

Enjoying and fearing laughter: Personality characteristics of gelotophobes, gelotophiles, and katagelasticists

René T. Proyer¹ & Willibald Ruch²

Abstract

People differ in the way they deal with ridicule. The study examines the personality correlates of those who fear being laughed at (gelotophobes), those who enjoy being laughed at (gelotophiles) and those who enjoy laughing at others (katagelasticists). Gelotophobes do not interpret laughter by others as something positive but more as a mean to put them down. Gelotophiles enjoy being laughed at and interpret the laughter by others positively, as a sign of appreciation. Katagelasticists enjoy laughing at others and do not feel that there is anything wrong in doing so. In an empirical study ($N = 394$), gelotophobia, gelotophilia, and katagelasticism were related to the PEN-model. Gelotophobes were found to be introverted neurotics. Gelotophilia was primarily related to extraversion and in a multiple regression analysis gender (higher among males) turned out to be predictive as well. Katagelasticists were found to be younger males with higher scores in extraversion and psychoticism. Overall, in a regression analysis the content scales of the short form of the EPQ-R predicted gelotophobia best, but gelotophilia and katagelasticism also yielded robust relations.

Key words: gelotophobia, gelotophilia, humor, katagelasticism, PEN-model, ridicule

¹ *Correspondence concerning this article should be addressed to:* René Proyer, PhD, University of Zurich, Department of Psychology, Division for Personality and Assessment, Binzmuehlestrasse 14/7, CH-8050 Zurich, Switzerland; email: r.proyer@psychologie.uzh.ch

² University of Zurich, Switzerland

Starting from the first empirical study on gelotophobia (Ruch & Proyer, 2008a) the question of personality correlates of the fear of being laughed at emerged as an important research topic. There has been a lot of advance in the scientific exploration of this concept (see Ruch, 2009 and this issue for an overview) and, of course, first studies on personality correlates have been conducted. For example, in the *Eysenckian model of personality*, gelotophobes were found to be introverted and neurotic (Ruch & Proyer, 2009a). Additionally, those who were high in the fear of being laughed at tended to score higher in older, more clinically saturated variants of the Psychoticism scale but not the current one of the *revised Eysenck Personality Questionnaire* (EPQ-R). The latter result was predicted on the basis of gelotophobes tending to display a paranoid sensitivity towards the laughter of others. Only the older P scales cover these contents while the current EPQ-R P scale was developed for measuring P in the range of normality. It has to be noted that there were gender differences in the Ruch and Proyer study. The predictive power of P was lower for the females than for the males. The relation to introversion and neuroticism tended to be higher for males but was not statistically different from the scores of the females. Based on these first results further investigations on the role of personality in the way people deal with laughter and being laughed at can be undertaken. In a first study on the localization of gelotophobia in the *Five Factor Model* (using the Big Five Questionnaire, BFQ; Caprara, Barbaranelli, Borgogni, & Perugini, 1993; Caprara, Barbaranelli, Bermudez, Maslach, & Ruch, 2000), gelotophobes could be primarily described as emotionally unstable introverts with lower inclinations to friendliness and openness (and negative relations to social desirability – however, only extraversion and emotional stability were significant predictors of gelotophobia in a regression analysis; Ruch, Proyer, & Popa, 2008).

Agents and targets of ridicule. It seems obvious that fearing to be laughed at is not the only possible reaction when confronted with the laughter by others. Some cultures even seem to have cultivated rites that contain mocking others as a core element. These rites may be used to solve a conflict or more generally speaking for problem solving within a community. For example, there is something like a drumming-contest among the Inuit where contestants attack one-another with songs of satirical and mocking content; among the island of Wetan it has been observed that workers sing improvisational songs to each other that may be of mocking character – “sitting in the tops of the coconut-palms tapping the sap, the men sing mournful or mocking songs at the expense of their companions in the neighbouring trees” (Huizinga, 1938/1992; p. 123). However, rites that cultivate mocking and ridicule can also be found in modern western societies. For example, among Hip-Hop artists it is common to mock other singers (to *diss* them; i.e., disrespect them by singing songs with rhymes on their expense) and there are even “battles” where participants can test their skills in *dissing* others in a contest. Mainly in America, there is the tradition of *roasting* an honored guest. Roasting in this sense means to “humorously belittle [the personality], behaviors, and achievements” (Oring, 2003; p. 80) of this person. There are institutions that foster this tradition such as the Friars' Club in New York or special programs on TV (e.g., the *Comedy Central Roast*) that target (*roast*) celebrities in their presence.

