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# The virtuousness of adult playfulness: the relation of playfulness with strengths of character

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## Abstract

**Background:** It was hypothesized that playfulness in adults (i.e., the predisposition to play) is robustly associated with the “good character.” Playfulness in adults can be tested via a global cognitive evaluation and an instrument for distinguishing five different facets of playful behaviors (spontaneous, expressive, creative, fun, and silly). Character strengths can be assessed within the framework of the Values-in-Action (VIA) classification of strengths.

**Results:** Data were collected in an online study and the sample consisted of 268 adults. A regression analysis revealed that adult playfulness was best predicted by humor, the appreciation of beauty and excellence, low prudence, creativity, and teamwork. As expected, single strengths (e.g., creativity, zest, and hope) demonstrated strong relations with facets of playfulness with its fun-variants yielding the numerically highest relations. The fun-variant of playfulness was most strongly related with emotional strengths while intellectual strengths yielded robust relations with all facets of playfulness. Strengths of restraint were negatively related with spontaneous, expressive, and silly-variants of playfulness.

**Conclusions:** The findings were in line with expectations and are discussed within a broader framework of research in playfulness in adults. The results indicate that playfulness in adults relates to positive psychological functioning and that more studies further illuminating the contribution of playfulness to well-being in adults are warranted.

**Keywords:** adult playfulness, character strengths, humor, playfulness, VIA, virtuousness

## Background

Researchers have spent much effort in the study of play—especially of play in children (e.g., Barnett 1990; Schaefer et al. 1991). However, there is comparatively little literature on *playfulness* as a personality characteristic and even less on *playfulness in adults*. Playfulness is the predisposition to engage in playful activities and interactions (Barnett 1991a, b). Barnett (2007) suggested as a definition: “Playfulness is the predisposition to frame (or reframe) a situation in such a way as to provide oneself (and possibly others) with amusement, humor, and/or entertainment. Individuals who have such a heightened predisposition are typically funny, humorous, spontaneous, unpredictable, impulsive, active, energetic, adventurous, sociable, outgoing, cheerful, and happy, and are likely to manifest playful behavior by joking, teasing, clowning, and acting silly” (p. 955).

Adult playfulness has not been in the main focus of mainstream research in psychology. However, there is theoretical work but also empirical data that speak for more research in this area. To name but a few, there is empirical evidence on relations of playfulness in adults with flow-experiences (Csikszentmihalyi 1975), enhanced group cohesion (Bowman 1987), creativity and spontaneity (Barnett 2007; Glynn and Webster 1992, 1993), intrinsic motivation (Amabile et al. 1994), quality of life (Proyer et al. 2010), decreased computer anxiety (Bozionelos and Bozionelos 1997), positive attitudes towards the workplace, job satisfaction and performance, and innovative behavior (Yu et al. 2007), and even academic achievement (Proyer 2011). Several of these findings argue for a positive relation of adult playfulness with various indicators of well-being. Playfulness, however, has not yet been systematically studied within a broad framework of positive psychological functioning. This study represents such an approach by using a comprehensive classification system of positive traits.

Positive psychology, the study of what is good in people (Seligman and Csikszentmihalyi 2000), may serve as a new “home” for research in playfulness in adults and may further stimulate research efforts for a better understanding of the role of playfulness within positive psychological functioning. Several research directions within positive psychology have great potential for linking up with the further exploration of playfulness. Research in positive emotions may serve as one example. For example, Fredrickson (1998) argues that to play and to be playful can facilitate the experience of joy (“[...] over time and as a product of recurrent play, joy can have the incidental effect of building an individual’s physical, intellectual, and social skills”, p. 305), which, in turn, may broaden a persons’ action-thought-repertoire and facilitate the development of new coping resources.

