



Virtuous humor and the dispositions towards ridicule and laughter: Investigating their contribution to happiness

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Abstract

There are different concepts of humor: virtuous humor (i.e., benevolent and corrective humor) which represents the morally good, and three dispositions towards ridicule and laughter, namely the fear of being laughed at (gelotophobia), the joy of being laughed at (gelotophilia), and the joy of laughing at others (katagelasticism). In the current study, we aim to investigate the relationship of virtuous humor and dispositions towards ridicule and laughter with happiness. A sample of 229 Spanish undergraduates completed self-reports of the corresponding measures. Regression analyses revealed individual differences in humor predicting happiness. Gelotophobia and corrective humor were negatively associated with happiness, whereas gelotophilia and benevolent humor were positively associated with happiness. The effect of gelotophilia on happiness may be due to the existing relationship between gelotophilia and benevolent humor. Our study extends prior research into the contribution of novel forms of humor to positive outcomes and replicates important findings on the relationship between humor and happiness. In sum, the results demonstrated that virtuous humor and dispositions towards ridicule and laughter can be adequately assessed among Spanish samples, and that it is important to consider novel forms of humor in the study of happiness.

Keywords Gelotophobia · Gelotophilia · Katagelasticism · Benevolent humor · Corrective humor · Happiness

Introduction

Humor has generally been defined as a human experience involving the perception that something is funny (Ruch 2008). It describes a social phenomenon that takes many forms in different social contexts, such as canned jokes, wits, or funny verbalizations (Martin 2007). Although the origins of humor literature date back to classical philosophers such as Plato and

Aristotle, scholars have recently accumulated a considerable amount of evidence on the nature and correlates of humor from different psychological perspectives (e.g., Martin 2001; Martin et al. 2003; Ruch, Wagner, & Heintz, 2018). Two of the latest contributions in the field emphasize, on the one hand, the virtuosity of humor and, on the other, the existence of three dispositions towards ridicule and laughter. The former understands humor as a morally valued trait that guide virtuous behaviors (Beermann and Ruch 2009a, b) and is articulated by benevolent and corrective humor (Ruch and Heintz 2016); while the latter describes different reactions to laughter and ridicule in social interactions, such as the fear of being laughed at (gelotophobia), the joy of being laughed at (gelotophilia), and the joy of laughing at others (katagelasticism) (Ruch and Proyer 2009). Moreover, scholars have recently introduced a categorization to distinguish between *light* (e.g., virtuous and adaptive humor used to accept benevolently the world's imperfections) and *darker* (e.g., non-virtuous and mockery-related forms of humor used to deride others) forms of humor (Hofmann et al. 2019; Ruch et al. 2018). On this basis, our study conceived gelotophilia, benevolent and corrective humor as *light* forms of humor, and katagelasticism as a *darker* form of humor. Since gelotophobia entails individual humor reception rather than interpersonal humor use (e.g., laughter is seen as

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malevolently oriented towards oneself), it may fall off this categorization. Transcultural studies have nevertheless established threshold scores to identify five categories of gelotophobia that will be described in sections below (Proyer et al. 2009), yet within-group categorization of gelotophilia and katagelasticism are, to the best of our knowledge, not reported in previous literature. Similarly, advances in the science of well-being have generated increasing interest in the study of happiness and the contributors to mental well-being (Layous and Lyubomirsky 2014; Joshanloo and Niknam 2019). Although research has examined the mechanisms of happiness and the development of humor strategies to increase it (Wellenzohn et al. 2016, 2018), the present study attempts to contribute to the literature about how engaging in virtuous humor forms and having different dispositions towards laughter and ridicule can influence happiness.

Virtuous Humor

Within the study of humor there is no consensus about a singular definition of this multidimensional construct (Ruch 2012); rather, it has been generally referred to as an umbrella term for all funny and laughable things (Martin 2007). Although the historical and philosophical literature treated humor as a virtue, it is only recently that scholars have scientifically investigated the morality of humor in relation to virtues. For instance, in positive psychology research humor is understood as a character strength within the virtue of transcendence (Peterson and Seligman 2004) and is one of the strengths most related to well-being (Peterson et al. 2007). Within this scope virtuous humor has been associated with the virtues of humanity, transcendence, and wisdom (Beermann and Ruch 2009a, b; Müller and Ruch 2011).

A recent approach has conceptualized two forms of virtue-related humor emphasizing the ethical dimension – benevolent and corrective humor (Ruch and Heintz 2016). These are proposed as novel and more sophisticated humor forms that fill the gap between humor as a trait and humor as a virtue. These two derived from prior descriptions of the eight comic styles of Schmidt-Hidding (1963), a blossoming field in humor research (see e.g., Heintz & Ruch, 2019 and Ruch et al. 2018). The specific comic styles of humor and satire grounded the basis for conceptualizing and differentiating benevolent and corrective humor, respectively. In their initial study, Ruch and Heintz (2016) found that benevolent and corrective humor captured virtuous elements of humor beyond the sense of humor, mockery, and character strengths in a different way. Although benevolent and corrective humor are both morally based and aim at doing good to others, there are differences between the two – benevolent humor involves a humorous outlook used to understand and accept human weaknesses and world incongruities with a tolerant attitude, whereas corrective humor uses mockery or ridicule to elicit

human improvement and establish justice (Beermann and Ruch 2009a; Ruch and Heintz 2016). Despite the use of wit, corrective humor does not pretend to put someone down but rather to improve mishaps or mistakes by making fun of them (see Ruch and Heintz 2016), yet the act of correcting others might imply the dissatisfaction with the current situation and subsequently build upon lower levels of happiness. The main distinction lies in the motivation of corrective humor to correct wrongdoings by means of mockery, in contrast to the mere acceptance displayed by benevolent humor (Heintz et al. 2018).

