

Testing the associations between dispositions toward ridicule and being laughed at and romantic jealousy in couples: An APIM analysis

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Abstract

Objective: How people deal with ridicule and being laughed at plays a role in romantic life. We extend the research on the fear of being laughed at (gelotophobia), joy in being laughed at (gelotophilia), and joy in laughing at others (katagelasticism) by testing their associations with romantic jealousy and its consequences for relationship satisfaction (RS).

Method: Our study is based on Actor–Partner Interdependence Model (APIM) analyses of self and partner ratings of the laughter-related dispositions using data from 228 opposite-sex couples. APIM mediation analyses estimated indirect effects of jealousy on the associations between the dispositions and RS.

Results: As expected, gelotophobia-related positively to jealousy in actors, whereas gelotophilia and katagelasticism showed differential relationships. The analysis of partner effects showed that the *actual* expressions in the dispositions are unrelated to jealousy but *perceived* expressions account robustly for experiences of jealousy beyond self-ratings. Finally, jealousy had indirect effects on the associations between the dispositions and RS.

Conclusion: These findings contribute to our understanding of the role of dealing with ridicule and laughter in romantic life. We embed the findings into the literature, discuss practical implications, and derive future directions to expand the knowledge on gelotophobia, gelotophilia, and katagelasticism in romantic life.

KEYWORDS

gelotophobia, jealousy, laughter, relationship satisfaction, ridicule, romantic relationships

1 | INTRODUCTION

“Jealousy, turning saints into the sea

Swimming through sick lullabies

Choking on your alibis

But it's just the price I pay” (“Mr. Brightside,” Flowers, 2003)

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Contrary to conventional wisdom (e.g., “laughter is the best medicine”), people differ in how they experience laughter and there are those who do *not* experience laughter as joyful or positive. Ruch and Proyer (2008a, 2008b, 2009a) introduced three dispositions that describe individual differences in (a) fear of being laughed at (*gelotophobia*; Greek: *gelos* = laughter), (b) joy in being laughed at (*gelotophilia*), and (c) joy in laughing at others (*katagelasticism*; Greek: *katagelao* = laughing at). How people deal with ridicule and being laughed at plays a role in romantic life (e.g., Brauer & Proyer, 2018, 2020b; Brauer et al., 2020; Ruch et al., 2014). This study has sought to expand our understanding of the dispositions in intimate relationships by testing their associations with romantic jealousy. We collected data from opposite-sex couples and used the *Actor–Partner Interdependence Model* (APIM; Cook & Kenny, 2005) framework to analyze the associations between the three dispositions toward ridicule, and being laughed at and jealousy. In addition, mediation analyses have examined the indirect effects of jealousy on the associations between the dispositions and relationship satisfaction (RS).

1.1 | Individual differences in dealing with ridicule and being laughed at

Gelotophobia describes individual differences in the fear of being laughed at on a dimension from no fear to extreme expressions. Those with high expressions (gelotophobes) experience all types of laughter as hurtful ridicule, independent of its intention or direction (Ruch & Proyer, 2008a, 2008b). For illustration, one might imagine that gelotophobes experience passing strangers who laugh as directing their laughter at them to ridicule them. Thus, gelotophobia is characterized by an almost paranoid sensitivity to cues of ridicule. Experimental studies have supported this notion when testing affective, physical, and neural responses to laughter and laughter-eliciting emotions (e.g., Chan, 2016; Platt, 2008, 2019; Ruch et al., 2014; for an overview see Ruch et al., 2014). Although initial studies on *gelotophobia* have been conducted in a clinical realm, research has shown that it is best understood as a nonclinical individual difference variable (e.g., Ruch & Proyer, 2009b). It has also been theoretically and psychometrically distinguished from potentially related constructs, such as fear of negative evaluation and social phobia (e.g., Carretero-Dios et al., 2010; Edwards et al., 2010; Forabosco et al., 2009; Ruch & Proyer, 2008b). When localizing gelotophobia in broad personality systems, associations with Neuroticism, low Extraversion, low honesty-humility, and higher scores in older clinically oriented scales of psychoticism have been reported (e.g., Ruch & Proyer, 2009b; Torres-Marín et al., 2019).

Those high in *gelotophilia* enjoy being laughed at (Ruch & Proyer, 2009a). They experience laughter from others as a

sign of appreciation and they actively engage in making others laugh at them; for example, by telling and exaggerating experiences, or by exploiting mishaps to provoke laughter. One might think of class clown behaviors when describing prototypical gelotophiles. Gelotophilia is negatively related to gelotophobia (r_s around $-.30$) but they are not redundant or negative poles of the same dimension (e.g., Ruch & Proyer, 2009a). Joy in being laughed at relates to Extraversion and emotional stability (e.g., Ruch et al., 2013; Torres-Marín et al., 2019).

Finally, *katagelasticism* describes individual differences in the joy in laughing *at* others (Ruch & Proyer, 2009a). Katagelasticists enjoy laughing at others and making people laugh at others. For example, by drawing attention to other's shortcomings to ridicule them, even at the expense of hurting others. Because katagelasticists see laughter as a part of life, they do not feel guilty when laughing at others and they follow the eye-for-an-eye principle (i.e., others should fight back if they feel hurt by having been ridiculed). While katagelasticism relates to gelotophilia positively, it is unrelated to gelotophobia (e.g., Ruch & Proyer, 2009a). Katagelasticism relates to low Agreeableness and honesty-humility (e.g., Torres-Marín et al., 2019). It also relates to the so-called “dark” traits, such as psychopathy, Machiavellianism, and manipulative tendencies, whereas gelotophobia and gelotophilia are widely unrelated to those maladaptive characteristics (Proyer et al., 2012; Torres-Marín et al., 2019).

1.2 | Prior research on dealing with ridicule and laughter in romantic life

There is increasing interest in the role of humor and laughter in romantic life (e.g., Hall, 2017). Laughter and smiling are a means to communicate joy and positive emotions (e.g., Ruch & Ekman, 2001), attraction and romantic interest in courtship (e.g., Grammer, 1990; Montoya et al., 2018), and shared laughter among partners robustly predicts couple's RS (Kurtz & Algoe, 2015). Furthermore, sharing laughter, making one's partner laugh, and having “a good sense of humor” are among the most desired characteristics in potential partners (for literature reviews see Brauer & Proyer, 2019 and Kaufman et al., 2008).

Research on the three dispositions in romantic life has provided three main findings. First, gelotophobia accounts for single status cross-sectionally and across the lifetime in retrospective ratings—although gelotophobes desire to enter committed relationships (Brauer & Proyer, 2020b; Brauer et al., 2020; Forabosco et al., 2009; Ruch & Proyer, 2008a). It has been argued that gelotophobes misinterpret laughter and smiling as ridicule and dissolve potential relationships early during courtship (because they may feel they are being ridiculed by a potential partner), which then hinders them from

entering relationships. Second, the dispositions differentially relate to romantic attachment styles: gelotophobia is characterized by insecure attachment (i.e., high attachment avoidance and anxiety), gelotophilia by low attachment avoidance, and katagelasticism is widely unrelated to romantic attachment (Brauer & Proyer, 2020b; Brauer et al., 2020). Attachment has also revealed indirect effects on the association between gelotophobia and single status. It has been argued that gelotophobes desire to enter relationships but that their oversensitivity to cues of rejection (e.g., ridicule) contributes to adversities in romantic life; for example, by not pursuing courtship rigorously (see also Pepping & MacDonald, 2019). Furthermore, attachment has been demonstrated to have indirect effects on RS in couples (Brauer et al., 2020). Finally, although gelotophobia is associated with a greater likelihood of being single, some gelotophobes do enter relationships (Brauer & Proyer, 2018). Partner similarity may account for this finding because similar ways of dealing with laughter might help gelotophobes in finding a partner (e.g., two gelotophobic partners showing low inclinations to engage in laughing and/or ridiculing each other). Brauer and Proyer (2018) studied the associations between the three dispositions and RS in APIM analyses of opposite-sex couples and found that gelotophobia was negatively related to their RS and the *partner's* RS, gelotophilia was associated with greater RS (particularly in females), and katagelasticism was widely independent from RS but accounted robustly for higher disagreement in both partners.

Overall, these initial findings demonstrate that the laughter-related dispositions are associated with important indicators of romantic relationships, and they corroborate the notion that dealing with laughter and ridicule is of importance across different phases in relationships. We aim to extend the present knowledge on the dispositions in romantic life by studying the associations with romantic jealousy in couples. We will also examine the existence of indirect effects of jealousy on the associations between the dispositions and RS. To the best of our knowledge, this is the first study to address this question and we aim to narrow this gap in the literature.

