Humor, the PEN model of personality, and subjective well-being: Support for differential relationships with eight comic styles

Willibald Ruch*, Lisa Wagner & Sonja Heintz
University of Zurich, Switzerland
*E-mail: w.ruch@psychologie.uzh.ch

Original Article

ABSTRACT

IT Il presente studio esamina le relazioni di otto stili comici con il modello di personalità di Eysenck ed il benessere soggettivo. Ad un campione di 252 adulti è stata somministrata una batteria di test comprensiva di diversi strumenti: il Comic Styes Markers (strumento atto a valutare otto stili comici: divertimento, umorismo, nonsense, arguzia, ironia, satira, sarcasmo e cinismo), la forma breve del questionario di Eysenck sulla personalità e misure del benessere soggettivo. I risultati hanno mostrato che tutti e tre i superfattori erano predittivi degli stili comici: l'Estroversione è emersa predire gli stili positivi (divertimento, arguzia) mentre il Nevroticismo predice gli stili di derisione (sarcasmo e cinismo). Lo Psicoticismo è emerso essere legato a tutti gli stili comici tranne che all'ironia. Inoltre, gli stili comici predicono il benessere soggettivo sia positivamente (umorismo, divertimento e arguzia) sia negativamente (sarcasmo e cinismo). La validità incrementale degli stili comici oltre età, sesso e personalità è risultata piccola. Complessivamente, lo studio fornisce un iniziale supporto per evidenziare l'importanza di alcuni stili comici (in particolare umorismo, cinismo, divertimento, arguzia e sarcasmo) per il benessere soggettivo. Questa ricerca apre la strada a futuri studi volti ad esplorare i nessi causali sottesi a queste relazioni.

Parole chiave: Stili umoristici, umorismo, personalità, benessere soggettivo, affettività positiva, affettività negativa, soddisfazione della vita

EN The present study examines the correlations of eight comic styles with the Eysenckian system of personality and subjective well-being. A sample of adults (N = 252) completed the Comic Style Markers (assessing fun, humor, nonsense, wit, irony, satire, sarcasm, and cynicism), the short form of the Eysenck Personality Questionnaire, and measures of subjective well-being (the Satisfaction with Life Scale, the Positive and Negative Affect Schedule, and single items for domain-specific satisfaction). Results showed that the three personality superfactors were related to the comic styles, with extraversion relating to the light styles (fun, wit), and neuroticism relating to the mockery styles (sarcasm and cynicism). Psychoticism was related to all comic styles except for irony. Furthermore, the comic styles correlated with subjective well-being both positively (humor, fun, and wit) and negatively (sarcasm and cynicism). The unique overlap of the comic styles with subjective well-being beyond age, gender, and personality was small. Overall, the study provides initial support for the importance of certain comic styles (especially humor, cynicism, fun, wit, and sarcasm) for subjective well-being. These results pave the way for future intervention studies and experiments that explore the causalities underlying these relationships.

Keywords: Comic styles, humor, personality, subjective well-being, positive affect, negative affect, life satisfaction

1. Introduction

Individuals not only differ in their humor in terms of quantity but also quality. More recently, in psychology the expression 'humor styles' was used to refer to the qualities or flavors of humor. Craik, Lampert, and Nelson (1996) started the psychological study of styles of humor by identifying 10 styles of everyday humorous conduct (i.e., the socially warm, socially cold, reflective, boorish, competent, inept, earthy, repressed, benign and mean-spirited humorous styles) that they derived from the intercorrelations of 100 items depicting everyday humor behaviors. Not much later, Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003) proposed the study of affiliative, self-enhancing, aggressive, and self-defeating humor styles and they proposed that their use may be beneficial or detrimental to a person's well-being. In both approaches the humor styles are at a more general level of abstraction; that is, they depict compounds of humor behaviors or functions (that go together) rather than elementary styles. Furthermore, none of the proposed styles depicts a traditional category of humor, but they represent new constructs that describe clusters of more diverse humor behaviors or functions. Likewise, these styles do not stem from a theory, nor did they lead to a new theory of the styles. While a higher level of generality allows for a greater stability (i.e., a style covers a broad set of behaviors or functions) and validity as predictors for outcomes at a similar level of abstraction (e.g., traits), changes will be less easily induced and documented. It is also difficult to speak of "using" a style (as it is done in the literature), as styles represent the composite of different sets of behaviors or functions that may correlate but may yet be functionally independent from each other. As a consequence of these limitations, the utility of these concepts is lowered – despite the fact that there are many validation studies of the corresponding scales, namely the Humor Styles Questionnaire (e.g., Heintz, 2017; Martin et al., 2003; Ruch & Heintz, 2013, 2017) and the Humorous Behavior Q-Sort Deck (e.g., Craik et al., 1996; Ruch, Proyer, Esser, & Mitrache, 1996).