There exists convincing evidence that some people seem to enjoy making others laugh at them and interpret the laughter by others as a sign of appreciation – as something positive. Next to those who fear and enjoy being laughed at, there seems to be a third group of people who enjoy laughing *at* others more than average people would. Ruch and Proyer (2009b) studied the joy of being laughed at (*gelotophilia*) and the joy of laughing at others (*katagelasticism*; katagelao = Greek for laughing at) along with gelotophobia empirically. They used written descriptions of the worst (imagined or real) incidents of having been laughed at for developing these new concepts. According to their definition, *gelotophiles* are persons who "... exceedingly enjoy being laughed at by others. Gelotophiles seek and establish situations in which they can make others laugh at their own expense" (p. 185). Thus, one might think of people who do not feel embarrassment when making others laugh at their own misfortunes or mishaps. They do not make others laugh for self-defeating but gain joy out of it.

There is a scale labeled "self-defeating" humor in the *Humor Styles Questionnaire* by Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003), which should be shortly mentioned here. They define this form of humor as "excessively self-disparaging humor, or attempts to ingratiate oneself or gain the approval of others by doing or saying funny things at one's own expense" (p. 52). An important difference is that gelotophiles do not necessarily seek the approval by others by putting themselves down (e.g., for being part of a group) – rather they experience laughter at their own cost as something positive and rewarding and enjoy entertaining the others. Gaining reactions from others (i.e., laughter) even at the cost of giving away something embarrassing that happened to them is a joyful experience for them. It is also obvious that this is different from the way gelotophobes deal with laughter, as they experience laughter by others as primarily offensive³. It should also be noted that gelotophilia is different from Martin et al.'s concept of *self-enhancing humor* (i.e., "a tendency to maintain a humorous outlook on life even when one is not with other people, to be frequently amused by the incongruities of life, to maintain a humorous perspective even in the face of stress and adversity, and to use humor in coping"; Martin, 2007, p. 211). The focus in gelotophilia is on actually making others *laugh* at the own expense and enjoying this.

Katagelasticists actively seek and exceedingly enjoy laughing at others. Making fun of others, taking the chance if a misfortune happens to someone or making jokes about others is experienced as joyful for them. They do not feel that there is anything wrong in laughing at others. If people do not fight back when they are laughed at, it is their own fault. They typically would remember situations in which "weak" or "humorless" people broke up their friendship with them because of a joke or a funny remark. The distinction among gelotophobia, gelotophilia, and katagelasticism allows further studies on how people deal with laughter in everyday life.

³ While the PhoPhiKat-45 has not yet been studied in relation to the HSQ, gelotophobia has been. Gelotophobes engaged less often in self-enhancing and affiliative humor. Only, among student samples (not in an adult sample), gelotophobes exerted self-defeating humor (Ruch et al., 2009).

The measurement of gelotophobia, gelotophilia, and katagelasticism. Ruch and Proyer (2009b) developed a 45-item questionnaire for the assessment of gelotophobia, gelotophilia, and katagelasticism, the PhoPhiKat-45. The scales of the PhoPhiKat-45 were reliable (all alphas $\geq .84$); all items demonstrated high corrected-item total correlations, and yielded high stability across a period of six months (all retest reliabilities $\geq .77$ for a three- and $\geq .73$ for a six-months time interval). A factor analysis indicated a clear three-factor solution with a satisfying loading pattern (the median of the item loadings on the targeted factor were .62, .54, and .57 for gelotophobia, gelotophilia, and katagelasticism, respectively). While gelotophobia and gelotophilia existed independently from demographic variables, katagelasticists were more likely to be young males that are not in a relationship. As expected, the intercorrelations revealed that gelotophobia and gelotophilia correlated negatively ($r = -.43, p < .05$) and that gelotophilia and katagelasticism ($r = .37, p < .05$) correlated positively with each other. Consistently, there were zero-correlations ($r = -.04, p > .05$) between gelotophobia and katagelasticism. This indicates that not all gelotophobes are victims of laughter but some of them also enjoy laughing at others (i.e., are the agents of the laughter despite the fact that they know how harmful this can be). An inspection of the mean scores of a sample of $N = 547$ adults in the Ruch and Proyer study revealed that gelotophilia seems to be not so infrequent a phenomenon. The mean fell not much below the scale mid-point ($M = 2.43, SD = 0.55$; in a 4-point answer format). Gelotophobia and katagelasticism yielded lower mean scores ($M = 1.97, SD = 0.54$ and $M = 1.99, SD = 0.46$, respectively).

