent-Benevolent	Reflects the parent's disposition to do good and positively influence others	1 (<i>malevolent intentions</i>) to 7 (<i>benevolent intentions</i>)	She only likes to hurt us, she also used to hurt our cat—he died. She always said there's not enough food at home and there were no meals at home. I loved the cat very much and she only wanted to hurt him (score 1).	She is a kind and warm woman, when someone from my class cries, if she's around she'll ask him why he's crying (score 7).

(Continued)

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APPENDIX (Cont.)

Examples of coding categories of maternal and additional caregiver representations

Scale	Description	Rating scale	Low score	High score
Cold–Warm	Degree to which the parent's interpersonal style is unemotional or loving and warm	1 (<i>unemotional</i>) to 7 (<i>loving and warm</i>)	She went away when I was very small and I stayed with my dad. After that she came back, but we don't love each other like my friend and her mother—they love each other. Now that I'm here, I don't miss her at all ... (score 1).	My mom loves us very much. She spends a lot of time with us; she's warm and loving. When I come back here, we both cry and she calls me to see if everything is o.k. and asks me how I feel. I know that when I get older my mom will still love me even though I will be here (score 7).
Constructive Involvement	Extent of the parent's negative vs. positive interactions with others	1 (<i>negatively involved</i>) to 7 (<i>very positively involved</i>)	My mother works from 7:00 to 9:00 so I hardly see her at home, 'cause when she comes home I'm usually asleep. I	My mom helps me with my homework. ... She goes with me to the playground and we play together. ... We also

<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30</p>	<p>want us to do thing together, but she tells me she doesn't have time (score 2).</p>	<p>play games like chase and coloring and she teaches me new games like sewing and drawing. We also talk about school, friends and our home; she helps me get over problems I have (score 5-6).</p>	<p>My mom takes good care of me. She buys us food and even adds money to my pocket money from her salary. She asks what I like to eat and then she'll make it for me. She buys me stuff for school, and she takes me to the doctor when I'm sick. She cares for us, makes sure we're healthy. . . . If we cry, she asks us what happened and helps us. . . . If someone doesn't</p>
<p>31 32 33 34 35 36 37 38 39 40</p>	<p>Degree to which the parent is described as giving care and attention</p>	<p>1 (inattentive) to 7 (highly giving and caring)</p>	<p>My mom is an awful mother who doesn't care about kids. That's why they took us away from our home, and I'm lucky to be here, 'cause if I wasn't I would've ended up doing drugs, 'cause that's what we've got at home . . . (score 1).</p>

(Continued)

she gets mad about lots of things I do. . . . She doesn't like the way I behave. . . . There are a lot of things she tells me not to do (score 5–6).
 When she gets mad she beats me and it hurts. . . . Sometimes she says things to me that insult me and hurt me. . . . She really likes to shout at us. It gives me a headache (score 5).
 She is the best mom; she takes care of and loves all of the kids in this house. She helps us do homework every day. It is very important to her that we'll be successful and she always solves our problems. She loves us very much and also reads to us from books every night (score 7).

look for the bad in people, she sees the good (score 1).

She never punishes me (score 1).

1 (*nonpunitive*) to 7 (*highly punitive*)

Degree to which the parent is described as inflicting punishment

Punitive

Every time I don't feel well, my mother takes me to the doctor (score 1).

1 (*sensory-motor*) to 9 (*conceptual*)

The degree of abstraction and complexity through which the parent is perceived

Conceptual Level