Attachment in cultural context
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Introduction

For almost half a century Eastern and Western Europe had been separated from each other by different ideologies, and different social and economic systems. Political changes after 1989 ceased this long-lasting separation and increased economic, social and cultural contacts between countries of the previous Eastern and Western Blocs. As a consequence of these contacts, and more generally through the globalization process, Eastern and Western European cultures have arguably become more similar. Owing to the fact that national borders are more permeable, culture has a much more international and unified character than several years ago. Take television for instance: many serials and programs are broadcasted internationally contributing to the unification of cultural patterns. Or the Internet, to take another example, also internationalizes social contacts and unifies cultures. Furthermore, the freedom to travel increases the frequency of direct social encounters between Eastern and Western Europeans. It is tempting to ask if, in the case of the generation raised in post Cold War Europe, Eastern and Western Europeans have more similar psychological characteristics when compared to the generation of their parents, who grew up when differences between the East and the West were very large and pervasive. Studies stemming from temperament and personality frameworks suggest that culture plays a marginal role in the emergence of individual differences (e.g., Fulker, Eysenck, & Zuckerman, 1980). But there again, temperament is conceptualised as an inborn feature; consequently, one should not expect a significant cultural component in it. The present study will attempt to elucidate if culture may influence attachment, which is conceptualised as a construct related more closely to the environment than to genes.

The Attachment Framework

Attachment theory integrates biological (hereditary) and environmental approaches, proposing that the hereditary mechanism underlines the development of the attachment system, but that the environment, and parental practices in particular, is the main source of individual differences in attachment styles. The author of attachment theory, Bowlby (1984), argued that children have a tendency to seek for proximity to, and contact with, a specific caregiver in times of distress, due to a genetic self-protection
mechanism which urges them to look for a “powerful” attachment figure who could provide protection in potentially dangerous situations. The presence of a caring and responsive attachment figure would induce a development of a secure attachment style in the child; inconsistent and unresponsive care would induce insecure attachment. The early attachment experience is preserved in “working models” as shaping future patterns of relationships with other people in adulthood. A number of attachment styles have been proposed in the literature (see Cassidy & Shaver, 1999 for an overview). The present study draws on the Bartholomew and Horowitz (1991) model, in which four attachment styles are postulated: the secure style characterised by trusting oneself and others; the fearful style characterised by lack of trust in oneself and in others; the preoccupied style characterised by a desire for close relationships with others and, at the same time, a fear of being rejected; and the dismissing style characterised by trust in oneself, avoidance of relationships and excessive self-sufficiency. The model was empirically validated and used as a framework in adolescent and adult attachment research (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994).

Goals of the Study
Parent-child relationships are embedded in a broader social system, such as the extended family, school and neighbourhood. This broad social system affects parenting styles and patterns of parent-child interactions. Due to the fact that all societies expect certain characteristics and behaviours from people in order to function adequately as members of their society, functional parenting, apart from universal biological practices such as caring for and protecting children, often includes specific practices related to the values and standards prevailing in the particular society (see Rubin & Chung, 2006 for an overview; Minturn & Lambert, 1964; Hanono, 1999; Keller, 2003). Given that cultures differ with respect to ideas about parenting, it is reasonable to assume that cultural differences can be found also with respect to attachment styles. Some evidence indeed was found that individuals from diverse cultures may endorse different romantic attachment styles (Schmitt, 2003; Schmitt et al., 2004). Previous studies focused on cultural variation in romantic attachment, without paying attention to general, non relation-specific attachment. Moreover, comparative studies on parenting hitherto have focused on relatively “remote” cultures, e.g., Occidental versus Oriental (see Rubin & Chung, 2006 for an overview; Minturn & Lambert, 1964; Hanono, 1999), whereas parenting practices within Europe have received scant attention. The question as to whether the long-lasting separation of Eastern and Western Europe exerted any influence on parenting and attachment styles, to our knowledge, has not been addressed. Previous research has shown, for example, differences in personality traits of
respondents from West and East Germany, with the latter scoring lower on openness (Angleitner & Ostendorf, 2000) and self esteem (Fischer, Meas, & Schmitt, 2006). Moreover, Schmitt, Allik, McCrae and Benet-Martínez (2007) found that Western Europeans scored higher than Eastern Europeans on Neuroticism, the dimension of the Big Five personality theory. Accordingly, the first goal of the present study was to compare Eastern and Western European adolescents and their parents with respect to attachment styles. In addition, we were interested if the unification of Eastern and Western European cultures may have caused a bigger similarity of attachment styles in adolescents from Eastern and Western Europe as compared to their parents. The second goal was to examine what is the role of parental characteristics and culture in the development of the attachment styles of adolescents.