Dispositions Towards Ridicule and Laughter

Laughter can elicit different responses among people and is not always experienced as something positive: it can be seen as aversive and malicious, as self-enhancing, or be used to ridicule others. These interpretations connect with three dispositions towards ridicule and laughter: the fear of being laughed at (gelotophobia), the joy of being laughed at (gelotophilia), and the joy of laughing at others (katagelasticism) (Ruch and Proyer 2009). Variations among these tendencies are seen as markers of individual differences in the way people cope with social daily events (Ruch et al. 2014).

Gelotophobia was introduced as a phenomenon related to social phobia, but Ruch and Proyer (2009) showed that it could also be experienced by non-clinical populations. One of the distinctive characterizations of gelotophobes is a persistent bias in the perception of and response to laughter, because any situation involving laughter is pictured as being maliciously directed towards them (Proyer et al. 2012; Ruch et al. 2014). Gelotophilia and katagelasticism both involve the joy of laughing but the object of laughter is different – while gelotophiles enjoy laughing at themselves, katagelasticists enjoy laughing at others (Ruch and Proyer 2009). Gelotophiles are described as cool, happy, warm, and extroverted people who usually seek potential situations in which they can make fun at their own expense and do not abstain from sharing embarrassing or shameful experiences (Ruch and Proyer 2009). Although gelotophilia may share some commonalities with the capacity to laugh at oneself, which is referred to as a core element of humor (McGhee 1996) and entails an adaptive resource to cope with negative emotions (Hofmann 2018), a major distinction set these humor terms apart; that is, while gelotophilia requires an audience to display humor, laughing at oneself does necessarily not.

One should note two aspects: first, despite being interpreted as mockery with a benevolent tendency, virtue is not a central element in gelotophilia (Ruch and Proyer 2009); and second, regardless of the use of self-disparaging humor, gelotophiles do not necessarily put themselves down but they rather enjoy laughing with others at their own expense. Katagelasticists in turn enjoy laughing at their audience and

usually do not care about their reactions or emotions, therefore they seek potential situations to make fun at others' expense and ridicule them if any misfortune happens. They tend to screen signs of amusement in their audience to evoke humor and are characterized as unfriendly, indifferent, self-centred, and annoying (Ruch and Proyer 2009). While self-enhancement in gelotophiles stems from poking fun at their faults, in katagelasticians the motivation lies in injuring others (Martin et al. 2003; Ruch and Proyer 2009). Similarly, the virtuous element of correcting and bettering people embedded into corrective humor is lacking in katagelasticism, where the motivation is rooted in the pleasure derived from putting others down (Ruch and Heintz 2016).

Humor and Happiness

Humor became an essential element of mental health and incorporated connotations of being well-adjusted and able to deal with stress (Martin 2007). It has been associated with several positive outcomes, such as increased mental well-being, optimism (Schneider et al. 2018; Wellenzohn et al. 2018), and a lower prevalence of cardiovascular disease (Hayashi et al. 2016). Prior research examined the relationship of humor with mental health (Schneider et al. 2018) and the effectiveness of humor-based interventions on well-being (Wellenzohn et al. 2018). More specifically concerning the role that virtuous humor and the dispositions towards ridicule and laughter exert on happiness, previous studies reported that gelotophobia related negatively to well-being indicators (e.g., life satisfaction, subjective well-being, and happiness) (Proyer et al. 2012; Samson et al. 2011). Hofmann et al. (2017) replicated these results and, moreover, found that katagelasticism was negatively and gelotophilia was positively related to life satisfaction.

Because virtuous humor is morally based and pursues the good in others, one might find instances in the literature regarding a positive relationship with happiness. To start with, virtues are considered psychological routes that contribute to a happy life (Peterson and Seligman 2004). Engaging in virtuous behaviours generally relates to improved well-being (Steger et al. 2008), and from the character strength perspective virtuous humor-related behaviours made people happier (Proyer et al. 2013). The use of self-enhancing forms of humor (e.g., adaptive humorous outlook used during times of adversity to enhance the self without deriding others; Martin et al. 2003) can be considered virtuous (Beermann and Ruch 2009b). This type of humor was positively linked with mental health and well-being, however, the use of non-virtuous forms of humor such as sarcasm, derision, and self-defeating humor (e.g., self-disparaging in order to ingratiate others; Martin et al. 2003) was negatively related (Martin et al. 2003; Jovanovic 2011; Schneider et al. 2018). In this line of theorizing, a recent study reported positive relationships of subjective

well-being with *light* styles of humor (e.g., humor understood as benevolent) and negative relationships with mockery styles (e.g., sarcasm, cynicism; Ruch et al. 2018). Regardless of the previous findings, it is necessary to examine more specifically how virtuous humor (i.e., benevolent and corrective humor) contributes to happiness.

