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# To Love and Play: Testing the Association of Adult Playfulness with the Relationship Personality and Relationship Satisfaction

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**Abstract** It is hypothesized that playfulness in adults is positively associated with relationship satisfaction and that specific types of attachment and love are related with this trait. Findings, based on two samples of adults that are currently in a relationship ( $N=161$  and  $598$ ), show that playfulness is positively associated with relationship satisfaction—albeit low in effect size. Playfulness shares about 17 % overlapping variance with different types of love and attachment; particularly, Seduction, low Market Orientation, Attachment, and Love were predictive for playfulness. While gender differences only played a minor role it was shown that playfulness mediates about 5.7 % of the gender differences in the inclination to Sexuality. Overall, findings are in the expected direction. The discussion highlights the importance of considering multidimensional measures for playfulness and satisfaction and gives future research directions.

**Keywords** Adult playfulness · Attachment · Love · Play · Playfulness · Relationship personality · Relationship satisfaction

Recent years have seen an increase in the interest in the study of playfulness as a personality trait in adults. It is frequently defined as “[...] the predisposition to frame (or reframe) a situation in such a way as to provide oneself (and possibly others) with amusement, humor, and/or entertainment” (Barnett 2007; p. 955). Earlier studies demonstrate that playfulness is associated with a broad range of positive outcome variables; e.g., academic performance (Proyer 2011), stress coping (e.g., Barnett 2011; Qian and Yarnal 2011), or positive behavior at the workplace (e.g., Yu et al. 2007). Playfulness seems to be rather stable over the life course and about equally distributed in men and women (Proyer 2014b). It is argued that playfulness in adults is a trait of great potential to romantic relationships (especially to relationship satisfaction and the

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“relationship personality” or love style) but nevertheless understudied. The main aim of this study is to narrow this gap.

Playfulness seems to be an important personality trait for people when thinking about engaging in a romantic relationship. It has been shown that it is a desired personality characteristic in potential romantic partners (Chick et al. 2012) and thus, may be of special relevance when thinking of romantic relationships. Chick (2001) proposes a *signal theory* of playfulness and argues that it signals *nonaggressiveness* in men and youth and health as signs of *fecundity* in women. There also seems to be an evolutionary component that speaks for the relevance of playfulness in romantic relationships and that suggests that individual differences in playfulness vary with the endorsement of specific types of attachment and preferences in romantic relationships.

It is important to differentiate *play* (the actual behavior) from *playfulness* (the personality trait). The main focus of this study is on the personality trait and its role in adult romantic relationships. However, there are several studies that have dealt with the role of different types and forms of play and playful behaviors in relationships and the relevance of play for romantic relationships. This literature will also be reported here since it helps give a better understanding of how play and playful behavior can have an impact on the romantic relationship between two adults. It is argued that playfulness indirectly affects the relationship in general and the relationship satisfaction in specific through influencing one’s compliance with satisfaction-promoting behaviors. This idea is in line with what has been proposed, for example, in the *health behavior model* where certain personality traits are expected to influence health-oriented behaviors (see e.g., Kubzansky et al. 2009). It is not the aim of the current research to develop a classification of such activities, but it can be said that to play and being playful facilitates the emergence of positive emotions (Fredrickson 2001; Panksepp 1993). In turn, these help building and broadening a variety of psychological resources including social ones (Fredrickson 2001) that can help fostering relationships via an upward spiral by facilitating the experience of positive emotions. The experience of specific positive emotions such as, for example, joy might then encourage more playful behavior. This is in line with Fredrickson’s broaden and build-theory of positive emotions. In fact, there is also empirical evidence that positive emotions relate positively to relationship satisfaction (Aune and Wong 2002). Metz and Lutz (1990) highlight the role of (intimate) play in contributing to the satisfaction of basic needs such as trust or acceptance but also joy.

Aside from facilitating the experience of positive emotions, to play and being playful can serve as a lubricant in social situations and, especially, for successful communication in romantic relationships. Baxter (1992) describes several functions of play in relationships; e.g., an indicator and promoter of intimacy, a means to potentially reduce conflict and tension, a “safe” communication strategy (sharing emotional attachment), a “creative outlet for individual expression [...] to celebrate their individual qualities while simultaneously embedded in an interdependent relationship” (p. 337), and enhancing communication for finding joint meaning. Proyer (2013b) found that lay people observe relationship-related functions of playfulness in their daily lives; e.g., strengthening and cultivating interpersonal relationships; making communication easier; or to show affection to others.

There is ample evidence that playfulness has an *other-directed* component; e.g., a gregarious-factor in Barnett (2007), or a kind-loving factor in (Proyer 2012a). While

several studies have addressed the relation between loving styles and personality (e.g., Davies 1996; Mallandain and Davies 1994; Worobey 2001), only little is known about the role of playfulness. In an earlier study, Woll (1989) tested the association of Lee's (1973) loving styles (i.e., *Eros* [passionate love], *Ludus* [game-playing love], *Storge* [friendship love], *Pragma* [logical love], *Mania* [possessive, dependent love], and *Agape* [all-giving, selfless love]; see also Hendrick and Hendrick 1986) with, amongst others, the Personality Research Form (Jackson 1974) in 88 psychology students. As expected, the *need for play*-scale correlated positively ( $r=0.38$ ) with *Ludus*,  $r=0.39$  with *Eros/Ludus* ("superficial attraction based on sensuality"; Hendrick et al. 1984, p. 189), and  $r=0.29$  with *Storge/Eros* (gradual vs. *rapid* development of love; Hendrick et al. 1984; all  $p<0.01$ ). Woll (1989) describes the 'ludic lover' as "one that is dominated by disinhibition, playfulness, sociability, and a desire for multiple relationships" (p. 495).