1.3 | Romantic jealousy

Romantic jealousy describes individual differences in “thoughts, feelings, and actions which follow threats to the existence or the quality of the relationship, when those threats are generated by the perception of a real or potential attraction between one's partner and a (perhaps imaginary) rival” (White, 1981, p. 130). Jealousy is described on a continuum ranging from low to high expressions, with those on the high end of the dimension being characterized by experiencing paranoid suspicions, intense negative

feelings, and showing extensive detective behaviors (Pfeiffer & Wong, 1989; White, 1981). Although jealousy is mainly related to detrimental consequences for relationships (e.g., lower RS, inclinations to insecure attachment, and disagreement), mild expressions and perceptions of jealousy can sometimes improve the relationship quality if partners interpret it as an indicator for commitment and caring (Pfeiffer & Wong, 1989). This notion has been empirically supported in three APIM studies by Barelds and Barelds-Dijkstra (2007), who found that reactive jealousy (i.e., negative emotions after experiencing a relationship threat; Buunk & Dijkstra, 2006) is positively associated with RS in actors and partners, whereas reactions to imagined threats were negatively associated with RS. Theoretical and psychometric evidence suggests that jealousy is best understood multidimensionally, which acknowledges the differential characteristics of its components and consequences (e.g., Barelds & Barelds-Dijkstra, 2007; Buunk & Dijkstra, 2006; Pfeiffer & Wong, 1989).

We used Pfeiffer and Wong's (1989) three-dimensional model of jealousy that comprises the facets of *cognitive*, *emotional*, and *behavioral* jealousy. They expanded White's (1981) understanding of romantic jealousy as a *process* that begins with the perception of a relationship threat and goes along with a cognitive appraisal that evokes negative emotions. Finally, to cope with the situation and with the aim of reducing unpleasant emotions and thoughts, detective behaviors are shown (e.g., actively questioning the partner's actions and motives). Pfeiffer and Wong suggested an interactive model of jealousy in which cognition, emotion, and behavior are considered simultaneously. In particular, *cognitive jealousy* is characterized by almost paranoid worries and suspicions regarding an actual or imagined rival that could poach the partner and end the relationship. These thoughts arise when a threat to the relationship is perceived. *Emotional jealousy* describes affective reactions, such as arousal or anxiety, that appear in reaction to cognitive appraisals and as conditioned emotional responses to certain stimuli indicating a relationship threat (e.g., when one has been betrayed by a partner in a previous relationship). *Behavioral jealousy* refers to detective and/or protective actions that aim to fend off a perceived relationship rival, such as looking through the partner's handbag or pockets, or asking questions about their whereabouts and phone calls. Studies using this model have uncovered differential associations with important relationship outcomes, such as RS, responses to infidelity, mate retention, or abusive behaviors toward the partner (e.g., Chin et al., 2017; Elphinston et al., 2011; Henning & Connor-Smith, 2010). In line with Pfeiffer and Wong's assumption that ambiguous stimuli can evoke jealousy and considering the literature on the functions of laughter in mating (e.g., Grammer, 1990; Hall, 2017; Kurtz & Algoe, 2015; Li et al., 2009; Montoya et al., 2018), we expected that dealing with ridicule and being laughed at relates to jealousy in couples.

1.4 | The present study

In our study, we examined how self and partner perceptions of how people deal with ridicule and being laughed at are related to experiences of romantic jealousy. In extension, we tested the indirect effects of jealousy on the associations between the three dispositions and RS. To address this aim, we collected data of romantic couples and computed APIM analyses (Cook & Kenny, 2005; see Figure 1a) that allow us to examine the associations between the laughter-related dispositions and jealousy in couples through *actor effects* (i.e., within-person associations between the dispositions and jealousy) and *partner effects* (i.e., associations between the dispositions and the *partner's* jealousy), while accounting for the interdependence between partners. The APIM also allows to examine sex differences for the actor and partner effects (Cook & Kenny, 2005).

We supplemented the subjective self-ratings in the three dispositions with partner ratings (e.g., how does partner A views B's joy in being laughed at). This approach has two merits: First, perceptions of others are a core criterion of jealousy (e.g., Pfeiffer & Wong, 1989; White, 1981). We argue that perceptions of how the *partner* deals with ridicule and being laughed at might relate to one's own jealousy, independently of how the partner describes themselves. This is comparable to arguments put forward in research on the functions of smiling and making others laugh to signal sexual and romantic interest (e.g., Grammer, 1990; Li et al., 2009; Montoya et al., 2018; see also Kaufman et al., 2008). Second, other ratings incrementally explain variance over and beyond self-ratings because the latter are confounded with methodological and psychological biases (see e.g., Campbell &

Fiske, 1959; Connelly & Ones, 2010).¹ Finally, we tested if romantic jealousy would mediate the associations between the laughter-related dispositions and RS.

We derived our expectations based on the literature and followed two lines of assumptions. For actor effects, we considered the knowledge on the affective and cognitive characteristics of the laughter-related dispositions. For the partner effects, we based our expectations on the knowledge of laughter serving signal and indicator functions in courtship. While no data yet exist on desired partner preferences concerning the three dispositions, prior studies have examined the sense of humor and laughter-related preferences. For example, Buss (1988) found that “making him/her laugh” is among the most popular strategies to approach and attract a potential partner. Similarly, Montoya and colleagues' (2018) meta-analysis showed that smiling and laughter are strategies to indicate attraction. Furthermore, Bressler et al. (2006) showed that people place a high degree of importance on the partner making them laugh (e.g., assessed with statements such as “if someone cannot make me laugh, I am not interested in him/her as a relationship partner”). Finally, there is robust evidence to show that smiling and making others laugh are frequently used as successful mating strategies to attract short- and long-term partners (for overviews see Brauer & Proyer, 2019 and Kaufman et al., 2008).

1.5 | Expectations for the relationships between the dispositions and romantic jealousy

For gelotophobia, we expected that negative experiences of laughter and inclinations to misperceptions of smiling and laughter for ridicule (for an overview see Ruch et al., 2014) contribute to greater romantic jealousy in actors because it hinders the perception of a partner's smile as sign of reassurance and positive feedback (e.g., Grammer, 1990; Ruch & Ekman, 2001). This might relate to ambiguous perceptions of intentions when observing interactions that involve others smiling at or laughing with their partner. Moreover, gelotophobes systematically underestimate their intra- and inter-personal strengths and abilities, are prone to false alarms (e.g., subjective impressions of bullying do not converge with external ratings by peers and teachers; Proyer et al., 2012, 2013), experience insecurities and misattributions in social relationships, and perceive to be put down by others (e.g., Brauer & Proyer, 2020b, 2020c; Canestrani et al., 2019; Proyer & Ruch, 2009a, 2009b, Proyer et al., 2014). This is likely to contribute to feelings of not being a valuable partner and perceptions that the partner might leave them for a rival. Furthermore, gelotophobia is robustly positively related to experiencing mistrust toward the partner and partner reports of feeling constrained (Brauer & Proyer, 2018). Taken together, we

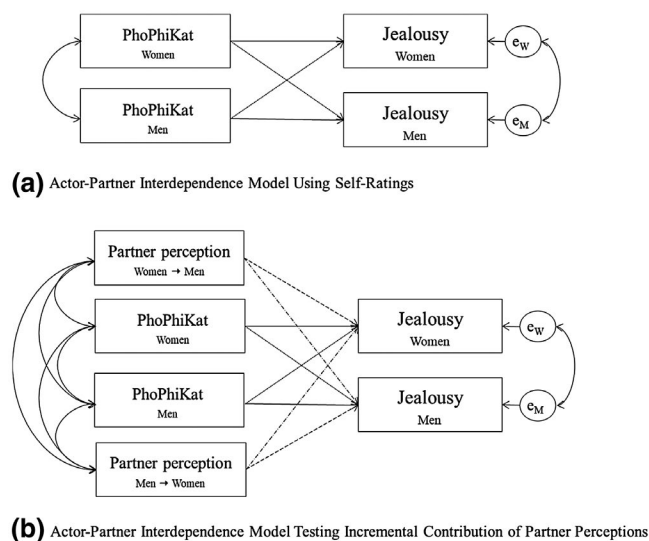


FIGURE 1 Actor–Partner Interdependence Model predicting jealousy from (a) self-ratings and (b) self- and partner-ratings. For each disposition a separate model is computed. – Actor effect. .. Partner effect. -- Actor and partner effects of partner perception

argue that the fear of being laughed at might contribute to experiences of heightened sensitivity to perceive threats that could endanger the existence of the relationship, such as when their partner interacts with others and exchanges laughter or smiling. Thus, we expected a positive association between gelotophobia and romantic jealousy (actor effect; H1). We examined potential partner effects exploratorily because we did not expect a spillover from gelotophobia to the partner's jealousy; similarly, we have tested the relationship with partner perceptions exploratorily.

For the joy in being laughed at, we expected negative actor effects toward jealousy (H2.1) because the literature has shown that those high in gelotophilia are confident with their intrapersonal and interpersonal environment (e.g., slightly overestimating their strengths and attributing social missteps to chance or luck, while internalizing compliments), are securely attached, experience social support, and show no inclinations to mistrust their partner (e.g., Brauer & Proyer, 2018, 2020c; Brauer et al., 2020; Canestrani et al., 2019; Proyer et al., 2014). We expected that partners of gelotophiles would experience greater jealousy because gelotophiles engage in making others laugh, which is among the most preferred tactics to attract potential partners in both sexes, and people typically seek and desire partners that make them laugh (e.g., Bressler et al., 2006; Buss, 1988; Grammer, 1990; Li et al., 2009; Sprecher & Regan, 2002; Wilbur & Campbell, 2011). Hence, we expected robust positive partner effects (i.e., an association between A's gelotophilia and B's romantic jealousy; H2.2) and we accordingly expected that partner perceptions of gelotophilia would also positively relate to greater jealousy (H2.3; i.e., an association between A's jealousy and how A views B's gelotophilia).