Current Study

The goal of the current study is to examine the relationship of virtuous humor and the dispositions towards ridicule and laughter with happiness. Although these associations have been previously investigated by separate, we do not have empirical evidence about the possible interactions between virtuous humor and the humor dispositions in regard to happiness, and thus our study might contribute to narrow this gap. Based on prior research, we expect a negative association of gelotophobia and katagelasticism with happiness and a positive association of gelotophilia with happiness. Furthermore, we expect benevolent humor to be positively related and corrective humor to be negatively related to happiness. Finally, we expect that the positive association between gelotophilia and happiness will emerge as a result of the shared variance between gelotophilia and virtuous humor. The rationale is that these two may share humor-related elements of self-enhancement that help capture one's and world's benevolence, respectively.

Method

Participants and Procedure

A total of 229 first-year Spanish university students (82% female) between 17 and 37 years old ($M = 18.89$; $SD = 2.60$) completed the measures as part of a larger study aimed at identifying positive traits. The participants enrolled voluntarily, they could withdraw from the study at any time without further explanation, and no partial responses were collected. After completing the measures, participants received an individualized report with their results and the corresponding explanation for each measure. The mean time spent to complete the survey was 40 min. All the data and the codebook with all the variables assessed are available to download in an open repository at: https://osf.io/wv6ex/?view_only=0306166dbc73438fb69463efa24fbaa5. No missing observations were registered because responses were collected online and each question was mandatory.

Measures

The Phophikat-45 (Ruch and Proyer 2009; Spanish validation: Torres-Marín et al. 2019) measures three dispositions toward ridicule and being laughed at: gelotophobia – the fear of being laughed at (sample item: *When others make joking remarks about me I feel being paralyzed*); gelotophilia – the joy of being laughed at (sample item: *I enjoy it if other people laugh at me*); and katagelasticism – the joy of laughing at others (sample item: *I enjoy exposing others and I am happy when they get laughed at*). The questionnaire is composed of 45 items on which respondents answer using a four-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*). Within the current study, reliability estimates were good for the three components ($\alpha = .87$ for gelotophobia; $\alpha = .84$ for gelotophilia; $\alpha = .82$ for katagelasticism).

The BenCor (Ruch 2012; Spanish validation: Heintz et al. 2018) evaluates benevolent humor (sample item: *Humor is suitable for arousing understanding and sympathy for imperfections and the human condition*) and corrective humor (sample item: *I like to ridicule moral badness to induce or increase a critical attitude in other people*). The scale comprises 12 items on which participants rate their agreement using a seven-point Likert-type scale (1 = *strongly disagree* to 7 = *strongly agree*). Within the current study, reliability estimates were good for both benevolent humor ($\alpha = .77$) and corrective humor ($\alpha = .84$).

The Subjective Happiness Scale (Lyubomirsky & Lepper, 1999; Spanish validation: Extremera & Fernández-Berrocal, 2014) assesses the level of individual happiness (*In general, I consider myself...*). It comprises four items (one reversely-scored) on which participants are assessed using a seven-point Likert-type scale (with different response alternatives for each item: e.g., 1 = *not a very happy person* to 7 = *a very*

happy person). Within the current study, the reliability estimate was acceptable ($\alpha = .65$).

Results

Descriptive Statistics and Correlations Between Analyzed Variables

Table 1 shows the descriptive statistics, gender differences, reliability estimates, and correlations of the analyzed variables. Descriptive statistics within the current study were overall lower than previous studies with Spanish samples. Means for benevolent and corrective humor within the current study were 4.42 ($SD = 1.12$) and 3.10 ($SD = 1.26$), respectively, while means for gelotophobia, gelotophilia and katagelasticism were 1.93 ($SD = .55$), 2.26 ($SD = .53$), and 1.66 ($SD = .42$), respectively. Compared to previous studies with Spanish samples, means and standard deviations for benevolent and corrective humor within the current study were slightly lower. For instance, Heintz et al. (2018) reported means of 5.44 ($SD = .81$) and 4.24 ($SD = 1.21$), respectively. Comparisons regarding gelotophobia, gelotophilia and katagelasticism cannot be stated because research using the Spanish adaptation of the PhoPhiKat has not been already reported. However, compared to previous studies using non-Spanish samples, means and standard deviations of the three dispositions towards laughter and ridicule within our study were also lower. For example, Hofmann et al. (2017) indicated means of 1.99 ($SD = .56$), 2.47 ($SD = .55$) and 1.97 ($SD = .43$), and Ruch and Proyer (2009) reported means of 1.97 ($SD = .54$), 2.34 ($SD = .55$) and 1.99 ($SD = .46$) for gelotophobia, gelotophilia and katagelasticism, respectively.

Transcultural research indicated that scores higher than 2.5 can be considered expressions of gelotophobia (Proyer et al. 2009) and on this basis five categories could be identified: (1)

Table 1 Descriptive statistics, alpha reliabilities, gender differences and two-tailed Pearson's correlations between studied variables

Variable	α	$M (SD)$	$M_{females} (M_{males})$	t	p	d (SD) [95% CI]	2	3	4	5	6	7	8
1. Gelotophobia	.87	1.93(.55)	1.96(1.82)	1.55	.121	.14(.09) [-.04; .32]	-.21**	.20**	-.02	.15*	-.50**	-.07	-.10
2. Gelotophilia	.84	2.26(.53)	2.22(2.44)	-2.48	.014	-.21(.09) [-.39; -.44]		.41**	.51**	.35**	.22**	.01	.15*
3. Katagelasticism	.82	1.66(.42)	1.60(1.95)	-5.32	.000	-.35(.07) [-.48; -.22]			.36**	.46**	-.05	-.04	.32**
4. Benevolent	.77	4.42(1.12)	4.32(4.94)	-3.46	.001	-.62(.18) [-.98; -.27]				.60**	.19**	.07	.21**
5. Corrective	.84	3.10(1.26)	2.97(3.71)	-3.68	.000	-.74(.20) [-1.14; -.35]					-.07	.07	.22**
6. Happiness	.65	4.86(1.00)	4.81(5.08)	-1.70	.091	-.28(.16) [-.60; .045]						.03	.11
7. Age		18.89(2.60)	18.75(19.58)	-1.97	.050	-.83(.42) [-1.66; .002]							.12
8. Gender													