1.1. The Comic Style Markers

These two more general approaches to humor styles were supplemented recently by a proposal for more narrow styles, namely to study individual differences in engaging in fun, humor, nonsense, wit, irony, satire, sarcasm, and cynicism (Ruch, Heintz, Platt, Wagner, & Proyer, 2018). These eight humor styles (actually called comic styles)[1] were frequently discussed in the past, also in different disciplines. For example, Schmidt-Hidding (1963, pp. 50–51; English translation by Ruch, 2012) characterized them according to seven features, which he derived rationally based on descriptions of the eight comic styles in the literature. Specifically, the features are intention/goal (examples taken from wit: to illuminate like a flashlight; desire for being brilliant), object (words and thoughts), attitude of the agent (tense, vain, takes oneself seriously), behavior towards other people (callous, malicious; without sympathy for "victims"), ideal audience (educated society that appreciates wit), method (surprising punch line; "sensation" of the unusual combination), and linguistic peculiarities (brief, pointed, enjoying contrasting stylistic devices).

---

[1] The historical nomenclature stems from the field of aesthetics where the funny (or the comic) is distinguished from other aesthetic qualities. In this tradition, humor is one element of the funny, as are the other seven comic styles. The alternative current use of "humor" in contemporary psychological research is as an umbrella term for all phenomena of the funny (for more details, see Ruch et al., 2018).

Based on several sources (among them the descriptions by Schmidt-Hidding, 1963), Ruch et al. (2018) generated descriptions for these comic styles to derive items that can be used as preliminary markers (the Comic Style Markers, CSM) until a definite instrument is being constructed. The CSM was tested empirically in German- and English-speaking samples, and the scales proved to measure the eight comic styles reliably (internal consistency and test-retest reliability) and validly (self-other agreement, factorial, criterion, and discriminant validity). While it was decided to study the eight styles separately, factor analysis suggested a hierarchical model with three second-order factors (mockery, good humor, and enjoyment of humor) as well as a general third-order factor. The mockery factor was loaded by sarcasm (sample item: "Biting mockery suits me") and cynicism (sample item: "I have a cynical attitude towards some common norms and moral concepts; I don't believe in them and mostly find them ridiculous") and to a lower extent by irony (sample item: "I can converse with close friends in a way that only we know what is meant, but outsiders don't sense that it is merely irony") and satire, or corrective humor (sample item: "I caricature my fellow humans' wrongdoings in a funny way to gently urge them to change"). The light styles were split into a factor of enjoyment of humor that was loaded by fun (sample item: "I occasionally play harmless tricks on my friends and thus make them laugh") and nonsense (sample item: "I like humor when it aimlessly plays with sense and nonsense") and a factor of good humor that was composed of humor (sample item: "I am a realistic observer of human weaknesses, and my good-natured humor treats them benevolently") and wit (sample item: "I can make relationships between disconnected ideas or thoughts and thus create quickly and pointedly a comical effect.").

The initial study (Ruch et al., 2018) showed that older individuals scored higher in humor, nonsense and wit, and lower in irony, sarcasm, cynicism, and fun (small effects). Men scored higher in all comic styles (except for humor), with the largest differences occurring for the mockery styles. Higher education related to higher scores in wit and irony, and wit also seemed to reflect cognitive ability (i.e., verbal intelligence). All eight styles showed different patterns of correlations with character strengths and the traits of the five-factor model of personality. For example, fun showed the highest correlation with extraversion, sarcasm showed the highest (negative) correlation with agreeableness, humor showed the highest correlation with emotional stability, and wit showed the highest correlation with culture/openness to experiences. , the comic styles were related to character strengths; for example, wit, humor, and fun were positively related to emotional strengths, sarcasm and cynicism were negatively related to interpersonal and theological strengths, fun was negatively related to strengths of constraint, and wit was positively related to intellectual strengths. Another study (Ruch & Heintz, 2016) used one-item measures for each of the eight comic styles and showed that they were not interchangeable with the previous conceptualizations of humor styles by Craik et al. (1996) and Martin et al. (2003).

1.2 Humor and the PEN Model of Personality

The PEN (psychoticism, extraversion, neuroticism) system is a descriptive taxonomy of personality derived from factor analytic studies (Eysenck & Eysenck, 1985). The PEN model assumes a hierarchical arrangement of personality traits with psychoticism (versus impulse control), extraversion (versus introversion), and neuroticism (versus emotional stability) located at the highest level. They are referred to as types (second-order factors, or superfactors) as opposed to traits (first-order factors) that are defining them. The type concept of psychoticism is made up of traits like aggressive, cold, egocentric, impersonal, impulsive, antisocial,

unempathetic, creative, and tough-minded. Extraversion is defined by traits such as sociable, lively, active, assertive, sensation-seeking, carefree, dominant, surgent, and venturesome. Finally, neuroticism is extracted from the intercorrelation of traits like anxious, depressed, guilt feelings, low self-esteem, tense, irrational, shy, moody, and emotional.

