Sex differences in romantic attachment: A facet-level analysis

Marco Del Giudice

Department of Psychology, University of New Mexico, Logan Hall, 2001 Redondo Dr NE, Albuquerque, NM 87131, USA

ABSTRACT

Evolutionary models predict systematic sex differences in romantic avoidance and anxiety; however, observed effect sizes are typically small. Here I explore the possibility that larger and more reliable differences may emerge at the level of narrower attachment facets. In two datasets from the US and Italy, five facets could be identified in the Experiences in Close Relationships questionnaire. As predicted, attachment facets showed larger sex differences (US: $d = -0.14$ to $0.31$, Italy: $d = -0.53$ to $0.39$) than avoidance and anxiety (US: $d = 0.00$ and $-0.03$, Italy: $d = -0.18$ and $-0.40$); moreover, different facets of the same dimension showed opposite-sign effects. These findings suggest that sex differences in attachment can be fruitfully investigated at the level of facets.

The existence of systematic sex differences in romantic attachment has been predicted based on evolutionary theory (see Del Giudice (2009); Del Giudice and Belsky (2010); Kirkpatrick (1998)). In this perspective, romantic avoidance can be partly understood as a male-biased strategy for minimizing commitment in long-term relationships, whereas anxiety can be interpreted as a female-biased strategy for maximizing investment from partners and relatives (Del Giudice, 2009). The available empirical data support evolutionary predictions: across countries, men tend to show higher avoidance and lower anxiety than women (Del Giudice, 2011; Schmitt et al., 2003). However, effect sizes are typically small, which raises questions about their biological and psychological significance.

Here I explore the possibility that broad dimensions such as avoidance and anxiety may fail to capture the true pattern of sex differences in attachment styles, and that larger and more reliable differences may emerge at the level of narrower attachment facets (see Del Giudice (2011)). As I show below, a facet-level analysis reveals a complex structure of sex differences within the domains of avoidance and anxiety; while some facets show differences in the usual direction, other facets display attenuated or opposite-sign associations with sex.

1. Methods and results

I reanalyzed two existing datasets of scores on the Experiences in Close Relationships questionnaire (ECR; Brennan, Clark, & Shaver, 1998). The first was an aggregate sample of US undergraduates. I started by extracting lower-level facts of the ECR with exploratory factor analysis; next, I computed sex differences in individual facets and compared them with those in avoidance and anxiety. I then replicated the analysis in a sample of Italian undergraduates. Analyses were performed in SPSS™ Statistics 20.0 and R™ 2.15.

2. Dataset 1: US undergraduates

The dataset was obtained by aggregating three samples from Allen and Baucom (2004; $N = 504$) and Noftle and Shaver (2006; $N = 285$ and 8310). Raw data were contributed by the authors and included in a previous meta-analysis (Del Giudice, 2011). Participants were undergraduates aged 17–24. In Noftle and Shaver’s sample, 239 participants (3.2%) had answered all the items with the same score, had more than 50% missing answers, or had omitted to indicate their sex; they were dropped from analysis. Missing values ranged from 0% to 1%, and were imputed via multiple regression. Total $N = 8829$ (5793 females).
Table 1
Oblimin-rotated loadings of ECR items in the US dataset (pattern matrix).