α = Cronbach's alpha; t = independent-samples t -test; d = Cohen's d (effect size used to indicate the standardized difference between two means); positive values show higher values for women

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

Note. M = Mean; SD = Standard Deviation

non-gelotophobes (scores lower than 2); (2) borderline fearful (scores from 2 to 2.5); (3) little expression of gelotophobia (scores from 2.5 to 3); (4) substantial expression of gelotophobia (scores from 3 to 3.5); (5) highly fearful of being laughed at (scores from 3.5 to 4) (as cited in Torres-Marín et al. 2017). We implemented these cut-offs into the descriptive analysis to examine the number of gelotophobes in our sample. Results indicated that 15% of the study participants ($N = 39$; 34 females) showed some expression of gelotophobia ($M = 2.90$; $SD = .24$), yet 23.5% of the total sample fall under the borderline fearful category ($N = 61$; 54 females) and 61.4% were non-gelotophobes ($N = 159$; 126 females). No respondents met the fifth category of high gelotophobes.

Overall, happiness was positively correlated with gelotophilia and benevolent humor but negatively correlated with gelotophobia. Gelotophobia and gelotophilia were both positively correlated with katagelasticism, despite the fact that they were negatively related to one another. As expected, benevolent and corrective humor were positively correlated. Our results reported no significant associations between age demographics and humor measures. However, the effect of gender was significant for gelotophilia, katagelasticism, and benevolent and corrective humor. Women reported significant lower levels in these humor traits than men. The reliability estimates of the scales used were mostly good, indicating that a moderate amount of variance was due to measurement error.

The correlation of katagelasticism with benevolent humor is, at least, remarkable in view of the different motivation and nature of both forms of humor. To further test the results, we analyzed how the collinearity with other types of humor impact this relationship, and – while we control for corrective humor and gelotophilia, the relationship turns non-significant (see Table 2). This result indicates that the relationship of katagelasticism with benevolent humor turns non-significant once the shared variance of corrective humor and gelotophilia is controlled for.

Happiness, Virtuous Humor, and the Dispositions Towards Ridicule and Laughter

In order to test the unique effect of virtuous humor and the dispositions towards ridicule and laughter on happiness, we analyzed five different linear regression models in which

happiness was introduced as a criterion and the different forms of humor were introduced as predictors (controlled for age and gender in all models). The predictor variables in the tested models were as follows: virtuous humor and the dispositions towards ridicule and laughter predicted happiness as follows: (Model 1) benevolent and corrective humor; (Model 2) gelotophobia, gelotophilia, and katagelasticism; (Model 3) gelotophobia, gelotophilia, katagelasticism, and benevolent humor; (Model 4) gelotophobia, gelotophilia, katagelasticism, and corrective humor; (Model 5) gelotophobia, gelotophilia, katagelasticism, as well as benevolent and corrective humor.

We expected negative relationships of happiness with gelotophobia, katagelasticism and corrective humor, and positive relationships with gelotophilia and benevolent humor. Furthermore, we hypothesized that the positive link between gelotophilia and happiness may be a result of their shared variance.

Table 3 shows the results of regression analyses. The last of the analyzed models, which included all humor forms as predictors, explained one-third of the happiness variance ($R^2 = .30$). As expected, results of this model indicated that happiness was predicted positively by benevolent humor, but negatively by gelotophobia and corrective humor. Although happiness was predicted positively by gelotophilia (Models 2 and 4), this relation became non-significant when benevolent humor was introduced (Models 3 and 5), which is in line with our hypothesis regarding the possible link between gelotophilia and happiness due to the shared variance of virtuous humor. Gelotophobia, in turn, remained a significant negative predictor and katagelasticism remained a non-significant predictor in all of the analyzed models. Finally, corrective humor negatively explained happiness (Model 1) but when analyzed in association with ridicule and laughter dispositions (Model 4) it became non-significant. However, when we controlled for the shared variance of benevolent humor (Model 5) it became a significant negative predictor once again. These results suggest that corrective humor is, as expected, negatively associated with happiness.

Given the number of gelotophobes in our sample and with the aim to investigate if differences in the presence of this trait could lead to differences in happiness, we conducted a one-way ANOVA to compare the effect of gelotophobia on happiness in the four groups (group 5 was not included because no participants scored above the indicated threshold). ANOVA results reported a significant effect of gelotophobia on happiness, $F(3,255) = 20.894$, $p = .000$. Post hoc analysis using the Tukey *HSD* criterion for significance showed differences between the four groups (see Table 4). An overall pattern suggests that groups with no expression of gelotophobia (groups 1 and 2) were more related to enhanced happiness than groups with some expression of this humor trait (groups 3 and 4). Group 1 reported significantly higher levels of

Table 2 Collinearity of katagelasticism, gelotophilia and corrective humor with benevolent humor as dependent variable