Some items that measure the super factors already contain reference to humor, such as liking to laugh and to entertain others (extraversion) or liking to ridicule people and upsetting them (psychoticism; Eysenck & Eysenck, 1976). There is ample evidence that the PEN model of personality is related to both the appreciation of humor (i.e., liking and disliking of jokes and cartoons) and to self- and peer-reports of the sense of humor or components of humor. Extraversion predicted the inclination to laugh (Ruch & Deckers, 1993; Ruch, 1996), the frequency of humor production (Köhler & Ruch, 1996), and it was also a predictor of general funniness irrespective of the type of jokes and cartoons (Hehl & Ruch, 1985; Ruch, 1992; Ruch & Hehl, 1985). Hence, we expect that extraversion will mostly relate to fun, humor, and wit.

Neuroticism represents an inclination to negative emotions that also involves intrinsically enjoyable stimuli and situations such as humor and laughter. This might involve the fear of being laughed at (Ruch, Harzer & Proyer, 2013) and generally finding jokes and cartoons aversive (i.e., irrespective of type of humor; Ruch, 1992; Ruch & Hehl, 1985). Ruch (1994) also speculated that "N might relate to the aspects of losing ones sense of humor under stressful conditions […], or being habitually predominantly ill-humored or sad" (p. 234). Ruch et al. (2018) found emotional stability to be primarily positively correlated with humor and wit, and negatively with sarcasm. We thus expect a similar (reversed) pattern for neuroticism.

While extraversion determines the threshold of the positive affective response to a humor stimulus (covert amusement, smiling, or laughter), psychoticism might relate to the ease or difficulty with which a humor-related stimulus gains attention and is processed adequately, that is, in a playful frame of mind. This hypothesis is in line with the finding that only those items of the Situational Humor Response Questionnaire (Martin & Lefcourt 1984) correlated with psychoticism that depict situations that are of different relevance for high and low scorers in psychoticism (Ruch & Deckers, 1993). Furthermore, Ruch and Hehl (1985) reported that a self-report measure of cynicism and aggressive humor (defined as the tendency of people to engage in and to appreciate funny hostile messages) correlated with measures of aggressivity, extraversion, and assertiveness, but also negatively with social desirability. A related laughter-related trait, katagelasticism (i.e., the joy of laughing at others), was positively correlated with self-reports of psychopathy (Proyer, Flisch, Tschupp, Platt, & Ruch, 2012) and negatively with both agreeableness and conscientiousness (Ruch et al., 2013). In the recent study (Ruch et al., 2018), the mockery styles, in particular cynicism and sarcasm, were negatively related to agreeableness (and to a lesser extent to conscientiousness). We thus predict psychoticism to be positively correlated with the mockery styles.

1.3 Humor and Subjective Well-Being

The comic styles will also be differently related to happiness or well-being. Subjective well-being has affective (high positive and low negative affect) and cognitive (general life satisfaction and satisfaction in different life domains) components (Diener, Suh, Lucas, & Smith, 1999). There are various reasons that humor could be linked with subjective well-being, and in fact several such studies were conducted (for overviews, see Martin, 2007; Ruch & Hofmann, 2017). The use of comic styles could lead to outcomes that are relevant to well-being. Generally speaking, the

light styles (fun, humor, nonsense, wit) should be conducive to positive emotions (such as amusement, empathy, intellectual enjoyment, or pride), and hence they could lead to higher scores in the affective part of well-being. Humor should ameliorate adversity, negative emotions and stress, and might relate negatively to negative affect, while sarcasm and cynicism should be conducive to negative affect due to their hostility and irritation components. Humor should lower the distance to others and fun should facilitate group cohesion and positive affect by laughing together and by enjoying playful interactions. By contrast, the mockery styles should create distance and thus negatively influence well-being by lowering the quality of relationships. These correlations need to be established in a first study and should later be tested for causality. It should be noted that often causality is inferred from humor to well-being. For the comic styles, however, also the contrary might hold true. For example, low subjective well-being might lead to engaging in cynicism or sarcasm, or third variables (such as broad personality traits) might influence the relationship between comic styles and well-being.

In this study, cross-sectional relationships are investigated, paving the way for future studies that focus on the causality underlying these relationships. We thus expect the light styles (i.e., fun, humor, nonsense, and wit) to be positively related to positive affect, while sarcasm and cynicism should be positively related to negative affect. Additionally, humor should be negatively related to negative affect. We do not have specific expectations for the cognitive aspects of subjective well-being (i.e., general and domain-specific satisfaction), with the exception of the social relationship component: This component should correlate positively with fun and humor and negatively with sarcasm and cynicism.

Recent research underlined the importance of investigating the incremental validity of humor in explaining subjective well-being beyond already established constructs. As discussed before, humor is related to personality, and at the same time personality is related to subjective well-being (especially extraversion and neuroticism; e.g., DeNeve & Cooper, 1998; Soto, 2015; Steel, Schmidt, & Shultz, 2008). Hence, the zero-order relationships between humor and subjective well-being might be inflated due to their overlaps with personality (e.g., Jovanovic, 2011; Ruch & Heintz, 2013, 2017). Thus, we also explore the variance that the comic styles can uniquely explain beyond demographics (age and gender) and the PEN personality model. We expect the explained variance to be small, yet still significant for the central comic styles (i.e., fun/humor and sarcasm/cynicism).