Andresen (2012) developed an instrument for the assessment of personality traits that are associated with love and attachment (*relationship personality*). These cover individual differences in the preferences and types of behavior of individuals in relationships. These differences reflect what individuals expect from a relationship and *how* they want to live together with their partner. Therefore, the different types described by Andresen do not refer to one specific relationship or one specific partner, but aim at describing general patterns that are valid across different relationships and partners. Using a factor-analytic strategy, Andresen arrived at an eight-factor solution that is based on and encompasses earlier works by Bartholomew and Horowitz (1991), Lee (1973), Schmitt and Buss (2000), and Sternberg (1988). He differentiates between (1) *Love* (Love, Eroticism, and Understanding; tender eroticism, romanticism, and need for caring closeness; related to *Emotional Investment* in Schmitt and Buss, and partially *Eros* in Lee and *Passion* in Sternberg); (2) *Sexuality* (Sexuality, Adventure, and Desire; strong libidinous sexuality; related to the *Erotophilic Disposition* in Schmitt and Buss, partially *Eros* in Lee, *Sexual Restraint* in Schmitt and Buss, and *Passion* in Sternberg); (3) *Insecurity* (Insecurity, Frustration, and Doubts; anxiety in relationships and ambivalence in bonding, dissatisfaction and lack of trust in relationships; related to *Fearful* in Bartholomew and Horowitz and partially *Mania* in Lee); (4) *Dominance* (Dominance, Disputability, and Aggressiveness; mainly feelings of aggression in relationships, verbal but also physical abuse may occur, degradation and arrogance toward the partner; partially related to *Mania* and *Agape* (negatively) in Lee); (5) *Attachment* (Attachment, Need for Closeness, and Dependence; need for attachment and fear of disconnectedness, emotional fixation and idealization of the partner; partially related to (negative) *Dismissive* attachment in Bartholomew and Horowitz, *Intimacy* in Sternberg, and *Agape*, *Mania*, and *Ludus* (negatively) in Lee); (6) *Seduction* (Seduction, Charm, and Attractiveness; those convinced of their abilities in seducing partners and attractiveness, high sociability; related to *Sexual Attractiveness* in Schmitt and Buss and partially to *Ludus* in Lee); (7) *Faithfulness* (Faithfulness, Moral, and Consistency; high moral standards, conservative, liking of routines in a relationship; partially related with *Sexual Restraint* in Schmitt and Buss, *Pragma*, *Ludus* (negatively), and *Storge* in Lee, and *Commitment* in Sternberg); and (8) *Market Orientation* (Market Orientation, Entitlement, Pride; sense of entitlement toward the partner or a potential partner, orientation toward a certain status and attractiveness of the (potential) partner; partially related to *Pragma* in Lee).

It will be tested where playfulness in these eight different facets can be located using the *Relationship- and Bonding-Personality Inventory* (*Beziehungs- und Bindungs-Persönlichkeitsinventar*, BB-PI; Andresen 2012) that allows the subjective assessment of these eight facets. Playfulness will be assessed using the *Short Measure of Adult Playfulness* (SMAP; Proyer 2012b) that measures playfulness as an easy onset and high intensity of playful experiences along with the frequent display of playful activities.

*Aims of the Present Study* This study focuses on participants that are currently in a relationship to study the interplay of playfulness and relationship satisfaction directly. It was expected that those love styles with a *ludic* component (love as play or fun) will be positively associated with playfulness; i.e., *Attachment*, *Seduction*, and negatively with *Faithfulness*. The latter is mainly based on findings for the *Ludus*-love style (Lee 1973; see Woll 1989) that is described as “[...] a style which is permissive and pluralistic [...] and relationships are often multiple and relatively short-lived” (Lee 1973; p. 174). The study by Woll (1989) allows for an approximation of the size of correlations that could be expected (at around 0.30). Based on the descriptions given by Andresen (2012) positive relations with *Love* (a playful expression of romance and flirtation) and *Sexuality* (a playful enjoyment of different forms of sexual activity and habits) were also expected. Earlier studies suggested that playfulness is negatively associated with extrinsic life goals (Proyer 2012c), which may point toward a negative relation with *Market Orientation*.

There are positive relations of low to moderate size between playfulness and different indicators of subjective and physical well-being (e.g., Proyer 2012c, 2013a). Findings suggest that couples that are satisfied with their marriage engage in frequent play activities (Betcher 1977)—of course, one might also argue that couples that engage in frequent play activities are satisfied with their marriage, or that there is an interaction between the two. As mentioned earlier, playing and being playful has the potential to elicit positive emotions and that this could help for a better understanding of these relations (see e.g., Fredrickson 2001). Also, certain types of playful communication styles are associated with partnership satisfaction (Bruess and Pearson 1993). It is expected that there will be a positive relation between playfulness and relationship satisfaction. This receives further support from Aune and Wong (2002), who report positive relations of partnership satisfaction with the level of play in the partnership.

Aside from testing gender differences in the relation of playfulness with love styles it will also be tested whether men and women differ in the relation of their playfulness with love styles. If playfulness has a different signal function for men and women (Chick 2001), one might argue that this could have an impact on how playfulness and love styles are related; i.e., depending on its function. Hence, it was expected that playfulness is a partial mediator between gender and the expression of love styles.