<table>
<thead>
<tr>
<th>ECR items (content summary)</th>
<th>1. SR</th>
<th>2. DC</th>
<th>3. PR</th>
<th>4. NE</th>
<th>5. RDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Shows feelings</td>
<td>.18</td>
<td>.46</td>
<td>.03</td>
<td>.03</td>
<td>.08</td>
</tr>
<tr>
<td>3. Comfortable being close</td>
<td>.49</td>
<td>.32</td>
<td>.01</td>
<td>.00</td>
<td>.08</td>
</tr>
<tr>
<td>5. Pulls away when close</td>
<td>.05</td>
<td>.81</td>
<td>.06</td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>7. Uncomfortable when close</td>
<td>.03</td>
<td>.80</td>
<td>.00</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>9. Comfortable opening up</td>
<td>.18</td>
<td>.64</td>
<td>.07</td>
<td>.06</td>
<td>.06</td>
</tr>
<tr>
<td>11. Wants to close, keeps pulling back</td>
<td>.00</td>
<td>.77</td>
<td>.07</td>
<td>.02</td>
<td>.06</td>
</tr>
<tr>
<td>13. Nervous when close</td>
<td>.03</td>
<td>.82</td>
<td>.00</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>15. Comfortable sharing</td>
<td>.63</td>
<td>.08</td>
<td>.02</td>
<td>.09</td>
<td>.09</td>
</tr>
<tr>
<td>17. Avoids getting close</td>
<td>.05</td>
<td>.74</td>
<td>.02</td>
<td>.01</td>
<td>.09</td>
</tr>
<tr>
<td>19. Easy to get close</td>
<td>.50</td>
<td>.04</td>
<td>.10</td>
<td>.02</td>
<td>.04</td>
</tr>
<tr>
<td>21. Difficult to depend</td>
<td>.07</td>
<td>.50</td>
<td>.04</td>
<td>.03</td>
<td>.05</td>
</tr>
<tr>
<td>23. Not too close</td>
<td>.12</td>
<td>.68</td>
<td>.18</td>
<td>.00</td>
<td>.07</td>
</tr>
<tr>
<td>25. Tells everything</td>
<td>.68</td>
<td>.14</td>
<td>.06</td>
<td>.01</td>
<td>.07</td>
</tr>
<tr>
<td>27. Discusses problems</td>
<td>.81</td>
<td>.03</td>
<td>.02</td>
<td>.05</td>
<td>.01</td>
</tr>
<tr>
<td>29. Comfortable depending</td>
<td>.44</td>
<td>.18</td>
<td>.09</td>
<td>.13</td>
<td>.04</td>
</tr>
<tr>
<td>31. Asks for comfort</td>
<td>.80</td>
<td>.02</td>
<td>.02</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>33. Help in times of need</td>
<td>.79</td>
<td>.07</td>
<td>.06</td>
<td>.07</td>
<td>.14</td>
</tr>
<tr>
<td>35. Comfort and reassurance</td>
<td>.77</td>
<td>.03</td>
<td>.08</td>
<td>.12</td>
<td>.11</td>
</tr>
</tbody>
</table>

Table 2
Factor correlation matrix in the US dataset.

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-reliance</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discomfort with closeness</td>
<td>.52</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Preoccupation</td>
<td>.05</td>
<td>.28</td>
<td>1.00</td>
</tr>
<tr>
<td>Neediness</td>
<td>.22</td>
<td>.12</td>
<td>.55</td>
</tr>
<tr>
<td>Rejected desire for closeness</td>
<td>.05</td>
<td>.26</td>
<td>.46</td>
</tr>
</tbody>
</table>

2.1. Avoidance facet 1: self-reliance
The first avoidance facet was defined by reluctance to ask one’s partner for help and comfort, share feelings, and discuss problems (items 15, 25, 27, 31, 33, 35). I labeled this facet self-reliance. High scores indicate reduced emotional need for one’s partner, and a failure to rely on him/her as a “safe haven” in distress.

2.1.2. Avoidance facet 2: discomfort with closeness
The second avoidance facet was defined by discomfort with, and ambivalence toward, emotional closeness (5, 7, 9, 11, 13, 17, 21, 23). I labeled this facet discomfort with closeness. The overarching theme of this facet is a difficulty in finding the right emotional distance in relationships, often implying ambivalence toward closeness—a psychological theme that overlaps with both avoidance and anxiety. Indeed, this facet was also positively correlated to anxiety facets (Table 2).

2.1.3. Anxiety facet 1: preoccupation
The first anxiety facet was defined by persistent worry about being abandoned or neglected by one’s partner (2, 4, 6, 8, 14, 22). I labeled this facet preoccupation.

2.1.4. Anxiety facet 2: neediness
The second anxiety facet was defined by reactions of frustration, anger, and resentment when the partner is perceived as unavailable or uninterested (24, 30, 32, 36). Accordingly, I labeled this facet neediness.

2.1.5. Anxiety facet 3: rejected desire for closeness
The third anxiety facet indicates unreciprocated desire for emotional closeness, which ends up scaring partners away (12, 16, 26). Items loading on this facet are unique in that they explicitly describe the failure of a relational strategy. This complicates the interpretation of this facet, as high scores do not simply indicate a strong desire for closeness, but rather a combination of attempts to get emotionally closer and rejection of those attempts by one’s partners (which may be confounded by attractiveness and mate value). Accordingly, I labeled this facet rejected desire for closeness.