Variable	<i>B</i>	<i>SE(B)</i>	β
Katagelasticism	.02	.14	.01
Gelotophilia	.71	.11	.34***
Corrective	.43	.05	.49***

$R^2 = .39$, $F(3,255) = 53.974$, $p < .000$

*** $p < .001$

Table 3 Summary of multiple regression analysis for variables predicting happiness

Variable	<i>B</i>	<i>SE(B)</i>	β
Model 1			
Benevolent	.31	.07	.35***
Corrective	-.24	.06	-.29***
Age	.01	.02	.01
Gender	.26	.16	.10
Model 2			
Gelotophobia	-.84	.11	-.46***
Gelotophilia	.25	.12	.13*
Katagelasticism	-.07	.15	-.03
Age	-.01	.02	-.01
Gender	.14	.15	.05
Model 3			
Gelotophobia	-.86	.11	-.48***
Gelotophilia	.11	.13	.06
Katagelasticism	-.13	.16	-.05
Benevolent	.15	.06	.17**
Age	-.01	.02	-.03
Gender	.10	.15	.04
Model 4			
Gelotophobia	-.83	.11	-.45***
Gelotophilia	.27	.12	.14*
Katagelasticism	-.03	.16	.01
Corrective	-.04	.05	-.05
Age	-.01	.02	-.01
Gender	.15	.16	.06
Model 5			
Gelotophobia	-.82	.11	-.45***
Gelotophilia	.11	.13	.06
Katagelasticism	-.03	.16	-.01
Benevolent	.23	.07	.25***
Corrective	-.14	.06	-.18*
Age	-.01	.02	-.02
Gender	.12	.15	.05

$R^2 = .10$ for Model 1, $F(4,254) = 6.798$, $p < .000$; $R^2 = .27$ for Model 2, $F(5,253) = 18.356$, $p < .000$; $R^2 = .29$ for Model 3, $F(6,252) = 16.740$, $p < .000$; $R^2 = .27$ for Model 4, $F(6,252) = 15.405$, $p < .000$; $R^2 = .30$ for Model 5, $F(7,251) = 15.512$, $p < .000$

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

happiness ($M = 5.16$, $SD = .90$) than group 2 ($M = 4.61$, $SD = .93$), group 3 ($M = 4.11$, $SD = .68$) and group 4 ($M = 3.6$, $SD = 1.27$). Likewise, group 2 reported significantly higher levels of happiness than group 4, suggesting a downward tendency of gelotophobia with respect to happiness in which higher expression of this humor trait seems detrimental to happiness.

Discussion

The current study attempted to investigate the contribution of virtuous humor and the dispositions towards ridicule and laughter to happiness. Although humor is generally interpreted as something positive, scholars are increasingly examining other forms of humor, such as morally-guided humor (Ruch and Heintz 2016) as well as expressions of humor that entail harm to oneself or others (Greengross & Geoffrey, 2008). Few studies have investigated the relationship of virtuous humor and the dispositions to ridicule and laughter with happiness. Within the current paper we have provided an empirical test of these relations.

With regard to virtuous humor, benevolent humor was positively related and corrective humor was negatively related to happiness, thus our initial hypothesis was supported. Albeit corrective humor falls under the *light* humor category (Hofmann et al. 2019), one possible explanation of the negative relationship with happiness is that, at the moment of laughing, the person may feel unsatisfied with a potentially detrimental situation, and corrective humor is used to change it. Hence, negative feelings might emerge due to the divergence and nonconformity with the current situation, which is fought by means of corrective humor. Besides, although humor involves the virtues of humanity, wisdom, and justice (Beermann and Ruch 2009a, b), the act of criticizing others' wrongdoings may imply an uncomfortable situation with underlying negative emotions. Another possible explanation lies in the primary purpose of corrective humor: because it has an other-directed focus, its effect on happiness might be indirect or weaker (see Edwards and Martin 2014). On the contrary, an attitude of accepting benevolently the world's incongruities and fellow mistakes without attempting any correction (benevolent humor) is associated with enhanced happiness. These two conceptualizations depict humor as a morally valued component that helps explain how people use humor to do good towards others and improve the world, and also distinguishes the different influences of benevolent and corrective humor on happiness.

Concerning the three dispositions towards ridicule and laughter, correlation analysis indicated that gelotophobia and gelotophilia were negatively correlated to each other, whereas katagelasticism was positively correlated with both gelotophobia and gelotophilia. Conversely, Ruch and Proyer (2009) reported a non-significant correlation between gelotophobia and kataglasticism. Literature about bullying has proved that those who have been bullied are more likely to be *bullies* (Haynie et al. 2001), so our results could indicate that people who feel the target of laughter in social situations may in turn be more prone to laugh about others.