## Materials and Methods

### Sample

*Sample 1* consisted of 48 men and 113 women ( $N=161$ ) between 18 and 70 years ( $M=40.6$ ,  $SD=14.2$ ). Close to half (47.8 %) held a degree from University and an additional

5.6 % a doctoral degree. Close to a third (30.4 %) had a school education that would qualify them for attending an University and 14.3 % had a completed vocational training. About half were married (48.4 %) or in a partnership without being married (51.6 %).

*Sample 2* consisted of 127 men and 431 women ( $N=558$ ) between 18 and 81 ( $M=45.9$ ,  $SD=11.5$ ). About one fifth (20.6 %) had a completed vocational training, 17.9 % had a completed school education that would allow them to attend University, 59.0 % had a degree from an institution of higher education, and 2.5 % had basic school education. More than two thirds were married (68.6 %) and 31.4 % were in a relationship.

## Instruments

The *Short Measure of Adult Playfulness* (SMAP; Proyer 2012b) assesses an easy onset and high intensity of playful experiences along with the frequent display of playful activities using five items (e.g., “I am a playful person”). Answers are given on a seven-point scale (1=“strongly disagree,” 7=“strongly agree”). Exploratory and confirmatory factor analyses provide support for the expected one-dimensional solution. Alpha-coefficients across three different samples ranged between 0.80 and 0.89 and the test-retest correlation was 0.74 for a period of 12 to 15 weeks. Its convergent validity has been established by showing correlates in the expected direction with measures developed by Barnett (2007), Glynn and Webster (1992), and Jackson (1984) and its divergent validity by showing the expected relations with the *State-Trait-Cheerfulness Inventory* (Ruch et al. 1996) that assesses cheerfulness, seriousness, and bad mood as well as showing expected associations with a measure of the big five personality traits. Additionally, Proyer (2012b) showed that playfulness as measured with the SMAP predicted greater liking and lower disapproval of surrealistic art over painting consisting of geometric figures (i.e., with lower information and complexity) and of greater liking and lower disapproval of unorganized work places over organized work places; while there were no differences between those playful and nonplayful for the liking/disapproval of the geometric figures and the organized work places. The SMAP has been used widely in research and findings support its validity (e.g., Proyer 2012c, 2013a, b; Proyer and Jehle 2013). The alpha-coefficient in this sample was 0.89.

The *Relationship Assessment Scale* (RAS; Hendrick 1988; German version: Sander and Böcker 1993) consists of seven items. It assesses general satisfaction with a relationship and focuses on how well the own needs are met by the partner. It utilizes a five-item answer scale (1=“low satisfaction”, 5=“high satisfaction”). The scale is widely used and the studies provide support its good psychometric properties and validity (see e.g., Hendrick et al. 1998). The alpha-coefficients in the two samples were high; i.e., 0.92/0.91 in Sample 1/2.

The *Relationship- and Bonding-Personality Inventory* (*Beziehungs- und Bindungs-Persönlichkeitsinventar*, BB-PI; Andresen 2012) assess eight relationship styles (18 items each); i.e., (1) *Love* ( $\alpha=0.86$  in this sample); (2) *Sexuality* ( $\alpha=0.94$ ); (3) *Insecurity* ( $\alpha=0.91$ ); (4) *Dominance* ( $\alpha=0.91$ ); (5) *Attachment* ( $\alpha=0.89$ ); (6) *Seduction* ( $\alpha=0.90$ ); (7) *Faithfulness* ( $\alpha=0.86$ ); and (8) *Market Orientation* ( $\alpha=0.89$ ). A sample item for *Love* is “I am very interested in the psychology of love” or “Sexuality plays a central role for me in my relationships” for *Sexuality* (translated by

the author). Andresen found positive relations of male gender with Love, Dominance, and Seduction ( $r$ s between 0.18 and 0.24,  $p < 0.01$ ) and negative relations of Sexuality and female gender ( $r = 0.24$ ,  $p < 0.01$ ). Primarily Attachment ( $r = -0.24$ ) and Seduction ( $r = -0.22$ ,  $p < 0.01$ ) decreased with age. He also reports high reliabilities (e.g., alpha-coefficients between 0.86 and 0.92 and test-retest reliabilities between 0.78 and 0.84 for 1 year) and evidence for the validity of the BB-PI (see also Iffland et al. 2014).

## Procedure

Participants of both samples completed the questionnaires online. Data collections were conducted independently from each other. In both cases the measures were part of a larger test-battery used in studies in the field of positive psychology. Participants for Sample 1 completed the questionnaires in a study advertised on “humor, playfulness, and personality.” Participants in Sample 2 were interested to take part in a strengths-based online intervention program and the test battery was part of the baseline assessment. The studies were advertised in different media outlets and via mailing lists. Participants in Sample 1 completed the *SMAP* and the *RAS*, and those in Sample 2, additionally, the *BB-PI*.

Collecting data over the Internet has been criticized (e.g., for potential sampling biases), but there is evidence that the data are comparable to those that have been assessed in more conventional ways (e.g., Gosling et al. 2004). Participants were not paid for their services but received an individual feedback upon completion of the study. A local ethic committee approved the studies.