1.4 Aims of the Study

First, we examine the relationship between comic styles and the PEN model of personality to extend the nomological network of the comic styles. Second, we study the comic styles in relation to subjective well-being; that is, the relation to positive affect and negative affect, and to global and domain-specific satisfaction with life (i.e., testing concurrent criterion validity). Finally, we investigated whether the comic styles predict subjective well-being beyond demographic variables and the PEN model of personality (i.e., testing the incremental validity of the comic styles).

2. Method

2.1 Research Participants

Overall, the sample comprised 252 adults (76.2% females). Their mean age was 39.24 years ($SD = 16.52$; ranging from 18 to 80 years). Most participants indicated a Swiss (51.8%) or German

(42.3%) nationality, and the remaining ones were mostly from other German-speaking countries (Austria and Liechtenstein). About a third of the participants (36.9%) currently went to school or attended university.

2.2 Measures

The *Comic Style Markers* (CSM; Ruch et al., 2018) is a self-report questionnaire consisting of 48 marker items that capture the eight comic styles fun, humor, nonsense, wit, irony, satire, sarcasm, and cynicism. There are six marker items for each comic style (see the introduction for sample items), utilizing a seven-point response format from 1 (*strongly disagree*) to 7 (*strongly agree*). Internal consistencies for the German version ranged from .66 (humor) to .89 (cynicism), with most values being larger than .80. Also test-retest reliability (across 7–14 days) was high for all comic styles (.74–.89, *Mdn* = .87). In the present sample, internal consistencies (Cronbach's alpha) ranged from .74 (humor) to .89 (cynicism), with a median of .84.

The short form of the *Eysenck Personality Questionnaire-Revised* (EPQ-RS; Eysenck, Eysenck, & Barrett, 1985; German adaptation by Ruch, 1999) is a 50-item questionnaire containing four scales: Psychoticism (14 items), extraversion (12 items), neuroticism (12 items), and a lie scale (12 items). All items are answered on a dichotomous scale, with 0 (*no*) and 1 (*yes*). In the present sample, internal consistencies were .60 for psychoticism, .87 for extraversion, .80 for neuroticism, and .65 for the lie scale.

The trait version of the *Positive and Negative Affect Schedule* (PANAS; Watson, Clark, & Tellegen, 1988; German version by Krohne, Egloff, Kohlmann, & Tausch, 1996) was used to measure the frequency of positive and negative affective experiences. Participants rated how frequently they experienced each of 20 affective states in general on a five-point scale from 1 (*not at all*) to 5 (*extremely*). In the present sample, internal consistencies were .86 for both positive and negative affect.

The *Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a five-item self-report questionnaire to measure the personal evaluation of satisfaction with life in general. It utilizes a seven-point answer format from 1 (*strongly disagree*) to 7 (*strongly agree*). Diener et al. (1985) reported good psychometric properties with a high reliability (Alpha = .87), and test-retest reliability over 2 months (.82). The German version used in the present study yielded a high internal consistency (Alpha = .88).

In addition, single items were used to assess domain-specific life satisfaction. While there is no clear consensus on which domains are most relevant, Diener et al. (1999) mention seven domains: Work, family, leisure time, health, the self, and the own group. As suggested by Oishi and Diener (2001), we subsumed family and own group under the broader term *social relationships*, and thus assessed six domains with one item each. Participants were asked to rate for their satisfaction with each domain on a five-point scale from 1 (*very dissatisfied*) to 5 (*very satisfied*).

2.3 Procedure

The study was conducted online. All participants gave informed consent and participated voluntarily. The study was performed in accordance with the local ethical guidelines of the Faculty of Arts and Sciences at the University of Zurich. Additional measures were assessed that are not relevant for the aims of the present study. Some of these are reported in Ruch et al. (2018).

2.4 Analyses

Partial Pearson-moment correlations were computed to investigate the relationships of the comic styles with personality and subjective well-being. Since most of the scales (except for humor and extraversion) showed significant correlations with age and gender, these variables were controlled for in these analyses. For example, younger participants tended to score higher than older participants in fun, nonsense, irony, satire, sarcasm, and cynicism, as well as psychoticism and neuroticism. To test the degree of overlap of the comic styles with personality, standard multiple regressions were computed. Finally, to test the incremental relationships of the comic styles with subjective well-being, standard hierarchical regression analyses were conducted with the different measures of subjective well-being as criteria, in which age and gender were entered in the first step, the EPQ-RS scales were entered in the second step, and the comic styles were entered in the third step.

3. Results

3.1 Comic Styles and the PEN Model of Personality

The correlations between the PEN superfactors and the eight comic styles are presented in Table 1 (controlling for age and gender)[2]. Furthermore, standard multiple regressions assessed how much variance is explained in total in each comic style.