The PhoPhiKat-45 has been used in several other studies to investigate some basic postulates. For example, Proyer, Hempelmann, and Ruch (2009) report that gelotophobes do not remember having been laughed at more *frequently* than gelotophiles and katagelasticists but that they remember these situations with a higher *intensity*. Gelotophobes are supposed to be exceedingly fearful of the humor of others; partially because they fear that they cannot keep up with the humor of others and feel inferior to them (Ruch & Proyer, 2008a). Ruch, Beermann, and Proyer (2009) asked their participants to create as many punch lines as possible to cartoons where the original punch lines have been deleted (i.e., to complete the Cartoon Punchline Production Test, CPPT; Köhler & Ruch, 1996). The ability to create humor was unrelated to gelotophobia (zero-correlations) and there were non-significant correlations to gelotophilia and katagelasticism. This indicates that not all gelotophobes seem to be impaired in their humor production abilities and gelotophiles and katagelasticists do not seem to be especially productive (at least in the CPPT that does not directly ask for mocking people or mocking oneself – one might think that such an instruction would lead to different results). Thus, gelotophobes seem to underestimate their abilities. This finding was also shown for lower self-ratings of intelligence in gelotophobes compared to their psychometric intelligence (Proyer & Ruch, 2009). Further studies using the PhoPhiKat-45 are reported in Renner and Heydasch (2010, this issue), Samson and Meyer (2010, this issue), and Platt and Ruch (2010, this issue).

Aims of the study. The main aim of this study was to examine the relation of gelotophobia, gelotophilia, and katagelasticism with the PEN model of personality. Based on the description given in Ruch and Proyer (2009b), *gelotophiles* were expected to be primar-

ily extraverted. This is in line with Ziv (1984) who suggests that stable extraverts enjoy jokes at their own expense (for an overview see Furnham & Heaven, 1999). Furthermore, making others laugh at oneself and making fun of oneself is an activity that increases activation. This fits well to the description of extraverts seeking to increase their level of stimulation (e.g., Eysenck, 1967). The notion that extraverts like to laugh fits also to the description of gelotophiles and would predict a negative relation to gelotophobia (Eysenck & Eysenck, 1991). Furthermore, gelotophiles enjoy social interactions, which is also a characteristic of extraverts (e.g., Eysenck, 1967; Eysenck & Eysenck, 1991). Based on the descriptions given in Ruch and Proyer (2009b), gelotophiles are rather low on traits used to describe high P scorers (e.g., aggressive, antisocial, cold etc.). This would speak for a negative relation to P. However, gelotophiles were found to enjoy laughing at others as well – even though their primary focus is on making others laugh at themselves. In empirical studies there is typically a positive correlation between gelotophilia and katagelasticism, which might favor a positive relation between gelotophilia and P. Taken together it is expected that there is either a zero correlation between gelotophilia and P or that there are only slightly higher expressions of P among the gelotophiles.

In the manual of the EPQ, Eysenck and Eysenck (1991) describe a high scorer in psychoticism as someone who “may be cruel and inhumane, lacking in feeling and empathy, and altogether insensitive. He is hostile to others, even his own kith and kin, and aggressive, even to loved ones. He has a liking for odd and unusual things, and has disregard for danger; he likes to make fools of other people, and to upset them” (p. 6). One might think of people who play practical jokes on others that go beyond of what is commonly accepted (e.g., harmless pranks on April Fool’s Day) and even might risk hurting others. Furthermore, Eysenck, Eysenck, and Barrett (1985) described the high P person with traits like aggressive, cold, egocentric, impersonal, impulsive, antisocial, unempathic, creative, and tough-minded and this description seems to fit well to the description of *katagelasticians*. It is not surprising that Larsen and Buss (2008) use a humor-related example for describing the typical high P scorer in their textbook on personality psychology; a person who “may laugh [...] when a dog gets hit by a car or when someone accidentally gets hurt” (p. 75). Extraverts like to laugh and one can assume that introverted high P scorers will not laugh at others. Laughing at others might also be interpreted as seeking for stimulation, which would be typical for the “stimulus hungry” extraverts. Furthermore, several of the traits describing a neurotic person (Eysenck et al., 1985) seem to reflect the opposite of the *katagelastician*; e.g., anxious, guilt-feelings, shy, or low self-esteem. It is difficult to imagine an anxious, shy, and guilt-prone person mocking others or ridiculing a person knowing that this might be harmful for that person. Overall, *katagelasticians* were expected to score higher in psychoticism and to be emotionally stable and extraverted. For *katagelasticians*, predictions can also be derived from their inclination to low socially desirable, non-conformist behavior. They do not hesitate crossing the border of socially accepted behavior for making others the butt of laughter. Thus, higher expressions of *katagelasticism* should be related to low scores in the lie scale.