**Differences in Attachment in Eastern and Western Europe**

Previous studies have demonstrated that people in collective cultures evaluate the self in terms of interconnectedness and the value they provide to others, more than do people from individualistic cultures (Markus & Kitayama, 1991; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). In other studies, insecure romantic attachments were found to be associated with harsh environment and economic hardships (Schmitt, 2003), and preoccupied attachment co-occurred with high rates of collectivism (Schmitt et al., 2004). Western European societies are more individualistic (see Chapter 1), and more affluent than Eastern European ones, so we should expect that Eastern Europeans will score higher on a preoccupied attachment than Western Europeans do [Hypothesis 1]. Although differences between Eastern and Western European cultures are still noticeable, the process of globalization and unification of cultures may increase the similarities in these societies and in people from the East and West (Mott, 2004). Therefore, it is valid to speculate that the differences between Eastern and Western European respondents with respect to attachment styles will be smaller in the adolescent respondents, who were more exposed to cultural unification and cultural exchange, than in their parents [Hypothesis 2].

As clarified above, culture may influence attachment styles. The ecocultural theory of development postulates that cultural influence can be direct e.g., when a child interacts with peers or is taught norms and values promoted by institutions (schools, youth organisations), and indirect, e.g., when values and standards prevailing in the culture influence parenting practices. A number of studies have demonstrated the influence of culture on parenting practices (Dobbsins, 2006; Anhalt, 2001; Lamb & Lewis, 2005; Nair & Murray, 2005). Still, the direct influence of culture on attachment styles is less documented. When we find that Eastern Europeans score higher on preoccupied
attachment, we will further investigate whether this difference exists due to the direct effect of culture on preoccupied attachment, or, perhaps due to differences in parenting characteristics and parental practices. We expect to find a bigger direct effect of culture (when controlling for parental characteristics) on preoccupied attachment than on secure, fearful and dismissing attachment styles [Hypothesis 3].

**Linking Attachment Styles of Children and their Parents**
The transmittance of attachment styles from parents to children (e.g., Ricks, 1985), and the relation between parents’ attachment styles and quality of parenting is very well-documented. Secure attachment was associated, for instance, with a higher motivation to parenting than fearful and dismissing styles; and a preoccupied attachment style was associated with a parent’s desire that the child fulfils the parent’s dependency needs (Wright, 2000; Rholes, Simpson, & Blakely, 1995). Results also suggest that individuals with a dismissing or preoccupied attachment style may experience problems in developing a strong helping relationship (Ettema, 1999). Dismissing parents experienced greater stress related to parenting, perceived parenting as less satisfying and as less personally meaningful (Rohles, Simpson, & Friedman, 2006), were less helpful and responsive, and displayed generally poor parenting skills (Ettema, 1999). We expect, therefore, that attachment styles of parents will positively predict an analogous attachment style of the child. In other words, we hypothesised that a secure attachment style of a parent is a positive predictor of a secure attachment style of the child; a fearful attachment of a parent is a positive predictor of a fearful attachment style of the child, a preoccupied attachment of a parent is a positive predictor of a preoccupied attachment style of the child; and a dismissing attachment style of a parent is a positive predictor of a dismissing attachment of the child [Hypothesis 4].

**Linking Parenting Styles and Attachment Styles of Children**
There is ample evidence about the relation between parenting practices and children’s attachment styles (e.g., Nair & Murray, 2005; Demo & Cox, 2000; Bowlby, 1984). For instance, sensitivity, acceptance and the emotional accessibility of parents are positively associated with the secure attachment of a child (Ainsworth, Blehar, Waters, & Wall, 1978; Karen, 1998), whereas inconsistent care-taking, rejection and punitive parental beliefs are associated with the insecure attachment of a child (Bridges & Connell, 1991; Egeland & Faber, 1984). Gamble and Roberts (2005) demonstrated that adolescents who perceive their parents as critical and perfectionist tend to report insecure attachment, characterised by difficulty of getting close to others, fear of abandonment, and a low self-esteem. A low level of maternal warmth was
associated with an insecure attachment of a child (Martens, 2006), whereas less punitive parenting was positively associated with a supportive and nurturing home environment (Reis, Barbera-Stein, & Bennett, 1986). Many categorisations of parenting styles have been proposed in the literature. In the present study we draw on the Baumrind (1966) classification that proposes three parenting styles: authoritative, authoritarian, and permissive. These three parenting styles seem to parallel the behaviour of parents of children with different attachment styles (Neal & Frick-Horbury, 2001). For example, similar to the parent of a securely attached child, the authoritative parent is sensitive to a child’s needs, emotionally responsive, does not use punitive discipline and is moderately controlling (Baumrind, 1966). The authoritarian parent, like the fearful and dismissing parent, is unresponsive to the needs of the child and tends to reprimand and uses physical enforcement, harsh punishment and high control (Kochanska, Kuczynski, & Radke, 1989). Children of authoritarian parents are described as anxious and withdrawn, and as having difficulties with interactions with peers and low self-esteem (Baumrind, 1967; 1971; Elicker, Englund, & Sroufe, 1992). The preoccupied parent, like the permissive parent, is described as inconsistent, being either too lenient or too controlling and punitive, and using withdrawal of love as a punishment. Baumrind (1967) reported that children of permissive parents are anxious, immature and low on self-control and self-reliance. Our review of the literature led us to expect that authoritative parenting is a positive predictor of a secure attachment style in children, while authoritarian and permissive parenting styles - of insecure attachment styles (fearful, preoccupied and dismissing) [Hypothesis 5].