Table 1. *Descriptive Statistics and Partial Correlations of the Comic Style Markers with the Scales of the Eysenck Personality Questionnaire-Revised, Controlled for Age and Gender*

EPQ-RS	*M*	*SD*	Fun	Humor	Non.	Wit	Irony	Satire	Sarc.	Cyn.
P	2.89	1.98	.14*	.13*	.17**	.14*	.09	.17**	.23**	.32***
E	5.99	3.64	.41***	.28***	.14*	.35***	.02	.10	.03	-.06
N	5.45	3.13	-.12	-.19**	.00	-.16*	.12	.02	.26***	.25***
Lie scale	2.85	2.24	-.15*	-.11	-.17**	-.10	-.13*	-.10	-.19**	-.20**
R	–	–	.47***	.34***	.31***	.39***	.31***	.28***	.46***	.49***
Adj *R*²	–	–	.21***	.10***	.08***	.14***	.08***	.06***	.20***	.23***
M	–	–	4.02	4.77	4.53	4.43	4.23	3.91	3.55	3.65
SD	–	–	1.17	0.87	1.18	1.12	1.17	1.07	1.29	1.37

Note. N = 251–252. P = psychoticism, E = extraversion, N = neuroticism, Non. = nonsense, Sarc. = sarcasm, Cyn. = cynicism.
* $p < .05$. ** $p < .01$. *** $p < .001$.

[2] The zero-order correlations (i.e., when age and gender were not controlled for) were similar.

Sarcasm and cynicism were high among people high in psychoticism and neuroticism and low in the lie scale (small to medium effects). Moreover, fun, wit, and humor correlated positively with extraversion (medium to large effects), while nonsense showed a small positive correlation with extraversion. Small positive correlations were also found for fun, humor, nonsense, wit, and satire with psychoticism. Neuroticism correlated negatively with humor and wit, and the lie scale correlated negatively with fun, nonsense, and irony (small effects). Importantly, each of the comic styles exhibited a unique pattern of correlations with personality, with the strongest similarities occurring between sarcasm and cynicism. Still, sarcasm correlated numerically higher with neuroticism than with psychoticism, while this order was reversed for cynicism.

The regression analyses showed that humor, nonsense, irony, and satire only overlapped to a small extent with the EPQ-RS scales (<10% explained variance). Medium overlaps were found for the other four comic styles (i.e., fun, wit, sarcasm, and cynicism). This supports the notion that the comic styles do overlap with the PEN model of personality, but they are far from being interchangeable with it.

3.2 Subjective Well-Being and Satisfaction with Life Domains

The correlations between different measures of subjective well-being (positive and negative affect, general life satisfaction, and domain-specific satisfaction) and the eight comic styles (controlled for age and gender)[3] are shown in Table 2.

Table 2. *Descriptive Statistics and Partial Correlations between Comic Styles and Measures of Subjective Well-Being (Controlled for Age and Gender)*

SWB	*M*	*SD*	Fun	Humor	Non.	Wit	Irony	Satire	Sarc.	Cyn.
PA	32.82	6.12	.27***	.36***	.21**	.36***	.07	.10	-.09	-.15*
NA	18.85	6.18	-.02	-.15*	.04	-.05	.09	.09	.26***	.21**
LS										
General	4.51	1.30	.21***	.26***	.11	.21***	.09	.10	-.06	-.16*
Domains										
Work	3.59	1.02	.12	.15*	.03	.03	-.02	.00	-.15*	-.13*
Leisure time	3.89	0.92	.10	.13*	.08	.08	-.03	.00	-.12	-.14*
Health	3.82	0.98	.05	.08	-.02	.05	.03	.03	-.06	-.14*
Finances	3.50	1.22	.03	-.01	-.02	.02	-.06	-.01	-.09	-.05
Relationships	3.86	0.98	.18**	.19**	.01	.08	-.07	.00	-.12	-.17**
Self	3.60	0.98	.14*	.23***	.06	.17**	-.02	.04	-.09	-.09

Note. N = 251–252. PA = positive affect, NA = negative affect , LS = life satisfaction, Non. = nonsense, Sarc. = sarcasm, Cyn. = cynicism.
*p < .05. **p < .01. ***p < .001.

---

[3] The zero-order correlations were similar.

Table 2 shows that the light comic styles were positively correlated with positive affect, while cynicism correlated negatively with it. As expected, negative affect related positively to sarcasm and cynicism and negatively to humor. Life satisfaction was high for individuals high in fun, humor and wit (but not nonsense) and those low in cynicism. Looking at domain-specific satisfactions, humor yielded a cluster of small to medium-sized positive correlations (satisfaction with work, leisure time, social relationships, and self), and cynicism yielded negative correlations (work, leisure time, health, and social relationships). Additionally, fun related positively to the satisfaction with social relationships and the self, wit related positively to satisfaction with the self, and sarcasm related negatively to satisfaction with work (all small effects).

To investigate the incremental relationships of each comic style with subjective well-being beyond age, gender, and the PEN model of personality, we computed a series of standard hierarchical regression analyses (entering age and gender in a first step, personality in the second step, and the eight comic styles in a third step; see Table 3).