For *gelotophobia* we wanted to replicate the findings by Ruch and Proyer (2009a) for extraversion and neuroticism. This means that gelotophobes were expected to be introverted neurotics. In Ruch and Proyer *gelotophobia* was not related to the current EPQ-R P scale. The EPQ-R P scale does not reflect paranoid contents anymore like the older variants did. However, those are supposed to be of relevance among gelotophobes (e.g., getting suspicious when hearing others laughing). Furthermore, the shorter version contains items that differentiate well among normals (i.e., likewise a “softer” P is being measured). Therefore, predictions on the outcomes are more difficult than for the E and N. Nevertheless, it is expected that *gelotophobia* exists mainly independently from the expression of P.

Method

Sample. The sample consisted of $N = 394$ participants from 15 to 80 years ($M = 31.75$, $SD = 13.12$). 99 were males and 285 were females (10 did not indicate their gender). Roughly one quarter was married (22.34 %) and slightly more than two thirds were single (68.53 %).

Instruments. The *PhoPhiKat-45* (Ruch & Proyer, 2009b) is a questionnaire for the assessment of *gelotophobia* (a sample item is “When they laugh in my presence I get suspicious”), *gelotophilia* (“When I am with other people, I enjoy making jokes at my own expense to make the others laugh”), and *katagelasticism* (“I enjoy exposing others and I am happy when they get laughed at”; 15 items each). The answer format ranges from 1 = strongly disagree to 4 = strongly agree. All items are positively keyed. The alpha-coefficients were .84, .86, and .80 for *gelotophobia*, *gelotophilia*, and *katagelasticism* in the present sample. Ruch (2009) contains several studies using the *PhoPhiKat-45* that support the reliability, validity, and usefulness of the measure.

The short form of the *Eysenck Personality Questionnaire-Revised* (EPQ-R; S. B. G., Eysenck, & H. J. Eysenck, 1991) in the German Adaptation by Ruch (1999) was used for the assessment of personality in terms of Eysenck’s theory. The 50-item questionnaire contains three content scales and a lie-scale (see Furnham, Eysenck, & Saklofske [2008] for an overview on the development of the EPQ). All scales yielded good internal consistencies; i.e., $\alpha = .64$ for Psychoticism, $\alpha = .82$ for Extraversion, $\alpha = .78$ for Neuroticism and the alpha-coefficient for the Lie scale was .63.

Procedure

All participants completed the questionnaires in an online study. The website was hosted by the Department of Psychology at the University of Zurich. Participants were recruited by means of pamphlets, advertising on the Department’s website, and a report in a local newspaper that advertised a study on personality and humor. The participants were not paid for their services but received individual feedback on their results.

Results

Ruch and Proyer (2008b) empirically derived cut-off points that allow classifying test scores into groups of non-gelotophobes and gelotophobes (slight, marked, and extreme expression). The application of these scores showed that there were 8.12 % gelotophobes in the present sample (6.35 % demonstrated a slight and 1.77 a marked expression). Table 1 shows information on the distribution of the scales and their correlations with sex and age.

Table 1:
Mean Scores, Standard Deviations, Skewness, Kurtosis, and Correlations with Age and Sex for the Scales of the PhoPhiKat-45 and the Short Form of the EPQ-R

	<i>M</i>	<i>SD</i>	<i>Sk</i>	<i>K</i>	<i>r</i> (age)	<i>r</i> (sex)
<i>PhoPhiKat-45</i>						
Gelotophobia	1.81	0.47	0.50	-0.17	-.06	.11*
Gelotophilia	2.41	0.52	0.09	-0.43	-.01	-.13*
Katagelasticism	2.00	0.46	0.42	-0.43	-.24*	-.24*
<i>EPQ-R short</i>						
Psychoticism	2.95	2.09	1.08	1.20	-.22*	-.09
Extraversion	7.64	3.15	-0.41	-0.77	-.19*	.00
Neuroticism	4.90	2.99	0.33	-0.73	.05	.14*
Lie Scale	2.45	2.00	0.91	0.64	.25*	.08

Note. *N* = 394. *M* = mean, *SD* = standard deviation, *Sk* = Skewness, *K* = Kurtosis, *r*(age) = correlation with age (*n* = 372), *r*(sex) = correlation with gender (1 = males, 2 = females; *n* = 384).