A different link, pursued in this study, is testing how playfulness relates to the “good character.” Thus far, playfulness in adults has not yet been studied in relation to a compendium of positive traits. Peterson and Seligman’s (2004) *Values-in-Action classification* (VIA) of strengths and virtues can serve as a framework for such a study. They argue that strengths are positively valued traits that enable the good life. Strengths are psychologically fulfilling and contribute to the well-being of a person. In the VIA-classification, three to five strengths are theoretically assigned to one of six universal virtues (wisdom and knowledge, justice, courage, humanity, temperance, and transcendence; see Dahlsgaard et al. 2005). The strengths are seen as the processes and mechanisms, which enable the practice of a virtue (e.g., pursuing love of learning, curiosity, or creativity for practicing wisdom).

Peterson and Seligman give synonyms for each of the strengths in their classification. One of the synonyms for humor is *playfulness*; which they briefly define as “humor [playfulness]: liking to laugh and joke; bringing smiles to other people.” This strength is assigned to the virtue of *transcendence* (along with appreciation of beauty and excellence, gratitude, hope, and religiousness). In their analysis of the virtuousness of item contents of current humor questionnaires, (Beermann and Ruch 2009a, b) found that humanity and wisdom were the virtues most frequently referred to. However, the other virtues in the classification could also be retrieved. Interestingly, Beermann and Ruch also found several references to playfulness in their analyses such as intellectually playing with language was related to the virtue of wisdom (see also Müller and Ruch

2011). Taken together, these findings substantiate the idea of playfulness being related to different strengths other than humor.

As said, Peterson and Seligman (2004) use *playfulness* as being synonymous to *humor*. However, the chapter on humor [playfulness] in the book describing the classification deals almost exclusively with *humor* in its narrow sense but less so with *playfulness*. For example, only tests for (various aspects of) humor but no playfulness measures are listed in an overview of instruments. Among the current meanings of humor these three are listed “(a) the playful recognition, enjoyment, and/or creation of incongruity; (b) a composed and cheerful view on adversity that allows one to see its light side and thereby sustain a good mood; and (c) the ability to make others smile or laugh” (p. 584). There is one direct reference to playfulness (“playfully” dealing with incongruity) and, perhaps implicitly, the idea that playful behavior or a playful outlook helps making others smile or laugh. Thus, one of the aims of the present study is testing how humor in the VIA-classification relates to playfulness-scales that were independently developed from research on character strengths.

It is evident that there should be a positive relation between greater playfulness and the strength of humor, but it is expected that also other strengths demonstrate robust relations. For example, creativity is frequently seen as incremental to playfulness (e.g., creative playfulness in Glynn and Webster 1992). Lieberman (1977) sees spontaneity (with manifest joy and sense of humor) as one core component of playfulness. Spontaneous behavior (assigned to gregariousness) was one of the facets identified by Barnett (2007) as one of the underlying components of playfulness. There are also data towards a positive relation between playfulness and divergent thinking (e.g., Barnett and Kleiber 1982; Truhon 1983).

Also, curiosity and love of learning are expected to relate positively to playfulness. Similar explanations might apply as given above for creativity but one might also argue that greater playfulness relates to exploratory behavior that may facilitate learning and curiosity. Additionally, there is also evidence that playfulness should be related to the perception of aesthetics and the approval (and low disapproval) of abstract, complex pieces of art (Proyer RT: Development and initial assessment of a short measure for adult playfulness: The SMAP, submitted), which may manifest itself in the appreciation of beauty and excellence.

Furthermore, it was expected that playfulness relates negatively to strengths relating to restraint and temperance (e.g., prudence or self-regulation)—i.e., those strengths that protect against excess. Playful adults are seen as being spontaneous, active, creative, and willing to take certain risks (e.g., joking around in social relationships, which may or may not be perceived as playful by others, too). This opposes restraining oneself and ones playful behavior. Contrarily, it was expected that strengths assigned to the virtue of humanity relate positively to playfulness (i.e., love, kindness, and social intelligence). Playfulness seems to be a way of effectively displaying interpersonal strengths; for example, when playfully expressing love towards other people or, for example, in social interaction situations (e.g., discussions, group meetings, or interviews) playfully easing tension or enabling creative processes in a group. Furthermore, playful adults are seen as approaching life with excitement and energy, which is Peterson and Seligman’s (2004) short definition of zest.

