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Personality and meaning in life

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Abstract

Associations between personality and two aspects of meaning in life are investigated: meaningfulness and sources of meaning. Three hypotheses are formulated: The first hypothesis (A) states a moderate predictability of meaningfulness by personality factors; the second (B) suggests that personality factors predict meaningfulness via sources of meaning. The third hypothesis (C) assumes that it should be possible to predict specific sources of meaning by personality factors.

The first and third hypotheses are supported. (A) 16% of variance in meaningfulness can be explained by personality factors. (C) The attempt to predict specific sources of meaning by personality factors yields highly significant results, showing a differentiated pattern of relationships between personality and sources of meaning. (B) In a path analysis predicting meaningfulness by personality factors via sources of meaning, only one source of meaning (*self-transcendence*) has a mediating effect; additionally, a direct path from Extraversion to meaningfulness proves fitting. In total, 52% of variance in meaningfulness are explained. The results suggest that individuals have a predisposition for particular sources of meaning, dependent on their personality. Persons with the capability of self-transcendence as well as extraverted individuals are prone to experience their lives as meaningful. Furthermore, some sources of meaning show positive correlations with Neuroticism—a finding that is cautiously interpreted, but will need further clarification.

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Keywords: Personality; Meaning in life; Meaningfulness; Sources of meaning; Big Four; Assessment of meaning; Path analysis

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0. Introduction

The significance of meaning in life for positive psychological functioning has been stated theoretically by psychologists such as Allport (1954), Frankl (1972), and Maslow (1962). Empirical studies dealing with constructs of meaning have been slow to follow, but are accumulating recently. Meaning in life is shown to be a substantial component of well-being (cf. Ryff & Keyes, 1995; Zika & Chamberlain, 1992). It is considered to have effects on mental and physical health (cf. Zika & Chamberlain, 1992). As regards associations with personality, surprisingly little is known, so far. Theoretically, systematic associations between different aspects of meaning and personality traits can be expected. The study at hand will explore them along the lines of three hypotheses: (A) Personality factors can predict meaningfulness to a moderate extent. (B) The relationship between personality factors and meaningfulness is mediated by the sources of meaning. (C) Given that personality and sources of meaning correlate, it should be possible to predict specific sources of meaning by personality factors.

1. Measuring meaning in life

The common focus of published studies dealing with meaning in life is on meaning as a quality of experience, or meaningfulness. For its assessment, the questionnaires most widely used are Crumbaugh and Maholick's Purpose in Life Test (PIL, 1969), Battista and Almond's Life Regard Index (LRI, 1973), and Antonovsky's Sense of Coherence Scale (SOC, 1987). In spite of their general acknowledgement and frequent use, they have been viewed critically as regards construct validity: Thus, the PIL has been criticised to be an indirect measure of depression (Dyck, 1987); many items verbalise depressive feelings or attitudes and thus confound with measures of mental health. Antonovsky's meaningfulness, one of the three SOC-facets, contains more items on interest in life than on meaning. Similarly, Mascaro, Rosen, and Morey (2004, p. 846) criticise the LRI's fulfilment scale which "to a large degree taps a sense of feeling good about life. . . . Such items tap directly the outcome variables that the LRI is often used to predict".

The degree of experienced meaningfulness is an important variable as regards psychological functioning; however, it is not exhaustive as regards the construct. Further insights are to be expected from the question on *sources* of meaning. As stated by Frankl (1972), meaning arises from creative, experiential, and attitudinal values lived in a committed and dedicated way. Mascaro et al. (2004, p. 845) speak of meaning in life as the "intentions underlying behavior, that is, the reason or the 'why' for behavior". Up to now, few attempts have been made to clarify *which* "values" or "intentions underlying behavior" actually serve as sources of meaning. One instrument has gained international attention: Wong's Personal Meaning Profile (PMP, 1998). Wong identified seven factors contributing to a meaningful life; they inter-correlate highly (average $r = .53$). This allows for the calculation of an overall PMP score on one hand, but it casts doubt on the instrument's profile reliability on the other hand (i.e. internally consistent scales with low inter-correlation, hence the precondition to interpret subtest values in a profile, cf. Lienert & Raatz, 1998, p. 324). For the present study, we decided to use a not yet internationally known instrument, the Sources of Meaning and Meaningfulness Questionnaire (SoMe, Schnell, 2004; Schnell and Becker, in press; English version in preparation). It allows for a differentiated assessment of

sources of meaning (26 subtests) while showing high profile reliability; it will be described in detail in Chapter 4.1.

2. Meaning in life and personality

Up to now, most studies considering the concept of meaning in life have investigated it as indicator of mental and physical health and well-being. While some studies find direct positive correlations (Reker, 1997; Wong, 1998; Zika & Chamberlain, 1992), others speak of moderating or mediating functions of meaning (Affleck, Tennen, Croog, & Levine, 1987; Bower, Kemeny, Taylor, & Fahey, 1998). Already in 1983, Lazarus and DeLongis pointed out the role of meaning in coping processes. Recent research on posttraumatic growth has shown that meaning reconstruction in response to loss is a central process in grieving (Neimeyer, 2001).