**p* < .05.

Table 1 shows that all scales were about normally distributed. Furthermore, gelotophobia existed independently from the age of the participants while gender yielded a significant correlation coefficient but that were negligible for a later interpretation ($r^2 \leq .02$). However, katagelasticists were more likely to be younger men. In the short form of the EPQ-R, P and E were more pronounced among younger participants while gender did not contribute to either of the two scales. N tended to be higher among females, and socially desirable answers (Lie scale) were related to higher age. Thus, age and gender were each related to specific variables, and since this needed to be considered the following analyses were performed split by gender and by controlling for age. The P scores had a lower mean and lower SD than in the normative sample (Ruch, 1999), which might reduce the size of the correlations with the PhoPhiKat-45-scores. While E is slightly higher than in the normative samples, N and L were comparable.

Correlations among the content scales and the Lie scale of the short form of the EPQ-R and the scales for gelotophobia, gelotophilia, and katagelasticism were computed. All analyses were done for the total sample and separately for males and females (see Table 2).

Table 2:
Correlations Among Gelotophobia, Gelotophilia, Katagelasticism and the Content Scales and the Lie Scale of the Short Form of the EPQ-R (for the Total Sample and Split by Gender)

	<i>Psychoticism</i>	<i>Extraversion</i>	<i>Neuroticism</i>	<i>Lie-Scale</i>
<i>Total sample</i>				
Gelotophobia	-.13*	-.44*	.56*	.00
Gelotophilia	.21*	.38*	-.17*	-.02
Katagelasticism	.21*	.18*	.03	-.24*
<i>Males</i>				
Gelotophobia	-.08	-.41*	.55*	-.14
Gelotophilia	.21*	.42*	-.03	-.01
Katagelasticism	.30*	.32*	.11	-.36*
<i>Females</i>				
Gelotophobia	-.14*	-.45*	.55*	-.02
Gelotophilia	.19*	.36*	-.19*	.00
Katagelasticism	.15*	.13*	.05	-.18*

Note. $N = 394$ ($n = 99$ males; $n = 285$ females).

* $p < .05$.

Table 2 shows that gelotophobes could be described as introverted and neurotic with lower scores in P. Enjoying being laughed at (gelotophilia) yielded a contrary pattern. Gelotophiles demonstrated a higher inclination to P and E and emotional stability. Both existed independently from a socially desirable answer style. Katagelasticians were high in P and E and there was a negative relation to social desirability. Comparing the correlation coefficients for males and females yielded a few interesting findings that should be highlighted. However, it has to be mentioned that none of these differences was statistically significant after applying the procedures suggested by Steiger (1980). Therefore, these differences should be interpreted conservatively. The relation between gelotophobia and P and lower social desirability in the katagelasticians tended to be more pronounced among males and gelotophilia tentatively was more related to emotional stability among the females.

Computing correlation coefficients controlling for the effects of age did not change the results. The largest absolute difference in comparisons of the correlations when controlling or not controlling for age was .05 for the total sample and the sample of males and .07 in the sample of females (in each case these differences were observed for the Lie scale).

We computed multiple stepwise regression analyses with gelotophobia, gelotophilia, and katagelasticism as criteria and the content scales of the EPQ-R short form as predictor variables. The predictors were split into two blocks. The first one contained sex and age and the second one the personality scales. Each block used the stepwise method for entering the predictors. Overall, personality had predictive power for each of the three scales yet the degree differed. The multiple correlation coefficient for gelotophilia was .39 ($F[2, 371] = 32.93, p = .0001$). E yielded a significant coefficient ($\beta = .37, p = .0001$)

and entered the equation after (male) sex ($\beta = -.13, p = .0069$). There was a multiple correlation coefficient for katagelasticism of .41 ($F[4, 371] = 17.43, p = .0001$). In the final model, Psychoticism ($\beta = .11, p = .0304$) and Extraversion ($\beta = .10, p = .0402$) yielded significant effects. The demographic variables were predictive as well; namely, younger age ($\beta = -.24, p < .001$) and male sex ($\beta = -.26, p = .0001$). For gelotophobia we found a multiple correlation coefficient of .64 ($F[3, 371] = 83.87, p = .0001$). None of the demographic variables was predictive. However, N ($\beta = .48, p = .0001$) and E ($\beta = -.33, p = .0001$) yielded significant effects in the final model.