There are gender differences in perceptions of making others laugh (i.e., aiming to evoke laughter to make others laugh). In their meta-analysis, Greengross et al. (2020) found that men's humor is on average rated funnier than women's humor output by independent raters ($d_{\text{meta}} = 0.32$). Furthermore, women tend to desire male partners who make them laugh, whereas men desire partners who enjoy laughing at their humorous content (for a literature overview and discussion see Brauer & Proyer, 2019). Following this notion, we expected that the partner effect of the male's gelotophilia (i.e., association between the male's gelotophilia and their female partner's jealousy) would be stronger than the female's partner effect (i.e., association between female's gelotophilia and male partner's jealousy). Thus, we expected that the size of the partner effects of gelotophilia and jealousy would be statistically different for males and females (H2.4).

For katagelasticism, we conducted an exploratory examination of the actor effects because prior research has shown that joy in laughing at others is widely independent

from indicators of romantic life (e.g., romantic attachment and RS; Brauer & Proyer, 2018; Brauer et al., 2020) and inclinations to misperceptions of themselves or their social environment (e.g., Brauer & Proyer, 2020c; Proyer et al., 2014). However, katagelasticism also incorporates making others laugh by pointing something or someone out and directing laughter at them. Hence, we expected robustly positive partner effects for katagelasticism (H3.1), and positive associations between-partner perceptions of katagelasticism and jealousy (H3.2). Taking the literature on gender differences in humor attractiveness into account, we also expected that females would show greater jealousy in comparison to men when their partner is higher in katagelasticism (H3.3; partner effect) and when they perceive their partner as being high in katagelasticism (H3.4; partner perception). Thus, H3.3 and 3.4 examined if the effect sizes for partner effects and partner perceptions differ for men and women.

Finally, we computed a mediation analysis to examine the indirect effects of romantic jealousy for associations between the dispositions and RS. Given that jealousy has been identified as negative predictor for RS in most studies (e.g., Barelds & Barelds-Dijkstra, 2007; Pfeiffer & Wong, 1989), we expected that jealousy would demonstrate negative indirect effects on the associations between the laughter-related dispositions and RS. The findings of the mediation analysis will contribute to our understanding of the associations between dealing with laughter and RS in couples.

2 | METHOD

2.1 | Sample

Our sample comprised $N = 228$ heterosexual romantic couples with an average relationship length of $M = 7.1$ years ($SD = 9.0$, median = 3.4) and a relationship duration spanning from 1 month to 45.3 years. Most couples (68.9%) lived together and 21.5% were married. The average age of the participants was $M_{\text{women}} = 28.4$ years ($SD = 11.3$, median = 24) and $M_{\text{men}} = 30.6$ years ($SD = 12.0$, median = 27). Approximately half of the sample (51.3%) were students² and the educational level assessed by the highest earned degree was high: most of the participants held a university degree (31.7%) or had completed high school qualifying them to attend university (44.7%), 15.4% had completed vocational training, and 5.5% held a regular high school diploma. We computed a post hoc power analysis using APIMPowerR (Ackermann et al., 2020) and found that small to medium size effects could be detected with 99% (actor effect; $\beta = .20$) and 91% (partner effect; $\beta = .15$) statistical power with a type I error rate of 5%.

2.2 | Instruments

The *PhoPhiKat-30* (Ruch & Proyer, 2009a) is the 30-item short form of the standard instrument (45 items) to assess gelotophobia (e.g., “When they laugh in my presence I get suspicious”), gelotophilia (e.g., “I enjoy if other people laugh at me”), and katagelasticism (e.g., “I enjoy exposing others and I am happy when they get laughed at”). Each disposition is assessed with 10 items that are rated on a 4-point Likert-type scale (1 = *strongly disagree*; 4 = *strongly agree*). Ruch and Proyer (2009a) report good internal consistencies ($\alpha \geq .79$), stable retest reliability ($r \geq .68/.70$ for 3- and 6-month intervals), and a robust three-factor structure. The findings on the reliability, and structural and external validity replicated well (e.g., Brauer & Proyer, 2020a; Canestrari et al., 2019; Renner & Heydasch, 2010). We used the *PhoPhiKat-30* in a partner rating version that included the items in their third person version (e.g., “He/she enjoys other people laughing at him/her”) to assess the partner's perceptions of the dispositions in accordance with prior studies using this approach (Brauer & Proyer, 2020a; Proyer et al., 2014). The instrument is openly available (<https://doi.org/10.23668/psycharchives.439>).

We used the *Multidimensional Jealousy Scale* (MJS; Pfeiffer & Wong, 1989; German version by Stieger et al., 2012) to assess cognitive, emotional, and behavioral romantic jealousy with eight items each. Sample items are “I suspect that X may be attracted to someone else” (*cognitive*; 1 = *never* to 7 = *all the time*), “X is flirting with someone of the opposite sex” (*emotional*; 1 = *very pleased* to 7 = *very upset*), and “I question X about his or her whereabouts” (*behavioral*; 1 = *never* to 7 = *all the time*). Pfeiffer and Wong (1989) reported good internal consistencies ($\alpha \geq .85$), good retest reliability ($r_{\text{cog/emot/beh}} = .75/.82/.34^3$ for 1-to-2-month intervals), a clear three-factorial structure, and both convergent and discriminant validity with external measures. The MJS has been translated into numerous languages and findings on the good psychometric properties, three-dimensional structure, and external validity have replicated well (e.g., Chin et al., 2017; Elphinston et al., 2011).

We assessed RS with the single-item indicator of Kliem et al.'s (2012) *Short Relationship Questionnaire*. The item wording is “How happy do you consider your relationship/marriage at the moment?” and responses are given on a 6-point Likert-type scale (0 = *very unhappy*; 5 = *very happy*). There is good evidence for the validity of the instrument (e.g., Kliem et al., 2015, 2012) and it has been frequently used to assess RS in couples (e.g., Miano et al., 2020; Proyer et al., 2019).

2.3 | Procedure

Our study was conducted in Germany and we advertised it as an examination of personality in romantic relationships.

Participants were recruited on campus, through leaflets and online advertisements on our department's web site. The inclusion criteria were that the participants should be ≥ 18 years old, in a heterosexual romantic relationship, and both partners should participate and be fluent in German. The participants took part in this study online via *SoSci Survey* (www.sosci-survey.de) after receiving a dyad code for data matching and instructions to complete the study independently from their partner. On average, the completion of the study took about 30 min. Although participation was voluntarily and without financial compensation, the participants received individual feedback on the results upon request and psychology students could earn course credit.

2.4 | Data analysis

We computed the APIM analyses (Figure 1a; Cook & Kenny, 2005) in *Mplus* 8.4 (Muthén & Muthén, 1997–2019). As recommended by Cook and Kenny (2005), we report unstandardized effects (b). The statistical significance of the parameters is evaluated upon two criteria, namely: 95% confidence intervals (CI; bootstrap method; $k = 5,000$ samples) and p values. For a better interpretation, we standardized the b coefficients on the men's and women's SD s (coefficient Δ ; i.e., an increase of 1 SD is associated with ΔSD in the outcome variable).⁴ In accordance with Kenny and Ledermann (2010), we tested the existence of gender effects by comparing a saturated model (free estimation of all effect parameters) and a constrained model in which actor and partner effects were restrained to be equal for both the men and women. Both models are compared with χ^2 difference tests and the parsimonious model is accepted when $p \geq .20$ (all of the fit tests are provided in the Electronic Supporting Information [ESM]).

We analyzed the effects of partner perceptions of the three dispositions after controlling for the actor and partner effects of self-perceptions (Figure 1b). This allows to examine the incremental value of the partner perceptions over and beyond subjective self-ratings. Technically, we interpreted the actor effects that describe the association between “how Partner A perceives Partner B's laughter-related disposition” and A's jealousy; for full transparency, we provide the coefficients of partner effects in the ESM.

To examine the indirect effects of jealousy on the associations between the three dispositions and RS, we used Ledermann et al.'s (2011) *Actor-Partner Interdependence Mediator Model* (APIMeM; see Figure 2). We interpreted the indirect effects, which were tested for statistical significance by examining whether bootstrapped ($k = 5,000$ samples) 95% CIs excluded zero. Note that our cross-sectional design allows us to test correlations but not causal effects; therefore, we use the term “effect” in its statistical sense

(i.e., effect parameter being statistically significantly different from zero). All of the data and syntaxes for this study are openly available in the Open Science Framework (osf.io/sxf6c/).