**Parental Psychological Health and the Attachment Styles of Children**

A number of studies clearly demonstrate that parents’ psychological health is related to that of their children (e.g., Gerlsma, Snijders, Van Duijn, & Emmelkamp, 1997). For instance, Umberson (1989) found that parental psychological health was positively associated with the quality of a parent-child relation. Ettema (1999) showed that the psychological health of a mother was related to her sense of competence as a parent, and psychological health problems in her were found to be associated with a high chance of child abuse. Studies also indicate that parental depression or anger-management problems are associated with insecure attachment and aggressive behaviours in children (Hutto, 1998). Therefore, we hypothesised that parental psychological health is a positive predictor of a secure attachment style in a child and a negative predictor of insecure ones (fearful, preoccupied and dismissing) of a child [Hypothesis 6].

**The Issue of Measurement Equivalence**
Several authors addressed the problem of bias and instrument equivalence in cross-cultural studies (e.g., Van de Vijver & Leung, 1997; Poortinga, 1995). Equivalence of measures appears particularly critical in cross-cultural comparisons (Van de Vijver & Tanzer, 2004). Sources and types of bias have been discussed at length in the literature, as well as have procedures to minimize them (see Van de Vijver & Leung, 1997 for an overview). It was a focus of attention to minimize the source of bias and to strive for full score comparability equivalence in the present study. Therefore, aside from utilizing equivalent sampling, translation (Van de Vijver & Hambleton, 1996), and application procedures (Van de Vijver & Tanzer, 2004), we tested the construct equivalence of attachment and parenting styles by checking the factorial structure of the questionnaires across the four cultures (Van de Vijver & Leung, 1997), using a pattern of high correlations with related measures (convergent validity) and low correlations with measures of opposite constructs (discriminant validity) (Van de Vijver & Tanzer, 2004). In addition, we controlled for possible response and item bias in measures of attachment and parenting styles before testing the hypotheses (e.g., Poortinga, 1989; Van de Vijver & Poortinga, 1982).
Method

Participants

Students of secondary schools (between 15-18 years old) from the Netherlands (71% female, mean age 16.08, $SD = 1.09$), from Poland (75% female, mean age 16.17, $SD = 1.34$), from Russia, (65% female, mean age 15.30, $SD = 1.21$), and from Hungary (79% female, mean age 16.27, $SD = 1.03$), as well as their parents participated in our survey. The numbers of adolescents, mothers and fathers from each country are shown in Table 6-1. The mean age of parents was 47.52 ($SD = 3.83$), 43.48 ($SD = 5.10$), 42.29 ($SD = 6.49$), and 44.40 ($SD = 5.13$), in the Dutch, Polish, Russian and Hungarian sample. Responses only from mothers accounted for 26, 34, 34, and 33%, and responses only from fathers accounted for 9%, 2%, 4%, and 5 %, and responses from both parents accounted for 65%, 64%, 62%, and 62% in the Dutch, Polish, Russian and Hungarian samples respectively.

Procedure

Translations of the Dutch questionnaire into Polish, Russian, and Hungarian were checked and revised by native Polish, Russian, and Hungarian psychologists who had spent more than 15 years in the Netherlands and were fluent in Dutch. These versions of the questionnaires, as well as the Dutch version, were presented once again to other Polish, Russian, and Hungarian translators, who were asked to evaluate the equivalence of each translated item with the original version. The equivalence was rated as high. Students of secondary schools in the Randstad (the largest urban area in the Netherlands), Warsaw (the capital city of Poland), Saint Petersburg (the second biggest city in Russia) and Budapest (the capital city of Hungary) were approached at schools during classes, with the consent of school principals and teachers. Students were told in their native language about the aim of the study, and each student received a set of questionnaires (one for a student and two questionnaires for parents), a letter with short instructions for students and parents as well as three small envelopes and one big one. Students were instructed to fill out the questionnaires at home and give questionnaires to their parents. We explained that after completion, questionnaires should be placed in the supplied small envelopes and be sealed, and subsequently placed into one big, “common” envelope and sealed. This procedure was used to ensure the total privacy of students and parents, and to avoid the mutual influence of family members on each other while responding to our survey. Putting the set of three small envelopes into the big envelope guaranteed that sets of questionnaires from each family were returned individually. All instructions, as well as the questionnaires, were in the respondents’ native language. The response rates were 25%, 33%,
34%, and 75% in the Netherlands, Poland, Russia and Hungary respectively. Missing data were replaced by variable means, separately for children, mothers, and fathers in each of the four samples. Missing data accounted for 2%, 2%, 3%, and 1% of the data in the students’ samples, 3%, 3%, 7%, and 5% in the mothers’ samples, and 4%, 5%, 9%, and 6% in the fathers’ samples from the Netherlands, Poland, Russia and Hungary respectively.