The main aim of the present study was to examine the relations of adult playfulness with strengths of character. This was tested by means of a global assessment of playfulness as an indicator for an easy onset and high intensity of playful experiences along with the frequent display of playful activities. Additionally, a scale that covers five different facets of playfulness (i.e., spontaneous, expressive, creative, fun, and silly) was used. This allows differentiating between various aspects of playful behavior and to test which of these relate to virtuousness and which do not. In more detail, spontaneous playfulness (e.g., free-spirited, impulsive) was expected to relate to the strengths of creativity but also humor. However, some of the strengths (like prudence or self-regulation) seem to oppose spontaneous playful behavior and were, therefore, expected to demonstrate negative relations. Expressive (e.g., excitable, open) playfulness was expected to demonstrate robust relations with strengths that indicate activity and engagement (e.g., zest, bravery) but also with strengths that may be related to producing something and seeking or being able to appreciate excellence such as creativity or awe (appreciation of beauty and excellence). For creative playfulness (e.g., imaginative, active), the main research question was, what strengths would demonstrate relations beyond creativity. One might argue that the other strengths of the virtue of wisdom and knowledge should demonstrate positive relations (e.g., curiosity) but also that appreciation of beauty and excellence and humor should be strongly related with creative playfulness. Again, also zest was expected to demonstrate robust relations as greater creative playfulness should manifest itself in actual activities. Strongest relations were expected with fun-oriented (e.g., exciting, bright) playfulness as this may serve as a lubricant in social situations and, therefore, relate to strengths of humanity but also help and facilitate acquiring wisdom and knowledge (e.g., via enjoying curious explorations or experiencing joy in learning). Furthermore, engagement in the sense of zest was expected to relate to exhibiting fun-oriented playfulness. Finally, silly-variants of playfulness (e.g., childlike, whimsical) were expected to exist independently from strengths or may even yield negative relations (e.g., with strengths assigned to the virtue of temperance such as self-regulation or modesty).

Additionally to these analyses, a regression analysis was conducted for testing the contribution of strengths to the explanation of variance in playfulness; especially, for testing whether the whole variance was accounted for by humor and which strengths were predictive beyond humor.

## Methods

### Sample

The sample consisted of 268 adults. Two were 17 years old and the others were between 18 and 65 ( $M = 29.0$ ,  $SD = 9.1$ ). Slightly more than one quarter were males ( $n = 69$ ; 25.7%). More than a third ( $n = 94$ ; 35.1%) held a degree from university or were currently students, while 48.9% ( $n = 131$ ) had a degree from school that would allow them to study. About one fifth ( $n = 55$ ; 20.5%) reported being married.

### Instruments

The *Adult Playfulness Scale* (APS; Glynn and Webster 1992, 1993) is a list of 32 adjectives. Of these, twenty-five are being scored and five facets of adult playfulness can be computed; i.e., *spontaneous* (e.g., spontaneous vs. disciplined, impulsive vs. diligent; the

alpha-coefficient in this sample was .74), *expressive* (e.g., bouncy vs. staid, open vs. reserved;  $\alpha = .66$ ), *fun* (e.g., bright vs. dull, excitable vs. serene;  $\alpha = .65$ ), *creative* (e.g., imaginative vs. unimaginative, active vs. passive;  $\alpha = .66$ ), and *silly* (e.g., childlike vs. mature, whimsical vs. practical;  $\alpha = .69$ ). Answers are given on a 7-point scale. Glynn and Webster (1992) report satisfying internal consistencies and test-retest correlations and a robust factor solution for their instrument. The APS has been used widely in research; e.g., Bozionelos and Bozionelos studied its relation with computer anxiety (1997) or instrumental and expressive traits (1999); it has been used in research in advertisement (Caruana and Vella 2003) or in work-related research in intrinsic and extrinsic motivation Amabile et al. 1994). As in the study by Proyer (2011), the German version of the scale has been used.