Discussion

The study is an aid to learning more about the personality correlates of how people deal with ridicule. While some fear being laughed at, others enjoy it, and a different group exists that enjoys excessively laughing at others. In Ruch and Proyer (2009b) it was shown that gelotophilia is a quite frequent phenomenon. The mean scores of the PhoPhiKat-45 were similar in this study. This indicates that it seems to be a stable result that there are people who endorse behavior that is aimed at making others laugh at them at their own expense. As the mean scores for katagelasticism also seem to be stable it is concluded that it is fruitful to study these variables more closely. Furthermore, they seem to be a useful extension of the gelotophobia concept.

The three different dispositions in response to ridicule were clearly related to personality. The prime personality characteristic of those who enjoy being laughed at (gelotophiles) is extraversion. E and male gender turned out to be significant predictors in a regression analysis ($R^2 = .17$). Usually, there are no gender differences in EPQ-R E but in the present sample the males were more extraverted. The liking to laugh, higher inclination to joy and a playful attitude might account for the extraverts higher inclination to show gelotophilic behavior. However, gelotophilia was also related to psychoticism and emotional stability. This fits well with the predictions derived from theoretical accounts (e.g., Ziv, 1984). Withstanding the laughter of others requires a certain toughness and emotional stability. In the present sample, these correlations disappeared after controlling for gender. However, Ruch and Proyer (2009) speculated about the potential use of gelotophilic behavior as a coping strategy. The mechanism in this line of argument would be that people learn avoiding to be laughed at by others by making them voluntarily laugh at themselves. This proactive strategy might prevent harmful experiences; e.g., one might focus on rather harmless topics in making others laugh while others that are potentially more harmful for the self are not being tapped. However, the relation of gelotophilia (and katagelasticism) and coping has not yet been examined empirically (as expected, gelotophobes were found not to use humor as a coping strategy against adversity; Ruch et al., 2009).

There seem to be two clusters of variables that have predictive power for katagelasticism. On the one hand it is evident that those who enjoy laughing at others are higher in psychoticism and extraversion. The high P scorers' tendency to be unempathic and cruel accounts for the insensitivity to the feelings of the person being laughed at and extravert-

sion might account for being among people and the enjoyment of the behavior. On the other hand, katagelasticism cannot be explained by personality only. It is a behavioral tendency typical for younger males. Further studies will illuminate the nature of these interactions; e.g., whether they occur more often in male-only groups (vs. mixed gender groups), whether ridicule is shown to members of the groups (e.g., for determining rank-order) or more often to individuals outside one's peer group. These four variables demonstrate predictive power in a multiple regression analysis ($R^2 = .17$). Additionally, katagelasticists were lower in social desirability; describing oneself to be less inclined to socially desirable behavior fits well to the description of the prototypic katagelasticist. The relation to P and lower social conformist behavior tended to be more pronounced among the males than among the females. However, it should be noted that there might be differences in the way older people and females laugh at others. If they use different strategies from those covered in the katagelasticism-items of the PhoPhiKat-45, the present scale would not detect this. Thus, a future study might check what strategies younger vs. older and male vs. female katagelasticists use and whether there are differences in the way they laugh at others.

The results of the Ruch and Proyer (2009a) study were well replicated regarding the role of E and N. Thus, there is stable evidence that those who fear being laughed at are introverted neurotics. E and N were significant predictors of gelotophobia in a multiple stepwise regression analysis ($R^2 = .41$). Contrary to the first study, however, there was a (statistically significant) negative relation to P in the female sub-sample. Nevertheless, the correlation coefficient in this study was low in size ($r^2 = .02$) and should not be over interpreted. In the study by Ruch and Proyer there was a positive relation to older (clinically saturated) variants of the P scale (particularly so in the male sub-sample) but a zero correlation with the current EPQ-R P scale. As suggested by the lower mean and standard deviation high P scorers were missing in the present sample. Perhaps due to their uncooperativeness high P scorers are less likely to voluntarily take part in an internet-survey hosted by a university for supporting empirical research. This might have prevented that those very high in P could show the paranoid tendencies of the person fearing to be laughed at. One should also consider that the lowered variance in P underestimates the true relation between P and gelotophilia and katagelasticism. This is also supported by data from a study relating the Dimensional Assessment of Personality Pathology scales (DAPP; Livesley, 2006) with gelotophobia. In addition to other variables, the results indicate that suspiciousness contributes significantly to the fear of being laughed at (cf. Ruch & Proyer, 2009c). Furthermore, the lowered reliability of the P scale in the short form of the EPQ-R may also contribute to this result. So the relation of gelotophobia to P is highly dependent on the type of scale used. Another explanation might be that the new "semantic field" for the gelotophobia items together with the gelotophilia and katagelasticism items might have an impact on the results. Further studies (preferably using the standard form of the EPQ-R) are needed to finally comment on this relation.