**Instruments**
The questionnaire for children contained questions about age, gender, and attachment styles. The questionnaire for parents started with demographic questions about age, gender and the kind of relation to the child participating in our survey (parent, step-parent, adoptive-parent, other). Further, the questionnaire contained questions concerning attachment styles, parenting styles, psychological health, satisfaction with life and social support.

Attachment styles of children and parents were measured with the Attachment Style Questionnaire (ASQ, see Appendix 1) by Van Oudenhoven, Hofstra and Bakker (2003) consisting of four scales – secure, fearful, preoccupied and dismissing, matching the four attachment styles postulated by the Bartholomew and Horowitz’s (1991). In previous studies, the replicability and reliability of scales (Hofstra, Van Oudenhoven, & Buunk, 2005; Polek, Ten Berge, & Van Oudenhoven, 2006), and the construct validity and stability (Hofstra, et al., 2005) had proved to be satisfactory. In contrast to many existing attachment measures that only focus on relationship specific attachment, the ASQ measures general attachment, which makes it possible to assess the general sociability of a respondent. The ASQ assesses attachment through multiple scores (on each dimension separately). Thus, participants were not classified into one attachment category, but received scores on all four attachment scales. For all ASQ scales, a 5-point scale was used, ranging from *strongly disagree* (1) to *strongly agree* (5). An example of an item from the 8-item secure scale was: “I feel at ease in emotional relationships”; from the 4-item fearful scale: “I am afraid that I will be deceived when I get too close with others”; from the 6-item preoccupied scale: “I often wonder whether people like me”; from the 3-item dismissing scale: “It is important to me to be independent”. The four attachment styles are not independent; as theory would predict secure style was correlated negatively with three other styles. Alpha coefficients for the secure scale were .70, .69, .67, .72; for the fearful scale were .84, .71, .79, .78; for the preoccupied scale were .83, .74, .71, .82; for the dismissing scale were .53, .60, .61, .59, .57 in the Dutch, Polish, Russian, and Hungarian samples, respectively.

Parenting styles were assessed with the Parental Authority Questionnaire – Revised (Reitman, Rhode, Hupp, & Altobello, 2002), based on an earlier
version of PAQ (Buri, 1991) consisting of scales representing the three parenting styles proposed by Baumrind (1991): authoritarian, authoritative and permissive. Previous studies indicated a satisfactory validity of this measure (Buri, Louiselle, Misukanis, & Mueller, 1988; Buri, 1991). For all scales, a 5-point answering scale was used, ranging from strongly disagree (1) to strongly agree (5). Similarly to the ASQ, respondents were not classified into one parenting category, but received scores on all three parenting scales. Confirmatory factor analysis was performed on the original 30-item PAQ-R in the four national samples of mothers and in the four national samples of fathers. Fourteen items that formed three robust factors across all samples (see Table 5-1) were retained in the final version of the questionnaire. An example of an item from a 4-item authoritarian scale is “When I ask my children to do something, I expect it to be done immediately and without questions”, from a 5-item authoritative scale is “Once family rules have been made, I discuss the reasons for the rules with my children”, from a 5-item permissive scale is “Children need to be free to make their own decisions about activities, even if this disagrees with what a parent might want to do”. Alpha coefficients for the authoritarian scale were .63, .72, .67, .76; for the authoritative scale were .69, .73, .76, .75; for the permissive scale were .78, .65, .64, .60 in the Dutch, Polish, Russian and Hungarian samples respectively.

The psychological health of parents was measured with a 9-item scale from the RAND 36-item Health Survey (RAND - Health Sciences Program, 1992; sample item: “How much of the time during the past four weeks have you been a very nervous person?”) and Satisfaction With Life with the 5-item Scale (SWLS) by Diener, Emmons, Larsen and Griffin (1985; sample item: “I am satisfied with my life”). Both measures had a 5-point answering scale ranging from strongly disagree (1) to strongly agree (5). The social functioning of parents was measured with a shortened version of the Social Support List – Interactions (SSL-I) by Van Sonderen (1993). The 9-item SSL-I used in the present study was derived from a factor analysis on the original list of 64 items (Van Oudenhoven & Van der Zee, 2002). A sample item was: “Does it ever happen to you that people are affectionate towards you?” Alpha coefficients for these scales ranged from .73 to .90 in the samples under study.
Results