## Results

### Preliminary Analyses

Participants in Sample 1 ( $M = 4.13$ ,  $SD = 0.92$ ) were more playful than those in Sample 2 ( $M = 3.50$ ,  $SD = 0.97$ ,  $t(959) = -7.78$ ,  $p < 0.001$ ,  $d = 0.67$ ), they reported greater relationship satisfaction ( $M = 4.16$ ,  $SD = 0.64$  vs.  $M = 3.77$ ,  $SD = 0.87$ ,  $t(960) = -5.41$ ,  $p < 0.001$ ,  $d = 0.51$ ), and were older,  $t(960) = 2.66$ ,  $p = 0.008$ ;  $d = 0.22$ .

There were small associations for age with some of the variables tested; playfulness (uncorrelated in Sample 1 with  $r = -0.03$ ,  $p = 0.739$ , but  $r = -0.12$ ,  $p = 0.005$  in Sample 2) and partnership satisfaction ( $r = -0.21$ ,  $p = 0.008$  in Sample 1,  $r = -0.14$ ,  $p = 0.001$  in Sample 2) decreased with age. The same was true for Attachment ( $r = -0.11$ ,  $p = 0.011$ ) and Seduction ( $r = -0.19$ ,  $p < 0.001$ ). Men ( $M = 2.62$ ,  $SD = 0.69$ ) were more playful than women ( $M = 2.46$ ,  $SD = 0.68$ ),  $t(575) = 2.29$ ,  $p = 0.023$ ,  $d = 0.23$  in Sample 2 while there was no difference in Sample 1,  $t(158) = -0.49$ ,  $p = 0.627$ . Women endorsed Love ( $M = 3.94$ ,  $SD = 0.56$  vs.  $M = 4.06$ ,  $SD = 0.47$ ,  $t(575) = 2.46$ ,  $d = 0.23$ ) and Attachment ( $M = 2.78$ ,  $SD = 0.67$  vs.  $M = 2.62$ ,  $SD = 0.62$ ,  $t(575) = 2.49$ ,  $d = 0.25$ ) stronger than men. Men were higher in Sexuality ( $M = 3.17$ ,  $SD = 0.74$  vs.  $M = 2.53$ ,  $SD = 0.75$ ,  $t(575) = 8.41$ ,  $d = 0.86$ ), Insecurity ( $M = 2.21$ ,  $SD = 0.71$  vs.  $M = 2.05$ ,  $SD = 0.70$ ,  $t(575) = 2.32$ ,  $d = 0.23$ ), and Market Orientation,  $M = 3.24$ ,  $SD = 0.65$  vs.  $M = 3.08$ ,  $SD = 0.62$ ,  $t(575) = 2.53$ ,  $d = 0.25$ . Men and women did not differ in their relationship satisfaction (*n.s.*). Since some

of the variables varied with demographics they were controlled for in the subsequently conducted analyses.

### Correlates of Playfulness, Partnership Satisfaction, and Loving Styles

For testing the overlap among the variables, bivariate correlations were computed controlling for age. Table 1 shows that there were small but positive associations between playfulness and partnership satisfaction. Additionally, *Love*, *Sexuality*, *Attachment*, and *Seduction* increased with greater levels of playfulness. The findings were robust for men and women but were not significant in the sample of men in some cases because of the smaller sample size.

An inspection of the scatter graph (playfulness  $\times$  relationship satisfaction) in the larger Sample 2 pointed toward potentially non-linear relations. A two-way ANOVA was computed with gender and a breakdown into four groups of relationship satisfaction (four groups of equal sizes derived from the total score of the RAS; from lowest to highest partnership satisfaction) as independent variables and playfulness. There was no interaction effect for gender and relationship satisfaction,  $F(3, 557)=0.64$ ,  $p=0.592$ . Therefore, gender was not further considered. The mean level comparison of the four groups approached significance,  $F(3, 557)=2.49$ ,  $p=0.059$ . Post hoc tests (LSD) revealed that only those highest in relationship satisfaction ( $M=2.58$ ,  $SD=0.68$ ) differed in their playfulness from those lowest ( $M=2.40$ ,  $SD=0.63$ ;  $d=0.27$ ); all other comparisons were *n.s.*

**Table 1** Partial correlations (controlled for age) between playfulness, relationship satisfaction, and love styles (split for men and women)

	Total	Men	Women
Sample 1			
Relationship satisfaction	0.16*	0.24	0.14
Sample 2			
Relationship satisfaction	0.14**	0.13	0.14**
Love styles			
Love	0.19***	0.15	0.21***
Sexuality	0.23***	0.20*	0.21***
Insecurity	0.02	0.03	0.01
Dominance	-0.01	-0.05	0.01
Attachment	0.18***	0.16	0.18**
Seduction	0.31***	0.37***	0.30***
Faithfulness	-0.01	-0.04	-0.01
Market Orientation	-0.02	0.01	-0.04

Note. Sample 1  $N=157$ ,  $n=45$  men,  $n=109$  women; Sample 2  $N=558$ ,  $n=127$  men,  $n=431$  women

\* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p<0.001$



## Predicting Playfulness from the Relationship Personality

A multiple regression analysis was computed with playfulness as the criterion and demographics (age and gender; step 1, method: enter) and the eight love styles (step 2, method: stepwise) as predictors. This approach allows testing the incremental contribution of the love styles on playfulness above and beyond demographics. The stepwise procedure also allows testing the incremental predictive power of each single style. This yielded a  $R^2=0.17$ ,  $F(6, 555)=18.35$ ,  $p<0.001$ . Table 2 shows that demographics contributed to the prediction (about 3 %) and that the styles of *Seduction*, low *Market Orientations*, *Attachment*, and *Love* predicted playfulness in adults supporting the notion that playfulness did not exist independently from these styles.