3 | RESULTS

3.1 | Preliminary analyses

The descriptive statistics for each instrument are displayed in Table 1. The distribution parameters were comparable to previous findings (Ruch & Proyer, 2009a), although the means

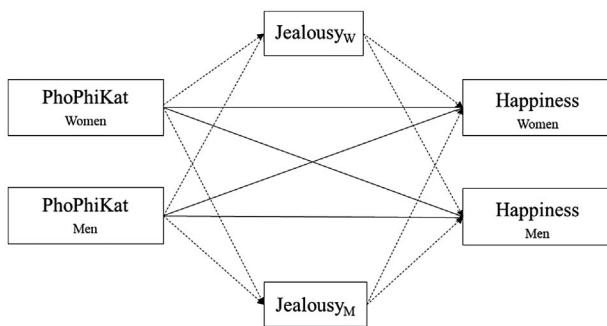


FIGURE 2 Actor-Partner Interdependence Mediation Model testing the association between self-ratings on the three dispositions toward being laughed at and ridicule and each partner's happiness with jealousy as a mediator. – Actor and partner effect. -- Indirect effects

TABLE 1 Descriptive statistics, partner similarity (*r*), and mean differences (Cohen's *d*) for the PhoPhiKat-30, multidimensional jealousy scale (MJS), and relationship quality

	α	Females		Males		<i>r</i>	<i>d</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>PhoPhiKat-30</i>							
Self-rating							
Gelotophobia	.78	2.01	0.56	1.87	0.46	.09	0.27
Gelotophilia	.81	2.13	0.54	2.31	0.54	.17*	-0.33
Katagelasticism	.81	1.65	0.44	1.90	0.54	.21**	-0.51
Partner rating							
Gelotophobia	.86	2.18	0.59	1.75	0.56	.07	0.74
Gelotophilia	.86	1.88	0.53	2.23	0.65	.20**	-0.60
Katagelasticism	.86	1.72	0.53	1.89	0.65	.17**	-0.29
Jealousy							
Cognitive	.85	2.12	0.88	2.30	0.98	.35***	-0.19
Emotional	.88	4.68	1.01	4.41	1.06	.30***	0.26
Behavioral	.74	2.14	0.76	1.93	0.72	.28***	0.28
Happiness	–	4.11	1.06	4.09	1.00	.17**	0.02

Note: *N* = 228 heterosexual romantic couples. Two-tailed tests of statistical significance.

p* < .05; *p* < .01; ****p* < .001.

for relationship happiness were numerically higher than in prior studies. Skewness and kurtosis did not indicate deviations from the normal distribution (all coefficients ≤ 10.651), except for RS which was left skewed (-1.91) as in prior studies (e.g., Miano et al., 2020). The internal consistencies of all measures were satisfying and comparable to earlier studies ($\alpha \geq .74$, Table 1).

There were small to medium gender effects in the self-ratings ($0.02 \leq |d| \leq 0.51$), with women being higher in gelotophobia, emotional, and behavioral jealousy, and men showing higher expressions in gelotophilia, katagelasticism, and cognitive jealousy. Couples were similar in all variables ($0.17 \leq r \leq .35$), which indicates the existence of robust interdependence between partners. However, the similarity for gelotophobia ($r = .09$, $p = .160$) was on the low end of expectations, while Brauer and Proyer (2018) found stronger convergence ($r = .19$).

We tested the accuracy of partner perceptions by correlating self and partner ratings. Overall, the impressions converged well ($r_{Pho} = .51$, $r_{Phi} = .47$, $r_{Kat} = .41$, all $p < .001$) and effect sizes were in line with prior findings (Brauer & Proyer, 2020a). On average, the female's impressions were similar to the men's self-ratings ($d \leq 0.23$). However, the males overestimated the female's gelotophobia ($d = 0.30$) and underestimated their partner's gelotophilia ($d = -0.47$).

Table 2 presents the bivariate correlations for all of the tested variables within and between partners. An initial inspection showed robust associations between the dispositions and jealousy in the expected directions.

3.2 | Associations between dealing with ridicule and being laughed at and jealousy

3.2.1 | Gelotophobia

The APIM analyses showed the expected positive actor effects between fear of being laughed at and all types of jealousy (all $b \geq 0.28$, $\Delta \geq 0.29$, $p < .001$; see Table 3). The analysis of partner effects indicated that gelotophobia existed independently from the partner's jealousy (all $|b| \leq 0.09$, $\Delta \leq 0.13$, $p \geq .193$). Against expectations, the partner perceptions of gelotophobia related to higher behavioral jealousy ($b = 0.19$, $\Delta_{F/M} = 0.25/0.26$, $p = .024$). However, the partner's perceptions of gelotophobia were unrelated to cognitive and emotional jealousy. All effects were independent from gender.

3.2.2 | Gelotophilia

We found differential associations for gelotophilia and jealousy. Although joy in being laughed at was related to higher cognitive jealousy ($b = 0.30$, $\Delta_{F/M} = 0.34/0.31$, $p = .001$;

Table 3), it was negatively associated with emotional jealousy ($b = -0.25$, $\Delta_{F/M} = 0.25/0.24$, $p = .004$). Furthermore, behavioral jealousy was positively related to men's gelotophilia ($b = 0.23$, $\Delta = 0.32$, $p = .003$), while it existed independently in women ($b = -0.06$, $\Delta = 0.08$, $p = .551$). The analysis of partner effects showed that female gelotophilia was related positively to their male partner's cognitive jealousy ($b = 0.40$, $\Delta = 0.41$, $p < .001$). Remaining partner effects were negligible (all $|b| \leq 0.12$, $\Delta \leq 0.17$, $p \geq .079$). Accordingly, men's partner perceptions incrementally contributed to understanding jealousy since perceptions of their partner's gelotophilia was positively associated with their cognitive ($b = 0.35$, $\Delta = 0.36$, $p = .026$) and behavioral jealousy ($b = 0.29$, $\Delta = 0.40$, $p = .027$). Against expectations, women's jealousy was unrelated from how they perceive their partner's gelotophilia ($|b| \leq 0.12$, $\Delta \leq 0.16$, $p \geq .205$).

3.2.3 | Katagelasticism

The analysis of actor effects showed that joy in laughing at others was robustly positively associated with cognitive ($b = 0.28$, $\Delta_{F/M} = 0.32/0.29$) and behavioral jealousy

TABLE 2 Bivariate correlations between the PhoPhiKat-30, Multidimensional Jealousy Scale (MJS), and relationship happiness (single item)

	Pho	Phi	Kat	Cognitive	Emotional	Behavioral	Happiness
Within partner							
<i>PhoPhiKat-30</i>							
Gelotophobia	–	–0.20**	0.03	0.16*	0.28***	0.26***	–0.11
Gelotophilia	–0.09	–	0.40***	0.22**	–0.15*	–0.02	–0.06
Katagelasticism	0.02	0.44***	–	0.15*	0.04	0.21**	–0.15*
Jealousy							
Cognitive	0.16*	0.17**	0.16*	–	0.17**	0.38***	–0.22***
Emotional	0.21**	–0.11	0.10	0.11	–	0.30***	–0.07
Behavioral	0.20**	0.17**	0.29***	0.49***	0.18**	–	–0.16*
Happiness	–0.03	0.00	–0.02	–0.12	–0.06	–0.02	–
Between partner							
<i>PhoPhiKat-30</i>							
Gelotophobia	–	0.03	0.11	0.04	0.03	–0.04	–0.11
Gelotophilia	0.03	–	0.11	0.25***	–0.03	0.15*	–0.07
Katagelasticism	–0.07	0.16*	–	0.09	–0.07	0.05	–0.07
Jealousy							
Cognitive	0.07	0.07	–0.01	–	0.00	0.13*	–0.09
Emotional	0.05	0.03	0.16*	0.11	–	0.06	–0.04
Behavioral	–0.03	0.04	0.09	0.12	0.12	–	–0.13
Happiness	–0.12	0.01	–0.01	–0.05	0.03	–0.02	–

Note: $N = 228$ heterosexual romantic couples. Pho = Gelotophobia. Phi = Gelotophilia. Kat = Katagelasticism. Coefficients in upper table display within-partner correlations (women/men = above/below diagonal). Coefficients in lower table display between-partner correlations (among partners, female in rows/male in columns). Two-tailed.

* $p < .05$; ** $p < .01$; *** $p < .001$.

TABLE 3 APIM analyses testing associations between dispositions toward laughter and romantic jealousy, unstandardized regression coefficients, bootstrapped 95% confidence intervals (CIs), and two-tailed tests of significance by Wald-tests

	Actor (self-rating)				Partner (self-rating)				Actor effects of partner perceptions ^a			
	<i>b</i> _{F/M}	95% CI	<i>p</i>	Δ _{F/M}	<i>b</i> _{F/M}	95% CI	<i>p</i>	Δ _{F/M}	<i>b</i> _{F/M}	95% CI	<i>p</i>	Δ _{F/M}
Gelotophobia												
Cognitive	0.28	0.11, 0.45	.001	0.32/0.29	0.07	-0.08, 0.23	.385	0.07/0.08	0.19	-0.01, 0.39	.056	0.22/0.19
Emotional	0.49	0.33, 0.65	<.001	0.49/0.46	0.03	-0.13, 0.19	.701	0.03/0.03	-0.04	-0.23, 0.16	.700	0.04/0.04
Behavioral	0.34	0.21, 0.47	<.001	0.45/0.47	-0.09	-0.21, 0.04	.193	0.13/0.12	0.19	0.02, 0.36	.024	0.25/0.26
Gelotophilia												
Cognitive	0.30	0.12, 0.47	.001	0.34/0.31	0.40/0.05	0.19, 0.61/-0.16, 0.26	<.001/.651	0.41/0.06	0.02/ 0.35	-0.20, 0.24/0.04, 0.65	.840/.026	0.02/0.36
Emotional	-0.25	-0.43, -0.05	.011	0.25/0.24	0.04	-0.14, 0.23	.659	0.04/0.04	0.11	-0.09, 0.31	.299	0.11/0.10
Behavioral	-0.06/0.23	-0.24, 0.14/0.08, 0.38	.551/.003	0.08/0.32	0.12	-0.01, 0.25	.079	0.17/0.16	0.12/ 0.29	-0.06, 0.30/0.03, 0.54	.205/.027	0.16/0.40
Katagelasticism												
Cognitive	0.28	0.12, 0.45	<.001	0.32/0.29	0.01	-0.14, 0.15	.946	0.01/0.01	0.08/ 0.55	-0.13, 0.29/0.20, 0.90	.453/.002	0.09/0.56
Emotional	0.15	-0.04, 0.34	.131	0.15/0.14	-0.17/0.24	-0.45, 0.12/0.00, 0.47	.248/.048	0.17/0.23	0.07/ 0.40	-0.18, 0.31/0.07, 0.71	.563/.013	0.07/0.38
Behavioral	0.37	0.23, 0.52	<.001	0.49/0.51	0.03	-0.09, 0.15	.603	0.04/0.04	0.29	0.14, 0.44	<.001	0.38/0.40

Note: *N* = 228 heterosexual romantic couples. Coefficients in boldface indicate that bootstrapped (*k* = 5,000) 95% CIs do not contain zero. ^aPartner effects of partner perceptions are displayed in the ESM, but all effects were negligible (all *b*s ≤ |0.18|, *p*s ≥ .095). F/M = Female/male.