Finally, this study shows that gelotophobia could be explained best by personality variables compared to gelotophilia and katagelasticism. A regression analysis shows that (male) sex and (younger) age seem to be relevant predictors. A longitudinal study would be needed to trace putative changes in the expression of katagelasticism across the life

span. Martin Führ's study (2010, this issue) suggests that the GELOPH<15> could be used for such a study with children and adolescents without having necessarily to adapt the questionnaire. Furthermore, it might be interesting to study gelotophobia, gelotophilia, and katagelasticism with respect to other comprehensive models of personality (e.g., five factor model of personality) but also to relate it to both variables of positive psychological functioning (e.g., strength of character) and pathological aspects of personality (personality disorders). This would provide a full picture of the personality of agents and targets of ridicule and allowing revising existing models of gelotophobia.

References

- Caprara, G. V., Barbaranelli, C., Bermudez, J., Maslach, C., & Ruch, W. (2000). Cross-cultural replication and further exploration of the Five Factor Model: A comparison of different approaches. *Journal of Cross-Cultural Psychology, 31*, 437-464.
- Caprara, G. V., Barbaranelli, C., Borgogni, L., & Perugini, M. (1993). The "Big Five Questionnaire": A new questionnaire to assess the Five Factor Model. *Personality and Individual Differences, 15*, 281-288.
- Carretero-Dios, H., Proyer, R. T., Ruch, W., & Rubio V. J. (2010). The Spanish version of the GELOPH<15>: Properties of a questionnaire for the assessment of the fear of being laughed at. *International Journal of Clinical and Health Psychology, 10*, 345-357.
- Eysenck, H. J. (1967). *The biological basis of personality*. Springfield, IL: C. C. Thomas.
- Eysenck, H. J., & Eysenck, S. B. G. (1991). *Manual of the Eysenck Personality Scales (EPQ Adults)*. London: Hodder and Stoughton.
- Eysenck, S. B. G., Eysenck, H. J., & Barrett, P. (1985). A revised version of the psychoticism scale. *Personality and Individual Differences, 6*, 21-29.
- Forabosco, G., Dore, M., Ruch, W., & Proyer, R. T. (2009). Psicopatologia della paura di essere deriso. Un'indagine sulla gelotofobia in Italia. *Giornale di Psicologia, 3*, 183-190.
- Führ, M. (2010). The applicability of the GELOPH<15> in children and adolescents: First evaluation in a large sample of Danish pupils. *Psychological Test and Assessment Modeling, 52*, 60-76.
- Führ, M., Proyer, R. T., & Ruch, W. (2009). Assessing the fear of being laughed at (gelotophobia): First evaluation of the Danish GELOPH<15>. *Nordic Psychology, 61*, 62-73.
- Furnham, A., Eysenck, S. B. G., & Saklofske, D. H. (2008). The Eysenck personality measures: Fifty years of scale development. In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *The Sage handbook of personality theory and assessment: Vol. 2. Personality measurement and testing* (pp. 199-218). Los Angeles, CA: Sage.
- Furnham, A., & Heaven, P. (1999). *Personality and social behaviour*. London: Arnold.
- Hřebíčková, M., Ficková, E., Klementová, M., Ruch, W., & Proyer, R. T. (2009). Strach ze zesmesnení: Česká a slovenská verze dotazníku pro zjišťování gelotofobie [The Fear of being laughed at: The Czech and Slovak version of the GELOPH 15 for the assessment of gelotophobia]. *Ceskoslovenská Psychologie, 53*, 469-480.