**Table 2** Summary of hierarchical regression analysis for variables predicting adult playfulness in demographics and love styles ( $N=556$ )

Variable	B	SE B	$\beta$
Step 1			
Sex	-0.19	0.07	-0.12**
Age	-0.01	0.00	-0.14**
Step 2			
Sex	-0.19	0.07	-0.12**
Age	-0.01	0.00	-0.08
Seduction	0.32	0.04	0.30***
Step 3			
Sex	-0.22	0.07	-0.14***
Age	0.00	0.00	-0.06*
Seduction	0.41	0.05	0.38***
Market	-0.21	0.05	-0.19***
Step 4			
Sex	-0.19	0.07	-0.12**
Age	0.00	0.00	-0.04
Seduction	0.40	0.05	0.37***
Market	-0.23	0.05	-0.22***
Attachment	0.15	0.04	0.14**
Step 5			
Sex	-0.22	0.07	-0.13**
Age	0.00	0.00	-0.06
Seduction	0.37	0.05	0.34***
Market	-0.23	0.05	-0.21***
Attachment	0.11	0.05	0.10*
Love	0.14	0.06	0.10*

Note. Market market orientation;  $\Delta R^2=0.028$  for Step 1 ( $p<0.001$ );  $\Delta R^2=0.086$  for Step 2 ( $p<0.001$ );  $\Delta R^2=0.028$  for Step 3 ( $p<0.001$ );  $\Delta R^2=0.017$  for Step 4 ( $p<0.01$ ), and  $\Delta R^2=0.008$  for Step 5 ( $p<0.05$ )

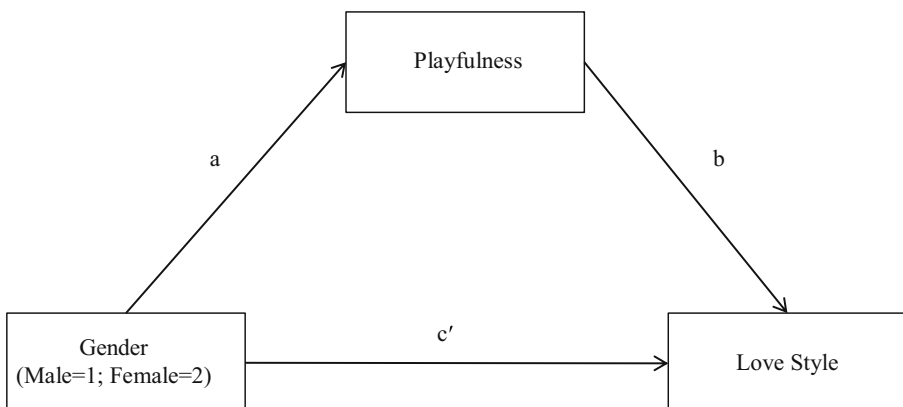
\* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p<0.001$

## Playfulness as a Mediator for Gender Differences in Love Styles

The previous analyses demonstrated gender differences for *Love*, *Attachment*, *Sexuality*, *Insecurity*, and *Market Orientation*. Bootstrap mediation analyses (5,000 bootstrap samples; Preacher and Hayes 2004) were used to test the hypothesis that playfulness mediates the association between gender and these five love styles. Estimates were computed in five separate simple mediation models for direct ( $c'$ ; gender  $\rightarrow$  love style), indirect (i.e., strength of the mediated effect;  $a \times b$  where  $a =$  gender  $\rightarrow$  playfulness and  $b =$  playfulness  $\rightarrow$  love style), and total effects ( $c$ ;  $c = c' + a \times b$ ; see Fig. 1). The analyses revealed that there were no mediating effects for *Love*, *Attachment*, *Insecurity*, and *Market Orientation*. For *Sexuality* (Sobel's  $Z = 2.05$ ,  $p = 0.040$ ; 95 % confidence interval  $[-0.0692; -0.0016]$ ) a small mediating effect of playfulness was found. The coefficient for the path between gender and *Sexuality* decreased in size from  $-0.66$  to  $-0.62$ . In this analysis men reported greater levels of playfulness than women ( $\beta = -0.16$ ,  $t = -2.30$ ,  $p = 0.022$ ) and a greater inclination to *Sexuality*,  $\beta = -0.66$ ,  $t = -8.87$ ,  $p < 0.001$ . Greater levels of playfulness were associated with greater *Sexuality* independently from gender,  $\beta = 0.22$ ,  $t = 4.99$ ,  $p < 0.001$ . About 5.7 % (see Shrout and Bolger 2002) of the gender differences in *Sexuality* were mediated by playfulness.

## Discussion

This study contributes to the understanding of playfulness and its localization in the relationship personality. Testing the association of playfulness as a personality trait with eight types of loving styles revealed positive relations with *Love*, *Sexuality*, *Attachment*, and numerically strongest with *Seduction*. The latter was expected since it has the theoretically strongest overlap with Lee's (1973) *Ludus*-type. The correlation coefficients are numerically smaller in size when compared to Woll (1989), but are in the expected direction. Thus, the study suggests that playfulness as a personality trait and preferences for specific types of relationship and attachment do not exist independently from each other.



**Fig. 1** Basic model of the (partial) mediation of playfulness on gender difference in love styles

It was also hypothesized that there would be a negative relation between playfulness and *Market Orientation*. There were no relations at the level of bivariate correlations, but when predicting playfulness from demographics and the relationship personality in a multiple regression analysis, *Seduction*, *Love*, *Attachment*, and *Market Orientation* (negative beta-weight, low incremental contribution) contributed to the prediction. Playfulness has about 17 % shared variance with the relationship personality (3 % accounted for by demographics). The multiple squared correlation coefficient shows that the tested variables do not exist independently from each other.