Table 3. *Standard Hierarchical Regression Analyses Predicting Subjective Well-Being from Demographic Variables, Personality (Eysenck Personality Questionnaire-Revised), and the Comic Styles (Comic Style Markers)*

Predictors	Positive affect		Negative affect		Life satisfaction	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1: Demographics		.03*		.04**		.05**
Gender	.01		.07		.04	
Age	.16*		-.17**		.22*	
Step 2: Personality (EPQ-RS)		.36***		.33***		.33***
Gender	.04		-.01		.10	
Age	.04		.02		.01	
EPQ-RS Psychoticism	-.07		.12*		-.16**	
EPQ-RS Extraversion	.42***		-.07		.22***	
EPQ-RS Neuroticism	-.36***		.58***		-.48***	
EPQ-RS Lie scale	.07		.04		.09	
Step 3: Comic styles (CSM)		.08***		.03		.05*
Gender	.04		.03		.11*	
Age	.07		.04		.06	
EPQ-RS Psychoticism	-.06		.10		-.15*	
EPQ-RS Extraversion	.34***		-.10		.18**	
EPQ-RS Neuroticism	-.30***		.55***		-.48***	
EPQ-RS Lie scale	.09		.05		.11*	
CSM Fun	-.06		.10		.02	
CSM Humor	.16*		-.16*		.08	
CSM Nonsense	.10		.03		.05	
CSM Wit	.14*		.05		-.03	
CSM Irony	.10		-.10		.16*	
CSM Satire	-.02		.08		.05	
CSM Sarcasm	-.05		.14		.09	
CSM Cynicism	-.13		-.05		-.18*	

Note. N = 251. Gender coded as 1 = male, 2 = female; Positive affect: Total R^2 = .46 (adjusted = .43). Negative affect: Total R^2 = .40 (adjusted = .36). Life satisfaction: Total R^2 = .43 (adjusted = .39). *p < .05. **p < .01. ***p < .001.

As shown in Table 3, extraversion was the strongest positive predictor and neuroticism the strongest negative predictor of subjective well-being. The eight comic styles were able to explain a small amount of additional variance in subjective well-being beyond demographic variables and personality (3–8% of explained variance). When predicting scores in positive affect, humor and wit showed positive and significant regression weights. The contribution of the comic styles in predicting negative affect was not significant overall; still humor emerged as a significant negative predictor. Finally, high scores in irony and low scores in cynicism predicted general life satisfaction. When the same analyses were performed with the domain-specific satisfactions as dependent variables, the comic styles did not explain a significant amount of incremental variance beyond age, gender, and personality in five of the six domains. The only significant incremental prediction was found for satisfaction with the self (change in R^2 of the comic styles = .02, p = .012), in which humor was a significant positive predictor (beta = .15, p = .012).

4. Discussion

The present study found distinct correlations of the PEN personality model with the eight comic styles, which fit well to our predictions. Neuroticism was negatively correlated with humor and wit, and positively with sarcasm and cynicism, replicating the findings by Ruch et al. (2018). Extraversion was positively related to fun, humor and wit (large effects), and an additional small positive correlation emerged with nonsense. In line with our expectations, psychoticism showed the strongest positive correlations with the mockery styles (sarcasm and cynicism), although small positive correlations also emerged with the other comic styles (except for irony). This might be explained by the fact that most participants scored low to medium in psychoticism, not adequately representing the hostile and antisocial components of this superfactor. In other words, the psychoticism scale might have rather captured participants' altruism and conformism, suggesting that having some degree of psychoticism might be conducive to engaging in comic styles in general (possibly by having a playful frame of mind). Future studies would thus need to investigate participants with higher scores in psychoticism to evaluate whether the expected relationships can be found. Despite these overlaps with personality, the results of the standard multiple regressions supported the idea that the comic styles overlapped with the PEN model of personality, yet they were not interchangeable with personality.

In terms of subjective well-being, positive affect correlated positively with the light styles, and negatively with cynicism. Conversely, negative affect was positively related to sarcasm and cynicism, while also being negatively related to humor. Life satisfaction showed a correlation pattern similar to positive affect (except for a non-significant relationship with nonsense). Similarly, the domain-specific satisfactions showed unique patterns of correlations with the comic styles. Specifically, fun and wit, and sarcasm related to only one or two domains, while humor and cynicism related to four of the six domains. Thus, humor and cynicism were the most consistent positive and negative predictors of subjective well-being, respectively. This supports the idea that humor, conceptualized as benevolent and warm-hearted, might be effective both in fostering positive affect, in increasing the satisfaction with one's life and different life domains, and in ameliorating negative experiences. At the same time, cynicism might have the opposite effects, showing that subjective well-being might be sensitive to the motivational difference between laughing at (as captured in cynicism and sarcasm) and laughing with (as captured in humor and fun).

Investigating the incremental relationships of the comic styles in terms of subjective well-being beyond age, gender, and the PEN model of personality confirmed the importance of the comic styles especially for positive affect and life satisfaction. Humor emerged as a unique predictor of positive affect, negative affect, and satisfaction with the self, while lower cynicism was the best predictor of life satisfaction. The small unique effects were similar to previous findings with the Humor Styles Questionnaire (e.g., Jovanovic, 2011; Ruch & Heintz, 2013, 2017), indicating that this might be the typical overlap that humor has with subjective well-being once the influence of basic personality traits are removed. Overall, these findings support the concurrent criterion validity of the comic styles with subjective well-being.