Preliminary analyses
Visual inspection of mean plots of scores on items used to measure attachment and parenting styles indicated that, regardless of the content, in 53% of the items the mean scores of Polish respondents were higher than those of respondents from the other three samples, whereas the mean scores of Dutch respondents were lower than those of the respondents from the other three samples in the case of 57% of the items. The mean scores of respondents from the Hungarian and Russian samples were between those of the Polish and Dutch respondents in 54% and 58% of the cases. In addition, ANOVA performed on items from the ASQ revealed significant differences between national samples in: 50% of items in the sample of children, 45% in the sample of mothers and 46% in the sample of fathers. ANOVA on items from the PAQ showed significant differences in scores between national samples in 35% of the items in the sample of mothers, and 28% in the sample of fathers. This observation suggests response tendencies: regardless of the contents of items Polish respondents used higher rates on the answering scale, Dutch respondents used lower rates on the answering scales, and Russian and Hungarian respondents - middle rates on the answering scale. As the analysis in the next section was carried out on the two groups – Western Europeans (the Dutch sample) and Eastern Europeans (the Polish, Russian and Hungarian samples, jointly), we further checked for response tendencies in these two groups by comparing correlations obtained in these two groups between the two opposite concepts - secure and fearful attachment styles (see: Chapter 6). The correlation between secure and fearful attachment was - .34, \( p < .001 \) in Eastern European group and -.51, \( p < .001 \) in Western European group. The difference between correlations was significant statistically \( (p < .01) \), which, again, suggested that Eastern Europeans used more acquiescent response styles. In order to account for these response tendencies we carried out analysis on the data standardized within samples (Fischer, 2004), and on the data standardized across all samples. However, in both cases, the results were similar and statistically significant; therefore, for the sake of brevity, we report below only the results on the data standardized across samples.

Confirmatory Factor Analysis (CFA) was performed on responses to the Attachment Styles Questionnaire of children, mothers and fathers from each country separately, and on the responses of mothers and fathers from each country to the Parental Authority Questionnaire. In addition, CFA was performed on the merged samples of children, mothers and fathers from the four countries (see Table1). The results of CFA indicated satisfactory replicability of factors in the ASQ and the PAQ across all the samples under
study, thus showing satisfactory structural equivalence of the measures of attachment and parenting styles. In order to further examine the construct equivalence, we checked if intercorrelations of the scales of the ASQ remain similar across studied samples (lack of similarities in correlation patterns would suggest low construct equivalence). In general, we found consistent patterns of internal correlations between secure - fearful (ranging from -.26 to -.59, $p < .001$), suggesting satisfactory cross-cultural equivalence of these constructs. Less consistent internal correlations were found for preoccupied and dismissing, which were probably due to the generally lower validity of the scale measuring a dismissing attachment. We also examined the patterns of positive correlations with related measures and negative correlations with measures of the opposite constructs, to check for convergent and discriminant validity respectively (Van de Vijver & Tanzer, 2004). Positive correlations ranging from .10 to .44, $p < .01$ between secure attachment and Social Support, Psychological health and Satisfaction with Life were found across all samples. Consistently across all samples, fearful and preoccupied attachment styles were correlated negatively (in the range of -.01 to -.44) with Social support, Psychological health and Satisfaction with life. A less consistent pattern of correlation was found for dismissing attachment. In sum, these results suggest satisfactory construct equivalence and validity for measures of secure, fearful and preoccupied attachment styles and a less satisfactory one for dismissing attachment.

**Differences in Attachment in Eastern and Western Europe**

In order to test the hypothesis that Eastern Europeans will score higher on preoccupied attachment than Western Europeans [Hypothesis 1], and that the magnitude of the differences between Eastern and Western European respondents with respect to attachment styles will be smaller in the adolescent respondents as compared to middle-life respondents [Hypothesis 2] we carried out Univariate Analysis of Variance (Toothaker, 1993), in which four groups were compared: Eastern European parents ($N = 852$), Eastern European adolescents ($N = 553$), Western European parents ($N = 151$) and Western European adolescents ($N = 99$). The analysis was performed for each attachment style separately, and post hoc Scheffé test was used as a robust procedure for the comparison of groups with different sample sizes (Keppel, 1991). The results revealed significant overall differences in preoccupied attachment between Eastern and Western European parents, and between Eastern and Western European adolescents $F(3, 1470) = 4.65$, $p < .01$, partial $\eta^2 = .01$. In the post hoc pair-wise comparison the mean difference in preoccupied attachment estimated based on marginal means was .14 between Eastern and Western parents, and .18 between Eastern and Western adolescents. In both cases, as predicted,
Eastern Europeans scored higher, but contrary to our prediction, the magnitude of the differences was higher in the adolescent sample. In a post hoc pair-wise comparison of Eastern and Western European adolescents on secure attachment, we found that the differences between them were not significant, while the differences between Eastern and Western parents were significant (Eastern European parents scoring .23 higher) $F(3, 1443) = 16.54$, $p < .001$, partial $\eta^2 = .03$. Neither overall, nor post hoc differences in fearful attachment were significant between either sample $F(3, 1484) = 2.28$, $p = .08$, partial $\eta^2 = .00$. In a post hoc pair-wise comparison of Eastern and Western European adolescents on dismissing attachment, we again found that the differences between them are not significant, while the differences between Eastern and Western European parents again were significant (Eastern European parents scoring .06 lower) $F(3, 1489) = 3.16$, $p < .05$, partial $\eta^2 = .01$. To further test the hypothesis about Western and Eastern parents differing more with respect to attachment styles than Western and Eastern adolescents [Hypothesis 2] we carried out two ANOVAs, first comparing parents and next comparing adolescents from the East and West. In each comparison we additionally tested statistical power to check if the differences in group size might have influenced the results. In the first ANOVA we found that Eastern parents scored 0.24 higher on secure attachment than Western parents $F(1,892) = 7.63$, $p < .01$ (statistical power 0.94). Eastern parents scored also 0.12 higher on preoccupied attachment than Western parents $F(1,907) = 5.63$, $p < .05$ (statistical power 0.70). In the second ANOVA we found that Eastern adolescents scored 0.14 higher on secure attachment than their Western peers $F(1,552) = 14.76$, $p < .001$ (statistical power 1.0). Eastern adolescents scored 0.16 higher on preoccupied attachment than Western adolescents $F(1,573) = 5.96$, $p < .05$ (statistical power 0.79). Thus, again we found that parents differed more on secure, while adolescents – on preoccupied attachment, and the sample sizes did not affect the results, as indicators of statistical power were similar when comparing parents and adolescents.
Table 5-1
Summary of Confirmatory Factor Analyses on the Attachment Styles Questionnaire and Parenting Authority Questionnaire in Samples of Children, Mothers and Fathers from the Four Countries Separately, and for a Merged Sample.