One might characterize the ‘playful lover’ in this study as being oriented toward *Seduction* (feeling confident about the own abilities to seduce a partner, highly sociable), *Love* (having a sense for eroticism, romanticism, and need for caring closeness), and low *Market Orientation* (not oriented toward status and attractiveness of a potential partner).

Playfulness existed widely independently from *Faithfulness* (having high moral standards, and liking of routines in a relationship). Most likely there are playful people that endorse *Faithfulness*, while others do not endorse this aspect of the relationship personality. The finding might also be a hint that the conceptualization of the *Ludus* type in Lee (1973) does not converge well with more current conceptualizations of playfulness since these may have a stronger emphasis on positive social relationships than seeing love and attachment as *game*-playing. The question arises on what the *true* nature of a *ludic lover* (in its narrow sense and not referring to Lee’s conceptualization) is? One might argue that specific beneficial functions of playfulness such as the prevention of boredom from occurring (e.g., Barnett 2011), stress-coping (e.g., Qian and Yarnal 2011; Staempfli 2007), or cognitive flexibility (e.g., Lieberman 1977; Proyer 2012c) may also contribute positively to longer lasting relationships and greater intimacy among the partners (see also Proyer 2013b). Thus, a reconceptualization of an *amator vere ludens* in future research might be warranted.

There was a small but positive correlation of playfulness with relationship satisfaction. Additional analyses revealed that those highest in relationship satisfaction (upper 25 %) were more playful than those with lower relationship satisfaction (small to medium effect size). This is in line with earlier literature that argued for a positive relation of play and playfulness with relationship satisfaction (Aune and Wong 2002; Baxter 1992) and subjective well-being (e.g., Proyer 2012c, 2013a, 2014b). Of course, the findings from this study do not allow for causal interpretations. However, since playing and being playful facilitates the experience of positive emotions (Fredrickson 2001) one might argue that the direction could be from frequent incidents of play and experience of playfulness to increased levels of partnership satisfaction.

The results of this study fit well to findings for studies with related personality traits and research on positive emotions in general. In literature playfulness has frequently been associated with humor (e.g., seeing a sense of humor as one of its components; e.g., Lieberman 1977) and items like “I laugh a lot” have been used to assess individual differences in playfulness (see Proyer and Jehle 2013). Of course, there is a relation between, for example, humor and playfulness, but still they are distinct. This has been shown empirically (e.g., Proyer 2014a; Proyer and Ruch 2011) and there are situations where humor is involved but that are not playful and vice versa. There is also literature showing that current measures of playfulness seem to be biased toward broader personality traits; mainly extraversion and emotional stability, but also by covering

too much humor- and laughter-related contents (Proyer and Jehle 2013). One advantage of the playfulness scale used in this study is that it has been shown to have moderate relations with personality (Proyer 2012b) and no overlap with humorous contents. Hence, one might argue that the relations found here are those that can be traced back to playfulness in its narrow sense.

There were gender differences that warrant further inspection. Unlike in earlier studies (Proyer 2014b) men were higher in playfulness than women (though effect sizes were low). Men were underrepresented in the present samples (21.9 %). Potentially there was a pre-selection of men interested in playfulness who participated in this study. Gender differences in love styles replicated what Andresen (2012) reported and seem to be rather stable. More in depth analyses revealed that playfulness did not mediate the gender difference in love styles. Only for *Sexuality* a trend with a small mediating effect (5.7 %) of the gender differences accounted for by playfulness was found. Some of the reported gender differences (e.g., greater expression of Sexuality and Market Orientation in Men and greater endorsements of Love and Attachment in Women) fit well to what has been reported for gender differences in mating styles (see e.g., Buss and Schmitt 1993; Symonds 1979). From an evolutionary psychology perspective one might argue that the costs for conception are different for men and women and that the preferred mating strategies of men and women reflect these differential costs. Further research will be needed to fully understand the role of playfulness in this relation (see also Chick 2001; Chick et al. 2012).

A field of potential practical applications would be to test whether programs that facilitate play and playfulness in relationships could be successful in improving relationship quality. McGhee (2010) developed a program for increasing people's sense of humor. He argues that humor is a specific variant of play and that a playful frame of mind is a prerequisite for humor to occur. His program was effective for increasing various aspects of subjective well-being (e.g., Crawford and Caltabiano 2011; McGhee 2010). The potential of the program or similar programs that address playfulness either directly or indirectly for the improvement of relationship satisfaction needs are yet to be tested. However, further research will be needed for a better understanding of the contribution of playfulness to relationship satisfaction and its role in *flourishing* relationships before practical applications could be implemented.

### Limitations

All data are self-reported and it is desirable that future research also considers ratings from knowledgeable others (ideally the partners themselves) or direct observations to provide a fuller picture on the relations. The present data are also from one person only and data on the (dis-)similarity of the own 'love-profile' with a partner's profile would be needed. It is expected that those couples similar in their playfulness will also have similar preferences for their type of attachment. While the findings regarding the relationship satisfaction could be replicated within this study (using two independently collected samples), the results for the relationship personality still need to be replicated in future studies. For the analyses on relationship satisfaction it needs mentioning that this continuous variable was broken down into four groups of relationship satisfaction and other cut-off points resulting in a different number of groups might be chosen as well for this analysis. The rationale behind this analysis was to test for non-linear

relations that were beyond what could potentially be detected in correlation analyses. Finally, it needs mentioning that women were over-represented in both samples and that this may have had an impact on the findings. For future research it is recommended to have a stronger focus on a balanced sample; this can easily be achieved if couples are being tested.