TABLE 4 Unstandardized effects of the Actor–Partner Interdependence Mediation Models testing the indirect effect of jealousy (M) on the association between gelotophobia, gelotophilia, katagelasticism (X), and relationship satisfaction (Y)

Effects	Gelotophobia			Gelotophilia			Katagelasticism		
	Cognitive	Emotional	Behavioral	Cognitive	Emotional	Behavioral	Emotional		Behavioral
							Male	Female	
<i>Direct</i>									
X → M									
Actor	0.28***	0.49***	0.34***	0.29***	-0.25*	0.20**	0.39***	0.35**	0.37***
Partner	0.07	0.03	-0.09	0.21**	0.04	0.06	0.07	-0.01	0.03
M → Y									
Actor	-0.17**	-0.06	-0.10	-0.18***	-0.07	0.04	0.03	-0.20	-0.08
Partner	0.01	0.04	-0.05	-0.01	0.01	0.04	0.02	-0.09	-0.08
X → Y									
Actor	-0.08	-0.10	-0.10	0.01	-0.06	0.02	-0.02	-0.30	-0.12
Partner	-0.20*	-0.23**	-0.20*	0.00	-0.04	0.04	0.05	-0.09	-0.01
<i>Indirect</i>									
Actor									
Total	-0.13	-0.13	-0.13	-0.05	-0.05	0.02	-0.12	-0.37*	-0.15
Total Indirect	-0.05*	-0.03	-0.03	-0.06*	0.02	0.00	0.02	-0.07	-0.03
Actor-Actor	-0.05*	-0.03	-0.03	-0.05*	0.02	0.01	0.01	-0.07	-0.03
Partner-Partner	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00
Partner									
Total	-0.21**	-0.21**	-0.21**	-0.04	-0.05	-0.12	0.04	0.04	-0.04
Total Indirect	-0.01	0.02	-0.01	-0.04	-0.01	0.01	0.00	0.00	-0.03
Actor-Partner	0.00	0.02	-0.02	0.00	0.00	0.01	0.01	0.01	-0.03
Partner-Actor	-0.01	0.00	0.01	-0.04*	0.00	0.01	-0.01	-0.01	0.00

Note: N = 228 heterosexual romantic couples. Coefficients in boldface indicate that bootstrapped (k = 5,000) 95% CIs do not contain zero.

*p < .05; **p < .01; ***p < .001. Two-tailed.

($b = 0.37$, $\Delta_{FM} = 0.49/0.51$, all $p < .001$; see Table 3). Against expectations, katagelasticism was unrelated to the partner's jealousy ($|b| \leq 0.24$, $\Delta \leq 0.23$, $p \geq .048$). However, the partner's perceptions of katagelasticism contributed to explaining jealousy because they related to higher behavioral jealousy, independently from gender ($b = 0.29$, $\Delta_{FM} = 0.38/0.44$, $p < .001$). Moreover, the male's perceptions of their partner's katagelasticism was associated with greater cognitive ($b = 0.55$, $\Delta = 0.56$, $p = .002$) and emotional jealousy ($b = 0.40$, $\Delta = 0.38$, $p = .013$), while the female's perceptions of their partner's katagelasticism were unrelated to jealousy ($|b| \leq 0.08$, $\Delta \leq 0.09$).

3.3 | Testing indirect effects of jealousy on associations between the laughter-related dispositions and relationship satisfaction

Finally, we studied the indirect effects of jealousy on the associations between the three dispositions and RS with APIMeM analyses (Figure 2). The findings are displayed in Table 4 (all CIs are provided in the ESM).

3.3.1 | Gelotophobia

The APIMeM analyses for gelotophobia showed three main findings. First, we found no evidence for gender effects. Second, cognitive jealousy had a negative indirect effect on the actor's RS (indirect effect: $b = -0.05$, 95% CI = $[-0.09, -0.02]$). Third, all types of jealousy showed the expected negative indirect effects on the *partner's* satisfaction ($b = -0.21$, 95% CI = $[-0.38, -0.05]$).

3.3.2 | Gelotophilia

Only cognitive jealousy yielded two negative indirect effects on RS; namely, through actors' jealousy ($b = -0.06$, 95% CI = $[-0.12, -0.01]$) and through the partner's gelotophilia on the actor's jealousy ($b = -0.04$, 95% CI = $[-0.08, -0.01]$). Hence, one's own and the partner's cognitive jealousy demonstrated indirect effects on the gelotophilia-RS association.

3.3.3 | Katagelasticism

We found that cognitive jealousy had a negative indirect effect on RS for actors ($b = -0.05$, 95% CI = $[-0.10, -0.02]$) that was independent of gender. For women, emotional jealousy yielded an indirect negative effect ($b = -0.37$, 95% CI = $[-0.71, -0.04]$), while being negligible for men ($b = -0.02$).

4 | DISCUSSION

Our study has extended our knowledge of the role of how people deal with ridicule and being laughed at in romantic life by testing associations between self and partner perceptions of gelotophobia, gelotophilia, and katagelasticism with facets of romantic jealousy. Overall, our expectations were only partially met. The differential relationships highlight the importance of differentiating between facets of jealousy for a thorough understanding of the phenomenon. Furthermore, our study showed that *perceptions* of how one's partner deals with laughter and ridicule robustly contributed to explaining experiences of jealousy over and beyond self-descriptions. Finally, mediation analyses revealed negative indirect effects of jealousy on the associations between the laughter-related dispositions and RS.

4.1 | Gelotophobia

In line with our expectations, fear of being laughed at was related to greater experiences of romantic jealousy— independently of gender and type of jealousy. Following White's (1981) approach to jealousy as a sequential process, these findings might indicate that gelotophobes actively engage in all of its components. This would fit well with the current understanding of gelotophobes' emotional and cognitive experiences, which are characterized by negative emotions, insecure romantic attachment, low confidence in social contexts, and mistrust toward their partner (e.g., Brauer & Proyer, 2018; 2020b, 2020c; Canestrani et al., 2019; Ruch et al., 2014; Ruch & Proyer, 2009b). It could be argued that these patterns of feeling and thinking contribute to the sensitivity to cues of relationship threats from a broader perspective. Furthermore, gelotophobes' misinterpretations of laughter and smiling (e.g., Platt, 2008, 2019; Ruch et al., 2014) might elicit jealousy when they observe interactions between their partner and others (e.g., when sharing laughter or reciprocal smiling). Initial findings using a picture-based scenario test of ambiguous interactions between two or more people show that gelotophobic misinterpretations are not limited to self-perceptions, but also affect judgments of social interactions (Ruch et al., 2017) and facial expressions of others (e.g., Hofmann et al., 2015). Thus, one might assume that gelotophobia-based misinterpretations of the partner's social interactions might contribute to the experience of jealous reactions. This could be tested by studying gelotophobes' reactions to naturalistic interactions in laboratory settings. Gelotophobia was unrelated to the partner's jealousy (i.e., no partner effects). However, perceiving one's partner to be high in gelotophobia was positively related to engaging in detective behaviors (e.g., searching through the partner's belongings for potential evidence of betrayal). This finding was

unexpected, and the effect size was small. While this should not be overinterpreted before replication, one might argue that how gelotophobes experience and behave in relationships could lead to perceptions of relationship threat in the partner. For example, earlier literature has shown that gelotophobes experience and express mistrust toward their romantic partner, have low future expectations for their relationship, constrain their partner, and show avoidant behaviors, such as withdrawing from the partner, limiting interdependence, and avoiding closeness and intimacy (Brauer & Proyer, 2018, 2020b; Brauer et al., 2020; Canestrari et al., 2019). The partner might experience these behaviors as low motivation to maintain the relationship (i.e., a threat to the relationship), which then might evoke worrying and detective behaviors in their partners as a response to the perceived relationship threat. This notion fits into Goodboy et al.'s (2017) findings, who studied negative maintenance behaviors in couples and found that avoidant relationship behaviors have partner effects; namely, inducing jealousy and spying on the partner. Further research controlling for third variables (e.g., attachment styles) is needed to clarify this surprising finding. All of the findings for gelotophobia were invariant across gender.