- Huizinga, J. (1992). *Homo ludens: A study of the play element in culture*. Boston, MA: The Beacon Press. (First edition published in 1938)
- Köhler, G., & Ruch, W. (1996). Sources of variance in current sense of humor inventories: How much substance, how much method variance? *Humor: International Journal of Humor Research*, 9, 363-397.
- Larsen, R. J., & Buss, D. M. (2008). *Personality psychology* (3rd ed.). New York: McGraw Hill.
- Livesley, W. J. (2006). The dimensional assessment of personality pathology (DAPP) approach to personality disorder. In S. Strack (Ed.), *Differentiating normal and abnormal personality* (2nd ed., pp. 401-429). New York: Springer.
- Martin, R. A. (2007). *The psychology of humor: An integrative approach*. Burlington, MA: Elsevier.
- 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.
- Oring, E. (2003). *Engaging humor*. Urbana, IL: University of Illinois Press.
- Papousek, I., Ruch, W., Freudenthaler, H. H., Kogler, E., Lang, B., & Schultze, G. (2009). Gelotophobia, emotion-related skills and responses to the affective states of others. *Personality and Individual Differences*, 47, 58-63.
- Platt, T., Proyer, R. T., & Ruch, W. (2009). Gelotophobia and bullying: The assessment of the fear of being laughed at and its application among bullying victims. *Psychology Science Quarterly*, 51, 135-147.
- Platt, T., & Ruch, W. (2010). Gelotophobia and age: Does laughter style predict how the elderly cope with potential age-related ridicule? *Psychological Test and Assessment Modeling*, 52, 231-245.
- Proyer, R. T., Hempelmann, C. F., & Ruch, W. (2009). Were they really laughed at? That much? Gelotophobes and their history of perceived derisibility. *Humor: International Journal of Humor Research*, 22(1-2), 213-231.
- Proyer, R. T., & Ruch, W. (2009). 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(1-2), 165-181.
- Proyer, R. T., Ruch, W., Ali, N. S., Al-Olimat, H. S., Andualet Adal, T., Aziz Ansari, S. 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: International Journal of Humor Research*, 22(1-2), 253-279.
- Proyer, R. T., Ruch, W., & Chen, G.-H. (in press). Positive psychology and the fear of being laughed at: Gelotophobia and its relations to orientations to happiness and life satisfaction in Austria, China, and Switzerland. *Humor: International Journal of Humor Research*.
- 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. (1999). Die revidierte Fassung des Eysenck Personality Questionnaire und die Konstruktion des deutschen EPQ-R bzw. EPQ-RK [The Eysenck Personality Questionnaire-Revised and the Construction of German Standard and Short Versions (EPQ-R and EPQ-RK)]. *Zeitschrift für Differentielle und Diagnostische Psychologie*, *20*, 1-24.
- Ruch, W. (2009). The fear of being laughed at [Special Issue]. *Humor: International Journal of Humor Research*, *22*(1-2).
- Ruch, W., Beermann, U., & Proyer, R. T. (2009). Investigating the humor of gelotophobes: Does feeling ridiculous equal being humorless? *Humor: International Journal of Humor Research*, *22*(1-2), 111-143.
- 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*(1), 47-67.
- Ruch, W., & Proyer, R. T. (2008b). Who is gelotophobic? Assessment criteria for the fear of being laughed at. *Swiss Journal of Psychology*, *67*(1), 19-27.
- Ruch, W., & Proyer, R. T. (2009a). Who fears being laughed at? The location of gelotophobes in the Eysenckian PEN-model of personality. *Personality and Individual Differences*, *46*, 627-630.
- Ruch, W., & Proyer, R. T. (2009b). Extending the study of gelotophobia: On gelotophiles and katagelasticians. *Humor: International Journal of Humor Research*, *22*(1-2), 183-212.
- Ruch, W., & Proyer, R. T. (2009c, August). Predicting the fear of being laughed at: Traits of personality and psychopathology. Poster presented at the *11th Congress of the Swiss Psychological Society*, August 19th-20th, University of Neuchâtel, Switzerland.
- Ruch, W., Proyer, R. T., & Popa, D. E. (2008). The fear of being laughed at (gelotophobia) and personality. *Anuarul Institutului de Istorie "G. Baritiu" din Cluj-Napoca* (Ed.), *Series Humanistica* (Vol. VI, pp. 53-68). Cluj-Napoca: Romania.
- Samson, A., & Meyer, Y. (2010). Perception of aggressive humor in relation to gelotophobia, gelotophilia, and katagelasticism. *Psychological Test and Assessment Modeling*, *52*, 217-230.
- Sarid, O., Ruch, W., & Proyer, R. T. (in press). Gelotophobia in Israel: On the assessment of the fear of being laughed at. *Israel Journal of Psychiatry and Related Sciences*.
- Steiger, J. H. (1980). Tests for comparing elements of a correlation matrix. *Psychological Bulletin*, *87*, 245-251.
- Ziv, A. (1984). *Personality and sense of humour*. New York, Springer.