The *Short Measure of Adult Playfulness* (SMAP; Proyer RT: Development and initial assessment of a short measure for adult playfulness: The SMAP, submitted) is a five-item questionnaire for the assessment of playfulness in adults. It was developed for providing a global, cognitive self-description of playfulness. A sample item is "I am a playful person." All items are positively keyed and answers are given on a 4-point answer format (from 1 = "strongly disagree" to 4 = "strongly agree"). High scores in the SMAP indicate an easy onset and high intensity of playful experiences along with the frequent display of playful activities. Proyer reports best fit for a one-dimensional solution of the data (in exploratory and confirmatory factor analyses) and high internal consistencies ( $\geq .80$  in different samples). Furthermore, he found correlations in the expected direction and range with the need for play scale of the *Personality Research Form* (Jackson, 1984), Glynn and Webster's (1992), (1993) Adult Playfulness Scale, and a total score out of a list of adjectives set together based on Barnett's (2007) study, which was interpreted as support for its convergent validity. Support for the divergent validity of the instrument was found in negative relations with the seriousness scale out of the State-Trait-Cheerfulness Inventory (Ruch et al. 1996). Additionally, high and low scorers in the SMAP differed in the expected way in ratings for approval and disapproval of high and low complexity in workplaces and pieces of art. The alpha-coefficient in this sample was .86.

The *Values in Action Inventory of Strengths* (VIA-IS; Peterson et al. 2005; in the German adaptation by Ruch et al. 2010) consists of 240 items for the subjective assessment of 24 character strengths of Peterson and Seligman's (2004) VIA classification (10 items per strength). It uses a 5-point Likert-style format (from "very much like me" through "very much unlike me"). A sample item is "I never quit a task before it is done" (persistence). Ruch et al. (2010) reported good internal consistencies (median = .77), stabilities (the median test-retest correlation across nine months was .73), and provide information on the factorial as well as convergent validity of the German form, which has already been used in several studies (e.g., Peterson et al. 2007; Proyer and Ruch 2009; Ruch et al. 2010). The alpha-coefficients in this sample ranged from .71 (*honesty*) to .92 (*religiousness*; median = .78).

## Design

Participants completed all questionnaires in an online study. This was advertised by means of leaflets handed out at public transport stations, via mailing lists, and it was posted in several online forums. Participants were not paid for their services but

received a feedback on their individual strengths profile (VIA-IS) after completion of the study.

Correlational analyses (Pearson correlations) were conducted for testing the relation between playfulness and character strengths. A hierarchical regression analysis with playfulness (SMAP) as criterion has been conducted; demographics were entered in a first step followed by the twenty-four VIA-strengths. A principal component analysis has been conducted for the VIA-IS. The inspection of the Eigenvalues suggested the extraction of five factors, which were rotated to the Varimax criterion. The five factor scores were correlated (Pearson) with the playfulness scales.

## Results

An analysis of the descriptive statistics for all scales that entered the study indicated that they were normally distributed. Mean scores and standard deviations were comparable with earlier studies that used these instruments and the scales showed the same (small) correlations with demographics; e.g., greater religiousness in higher age ( $r(265) = .17, p < .01$ ). Therefore, all subsequently conducted analyses controlled for a potential impact of demographics. Correlation coefficients among the scales are given in Table 1 (for the interpretation of single correlation coefficients it needs to be

**Table 1 The Relation of Adult Playfulness and its Facets with Strengths of Character (Partial Correlations Controlling for Sex and Age)**