4.2 | Gelotophilia

Joy in being laughed at was differentially related to jealousy with regard to its facets and gender. Against expectations, perceptions of potential relationship threat (cognitive jealousy) were positively related to gelotophilia in males and females alike. In contrast, and according to expectations, gelotophilia was negatively related to affective experiences after perceiving a threat to the relationship. One could argue that the security and confidence that gelotophiles experience in close relationships and their emotional well-being buffers potential effects of negative affective experiences in consequence of experiencing relationship threat (e.g., Brauer & Proyer, 2018, 2020c; Brauer et al., 2020; Canestrani et al., 2019; Renner & Heydasch, 2010). However, our findings indicate that such buffering might depend on gender because females who are high in gelotophilia showed no inclinations to behavioral jealousy, whereas men reported greater inclinations to jealous behaviors. Again, when viewing jealousy from a process perspective (White, 1981), one could argue that gelotophiles experience cognitive jealousy, but that their interpersonal security helps them to deal with the relationship threat and reduce jealousy-induced negative emotions. Finally, only male gelotophiles showed inclinations to behavioral jealousy. One might argue that women's higher emotional awareness and emotion-focused coping (see Barrett et al., 2000; Tamres et al., 2002) helps them to deal with worrying about potential relationship threats in

comparison to men. This might end the jealousy process in women before engaging in detective behaviors; in contrast, men who are high in gelotophilia continue to engage in their worrying and they finally engage in jealous behaviors.

Against expectations we did not find robust partner effects, except for greater cognitive jealousy in men. However, men in heterosexual relationships who perceived their partners to be more gelotophilic reported greater cognitive and behavioral jealousy. At least two interpretations for this might be put forward. First, prior studies have examined the desire for a potential partner who "makes one laugh," but this has been rarely studied in relation to one's actual long-term partner. Hence, future research should examine whether the role of laughter and perceptions of its attractiveness change over time and whether changes in perceptions of engaging to make others laugh affect the perceptions of attractiveness.⁵ Second, one could argue that biases might play a role because a female's inclinations to make others laugh at them might be perceived as an exception from the norm (see Brauer & Proyer, 2019). This notion receives support from the comparison of the self and partner ratings because men on average underestimate the women's gelotophilia, whereas female perceptions converge almost perfectly with the men's self-views. Prior findings also showed gender-specific findings in couples because females' gelotophilia related to the men's satisfaction, while females' satisfaction was unrelated from their partner's gelotophilia (Brauer & Proyer, 2018). The literature shows mixed findings on gender effects for the usage of laughter as a mating strategy (see Brauer & Proyer, 2019; Kaufman et al., 2008), but it could be argued that men might experience jealousy when their female partner is distinctively higher in gelotophilia than the average (perceived) woman. Considering that men were found to produce more and, externally rated, funnier humor in comparison to women (e.g., Greengross et al., 2020; Kaufman et al., 2008), females high in gelotophilia might be perceived as an exception to the rule by men. Furthermore, making others laugh at oneself is viewed as attractive and as a successful mating strategy (e.g., Grammer, 1990; Kaufman et al., 2008; Montoya et al., 2018). Consequently, one could argue that the male interprets their female partner's inclinations to make others laugh as flirting or as an approach to potential rivals, which contributes to the male's experience of jealousy. Therefore, further studies should collect data on actual, perceived, and ideal views of the partner's gelotophilia to disentangle potential sources of bias and predictors of jealousy with regard to gender.

4.3 | Katagelasticism

We conducted an exploratory examination of the relationships between joy in laughing at others and romantic jealousy. Thus, our findings must be interpreted cautiously. We found two

robust actor effects for positive associations with cognitive and behavioral jealousy, while katagelasticism of the partner did not contribute to explaining experiences of romantic jealousy. However, the partner's perceptions of katagelasticism contributed incrementally to the understanding of romantic jealousy. Similar to findings for gelotophilia, the male's perceptions of their partner's katagelasticism related positively to all types of jealousy, whereas the women's behavioral jealousy was related to their perceptions of their male partner's katagelasticism. As for gelotophilia, we expected the opposite (i.e., the female's jealousy would be related to the male's katagelasticism). In line with our interpretation of the findings for gelotophilia, we argue that data on changes in the evaluation of one's long-term partner's inclinations to make others laugh might play a role and that females' katagelasticism is perceived as a threat to the relationship by their partner.

Taking the findings for the partner's role of dealing with laughter together, we found that the *actual* expressions (by means of self-ratings) in making others laugh either at themselves (gelotophilia) or by directing laughter at others (katagelasticism) were unrelated to jealousy, whereas *perceived* expressions in those dispositions were robustly related to experiencing jealousy. In short, jealousy does not relate to how one's partner deals with ridicule and being laughed at but rather how one *perceives* that their partner deals with laughter. Thus, the notion that making others laugh as a strategy to attract others (e.g., Buss, 1988) should not be neglected overall, but the findings highlight the complexity of experiencing romantic jealousy in partnerships and the importance of collecting data of partner perceptions to incrementally explain and understand romantic jealousy.

Finally, we examined the indirect effects of jealousy on the associations between the three dispositions and RS in APIMeM analyses (Ledermann et al., 2011). Overall, jealousy showed the expected negative indirect effects and our findings do not support the notion that any type of jealousy would be positively related to RS (e.g., Barelds & Barelds-Dijkstra, 2007; Pfeiffer & Wong, 1989). Taken together, our analyses yielded two main findings. First, we found that cognitive jealousy mediated the association between the three dispositions and RS in actors. Thus, perceiving relationship threats and ruminating about them plays a role in the comparatively lower satisfaction across all dispositions. Second, we found that jealousy in those with high gelotophobia demonstrated indirect effects on the *partner's* satisfaction. However, as noted previously, our cross-sectional data do not allow for causal inferences. One might speculate that jealousy has detrimental consequences for RS in gelotophobes in actors and partners alike. Taking the findings of the present study into account, we extend Brauer and Proyer's (2018) practical recommendation by noting that an understanding and increased awareness of how oneself and the partner deal with ridicule and being laughed at might contribute to the process and success of a couple's therapeutic efforts. The present study

highlights the importance of the interpersonal role of dealing with laughter while taking the partner's views into account. Although jealousy affects RS, it would also be interesting to learn more about the immediate consequences of jealousy. For example, there is evidence to show that jealousy plays a role in mate retention and generates strategies in the partner to maintain the relationship when experiencing a relationship threat (e.g., de Miguel & Buss, 2011).

4.4 | Limitations

While the use of dyadic data is a strength of this study, replication of the findings in samples with heterogeneity in relationship status and cultural background is desirable to generalize the findings. We have only considered self-ratings of romantic jealousy. Therefore, future studies should additionally collect partner ratings to allow for a fully parallel design to further minimize method and perceptual biases (e.g., Campbell & Fiske, 1959). In addition, it would be desirable to control for broad and narrow third variables (e.g., attachment styles; Big Five) to examine the unique associations between the dispositions and jealousy. Although the assessment of RS through single-item indicators is common in couple research (e.g., Dyrenforth et al., 2010; Miano et al., 2020; Proyer et al., 2019), a more comprehensive assessment of satisfaction is desirable to increase reliability and to be able to differentiate across facets (which are likely to be predictive of different outcomes). We have based our analyses on cross-sectional data; however, replication using a longitudinal design is desirable to examine the cross-lagged effects and to expand the understanding of causal mechanisms beyond descriptions of associations, particularly for the mediation analysis. Hence, three measurements could be used for the assessment of the jealousy components to examine the process hypothesis of jealousy. To the best of our knowledge, this question has not been addressed longitudinally to date. The generalizability of our findings is limited in several ways. First, we only studied German-speaking participants, hence, cross-cultural validation is still pending. Second, we were interested in the gender invariance of the actor and partner effects, and therefore, only tested opposite-sex couples to compute the APIM analyses. Consequently, replication in same-sex couples is desirable, as prior findings indicated differences among the associations between jealousy and RS among heterosexual and homosexual participants (Barelds & Dijkstra, 2006).

4.5 | Conclusion

Overall, our findings support the notion that dealing with laughter and ridicule relates to romantic jealousy. While our

expectations were only partially met, our findings have extended our knowledge of the role of dealing with laughter in romantic life. A dyadic design and multiple data sources (self and partner ratings) have allowed us to highlight the complexity of jealousy and the merits of using partner perceptions for a better understanding of the phenomenon.

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CONFLICT OF INTEREST


The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in the Open Science Framework at osf.io/sxf6c/.

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ENDNOTES

¹ We have not collected partner ratings of jealousy because (a) the focal point of this study is the associations between self and partner perceptions of the laughter-related dispositions and how they relate to self-perceived jealousy; and (b) to the best of our knowledge, no study has yet examined the accuracy of partner ratings of jealousy. We assume that the accuracy of judgments of the partner's jealousy are compromised by the trait's low observability (i.e., cognitive and emotional aspects), evaluativeness, and limited availability of valid cues (e.g., Connelly & Ones, 2010).

² Due to technical complications, responses on job status are missing.

³ Note that trait assessments on the behavioral level show greater heterogeneity, which contributes to lower retest stability (cf. Buss & Craik, 1983; Fleeson, 2001). Therefore, the comparatively low retest coefficient for behavioral jealousy should not be overinterpreted as evidence against the reliability or validity of the scale.