2.2. Sex differences
Sex differences in the US dataset are reported in Table 3. Effect sizes ($d$) were corrected for unreliability ($d_*$) as recommended by Hunter and Schmidt (2014). Positive values indicate higher scores in males. There were no detectable sex differences in avoidance, while the effect size for anxiety was very small; neither was significantly different from zero. In contrast with avoidance and anxiety, sex differences in the five attachment facets were all significantly different from zero. Males scored higher than females in self-reliance and somewhat lower than females in discomfort with closeness. Females were higher in both preoccupation and neediness, whereas males reported higher levels of rejected desire for closeness. (Higher levels of rejected desire for...
closeness in males may partly reflect a higher likelihood of being rejected by potential partners, e.g., because of higher female choosiness.)

3. Dataset 2: Italian undergraduates

This dataset was obtained by aggregating two samples collected at the University of Turin, Italy (N = 435 and 184). Participants were undergraduates aged 18–28. The Italian translation of the ECR was employed (Picardi, Bisceti, Puddu, & Pasquini, 2000). Missing values ranged from 0% to 0.3%, and were imputed via multiple regression. Total N = 619 (324 females).

3.1. Facets

Six factors had eigenvalues > 1; parallel analysis suggested 5 factors. Again, solutions with more than 5 factors contained uninterpretable factors; the 5-factor solution was retained and Oblimin-rotated. Factor loadings and correlations between factors are shown in Tables 4 and 5. Male–female similarity of factor loadings was high, with average congruence CC = .92 (range: .86 to .97).

The five facets identified in the Italian dataset had the same content as those in the US dataset. While some items showed different loadings in the two datasets—likely due to minor differences in meaning between English and Italian items, and/or the comparatively small size of the Italian dataset—the two factorial solutions were essentially equivalent, with average congruence coefficient CC = .92 (range: .87 to .96). Between-factor correlation matrices were also highly similar (CC = .96).

Given the high similarity between factorial structures and the larger size of the US dataset, facet scores in the Italian dataset were computed using the items selected in the US dataset. This ensured maximum comparability of effect sizes. As a robustness check, facet scores were also computed using loadings from Table 4. Scores computed with the two methods were almost perfectly correlated; the average intraclass correlation was .95 (range: .93 to 1.00). In other words, it made no practical difference whether facet scores were computed based on US or Italian loadings.

3.2. Sex differences

Sex differences in the Italian dataset are reported in Table 6. Males were higher in avoidance and lower in anxiety; both effects were significant. The larger effect sizes relative to the US dataset is consistent with previous findings on cross-cultural variation (Del Giudice, 2011). As in the US dataset, males showed higher levels of self-reliance while females were higher in preoccupation and neediness. Sex differences in discomfort with closeness were small and non-significant; males showed higher levels of rejected desire for closeness, although the effect was not significant.

4. Conclusion

As predicted, a facet-level analysis showed the existence of larger sex differences than those observed in the broader dimensions of avoidance and anxiety (Fig. 1). Even in the US dataset, where sex differences in avoidance and anxiety were negligible, reliable effects in the order of d = .15 to .30 emerged at the level of facets. Of particular interest, different facets of the same dimension sometimes showed opposite-sign effects. Within avoidance, only self-reliance was consistently higher in males, whereas discomfort with closeness was higher in women (US dataset) or showed no significant sex differences (Italian dataset). Similarly, preoccupation and neediness were consistently higher in females, whereas rejected desire for closeness was higher in males (reaching statistical significance in the US dataset). This heterogeneity at the facet level accounts for the smaller effects observed at the level of broader dimensions, mirroring a well-known pattern in the study of sex differences in personality (see Del Giudice et al., 2012). More
research will be needed to understand the functional meaning of different attachment facets, evaluate their discriminant validity, and relate them to existing theoretical models of attachment. These initial findings suggest that sex differences in attachment can be fruitfully investigated at the level of facets.

References

Fig. 1. Corrected effect sizes ($d_c$) and 95% confidence intervals for sex differences in romantic attachment. Filled circles: US dataset. Open circles: Italian dataset.