Gelotophobia was negatively related to happiness, which is in agreement with previous studies (Samson et al. 2011; Proyer et al. 2012; Hofmann et al. 2017). Because

Table 4 Post hoc comparisons using Tukey HSD test of gelotophobes and non-gelotophobes in relation to happiness

Comparisons	Mean difference	SD	p	95% CI	
				Lower bound	Upper bound
1–2	.55	.14	.001	.20	.91
1–3	1.05	.19	.001	.57	1.54
1–4	1.52	.27	.001	.82	2.22

Numbers in comparisons column indicate the category of gelotophobia: 1 = non-gelotophobes; 2 = borderline fearful; 3 = little expression of gelotophobia; 4 = substantial expression of gelotophobia; positive values show higher values for the first group of comparison

All other comparisons were non-significant, except comparison between groups 2 and 4, in which the former scored higher ($M = .96$, $SD = .29$, $p < .005$)

gelotophobia entails difficulty in distinguishing between harmless and harmful contexts of laughter, it is frequent to misinterpret laughter as being maliciously directed towards oneself and the emotional responses usually involve low joy, along with high fear, anger, and shame, causing detrimental effects such as social withdrawal (Platt 2008; Ruch et al. 2014; Hofmann et al. 2017). Prior research suggested that emotional misinterpretations or difficulties in attending affective information might lead to lower levels of happiness (Blasco-Belled et al. 2019). Furthermore, Proyer et al. (2012) pointed out that people with gelotophobia see themselves as the object of mockery and anticipate ridicule in social interaction situations. Remarkably, our findings showed that increases in gelotophobia were associated with gradually lower levels of happiness, and the comparisons between different categories of this humor trait indicated that expressions of gelotophobia were indeed associated with lower happiness. These results suggest that the negative link between gelotophobia and happiness could be due to marked expressions of this humor trait. Hence, humor- and happiness-based interventions should consider this component in future studies.

Previous findings reported a positive relationship between gelotophilia and well-being indicators (Hofmann et al. 2017). Our findings partly confront these results, as gelotophilia was positively related to happiness but only when benevolent humor was not accounted for. Close to the concept of self-enhancing forms of humor (Martin et al. 2003), gelotophilia may involve a tolerant attitude to accept and use one's mishaps in order to fuel social interactions. It reinforces the assumption that gelotophilia might share some commonalities with virtuous humor; however, the presence of benevolent humor, where virtuosity is more pronounced, may modulate its effect on happiness. Gelotophiles do not pursue social compliance through derision but rather experience other's laughter as something positive and rewarding (Ruch and Proyer 2009), so it seems plausible that seeking situations to make others laugh might contribute to their happiness. These results confirmed our hypothesis regarding the positive association between gelotophilia and happiness as a result of their shared variance. Thus, despite

not being considered virtuous, gelotophilia may also share virtue-related humor elements stemming from the ability to laugh at oneself and the motivation to not injure others (McGhee 1996; Beermann and Ruch 2009a).

Finally, katagelasticism entails the tendency to ridicule people by means of laughter and contempt. Prior research showed a negative association with life satisfaction (Hofmann et al. 2017) but in our study the association with happiness was non-significant. Katagelasticists do not consider that there is anything wrong in making fun of others and they do not care about others' reactions and emotions; for this reason their humor could sometimes be rude and antisocial (Renner and Heydasch 2010). Research showed that the use of damaging forms of humor was negatively related to well-being (Jovanovic 2011; Martin et al. 2003; Ruch et al. 2018; Schneider et al. 2018). One might argue that seeking situations to deride others presumably does not contribute to happiness because the virtuous element (i.e., betterment) is not present; however, the indulgence exerted throughout their attempts of laughing at others also does not provide instances of happiness. How this laughter disposition influences well-being and social interactions should be investigated further.

Although previous studies found significant associations of age with gelotophobia and katagelasticism (Hofmann et al. 2017) and benevolent and corrective humor (Heintz et al. 2018), our results reported no significant associations between age demographics and humor measures, keeping with Hofmann et al. (2019). Our findings showed that the effect of gender was significant for gelotophilia, katagelasticism, benevolent and corrective humor. This is partly in consonance with previous research reporting individual differences on katagelasticism (Hofmann et al. 2017) and corrective humor (Heintz et al. 2018), but in disagreement with previous studies reporting no gender effects on virtuous humor (Hofmann et al. 2019).

Conclusions

The current study provides evidence of the complex role that humor exerts on happiness. On the basis of our results,

benevolent and corrective humor showed different relationships: while embracing reality and accepting life's setbacks is a powerful source for promoting happiness, pointing out and correcting others' wrongdoings or one's current situation seems to be detrimental to happiness. Perhaps corrective humor is used to fight unsatisfying or adverse situations that underlie negative feelings. Similarly, the dispositions towards ridicule and laughter also present distinct patterns in their association with happiness: the fear of being laughed at is detrimental for people's sense of well-being, yet the joy of making others laugh at one's own expense seems to contribute to happiness. This contribution is nevertheless subject to benevolent humor and might be limited under certain circumstances. Most remarkably, our study extends prior research in the relationship of novel forms of humor to happiness (Hofmann et al. 2017; Heintz et al. 2018), puts forward a mechanism by which the positive relationship between gelotophilia and happiness is presumably the result of the connection between gelotophilia and benevolent humor, and validates the Spanish adaptation of recently developed humor scales.

Limitations

Some limitations should be acknowledged in the current study. First, the sampling procedure was probabilistic, which precludes generalization of the results, and the sample size was rather small given the correlational nature of the study. Second, the cultural background of the sample could raise concerns: because happiness is influenced by culture (Diener et al. 2013), an examination of whether these novel forms of humor hold in different cultures may be worth considering in the study of happiness. Although the literature on happiness predictors has accumulated an abundance of evidence, the current research provides a starting point in the study of virtuous humor as an element to consider in happiness-based research and interventions. Third, we only used self-report measures, thus future experimental and longitudinal works are needed to examine the causality of the association between the studied variables. Fourth, since more literature is currently available regarding gelotophobia, the current study addressed in more detail the relationship of this humor trait with happiness than the other two humor traits (gelotophobia and katagelasticism). And last, we obtained lower means on humor variables compared to previous studies and the scale assessing subjective happiness reported low internal reliability, thus we recommend to remain cautious when applying the results reported in the current study to the Spanish population.