⁴ In APIMs with constrained effects for men and women, is computed on the basis of the pooled *SD* of men and women (see Kenny & Ledermann, 2010); and, therefore, does not inform about the standardized coefficient for each gender. We have computed the standardized coefficient manually by dividing the unstandardized *b* coefficient by the *SD* for men and women separately. Note that is interpreted identically to .

⁵ One reviewer suggested that we should examine the associations between perceptions and relationship duration. The findings indicated that relationship length and self-partner overlap for the three dispositions were independent in our data ($-0.07 r .11$; mean $r = .01$, median $r = .02$). However, it must be noted that our cross-sectional data only

allow for between-couple comparisons and they do not allow conclusions about how couples change over time. The latter must be studied using longitudinal data.

REFERENCES

- Ackerman, R. A., Ledermann, T., & Kenny, D. A. (2020). *Power analysis for the actor-partner interdependence model* [Computer software]. <https://robert-ackerman.shinyapps.io/APIMPowerR/>
- Barelds, D. P. H., & Barelds-Dijkstra, P. (2007). Relations between different types of jealousy and self and partner perceptions of relationship quality. *Clinical Psychology and Psychotherapy, 14*, 176–188. <https://doi.org/10.1002/cpp.532>
- Barelds, D. P. H., & Dijkstra, P. (2006). Reactive, anxious and possessive forms of jealousy and their relation to relationship quality among heterosexuals and homosexuals. *Journal of Homosexuality, 51*, 183–198. https://doi.org/10.1300/J082v51n03_09
- Barrett, L. F., Lane, R. D., Sechrest, L., & Schwartz, G. E. (2000). Sex differences in emotional awareness. *Personality and Social Psychology Bulletin, 26*, 1027–1035. <https://doi.org/10.1177/01461672002611001>
- Brauer, K., & Proyer, R. T. (2018). To love and laugh: An APIM analysis of actor-, partner-, and similarity effects of three dispositions towards ridicule and being laughed at and relationship satisfaction in romantic couples. *Journal of Research in Personality, 76*, 165–176. <https://doi.org/10.1016/j.jrp.2018.08.008>
- Brauer, K., & Proyer, R. T. (2019). Sex differences in attractiveness of humor. In T. K. Shackelford & V. A. Weekes-Shackelford (Eds.), *Encyclopedia of evolutionary psychological science*. Springer. https://doi.org/10.1007/978-3-319-16999-6_3245-1
- Brauer, K., & Proyer, R. T. (2020a). Analyzing a German-language Expanded form of the PhoPhiKat-45: Psychometric properties, factorial structure, measurement invariance with the Likert-version, and self-peer convergence. *Journal of Personality Assessment, 45*, 1–11. <https://doi.org/10.1080/00223891.2020.1720699>
- Brauer, K., & Proyer, R. T. (2020b). Gelotophobia in romantic life: Replicating associations with attachment styles and their mediating role for relationship status. *Journal of Social and Personal Relationships, 37*, 2890–2897. <https://doi.org/10.1177/0265407520941607>
- Brauer, K., & Proyer, R. T. (2020c). Is it me or the circumstances? Examining the relationships between individual differences in causal attributions and dispositions toward ridicule and being laughed at. *Personality and Individual Differences, 165*, 110135. <https://doi.org/10.1016/j.paid.2020.110135>
- Brauer, K., Proyer, R. T., & Ruch, W. (2020). Extending the study of gelotophobia, gelotophilia, and katagelasticism in romantic life towards romantic attachment. *Journal of Individual Differences, 41*, 86–100. <https://doi.org/10.1027/1614-0001/a000307>
- Bressler, E. R., Martin, R. A., & Balshine, S. (2006). Production and appreciation of humor as sexually selected traits. *Evolution and Human Behavior, 27*, 121–130. <https://doi.org/10.1016/j.evolhumbehav.2005.09.001>
- Buss, D. M. (1988). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology, 54*, 616–628. <https://doi.org/10.1037/0022-3514.54.4.616>
- Buss, D. M., & Craik, K. H. (1983). The act frequency approach to personality. *Psychological Review, 90*, 105–126. <https://doi.org/10.1037/0033-295X.90.2.105>

- Buunk, A. P., & Dijkstra, P. (2006). Temptations and threat: Extradyadic relations and jealousy. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 533–555). Cambridge University Press. <https://doi.org/10.1017/CBO9780511606632.030>
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*, 81–105. <https://doi.org/10.1037/h0046016>
- Canestrari, C., Carrieri, A., Del Moral, G., Fermani, A., & Muzi, M. (2019). Do coping strategies and the degree of satisfaction with one's social life and parental attachment modulate gelotophobia, gelotophilia and katagelasticism? A study on young Italian adults. *Current Psychology*, 1–12. <https://doi.org/10.1007/s12144-019-00417-4>
- Carretero-Dios, H., Ruch, W., Agudelo, D., Platt, T., & Proyer, R. T. (2010). Fear of being laughed at and social anxiety: A preliminary psychometric study. *Psychological Test and Assessment Modeling*, *52*, 108–124.
- Chan, Y.-C. (2016). Neural correlates of deficits in humor appreciation in gelotophobics. *Scientific Reports*, *6*, 34580. <https://doi.org/10.1038/srep34580>
- Chin, K., Atkinson, B. E., Raheb, H., Harris, E., & Vernon, P. A. (2017). The dark side of romantic jealousy. *Personality and Individual Differences*, *115*, 23–29. <https://doi.org/10.1016/j.paid.2016.10.003>
- Connelly, B. S., & Ones, D. S. (2010). An other perspective on personality: Meta-analytic integration of observers' accuracy and predictive validity. *Psychological Bulletin*, *136*, 1092–1122. <https://doi.org/10.1037/a0021212>
- Cook, W. L., & Kenny, D. A. (2005). The Actor-Partner Interdependence Model: A model of bidirectional effects in developmental studies. *International Journal of Behavioral Development*, *29*, 101–109. <https://doi.org/10.1080/01650250444000405>
- de Miguel, M., & Buss, D. M. (2011). Mate retention tactics in Spain: Personality, sex differences, and relationship status. *Journal of Personality*, *79*, 563–586. <https://doi.org/10.1111/j.1467-6494.2011.00698.x>
- Dyrenforth, P. S., Kashy, D. A., Donnellan, M. B., & Lucas, R. E. (2010). Predicting relationship and life satisfaction from personality in nationally representative samples from three countries: The relative importance of actor, partner, and similarity effects. *Journal of Personality and Social Psychology*, *99*, 690–702. <https://doi.org/10.1037/a0020385>
- Edwards, K. R., Martin, R. A., & Dozois, D. J. A. (2010). The fear of being laughed at, social anxiety, and memories of being teased during childhood. *Psychological Test and Assessment Modeling*, *52*, 94–107.
- Elphinston, R. A., Feeney, J. A., & Noller, P. (2011). Measuring romantic jealousy: Validation of the multidimensional jealousy scale in Australian samples. *Australian Journal of Psychology*, *63*, 243–251. <https://doi.org/10.1111/j.1742-9536.2011.00026.x>
- Fleeson, W. (2001). Toward a structure- and process-integrated view of personality: Traits as density distributions of states. *Journal of Personality and Social Psychology*, *80*, 1011–1027. <https://doi.org/10.1037/0022-3514.80.6.1011>
- Flowers, B., Keuning, D. B., Stoermer, D. B., & Vannucci, R. Jr. (2003). *Mr. Brightside*, On Hot Fuss, Universal Music.
- Forabosco, G., Ruch, W., & Nucera, P. (2009). The fear of being laughed at among psychiatric patients. *Humor: International Journal of Humor Research*, *22*, 233–251. <https://doi.org/10.1515/HUMR.2009.011>
- Goodboy, A. K., Dainton, M., Borzea, D., & Goldman, Z. W. (2017). Attachment and negative relational maintenance: Dyadic comparisons using an actor-partner interdependence model. *Western Journal of Communication*, *81*, 541–559. <https://doi.org/10.1080/10570314.2017.1302601>
- Grammer, K. (1990). Strangers meet: Laughter and nonverbal signs of interest in opposite-sex encounters. *Journal of Nonverbal Behavior*, *14*, 209–236. <https://doi.org/10.1007/BF00989317>
- Greengross, G., Silvia, P. J., & Nusbaum, E. C. (2020). Sex differences in humor production ability: A meta-analysis. *Journal of Research in Personality*, *84*, 103886. <https://doi.org/10.1016/j.jrp.2019.103886>
- Hall, J. A. (2017). Humor in romantic relationships: A meta-analysis. *Personal Relationships*, *24*, 306–322. <https://doi.org/10.1111/per.12183>
- Henning, K., & Connor-Smith, J. (2010). Why doesn't he leave? Relationship continuity and satisfaction among male domestic violence offenders. *Journal of Interpersonal Violence*, *26*, 1366–1387. <https://doi.org/10.1177/0886260510369132>
- Hofmann, J., Platt, T., Ruch, W., & Proyer, R. T. (2015). Individual differences in gelotophobia predict responses to joy and contempt. *SAGE Open*, *5*, 1–12. <https://doi.org/10.1177/2158244015581191>
- Kaufman, S. B., Kozbelt, A., Brombley, M. L., & Miller, G. F. (2008). The role of creativity and humor in human mate selection. In G. Geher & G. Miller (Eds.), *Mating intelligence: Sex, relationships, and the mind's reproductive system* (pp. 227–262). Erlbaum.
- Kenny, D. A., & Ledermann, T. (2010). Detecting, measuring, and testing dyadic patterns in the actor-partner interdependence model. *Journal of Family Psychology*, *24*, 359–366. <https://doi.org/10.1037/a0019651>
- Kliem, S., Foran, H. M., Beller, J., Hahlweg, K., Stöbel-Richter, Y., & Brähler, E. (2015). Dimensional latent structure of relationship quality: Results of three representative population samples. *Journal of Marriage and Family*, *77*, 1190–1201. <https://doi.org/10.1111/jomf.12211>
- Kliem, S., Job, A.-K., Kröger, C., Bodenmann, G., Stöbel-Richter, Y., Hahlweg, K., & Brähler, E. (2012). Entwicklung und Normierung einer Kurzform des Partnerschaftsfragebogens (PFB-K) an einer repräsentativen deutschen Stichprobe [Construction and evaluation of a short form of the relationship questionnaire]. *Zeitschrift für Klinische Psychologie und Psychotherapie*, *41*, 81–89. <https://doi.org/10.1026/1616-3443/a000135>
- Kurtz, L. E., & Algoe, S. B. (2015). Putting laughter in context: Shared laughter as behavioral indicator of relationship well-being. *Personal Relationships*, *22*, 573–590. <https://doi.org/10.1111/per.12095>
- Ledermann, T., Macho, S., & Kenny, D. A. (2011). Assessing mediation in dyadic data using the Actor-Partner Interdependence Model. *Structural Equation Modeling*, *18*, 595–612. <https://doi.org/10.1080/10705511.2011.607099>
- Li, N. P., Griskevicius, V., Durante, K. M., Jonason, P. K., Pasisz, D. J., & Aumer, K. (2009). An evolutionary perspective on humor: Sexual selection or interest indication. *Personality and Social Psychology Bulletin*, *35*, 923–936. <https://doi.org/10.1177/0146167209334786>
- Miano, A., Dziobek, I., & Roepke, S. (2020). Characterizing couple dysfunction in borderline personality disorder. *Journal of Personality Disorders*, *34*, 181–198. https://doi.org/10.1521/pedi_2018_32_388
- Montoya, R. M., Kershaw, C., & Prosser, J. L. (2018). A meta-analytic investigation of the relation between interpersonal attraction and