VIA-IS	SMAP	SPO	EXP	CRE	FUN	SIL	R <sup>2</sup>
Creativity	.33**	.27**	.28**	.65**	.21**	.19**	.45
Curiosity	.21**	.16*	.20**	.43**	.44**	-.10	.32
Open-mindedness	.00	-.24**	-.22**	.09	-.01	-.22**	.14
Love of learning	.13*	-.04	.07	.29**	.19**	-.12*	.15
Perspective	.07	-.10	-.08	.20**	.19**	-.22**	.14
Bravery	.25**	.19**	.30**	.45**	.36**	.02	.23
Persistence	-.03	-.30**	-.03	.17**	.18**	-.34**	.29
Honesty	.02	-.09	-.02	.07	.12*	-.26**	.10
Zest	.20**	.22**	.32**	.43**	.60**	-.09	.46
Love	.22**	.19**	.32**	.33**	.53**	-.02	.35
Kindness	.23**	.12*	.19**	.15*	.28**	.00	.11
Social Intelligence	.15*	.07	.15*	.31**	.42**	-.07	.24
Teamwork	.21**	.06	.14*	.11	.32**	-.06	.12
Fairness	.13*	-.02	.00	-.02	.22**	-.12*	.10
Leadership	.19**	.06	.11	.18**	.27**	-.07	.09
Forgiveness	.09	.02	-.06	.03	.22**	-.13*	.11
Modesty	.02	-.25**	-.30**	-.24**	-.07	-.24**	.15
Prudence	-.08	-.41**	-.34**	-.03	.02	-.41**	.29
Self-regulation	-.09	-.32**	-.13*	.10	.09	-.37**	.21
Beauty	.35**	.22**	.28**	.40**	.31**	.11	.21
Gratitude	.24**	.13*	.20**	.16*	.40**	-.07	.22
Hope	.15*	.14*	.15*	.28**	.59**	-.15*	.44
Humor	.41**	.42**	.29**	.33**	.49**	.32**	.30
Religiousness	.09	.10	.14*	.16*	.26**	-.02	.09
Median	.15	.06	.14	.18**	.27**	-.10	.21

*N* = 261-263. VIA-IS = Values in Action Inventory of Strengths; SMAP = Short Measure of Adult Playfulness; SPO = spontaneous; EXP = expressive; CRE = Creative; SIL = silly; R<sup>2</sup> = multiple correlation coefficient between all facets of the APS and a strength.

\* $p < .05$ . \*\* $p < .01$ .

highlighted that those  $\geq .23$  were significant at  $p < .05$  after controlling for multiple comparisons; Bonferroni-correction).

Table 1 shows that primarily the strengths of creativity, appreciation of beauty and excellence, and humor (all  $r^2 \geq .11$ ) were associated with greater playfulness in the sense of an easy onset and high intensity of playful experiences along with the frequent display of playful activities (SMAP). At a global level, those strengths theoretically assigned to the virtues of temperance (e.g., self-regulation) demonstrated the comparatively lowest correlations.

The creative- (i.e., imaginative, active) and the fun-variants of playfulness (i.e., bright, exciting) yielded the numerically comparatively highest correlations with strengths at the level of the facets of playfulness. Particularly (based on the squared multiple correlation coefficient), the strengths of creativity, zest, love, hope, and humor yielded strong relations with the five facets of playfulness while religiousness, leadership, forgiveness, fairness, kindness, and honesty yielded comparatively numerically lower coefficients. It was evident that the strengths of the virtue of temperance (i.e., forgiveness, modesty, prudence, and self-regulation) yielded negative relations with playfulness. The silly variants of playfulness (i.e., childlike, whimsical) yielded (with the exception of creativity and humor) negative relations (or zero-correlations) with strengths of character indicating that not all exhibits of playfulness could be seen as being related to character strengths. Creativity and humor seemed to be an incremental part of playfulness; the global score as well as all variants of playfulness yielded significantly positive relations. The same was true for hope with the exception that a greater expression in silly-variants of playfulness was associated with lower endorsement of hope.

#### **Predicting adults' playfulness from character**

A hierarchical multiple regression analysis was computed with global playfulness as criterion. Age and gender entered the equation first (*method: enter*), followed by the twenty-four strengths in a second step (*stepwise*). This analysis yielded a multiple correlation coefficient of  $R^2 = .29$  ( $F[7, 266] = 14.99$ ,  $p < .001$ ) indicating that there was a substantial relation between playfulness and the "good character" (regression coefficients are in Table 2).