Compliance with Ethical Standards

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional

and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

References

- Beermann, U., & Ruch, W. (2009a). How virtuous is humor? Evidence from everyday behavior. *Humor*, 22(4), 395–417. <https://doi.org/10.1515/HUMR.2009.023>.
- Beermann, U., & Ruch, W. (2009b). How virtuous is humor? What we can learn from current instruments. *The Journal of Positive Psychology*, 4(6), 528–539. <https://doi.org/10.1080/17439760903262859>.
- Blasco-Belled, A., Rogoza, R., Torrelles-Nadal, C., & Alsinet, C. (2019). Emotional intelligence structure and its relationship with life satisfaction and happiness: New findings from the bifactor model. *Journal of Happiness Studies*. Advance online publication. <https://doi.org/10.1007/s10902-019-00167-x>.
- Diener, E., Oishi, S., & Ryan, K. L. (2013). Universals and cultural differences in the causes and structure of happiness: A multilevel review. In C. L. M. Keyes (Ed.), *Mental well-being: International contributions to the study of positive mental health* (pp. 153–176). New York: Springer.
- Edwards, K. R., & Martin, R. A. (2014). The conceptualization, measurement, and role of humor as a character strength in positive psychology. *Europe's Journal of Psychology*, 10(3), 505–519. <https://doi.org/10.5964/ejop.v10i3.759>.
- Extremera, N., & Fernández-Berrocal, P. (2014). The Subjective Happiness Scale: Translation and preliminary psychometric evaluation of a Spanish version. *Social Indicators Research*, 119, 473–481. <https://doi.org/10.1007/s11205-013-0497-2>.
- Greengross, G., & Geoffrey, M. F. (2008). Dissing Oneself versus Dissing Rivals: Effects of Status, Personality, and Sex on the Short-Term and Long-Term Attractiveness of Self-Deprecating and Other-Deprecating Humor. *Evolutionary Psychology*, 6(3), 393–408.
- Hayashi, K., Kawachi, I., Ohira, T., Kondo, K., Shirai, K., & Kondo, N. (2016). Laughter is the best medicine? A cross-sectional study of cardiovascular disease among older Japanese adults. *Journal of Epidemiology*, 26(10), 546–552. <https://doi.org/10.2188/jea.JE20150196>.
- Haynie, D. L., Nansel, T., Eitel, P., Crump, A. D., Saylor, K., Yu, K., & Simons-Morton, B. (2001). Bullies, victims, and bully/victims: Distinct groups of at-risk youth. *Journal of Early Adolescence*, 21(1), 29–49.
- Heintz, S., Ruch, W., Platt, T., Pang, D., Carretero-Dios, H., Dionigi, A., et al. (2018). Psychometric comparisons of benevolent and corrective humor across 22 countries: The virtue gap in humor goes international. *Frontiers in Psychology*, 9(92), 1–19. <https://doi.org/10.3389/fpsyg.2018.00092>.
- Heintz, S., & Ruch, W. (2019). From four to nine styles: An update on individual differences in humor. *Personality and Individual Differences*, 141, 7–12. <https://doi.org/10.1016/J.PAID.2018.12.008>.
- Hofmann, J. (2018). Putting “laughing at yourself” to the test. *Humor*, 31(2), 273–286.
- Hofmann, J., Ruch, W., Proyer, R. T., Platt, T., & Gander, F. (2017). Assessing dispositions toward ridicule and laughter in the workplace: Adapting and validating the PhoPhiKat-9 questionnaire.