The *Short Measure of Adult Playfulness* (Proyer 2012b) allows the reliable assessment of playfulness in an economic way. However, there is ample evidence that playfulness is a multidimensional construct (e.g., Barnett 2007; Proyer 2012a; Proyer and Jehle 2013) and it needs to be tested whether specific facets of playfulness have stronger relations with certain aspects of the relationship personality. For example, Barnett (2007) and Proyer (2012a) both identified facets of playfulness that are associated with sociability. It is expected that people who are particularly playful in these aspects endorse different types of loving styles than those with other preferences. An extension of the study using a multidimensional measure of playfulness is particularly encouraged. The same is true for the measure of relationship satisfaction. A scale was used that addresses relationship satisfaction in general, but the inclusion of an instrument that assesses several relationship dimensions would also be desirable. The BB-PI (Andresen 2012) has only recently been published. Despite its good psychometric properties and support for its validity further research is needed. Finally, the usage of an instrument that assesses the *Ludus*-style (Lee 1973) more directly would also be desirable in a future study.

More research is needed for a better understanding of the role of playfulness as an individual differences variable, its localization in the relationship personality and its potential contribution to flourishing relationships.

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## References

- Andresen, B. (2012). *Beziehungs- und Bindungs-persönlichkeitsinventar (BB-PI) [Relationship- and bonding-personality inventory]*. Göttingen: Hogrefe.
- Aune, K. S., & Wong, N. C. H. (2002). Antecedents and consequences of adult play in romantic relationships. *Personal Relationships, 9*, 279–286. doi:10.1111/1475-6811.00019.
- Barnett, L. A. (2007). The nature of playfulness in young adults. *Personality and Individual Differences, 43*, 949–958. doi:10.1016/j.paid.2007.02.018.
- Barnett, L. A. (2011). How do playful people play? Gendered and racial leisure perspectives, motives and preferences of college students. *Leisure Sciences, 33*, 382–401. doi:10.1080/01490400.2011.606777.
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226–244.
- Baxter, L. A. (1992). Forms and functions of intimate play in personal relationships. *Human Communication Research, 18*, 336–363. doi:10.1111/j.1468-2958.1992.tb00556.x.
- Betcher, R.W. (1977). *Intimate play and marital adaptation: regression in the presence of another*. Doctoral Dissertation, Boston University, Dissertation Abstracts International, 38, 1871.
- Bruess, C. J. S., & Pearson, J. C. (1993). ‘Sweet pea’ and ‘pussy cat’: an examination of idiom use and marital satisfaction over the life cycle. *Journal of Social and Personal Relationships, 10*, 609–615. doi:10.1177/0265407593104009.

- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: an evolutionary perspective on human mating. *Psychological Review*, *100*, 204–232. doi:10.1037/0033-295X.100.2.204.
- Chick, G. (2001). What is play for? Sexual selection and the evolution of play. *Play and Culture Studies*, *3*, 3–25.
- Chick, G., Yarnal, C., & Purrington, A. (2012). Play and mate preference: testing the signal theory of adult playfulness. *American Journal of Play*, *4*, 407–440.
- Crawford, S. A., & Caltabiano, N. J. (2011). Promoting emotional well-being through the use of humour. *The Journal of Positive Psychology*, *6*, 237–252. doi:10.1080/17439760.2011.577087.
- Davies, M. F. (1996). EPQ-correlates of love styles. *Personality and Individual Differences*, *20*, 257–259. doi:10.1016/S0191-8869(00)00154-9.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *American Psychologist*, *56*, 218–226. doi:10.1037//0003-066X.56.3.218.
- Glynn, M. A., & Webster, J. (1992). The adult playfulness scale: an initial assessment. *Psychological Reports*, *71*, 83–103. doi:10.2466/PRO.71.5.83-103.
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies: a comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist*, *59*, 93–104. doi:10.1037/0003-066X.59.2.93.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family*, *50*, 93–98. doi:10.2307/352430.
- Hendrick, C., & Hendrick, S. (1986). A theory and method of love. *Journal of Personality and Social Psychology*, *50*, 392–402. doi:10.1037//0022-3514.50.2.392.
- Hendrick, C., Hendrick, S., Foote, F. H., & Slapion-Foote, M. J. (1984). Do men and women love differently? *Journal of Social and Personal Relationships*, *1*, 177–195. doi:10.1177/0265407584012003.
- Hendrick, S. S., Dicke, A., & Hendrick, C. (1998). The relationship assessment scale. *Journal of Social and Personal Relationships*, *15*, 137–142. doi:10.1177/0265407598151009.
- Iffland, J. A., Berner, W., & Briken, P. (2014). Relationship factors in sex offender couples—a pilot study in an outpatient setting. *Journal of Sex & Marital Therapy*. doi:10.1080/0092623X.2013.788108.
- Jackson, D. N. (1974). *Personality research form*. Goshen: Research Psychologists Press.
- Jackson, D. N. (1984). *Manual for the personality research form* (3rd ed.). Port Huron: Research Psychologists Press.
- Kubzansky, L. D., Martin, L. T., & Buka, S. L. (2009). Early 50 manifestations of personality and adult health: a life course perspective. *Health Psychology*, *28*, 364–372. doi:10.1037/a0014428.
- Lee, J. A. (1973). *Colours of love: an exploration of the ways of loving*. Toronto: New Press.
- Lieberman, N. J. (1977). *Playfulness: its relationship to imagination and creativity*. New York: Academic.
- Mallandain, I., & Davies, M. F. (1994). The colours of love: personality correlates of love styles. *Personality and Individual Differences*, *17*, 557–560. doi:10.1016/0191-8869(94)90092-2.
- McGhee, P. E. (2010). *Humor as survival training for a stressed-out world: the 7 humor habits program*. Bloomington: AuthorHouse.
- Metz, M. E., & Lutz, G. (1990). Dyadic playfulness differences between sexual and marital therapy couples. *Journal of Psychology and Human Sexuality*, *3*, 167–182.
- Panksepp, J. (1993). Rough-and-tumble play: a fundamental brain process. In K. B. MacDonald (Ed.), *Parent-child play: descriptions and implications* (pp. 147–184). Albany: State University of New York Press.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers*, *36*, 717–731.
- Proyer, R. T. (2011). Being playful and smart? The relations of adult playfulness with psychometric and self-estimated intelligence and academic performance. *Learning and Individual Differences*, *21*, 463–467. doi:10.1016/j.lindif.2011.02.003.
- Proyer, R. T. (2012a). A psycho-linguistic study on adult playfulness: its hierarchical structure and theoretical considerations. *Journal of Adult Development*, *12*, 141–149. doi:10.1007/s10804-012-9141-7.
- Proyer, R. T. (2012b). Development and initial assessment of a short measure for adult playfulness: the SMAP. *Personality and Individual Differences*, *53*, 989–994. doi:10.1016/j.paid.2012.07.018.
- Proyer, R. T. (2012c). Examining playfulness in adults: testing its correlates with personality, positive psychological functioning, goal aspirations, and multi-methodically assessed ingenuity. *Psychological Test and Assessment Modeling*, *54*, 103–127.
- Proyer, R. T. (2013a). The well-being of playful adults: adult playfulness, subjective well-being, physical well-being, and the pursuit of enjoyable activities. *European Journal of Humour Research*, *1*, 84–98.
- Proyer, R.T. (2013b). *Perceived functions of playfulness in adults: does it mobilize you at work, rest, and when being with others?* Manuscript submitted to reviewers' playfulness.