Table 2 shows that demographics accounted for only a minor part of the variance. Humor entered the equation as the most important predictor (17% overlapping variance) followed by appreciation of beauty and excellence, low prudence, creativity, and teamwork in the final step. Overall, the analysis shows that playfulness was robustly related to humor and that humor is its best predictor out of the VIA-classification, but that other strengths also contributed to the prediction to playfulness.

#### **Five broader dimensions of virtuousness**

Ruch and colleagues (2010) report a five-factor solution for the German version of the VIA-IS. When analyzing the present data in the same way as in the Ruch et al. study (not reported here in detail), the five factors could be well replicated (this is also the solution that has been reported for the US-version of the VIA-IS; Peterson and Seligman 2004); i.e., *interpersonal strengths* (e.g., leadership, teamwork), *emotional strengths* (e.g., zest, humor), *strengths of restraint* (e.g., prudence, self-regulation), *intellectual strengths* (e.g., creativity, curiosity), and *theological strengths* (e.g., religiousness,

**Table 2 Summary of Hierarchical Regression Analysis for Variables Predicting Adult Playfulness in Demographics and Character Strengths (N = 266)**

Variable	B	SE B	β
Step 1			
Sex	-0.05	.09	-.03
Age	0.00	.00	-.04
Step 2			
Sex	-0.03	.08	-.02
Age	0.00	.00	-.05
Humor	0.45	.06	.41***
Step 3			
Sex	-0.07	.08	-.05
Age	-0.01	.00	-.08
Humor	0.36	.06	.33***
Beauty	0.29	.07	.25***
Step 4			
Sex	-0.12	.08	-.08
Age	-0.01	.00	-.10
Humor	0.37	.06	.34***
Beauty	0.35	.07	.29***
Prudence	-0.23	.07	-.20***
Step 5			
Sex	-0.09	.08	-.06
Age	-0.01	.00	-.12
Humor	0.34	.06	.31***
Beauty	0.27	.08	.23***
Prudence	-0.23	.06	-.20***
Creativity	0.16	.06	.17**
Step 6			
Sex	-0.10	.08	-.06
Age	-0.01	.00	-.10
Humor	0.29	.07	.26***
Beauty	0.24	.08	.20***
Prudence	-0.29	.07	-.25***
Creativity	0.18	.06	.19**
Teamwork	0.17	.08	.14*

Note. Beauty = Appreciation of Beauty and Excellence.  $\Delta R^2 = .002$  for Step 1 (*n.s.*);  $\Delta R^2 = .17$  for Step 2 ( $p < .001$ );  $\Delta R^2 = .05$  for Step 3 ( $p < .001$ );  $\Delta R^2 = .04$  for Step 4 ( $p < .01$ );  $\Delta R^2 = .02$  for Step 5 ( $p < .01$ );  $\Delta R^2 = .01$  for Step 6 ( $p < .05$ ). \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

gratitude). It was also tested how these broader factors were related to playfulness. The respective factor scores were correlated with the SMAP and the scales of the APS (see Table 3).

Table 3 shows that adult playfulness was primarily related to intellectual and emotional strengths. Strengths of restraint were negatively associated (or uncorrelated) with playfulness. It also existed widely independently from theological and interpersonal strengths. The numerically highest relations were found between fun-variants of playfulness and emotional strengths ( $r^2 = .41$ ), between intellectual strengths and creative playfulness ( $r^2 = .30$ ), and between greater spontaneous ( $r^2 = .26$ ) and silly-variants ( $r^2 = .27$ ) of playfulness and lower endorsement of strengths of restraint.

As for the single strengths, a hierarchical multiple regression analysis was computed with global playfulness as criterion but, this time, with the five factors as predictors.