- Frontiers in Psychology*, 8(714), 1–10. <https://doi.org/10.3389/fpsyg.2017.00714>.
- Hofmann, J., Heintz, S., Pang, D., & Ruch, W. (2019). Differential relationships of light and darker forms of humor with mindfulness. *Applied Research in Quality of Life*. <https://doi.org/10.1007/s11482-018-9698-9>.
- Joshanloo, M., & Niknam, S. (2019). The tripartite model of mental well-being in Iran: Factorial and discriminant validity. *Current Psychology*, 38(1), 128–133. <https://doi.org/10.1007/s12144-017-9595-7>.
- Jovanovic, V. (2011). Do humor styles matter in the relationship between personality and subjective well-being? *Scandinavian Journal of Psychology*, 52, 502–507. <https://doi.org/10.1111/j.1467-9450.2011.00898.x>.
- Layous, K. T. I. N., & Lyubomirsky, S. (2014). The how, why, what, when, and who of happiness. In J. G. & J. Moskowitz (Eds.), *Positive emotion: Integrating the light sides and dark sides* (pp. 473–495). New York: Oxford University Press.
- Lyubomirsky, S., & Lepper, H.S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46, 137–155. <https://doi.org/10.1023/A:1006824100041>
- Martin, R. A. (2001). Humor, laughter, and physical health: Methodological issues and research findings. *Psychological Bulletin*, 127(4), 504–519. <https://doi.org/10.1037/0033-2909.127.4.504>.
- Martin, R. A. (2007). The social psychology of humor. In *The psychology of humor: An integrative approach*. Burlington: Elsevier Academic Press.
- Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the humor styles questionnaire. *Journal of Research in Personality*, 37, 48–75.
- McGhee, P. E. (1996). Health, healing, and the amuse system. In *Humor as survival training* (2nd ed.). Dubuque: Kendall/Hunt Publishing.
- Müller, L., & Ruch, W. (2011). Humor and strengths of character. *The Journal of Positive Psychology*, 6(5), 368–376. <https://doi.org/10.1080/17439760.2011.592508>.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press.
- Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. P. (2007). The journal of positive psychology strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, 2(3), 149–156. <https://doi.org/10.1080/17439760701228938>.
- Platt, T. (2008). Emotional responses to ridicule and teasing: Should gelotophobes react differently? *Humor*, 21(2), 105–128. <https://doi.org/10.1515/HUMOR.2008.005>.
- Proyer, R. T., Ruch, W., Ali, N. S., Al-Olimat, H. S., Amemiya, T., Adal, T. A., et al. (2009). Breaking ground in cross-cultural research on the fear of being laughed at (gelotophobia): A multi-national study involving 73 countries. *Humor*, 22(1–2), 253–279. <https://doi.org/10.1515/HUMR.2009.012>.
- Proyer, R. T., Ruch, W., & Chen, G. H. (2012). Gelotophobia: Life satisfaction and happiness across cultures. *Humor*, 25(1), 23–40. <https://doi.org/10.1515/humor-2012-0002>.
- Proyer, R. T., Ruch, W., & Buschor, C. (2013). Testing strengths-based interventions: A preliminary study on the effectiveness of a program targeting curiosity, gratitude, Hope, humor, and zest for enhancing life satisfaction. *Journal of Happiness Studies*, 14(1), 275–292. <https://doi.org/10.1007/s10902-012-9331-9>.
- 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(2), 171–190.
- Ruch, W. (2008). Psychology of humor. In V. Raskin (Ed.), *A primer of humor research* (pp. 17–100). Berlin: Mouton de Gruyter.
- Ruch, W. (2012). Towards a new structural model of the sense of humor: Preliminary findings. In *Proceedings of the AAAI fall symposium FS-12-02: Artificial intelligence of humor* (pp. 65–78). Menlo Park: AAAI Press.
- Ruch, W., & Heintz, S. (2016). The virtue gap in humor: Exploring benevolent and corrective humor. *Translational Issues in Psychological Science*, 2(1), 35–45. <https://doi.org/10.1037/tps0000063>.
- Ruch, W., & Proyer, R. T. (2009). Extending the study of gelotophobia: On gelotophiles and katagelasticists. *Humor*, 22(1–2), 183–212. <https://doi.org/10.1515/HUMR.2009.009>.
- Ruch, W., Hofmann, J., Platt, T., & Proyer, R. (2014). The state-of-the art in gelotophobia research: A review and some theoretical extensions. *Humor*, 27(1), 23–45. <https://doi.org/10.1515/humor-2013-0046>.
- Ruch, W., Heintz, S., Platt, T., Wagner, L., Proyer, R. T., & Horstmann, K. T. (2018). Broadening humor: Comic styles differentially tap into temperament, character, and ability. *Frontiers in Psychology*, 9(6), 1–18. <https://doi.org/10.3389/fpsyg.2018.00006>.
- Ruch, W., Wagner, L., & Heintz, S. (2018). Humor, the PEN model of personality, and subjective well-being: Support for differential relationships with eight comic styles. *Rivista Italiana Di Studi sull'Umorismo RISU*, 1(1), 31–44.
- Samson, A. C., Proyer, R. T., Ceschi, G., Pedrini, P. P., & Ruch, W. (2011). The fear of being laughed at in Switzerland: Regional differences and the role of positive psychology. *Swiss Journal of Psychology*, 70(2), 53–62. <https://doi.org/10.1024/1421-0185/a000039>.
- Schmidt-Hidding, W. (1963). *European key words. Vol I: Humor and wit*. Munich: Huber.
- Schneider, M., Voracek, M., & Tran, U. S. (2018). “A joke a day keeps the doctor away?” meta-analytical evidence of differential associations of habitual humor styles with mental health. *Scandinavian Journal of Psychology*, 59(3), 289–300. <https://doi.org/10.1111/sjop.12432>.
- Steger, M. F., Kashdan, T. B., & Oishi, S. (2008). Being good by doing good: Daily eudaimonic activity and well-being. *Journal of Research in Personality*, 42(1), 22–42. <https://doi.org/10.1016/j.jrp.2007.03.004>.
- Torres-Marín, J., Carretero-Dios, H., Acosta, A., & Lupiáñez, J. (2017). Eye contact and fear of being laughed at in a gaze discrimination task. *Frontiers in Psychology*, 8, 1954, 1–1954,14. <https://doi.org/10.3389/fpsyg.2017.01954>.
- Torres-Marín, J., Proyer, R. T., López-Benítez, R., & Carretero-Dios, H. (2019). Assessing individual differences in the way of people deal with ridicule and being laughed at: The Spanish Form of the PhoPhiKat-45. *Manuscript submitted for publication*.
- Wellenzohn, S., Proyer, R. T., & Ruch, W. (2016). Humor-based online positive psychology interventions: A randomized placebo-controlled long-term trial. *Journal of Positive Psychology*, 11(6), 584–594. <https://doi.org/10.1080/17439760.2015.1137624>.
- Wellenzohn, S., Proyer, R. T., & Ruch, W. (2018). Who benefits from humor-based positive psychology interventions? The moderating effects of personality traits and sense of humor. *Frontiers in Psychology*, 9, 821. <https://doi.org/10.3389/fpsyg.2018.00821>.