<table>
<thead>
<tr>
<th>Sample:</th>
<th>N</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
<th>GFI</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>NFI</th>
<th>CFI</th>
<th>IFI</th>
</tr>
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<tr>
<td>Attachment styles questionnaire (children)</td>
<td>Dutch</td>
<td>99</td>
<td>222.18</td>
<td>183</td>
<td>.03</td>
<td>.82</td>
<td>.77</td>
<td>.05</td>
<td>.69</td>
<td>.89</td>
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<td></td>
<td>Polish</td>
<td>186</td>
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<td>.83</td>
<td>.78</td>
<td>.08</td>
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<td>.76</td>
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<td></td>
<td>Russian</td>
<td>146</td>
<td>306.75</td>
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<td>.71</td>
<td>.08</td>
<td>.50</td>
<td>.67</td>
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<tr>
<td></td>
<td>Hungarian</td>
<td>221</td>
<td>346.33</td>
<td>183</td>
<td>.12</td>
<td>.87</td>
<td>.84</td>
<td>.06</td>
<td>.68</td>
<td>.81</td>
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<td></td>
<td>Merged</td>
<td>652</td>
<td>768.42</td>
<td>183</td>
<td>.05</td>
<td>.89</td>
<td>.86</td>
<td>.07</td>
<td>.73</td>
<td>.79</td>
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<td>Dutch</td>
<td>89</td>
<td>371.26</td>
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<td>.84</td>
<td>.76</td>
<td>.08</td>
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<td>.65</td>
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<td>183</td>
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<td>.77</td>
<td>.08</td>
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<td>.68</td>
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<td></td>
<td>Russian</td>
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<td>.65</td>
<td>.10</td>
<td>.48</td>
<td>.61</td>
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<td>198</td>
<td>488.87</td>
<td>183</td>
<td>.00</td>
<td>.83</td>
<td>.78</td>
<td>.08</td>
<td>.57</td>
<td>.67</td>
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<td></td>
<td>Merged</td>
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<td>858.96</td>
<td>183</td>
<td>.14</td>
<td>.88</td>
<td>.85</td>
<td>.07</td>
<td>.69</td>
<td>.74</td>
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<td>Attachment styles questionnaire (fathers)</td>
<td>Dutch</td>
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Note. GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; RMSEA = root-mean-square error of approximation; NFI = normed fit index; CFI = comparative fit index; IFI = incremental fit index.
In sum, support was found for Hypothesis 1 that Eastern Europeans score higher on preoccupied attachment than Western Europeans, whereas little evidence was found supporting Hypothesis 2 that the magnitude of the differences between Eastern and Western European respondents with respect to attachment styles will be smaller in the adolescent respondents as compared to middle-life respondents. The results of the Univariate Analysis of Variance suggested that Eastern and Western parents differed more than adolescents with respect to secure and dismissing attachment styles. Adolescents from the West and East differed more than their parents with respect to preoccupied attachment. No differences were found with respect to fearful attachment in either sample. The magnitude of the main effect for secure and dismissing attachment, as indexed by partial eta-square ($\eta^2$), although significant, was rather small. Additional ANOVA confirmed the findings with respect to secure and preoccupied attachment styles, but not with respect to dismissing and fearful attachment styles.