As next steps, the CSM should be compared with the other humor styles (Craik et al., 1996; Martin et al., 2003) to test for which aspects of well-being it can provide incremental validity. Furthermore, intervention studies of the comic styles are needed to test causality. Using humor, wit, and fun more often should predict increments in positive affect, general life satisfaction, and satisfaction with oneself. It also needs to be tested whether decreasing sarcasm and cynicism would help to reduce negative affect and to increase satisfaction with work. Many humor interventions already exist (for an overview, see Ruch & Hofmann, 2017), yet they usually do not distinguish between different forms of humor. The comic styles provide a framework in which more fine-grained differences can be investigated and in which the differential effects of comic styles on well-being can be evaluated. For example, single comic styles as well as specific combinations could be trained to see which comic styles influence well-being most strongly, and whether interaction effects among the comic styles could increase their effect on well-being. For example, for humor, a training would include several steps: (1) recognizing incongruities in one's everyday life, (2) interpreting them in a playful manner to see the funny side in them, and (3) making a humorous, accepting remark about them. Thus, this training would involve fostering both cognitive and affective skills. For satire, steps 1 and 2 would be similar, yet in step 2 also a critical interpretation would be added, and step 3 would involve a humorous, critical remark that aims at improving the person or institution the remark is directed at. As mentioned before, causality might also be reversed; that is, well-being could also influence comic styles, resulting in a feedback loop.

Limitations

One limitation of the present study is the homogeneity of the sample in terms of gender and psychoticism scores. Future research should include equal amounts of men and women and also include high scorers in the psychoticism scale (ideally the long version of the EPQ, or even an instrument having subscales of psychoticism). Also future studies should include more reliable measurements of domain-specific satisfaction (e.g., by measuring each domain with multiple items) to increase the true-score variance that can be explained by the predictors. Another limitation is that only one source of data (self-reports) was employed. Future studies should extend these investigations to multidimensional approaches (e.g., other-reports or objective data) to reduce the common method bias. Finally, criterion validity was only investigated cross-sectionally. Future studies should employ longitudinal designs to also investigate predictive criterion validity.

5. Conclusions

The present study supports the notion that the eight newly proposed comic styles show differential relations to the personality superfactors from Eysenck's PEN model. Mild levels of psychoticism were conducive to almost all comic styles, while extraversion was mostly related to the light styles and neuroticism to the mockery styles. This extends the nomological network of the comic styles, which has been previously established with the five-factor model of personality, character strengths, and intelligence (Ruch et al., 2018). Furthermore, concurrent validity was supported for subjective well-being, with the lighter styles (especially humor) relating to higher well-being and the mockery styles (sarcasm and especially cynicism) relating to lower well-being. Finally, the incremental relationships of the comic styles with subjective well-being beyond age, gender, and personality were small, similar to other humor styles. Overall, the study provides initial support for the importance of certain comic styles (especially humor, cynicism, fun, wit, and sarcasm) for subjective well-being. This paves the way for future intervention studies and experiments that explore the causalities underlying these relationships.

References

Craik, K. H., Lampert, M. D., & Nelson, A. J. (1996). Sense of humor and styles of everyday humorous conduct. *Humor: International Journal of Humor Research, 9*(3–4), 273–302.

DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*(2), 197–229.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71–75.

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*(2), 276–302.

Eysenck, H. J., & Eysenck, S. B. G. (1976). *Psychoticism as a dimension of personality.* London: Hodder & Stoughton.

Eysenck, H. J., & Eysenck, M. W. (1985). *Personality and individual differences: A natural science perspective.* New York: Plenum.

Eysenck, S. B. G., Eysenck, H. J., & Barrett, P. (1985). A revised version of the psychoticism scale. *Personality and Individual Differences, 6*(1), 21– 29.

Hehl, F.-J., & Ruch, W. (1985). The location of sense of humor within comprehensive personality spaces: An exploratory study. *Personality and Individual Differences, 6*(6), 703–715.

Heintz, S. (2017). Do others judge my humor style as I do? Self-other agreement and construct validity of the Humor Styles Questionnaire. *European Journal of Psychological Assessment.* Advance online publication. https://dx.doi.org/10.1027/1015-5759/a000440

Jovanovic, V. (2011). Do humor styles matter in the relationship between personality and subjective well-being? *Scandinavian Journal of Psychology, 52*(5), 502–507.

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*(3–4), 363–397.

Krohne, H. W., Egloff, B., Kohlmann, C. W., & Tausch, A. (1996). Investigations with a German version of the Positive and Negative Affect Schedule (PANAS). *Diagnostica, 42*(2), 139–156.

Martin, R. A. (2007). *The psychology of humor: An integrative approach.* London: Elsevier.

Martin, R. A., & Lefcourt, H. M. (1984). Situational Humor Response Questionnaire: Quantitative measure of sense of humor. *Journal of Personality and Social Psychology, 47*(1), 145–155.