- Proyer, R. T. (2014a). A psycho-linguistic approach for studying adult playfulness: a replication and extension toward relations with humor. *The Journal of Psychology: Interdisciplinary and Applied*. doi:10.1080/00223980.2013.826165.
- Proyer, R. T. (2014b). Playfulness over the lifespan and its relation to happiness: results from an online survey. *Zeitschrift für Gerontologie und Geriatrie*. doi:10.1007/s00391-013-0539-z.
- Proyer, R. T., & Jehle, N. (2013). The basic components of adult playfulness and their relation with personality: the hierarchical factor structure of seventeen instruments. *Personality and Individual Differences*, 55, 811–816. doi:10.1016/j.paid.2013.07.010.
- Proyer, R. T., & Ruch, W. (2011). The virtuousness of adult playfulness: the relation of playfulness with strengths of character. *Psychology of Well-Being: Theory, Research and Practice*. doi:10.1186/2211-1522-1-4.
- Qian, X. L., & Yarnal, C. (2011). The role of playfulness in the leisure stress-coping process among emerging adults: an SEM analysis. *Leisure/Loisir*, 35, 191–209. doi:10.1080/14927713.2011.578398.
- Ruch, W., Köhler, G., & van Thriel, C. (1996). Assessing the “humorous temperament”: construction of the facet and standard trait forms of the State-Trait-Cheerfulness-Inventory—STCI. *Humor: International Journal of Humor Research*, 9, 303–339. doi:10.1515/humr.1996.9.3-4.303.
- Sander, J., & Böcker, S. (1993). Die deutsche Form der Relationship Assessment Scale (RAS): Eine kurze Skala zur Messung der Zufriedenheit in einer Partnerschaft [The German version of the Relationship Assessment Scale (RAS): a short scale for the assessment of satisfaction in a romantic partnership]. *Diagnostica*, 39, 55–62.
- Schmitt, D. P., & Buss, D. M. (2000). Sexual dimensions of person description: beyond or subsumed by the Big Five? *Journal of Research in Personality*, 34, 141–177. doi:10.1006/jrpe.1999.2267.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological Methods*, 7, 422–445. doi:10.1037/1082-989X.7.4.422.
- Staempfli, M. B. (2007). Adolescent playfulness, stress perception, coping and well being. *Journal of Leisure Research*, 3, 393–412.
- Sternberg, R. J. (1988). *The triangle of love: intimacy, passion, and commitment*. New York: Basic Books.
- Symonds, D. (1979). *The evolution of human sexuality*. New York: Oxford University Press.
- Woll, S. B. (1989). Personality and relationship correlates of loving styles. *Journal of Research in Personality*, 23, 480–505. doi:10.1016/0092-6566(89)90016-0.
- Worobey, J. (2001). Associations between temperament and love attitudes in a college sample. *Personality and Individual Differences*, 31, 461–469. doi:10.1016/S0191-8869(00)00154-9.
- Yu, P., Wu, J.-J., Chen, I., & Lin, Y.-T. (2007). Is playfulness a benefit to work? Empirical evidence of professionals in Taiwan. *International Journal of Technology Measurement*, 39, 412–429. doi:10.1504/IJTM.2007.013503.