### Attachment Styles, Culture and Parental Characteristics

In the introduction we hypothesised that the direct effect of culture on the preoccupied attachment of adolescents will be stronger than on secure, fearful and dismissing attachment styles [Hypothesis 3]. Further, we hypothesised that a secure parental attachment style is a positive predictor of a secure attachment style of the child; a fearful attachment of a parent is a positive predictor of a fearful attachment style of the child, a preoccupied attachment of a parent is a positive predictor of a preoccupied attachment style of the child; and a dismissing attachment style of a parent is a positive predictor of a dismissing attachment of the child [Hypothesis 4]. We also expected that authoritative parenting is a positive predictor of a secure attachment style of children, while authoritarian and permissive parenting styles are predictors of insecure attachment styles (fearful, preoccupied and dismissing) [Hypothesis 5] and that parental psychological health is a positive predictor of a secure and a negative one of insecure attachment styles (fearful, preoccupied and dismissing) of the child [Hypothesis 6].

To test Hypotheses 3-6 we used an Analysis of Covariance (ANCOVA) in which culture (coded as a dummy variable) was entered as a random factor (Wildt & Ahtola, 1978), with characteristics of parents as predictors and attachment styles of adolescents one by one, individually, as dependent variables. This analysis is an extension of the analysis of variance carried out in the previous section. Since the correlations between responses of mothers and fathers were significant for each variable, apart from dismissing attachment and ranged from .16 to .50, in order to avoid a collinearity problem we separately carried out an analysis when
characteristics of mothers were entered as predictors, and when characteristics of fathers were entered as predictors. In sum, we report below eight analyses: two for each attachment style: one analysis utilizes responses of mothers on the ASQ, PAQ, RAND, SWLS, and SSL-I, the other one utilizes responses of fathers on these scales as predictors of adolescents’ responses on the scales of the ASQ. The interaction effects of culture and each parental characteristic were also tested in these analyses. Contrary to expectations we did not find a significant main effect of culture for preoccupied attachment when using responses of mothers nor when using responses of fathers. Neither have we found a significant interaction effect between culture and parental characteristics. This suggests that the difference between Eastern and Western Europeans we found in the analysis of variance in the previous section exists due to the effect of parental characteristics. When controlling for parental characteristics, the differences between Eastern and Western Europeans were not significant. The analysis showed that preoccupied attachments of adolescents were negatively predicted by their mother’s satisfaction with life $B = -.14, p = .04$, and positively predicted by preoccupied the attachment of the mother $B = .20, p = .01$, mother’s permissive parenting $B = .16, p = .02$, and the preoccupied attachment of the father $B = .27, p = .01$. The $B$ values indicate that, keeping all variables equal, if the predicting variable increases by one unit, the predicted variable increases with $B$ value of the unit. We found a significant main effect of culture when predicting secure attachment with mothers $F(1, 395) = 7.60, p < .01$, partial $\eta^2 = .02$ and fathers $F(1, 290) = 5.26, p < .05$, partial $\eta^2 = .02$ characteristics. The significant difference between marginal means indicated that Eastern European adolescents scored higher than their Western peers in the range of .31, when fathers’ characteristics are controlled and .41 when mothers’ characteristics are controlled. The above result indicates that beyond the influence parental characteristics exert on the secure attachment of their adolescent children, Eastern European culture seems to enhance the secure attachment of adolescents. Secure attachment amongst adolescents were negatively predicted by a fearful attachment of fathers $B = -.20, p = .05$, and positively predicted by the authoritative parenting of mothers $B = .15 p = .003$, mothers’ psychological heath $B = .11, p = .02$, and how mothers perceived the social support they receive from other people $B = .18, p = .007$. A significant interaction effect between culture and authoritative parenting was found when predicting the fearful attachment of adolescents with fathers’ characteristics $F(1, 301) = 5.56, p < .05$, partial $\eta^2 = .02$. Authoritative parenting of fathers from East Europe (interaction: culture x authoritative parenting) predicted negatively a fearful attachment of children $B = -.22, p = .02$. When fearful attachment was predicted by mothers’ characteristics,
fearful attachment of the mother $F(1, 411) = 7.70, p < .01$, partial $\eta^2 = .02$ has an effect on the fearful attachment of the child. Neither significant main, nor interaction effects were found with respect to the dismissive attachment of the adolescent by mother and father’s characteristics respectively. The estimated parameters showed that a preoccupied attachment of the mother was a negative predictor of the dismissive attachment of a child $B = -.06, p = .02$. In the analyses, in which mothers’ characteristics were entered as predictors, $R^2$ reached: .13, .08, .06, .06 and adjusted $R^2$ reached: .08, .03, .02, .01, for secure, preoccupied, fearful and dismissing attachment style respectively. In the analyses in which fathers’ characteristics were entered as predictors, $R^2$ was: .11, .07, .08, .05 and adjusted $R^2$ was: .04, .01, .02, .02, for secure, preoccupied, fearful and dismissing attachment style respectively.