- enacted behavior. *Psychological Bulletin*, 144, 673–709. <https://doi.org/10.1037/bul0000148>
- Muthén, L. K., & Muthén, B. O. (1997–2019). *Mplus 8.4 user's manual*. Muthén & Muthén.
- Pepping, C. A., & MacDonald, G. (2019). Adult attachment and long-term singlehood. *Current Opinion in Psychology*, 25, 105–109. <https://doi.org/10.1016/j.copsyc.2018.04.006>
- Pfeiffer, S. M., & Wong, P. T. P. (1989). Multidimensional jealousy. *Journal of Social and Personal Relationships*, 6, 181–196. <https://doi.org/10.1177/026540758900600203>
- Platt, T. (2008). Emotional responses to ridicule and teasing: Should gelotophobes react differently? *Humor: International Journal of Humor Research*, 21, 105–128. <https://doi.org/10.1515/HUMOR.2008.005>
- Platt, T. (2019). Extreme gelotophobia: Affective and physical responses to ridicule and teasing. *Current Psychology*, 1–9. <https://doi.org/10.1007/s12144-019-00510-8>
- Proyer, R. T., Brauer, K., Wolf, A., & Chick, G. (2019). Adult playfulness and relationship satisfaction: An APIM analysis of romantic couples. *Journal of Research in Personality*, 79, 40–48. <https://doi.org/10.1016/j.jrp.2019.02.001>
- Proyer, R. T., Flisch, R., Tschupp, S., Platt, T., & Ruch, W. (2012). How does psychopathy relate to humor and laughter? Dispositions toward ridicule and being laughed at, the sense of humor, and psychopathic personality traits. *International Journal of Law and Psychiatry*, 35, 263–268. <https://doi.org/10.1016/j.ijlp.2012.04.007>
- Proyer, R. T., Meier, L. E., Platt, T., & Ruch, W. (2013). Dealing with laughter and ridicule in adolescence: Relations with bullying and emotional responses. *Social Psychology of Education*, 16, 399–420. <https://doi.org/10.1007/s11218-013-9221-y>
- Proyer, R. T., Neukom, M., Platt, T., & Ruch, W. (2012). Assessing gelotophobia, gelotophilia, and katagelasticism in children: An initial study on how six to nine-year-olds deal with laughter and ridicule and how this relates to bullying and victimization. *Child Indicators Research*, 5, 297–316. <https://doi.org/10.1007/s12187-011-9127-1>
- Proyer, R. T., & Ruch, W. (2009a). How virtuous are gelotophobes? Self- and peer-reported character strengths among those who fear being laughed at. *Humor: International Journal of Humor Research*, 22, 145–163. <https://doi.org/10.1515/HUMR.2009.007>
- Proyer, R. T., & Ruch, W. (2009b). Intelligence and gelotophobia: The relations of self-estimated and psychometrically measured intelligence to the fear of being laughed at. *Humor: International Journal of Humor Research*, 22, 165–181. <https://doi.org/10.1515/HUMR.2009.008>
- Proyer, R. T., Wellenzohn, S., & Ruch, W. (2014). Character and dealing with laughter: The relation of self- and peer-reported strengths of character with gelotophobia, gelotophilia, and katagelasticism. *Journal of Psychology: Interdisciplinary and Applied*, 148, 113–132. <https://doi.org/10.1080/00223980.2012.752336>
- Renner, K.-H., & Heydasch, T. (2010). Performing humor: On the relations between self-presentation styles, gelotophobia, gelotophilia, and katagelasticism. *Psychological Test and Assessment Modeling*, 52, 171–190.
- Ruch, W., & Ekman, P. (2001). The expressive pattern of laughter. In A. Kasniak (Ed.), *Emotion, qualia and consciousness* (pp. 426–443). World Scientific. https://doi.org/10.1142/9789812810687_0033
- Ruch, W., Harzer, C., & Proyer, R. T. (2013). Beyond being timid, witty, and cynical: Big five personality characteristics of gelotophobes, gelotophiles, and katagelasticists. *International Studies in Humour*, 2, 24–42.
- Ruch, W., Hofmann, J., Platt, T., & Proyer, R. T. (2014). The state-of-the-art in gelotophobia research: A review and some theoretical extensions. *Humor: International Journal of Humor Research*, 27, 23–45. <https://doi.org/10.1515/humor-2013-0046>
- Ruch, W., Platt, T., Brunsch, R., & Ďurka, R. (2017). Evaluation of a picture-based test for the assessment of gelotophobia. *Frontiers in Psychology*, 8, 1–14. <https://doi.org/10.3389/fpsyg.2017.02043>
- Ruch, W., & Proyer, R. T. (2008a). The fear of being laughed at: Individual and group differences in gelotophobia. *Humor: International Journal of Humor Research*, 21, 47–67. <https://doi.org/10.1515/HUMOR.2008.002>
- Ruch, W., & Proyer, R. T. (2008b). Who is gelotophobic? Assessment criteria for the fear of being laughed at. *Swiss Journal of Psychology*, 67, 19–27. <https://doi.org/10.1024/1421-0185.67.1.19>
- Ruch, W., & Proyer, R. T. (2009a). Extending the study of gelotophobia: On gelotophiles and katagelasticists. *Humor: International Journal of Humor Research*, 22, 183–212. <https://doi.org/10.1515/HUMR.2009.009>
- Ruch, W., & Proyer, R. T. (2009b). Who fears being laughed at? The location of gelotophobia in the Eysenckian PEN-model of personality. *Personality and Individual Differences*, 46, 627–630. <https://doi.org/10.1016/j.paid.2009.01.004>
- Sprecher, S., & Regan, P. C. (2002). Liking some things (in some people) more than others: Partner preferences in romantic relationships and friendships. *Journal of Social and Personal Relationships*, 19, 463–481. <https://doi.org/10.1177/0265407502019004048>
- Stieger, S., Preyss, A. V., & Voracek, M. (2012). Romantic jealousy and implicit and explicit self-esteem. *Personality and Individual Differences*, 52, 51–55. <https://doi.org/10.1016/j.paid.2011.08.028>
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review*, 6, 2–30. https://doi.org/10.1207/S15327957PSPR0601_1
- Torres-Marín, J., Proyer, R. T., López-Benítez, R., Brauer, K., & Carretero-Dios, H. (2019). Beyond the big five as predictors of dispositions toward ridicule and being laughed at: The HEXACO model and the dark triad. *Scandinavian Journal of Psychology*, 60, 473–483. <https://doi.org/10.1111/sjop.12563>
- White, G. L. (1981). Some correlates of romantic jealousy. *Journal of Personality*, 49, 129–145. <https://doi.org/10.1111/j.1467-6494.1981.tb00733.x>
- Wilbur, C. J., & Campbell, L. (2011). Humor in romantic contexts: Do men participate and women evaluate? *Personality and Social Psychology Bulletin*, 37, 918–929. <https://doi.org/10.1177/0146167211405343>

SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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