**Table 3 Correlations between Indicators of Adult Playfulness and Factor Scores for a Five-factor Solution for the Values-in-Action Inventory of Strengths**

VIA-factors	SMAP	SPO	EXP	FUN	CRE	SIL
Interpersonal	.14*	-.04	-.10	.09	-.14*	-.08
Emotional	.22**	.32**	.42**	.64**	.25**	.04
Restraint	-.24**	-.51**	-.34	-.07	.00	-.52**
Intellectual	.33**	.26**	.26**	.24**	.55**	.18**
Theological	.08	.13*	.14*	.13*	.14*	.06

Note.  $N = 268$ . SMAP = Short Measure of Adult Playfulness; SPO = spontaneous; EXP = expressive; CRE = Creative; SIL = silly-playfulness.

\* $p < .05$ . \*\* $p < .01$ .

Again, demographics were entered first followed by the strengths factors (stepwise). In this analysis (not shown here in detail;  $R^2 = .24$  ( $F[5, 266] = 13.85$ ,  $p < .001$ ), intellectual strengths ( $\Delta R^2 = .11$ ;  $\beta = .34$ ,  $p < .001$ ), lack of strengths of restraints ( $\Delta R^2 = .06$ ;  $\beta = -.26$ ,  $p < .001$ ), emotional strengths ( $\Delta R^2 = .05$ ;  $\beta = .29$ ,  $p < .001$ ), and interpersonal strengths ( $\Delta R^2 = .02$ ;  $\beta = .14$ ,  $p < .05$ ) were significant predictors in the final step (demographics did not contribute significantly to the prediction).

## Discussion

This study tested adult playfulness for the first time in its relation to a framework of positive psychological functioning. Two different approaches were used for assessing playfulness: (a) an overall indicator of playfulness in the sense of an easy onset and high intensity of playful experiences along with the frequent display of playful activities and (b) five facets of playfulness (spontaneous, expressive, fun, creative, and silly) for being able to comment on different levels of playful behavior. Playfulness can be well described in terms of specific character strengths. Humor is used synonymously with playfulness in the VIA-classification of character strengths (Peterson and Seligman 2004). This is also reflected in the empirical findings. Out of the twenty-four VIA-strengths, humor is the best predictor for global playfulness. This fits well to theoretical accounts in playfulness research. Lieberman (1977) sees playfulness as a combination of spontaneity, manifest joy, and the sense of humor. McGhee (2010) describes humor as a form of play—the play with ideas and a playful frame of mind is one of the preconditions for humor to occur. Thus, in this sense, humor appears to be narrower, a variant of play. However, some forms of humor do not relate to play at all, so humor and playfulness are best seen as strongly overlapping without being identical.

While this study provides support for the notion of a close relation between humor and playfulness, the operationalization of the measurement of humor in the VIA-IS (Peterson et al. 2005), however, seems to refer more strongly to humor than to playfulness. When examining the content of the items of the VIA-IS humor-scale, it can be noted that only three out of the ten items refer to playfulness while the others refer to humor directly (e.g., having a good sense of humor, or feeling good when smiling at others or making others laugh). Of these three, only one has a direct reference to play (i.e., seeing life more as a playground than a battlefield) while the other two (i.e., trying to have fun in lots of different situations and trying to make everything one does with some humor) refer only indirectly to playfulness (e.g., by facilitating experiencing fun/humor in a broad range of daily situations). This may provide ground for a future more in-depth analysis of the inter-relation between humor and playfulness as strength

of character. Also, it would be interesting to test the impact of interventions of humor in comparison to interventions of playfulness on well-being and in whether they have distinct effects (McGhee 2010; Ruch et al. in press).

Clearly, humor was the single strongest predictor to the strength-based prediction of playfulness. However, the strengths of appreciation of beauty and excellence, (lower) prudence, creativity, and teamwork were also predictive. There is a long tradition of research that relates playfulness to creativity (see e.g., Barnett and Kleiber 1982, 1984; Lieberman 1977). This relation was expected as well as the association with appreciation of beauty and excellence. One might argue that awe can be more easily experienced with greater flexibility and willingness to engage in arts or related fields. In a recent study (Proyer RT: Development and initial assessment of a short measure for adult playfulness: The SMAP, submitted), greater playfulness was associated with greater approval and lower disapproval of complex, abstract paintings while playful and nonplayful participants did not differ in their (dis-)approval of simple geometrical figures.