To sum up, the results are not in accordance with Hypothesis 3 – we did not find a stronger direct effect of culture on preoccupied attachment as compared to other attachment styles. On the contrary: the results suggest that the difference between Eastern and Western European adolescents with respect of their preoccupied attachment style exists due to differential parental practices. Surprisingly, we found that culture may exert a direct influence on the secure attachment styles of adolescents, beyond the influence of parental characteristics. Further, we found support that secure, fearful and preoccupied attachment styles, and to some extent - dismissing attachment styles of parents are predictors of an analogous attachment style of their children [Hypothesis 4]. Evidence was found that authoritative parenting has a positive effect on a secure attachment style of children, while permissive parenting styles - on insecure attachment styles, however no evidence was found that authoritarian parenting would predict insecure attachment [Hypothesis 5]. The results supported our expectations that parental psychological health is a positive predictor of a secure and a negative one of insecure attachment styles (fearful, preoccupied and dismissing) in a child [Hypothesis 6].

**Discussion**

In the present study we were interested in, whether the long-lasting separation between Eastern and Western Europe may have resulted in differences in the psychological characteristics of people from these regions. We focused on attachment styles, because attachment is defined as a construct shaped by the immediate (parental practices) and broader environment (culture). Therefore it is plausible that differences in culture will be reflected in differences in attachment styles.
First, the present results indicate that Eastern Europeans have more preoccupied attachment than Western Europeans. This difference, as the findings suggest, exists mainly due to different parenting practices, more than due to the direct influence of the culture on an individual. The present results show that parental practices are of greater importance for child development than the broad social network. This challenges the assumption of the ecocultural theory (Weisner, 2005) proposing that the environment and parental practices are equally important for a development of the child. Second, the study addressed the question of whether the generation of Eastern and Western Europeans, which grow up in a more unified and internationalized world show more similarities in their attachment styles, than the generation of their parents. The findings suggest a negative answer to this question: there were no differences in either sample on the fearful and dismissing attachment, and the differences between adolescents from Eastern and Western Europe were smaller than the differences between their parents only with respect to secure attachment styles, but slightly bigger with respect to preoccupied attachment. A possible explanation of the latter might be that in puberty the worries as to whether one is liked and accepted by others, related to preoccupied attachment, are particularly strong. This tendency may be more salient in collectivistic, thus, Eastern European societies, than in more individualistic Western European societies, as Eastern cultures were found to induce self-evaluation, which is based on interconnectedness more than do Western cultures (Markus & Kitayama, 1991).

In addition, we found that the attachment styles of parents predicted the attachment styles of their adolescent children, and the relation between them was, generally speaking, as we expected, and as described in the literature (e.g., Nair & Murray, 2005; Demo & Cox, 2000; Bowlby, 1984, Ainsworth, 1967): secure attachment of parents positively predicted a secure attachment style of the child and negatively insecure attachment styles of the child. Conversely, the insecure attachment of parents predicted negatively the secure attachment of the child and positively insecure attachment styles of the child. The results also suggest that an authoritative parenting style increases the chance that the child will develop a secure attachment style, which is in line with previous findings (Ainsworth et al., 1978; Karen, 1998). Surprisingly, the study failed to support the predicted effect of authoritarian parenting on the attachment of children. Possibly, children possess some kind of a “recovery” mechanism, which helps them to develop a secure attachment style even in the case of dysfunctional parenting. With respect to psychological health, the results were consistent with earlier findings (Gerlsma et al., 1997) that psychological health, regardless of cultural context, is an important factor for the child to develop a secure attachment.
When controlling for parental characteristics, culture turned out to have the strongest effect on secure attachment, and not as expected, on preoccupied attachment. This result gives us a hint that Eastern European culture is more conducive for adolescents to develop secure attachment than Western European culture. Interestingly, in the comparisons of parents, Eastern Europeans also scored higher than their Western peers. It might be attributed to rapid economic growth and social progress, and the higher optimism of Eastern Europeans resulting from this.

In accordance with earlier studies (Van IJzendoorn & Sagi, 1999; Schmitt et al., 2004) showing that a secure type of attachment is normative across diverse cultures, we also found that adolescents and their parents from all four samples scored higher on a secure than on insecure (fearful, preoccupied and dismissing) attachment styles.

The present study has some limitations. First, there was a trace of differential response strategies among respondents from different countries; Polish respondents had a tendency to use higher, Dutch - lower, and Russian and Hungarian - middle categories of the answering scale. Although we found the same results in comparisons on the standardized data within samples, still we have to keep in mind the possibility that the outcome of the comparisons might have been influenced, to some extent, by the response styles. Our observation with regard to response strategies are in line with other studies which indicate that respondents from more collectivistic cultures show more acquiescent (positive) response styles (Lamm & Keller, 2007). Another limitation is related to the fact that in our fourfold comparison we had, on the one hand, adolescent respondents and, on the other, mid-life respondents. It must be noted that in adolescents attachment styles are not completely stable. This restrains the validity of the present findings, as it might well be that attachment styles measured in the same respondents will change in a few years. One should not forget, however, that since the political changes started 18 years ago, adolescent participants represent the first generation of Eastern Europeans born in a post Cold War Europe. Finally, it should be noted that respondents in the present study were recruited among the inhabitants of the biggest cities in the four countries; thus generalization to other non-metropolitan samples must be done cautiously.