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*(1), 48–75.

Oishi, S., & Diener, E. (2001). Re-examining the general positivity model of subjective well-being: The discrepancy between specific and global domain satisfaction. *Journal of Personality, 69*(4), 641–666.

Proyer, R. T., Flisch, R., Tschupp, S., Platt, T., & Ruch, W. (2012). How does psychopathy relate to humor and laughter? Dispositions towards ridicule and being laughed at, the sense of humor, and psychopathic personality traits. *International Journal of Law and Psychiatry, 35*(4), 263–268.

Ruch, W. (1992). Assessment of appreciation of humor: Studies with the 3 WD humor test. In C. D. Spielberger, & J. N. Butcher (Eds.), *Advances in personality assessment* (vol. 9, pp. 27–75). Hillsdale: Lawrence Erlbaum Associates.

Ruch, W. (1994). Temperament, Eysenck's PEN system, and humor-related traits. *Humor: International Journal of Humor Research, 7*(3), 209–244.

Ruch, W. (1999). Die revidierte Fassung des Eysenck Personality Questionnaire und die Konstruktion des deutschen EPQ-R bzw. EPQ-RK [The revised version of the Eysenck Personality Questionnaire and the construction of the German EPQ-R and EPQ-RS]. *Zeitschrift für Differentielle und Diagnostische Psychologie, 20*(1), 209–244.

Ruch, W. (2012). Towards a new structural model of the sense of humor: Preliminary findings. *AAAI Fall Symposium FS-12-02*, 68–75.

Ruch, W., & Deckers, L. (1993). Do extraverts "like to laugh": An analysis of the Situational Humour Response Questionnaire (SHRQ). *European Journal of Personality, 7*(4), 211–220.

Ruch, W., Harzer, C., & Proyer, R. T. (2013). Beyond being timid, witty, and cynical: Big Five personality characteristics of gelotophobes, gelotophiles, and katagelasticists. *International Studies in Humour, 2*(1), 24–42.

Ruch, W., & Hehl, F.-J. (1985). Diagnose des Humors – Humor als Diagnostikum. [Assessment of humor – Humor as an assessment tool]. In F.-J. Hehl, V. Ebel, & W. Ruch (Eds.), *Diagnostik psychischer und psychophysiologischer Störungen* [Assessment of mental and psychophysiological disorders] (pp. 253–325). Bonn: Deutscher Psychologen Verlag.

Ruch, W., & Heintz, S. (2013). Humour styles, personality, and psychological well-being: What's humour got to do with it? *European Journal of Humour Research, 1*(4), 1–24.

Ruch, W., and Heintz, S. (2016). The German version of the Humor Styles Questionnaire: Psychometric properties and overlap with other styles of humor. *Europe's Journal of Psychology, 12*(3), 434–455.

Ruch, W., & Heintz, S. (2017). Experimentally manipulating items informs on the (limited) construct and criterion validity of the Humor Styles Questionnaire. *Frontiers in Psychology: Personality and Social Psychology, 8*(616), 1–14.

Ruch, W., Heintz, S., Platt, T., Wagner, L., & Proyer, R. T. (2018). Broadening humor: Comic styles differentially tap into temperament, character, and ability. *Frontiers in Psychology, Personality and Social Psychology.*

Ruch, W., & Hofmann, J. (2017). Fostering humour. In C. Proctor (Ed.), *Positive psychology interventions in practice* (pp. 65–80). New York: Springer.

Ruch, W., Proyer, R. T., Esser, C., & Mitrache, O. (2011). Cheerfulness and everyday humorous conduct. In Romanian Academy (Ed.), *Yearbook of the 'George Baritiu' Institute of History in Cluj-Napoca – Series Humanistica* (vol. 9, pp. 67–87). Bucharest: Romanian Academy Publishing House.

Schmidt-Hidding, W. (1963). *Europäische Schlüsselwörter. Band I: Humor und Witz [European keywords. Vol. 1: Humor and wit]*. Munich: Huber.

Soto, C. J. (2015). Is happiness good for your personality? Concurrent and prospective relations of the big five with subjective well‑being. *Journal of Personality, 83*(1), 45–55.

Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin, 134*(1), 138–161.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070.

Bionotes

Willibald Ruch

Prof. Dr. Willibald Ruch is a Full Professor of Psychology at the University of Zurich. His research interests are in the field of humor and laughter, cheerfulness and smiling. His recent work, together with his research team at the University of Zurich, includes humor from a positive psychology perspective, the effectiveness of humor training programs and clown interventions, the fear of being laughed at (i.e., gelotophobia), and the measurement of humor.

Lisa Wagner

Lisa Wagner is a research and teaching assistant at the Department of Psychology at the University of Zurich. Her main research interests are personality and character, positive psychology in children and adolescents and at school, and assessment.

Sonja Heintz

Dr. Sonja Heintz is a postdoctoral researcher at the Department of Psychology at the University of Zurich. Her main research interests are personality and assessment, humor (individual differences and measurement), and positive psychology (e.g., character strengths and well-being).