In the case of teamwork, one might argue that there are some studies towards an increase in group cohesion in playfulness at work (Bowman 1987) but also that, more generally spoken, playfulness may serve as a lubricant in productive work-relations. A playful interaction may help releasing tension or open up the field for new ideas in a brainstorming situation. This, in turn, may facilitate the experience of positive emotions, which could stimulate an upward spiral towards a broadened action-thought repertory and the building of new personal resources (Fredrickson 1998). Recently, Kolb and Kolb (2010) described a case study in which a playful activity in a team created a “ludic learning space,” which evidently helped to promote learning.

Lower prudence in playful adults may be a hint on extending the study of playfulness towards its “darker sides.” There may be a relation to sensation or risk seeking or of crossing borders in social interactions (e.g., when joking around or teasing others playfully turns into laughing *at* others instead of laughing *with*; see Ruch and Proyer 2009). Along with the finding that not all variants of playfulness seem to be virtuous—the exception were the silly-variants (e.g., childlike, whimsical) of playfulness—this may be seen not only as a call for more studies towards playfulness in adults in general but also towards a classification that also encompasses its darker, more negatively connoted aspects.

Findings suggest clearly that the strengths assigned to the virtue of temperance (i.e., forgiveness, modesty, prudence, and self-regulation) or strengths of restraint were negatively related to playfulness. Thus, strengths like self-regulation or modesty do not seem to be among the core strengths of playful adults. Of course, the present data does not allow for causal inferences but it seems evident that too much of self-regulation or modest behavior may hinder the production or sharing of unconventional or new ideas or may hinder spontaneity to occur.

Primarily intellectual and emotional strengths were positively related to playfulness in adults. The latter might be of interest when thinking of the role that playfulness can play in social situations; for example, as a mean of facilitating or strengthening social bonds. Also, the field of intimate partnership and relationships has hitherto not extensively been studied. In any case, the results clearly support the notion that playfulness can be described in terms of the good character. This study can serve as a starting

point for further examinations of the role of playfulness in relation to the “good life” from a positive psychology-perspective. Its contribution to subjective and psychological well-being and its role in a productive and healthy stance towards work will be addressed in follow-up studies.

Limitations of the study are the sample that was collected for this study, which consisted of more women than men (at a ratio of 1 : 4) and mainly of younger participants. Thus, a replication of the findings with a more balanced sample but also by including further data (e.g., observer reports) would be needed for further substantiating the findings. Additionally, it needs to be acknowledged the APS has been criticized in the literature as play in this conceptualization is seen as opposite of work on a single continuum and for psychometric shortcomings (see e.g., Barnett 2007; Krueger 1995). Therefore, follow-up studies should also consider alternative measures but also different data sources (e.g., behavior observations, diary methods, etc.).

### Conclusions

There is a robust relation between playfulness and strengths of character. Humor is the best predictor of adult playfulness without indicating redundancy. At a theoretical level, humor was interpreted as being a variant of play. Overall, greater inclinations towards intellectual but also emotional strengths and lower towards strengths of restraint seem to relate with playfulness. One might argue that playfulness can be seen as an intellectual act, which opposes the view of playfulness in adults as being childish and without any greater sense. Playfulness also may have a potential in serving as a lubricant in social situations but also helping in work-related settings (e.g., in meetings or group efforts). This study provides ground for a more thorough analysis of the contribution of playfulness to the well-being in adults. Clearly, there is a relation between exhibiting playfulness and the experience of positive emotions. However, playfulness also seems to contribute to the good life in various forms and further studies are needed for a better understanding of this relation.

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### Authors' contributions

RTP designed the study, collected the data, and provided the first draft of the manuscript. WR contributed to the design and revised the manuscript critically. The interpretation of the data and completing the manuscript was a joint process. All authors read and approved the final manuscript.

### Competing interests

The authors declare that they have no competing interests.

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