As the areas of meaning, well-being, mental and physical health have been investigated to some extent, not much is known so far about relationships between meaning and personality. Searching for empirical studies, one has to go back quite far. In 1970, Crumbaugh, Raphael, and Shrader employed the PIL and a battery of personality measures in a sample of trainees for a religious order. They reported “no high relationship between PIL scores and measures of any personality trait, though there was a substantial relationship [$r = -.52$] with the anxiety scale of the 16 PF test” (p. 207). Pearson and Sheffield (1974), after applying both the PIL and the Eysenck Personality Inventory to a sample of outpatients with mixed diagnoses, found a moderate to high negative correlation with Neuroticism and a moderate positive correlation with Extraversion. In a sample of male inmates, Reker (1977) reported positive correlations of the PIL with “locus of control” and two (of 14) scales of the Edwards Personality Inventory, “Plans and organises things” and “Carefree”.

3. Hypotheses

Available evidence points towards existing associations between personality and meaningfulness as well as sources of meaning. The following hypotheses can be formulated:

- (A) *Personality factors can predict meaningfulness to a moderate extent.* A significant, but moderately strong prediction of meaningfulness by personality factors is anticipated. In accordance with previous results, relationships between the following variables are expected: Meaningfulness should be moderately positively related with Extraversion/Openness, and negatively with Neuroticism. However, measured by the newly developed meaningfulness scale, the negative correlation with Neuroticism should be less strong than those found when using the PIL or other confounded measures.
- (B) *The relationship between personality factors and meaningfulness is mediated by sources of meaning.* Cloninger, Svrakic, and Przybeck (1993) usefully distinguish between *temperament* and *character* as two different dimensions of personality: While *temperament* is genetically determined, *character* refers to self-concept and inter-individual differences in goals and values. Accordingly, sources of meaning and meaningfulness can be viewed as character traits.

As stated by Cloninger et al., character is based on temperament, but develops in interaction with cultural and social environment. It is thus assumed that sources of meaning and meaningfulness can partly be predicted by personality factors known to be genetically influenced: Neuroticism, Extraversion/Openness, Conscientiousness, and Disagreeableness. Meaningfulness is viewed as a result of the realisation of sources of meaning; hence, the following theoretical model is posited: Personality factors influence the experience of meaningfulness via the realisation of sources of meaning.

- (C) *Given that personality and sources of meaning are closely related, it should be possible to predict specific sources of meaning by personality factors.* We assume that the contribution of personality factors to the prediction of sources of meaning is rather specific. Though many particular hypotheses could be formulated, this will be avoided due to the scope of the article. Rather, results should be viewed as suggestions to be replicated.

4. Method

4.1. Measurement

4.1.1. Assessment of Sources of Meaning and Meaningfulness

The Sources of Meaning and Meaningfulness Questionnaire (SoMe) was developed in a four-year-process of qualitative and quantitative studies on meaning in life (see Schnell, 2004). 74 structured in-depth interviews on sources of meaning served as empirical foundation for the construction of the questionnaire. They were content-analysed; altogether, 26 sources of meaning could be identified (see Table 1 for their description). These and a scale to measure meaningfulness were made accessible psychometrically by the SoMe. It has undergone several revisions and can now be shown to measure in reliable and valid ways individual differences in sources of meaning and meaningfulness (Beuel, 2004; Imruck, 2004; Schnell, 2003, 2004). The meaningfulness scale subsumes complementary aspects of experienced meaning, regardless of its sources. It is composed of four items. They read: (a) I experience the things I do as meaningful; (b) I have a life-task; (c) I feel like being part of a greater whole; (d) I believe my life has a deeper meaning. Internal consistency in the present sample amounts to Cronbach $\alpha = .74$. Correlation with Antonovsky (1987) meaningfulness sub-scale is $r = .46$; with a one-item rating of personal religiosity (*According to your very personal definition of religiosity: How religious are you?*) is $r = .43$; and with a one-item rating of commitment to a religious community $r = .20$.

The sources of meaning scales assess the degree of commitment to and practice of 26 categories of ultimate meanings (for descriptions see Table 1). Each of the 26 scales consists of an average of seven items. Internal consistencies (this sample) range from .66 to .93, with an average Cronbach α of .80. Inter-correlations of the 26 sources of meaning only amount to an average of .18, thus resulting in high profile reliability. Orthogonal as well as oblique factor analyses suggest a summary of the sources of meaning by four dimensions: (1) *self-transcendence*, (2) *self-actualisation*, (3) *order*, and (4) *well-being and communality*. These composite scales show a mean inter-correlation of .27; their Cronbach α s range from .88 to .94, with an average value of .91. Calculation of test–retest reliability (four-months interval) with another sample ($N = 55$) resulted

Table 1
The 26 Sources of meaning as assessed by the SoMe

Dimension/scale	Description	Cronbach <i>alpha</i>
Self-transcendence		.91
Explicit religiosity	Religion and faith	.93
Spirituality	Connection with a higher reality	.74
Unison with nature	Harmony and unity with nature	.89
Social commitment	Commitment for justice, public welfare, or human rights	.68
Generativity	Doing or creating things valued beyond one's death	.75
Care	Consideration, forethought, helpfulness	.74
Health	Healthiness, fitness, wholesome nutrition	.86
Self-actualisation		.89
Individualism	Independence and realisation of potentials	.70
Challenge	Endeavour, adventure, risk	.77
Power	Power, fight, dominance	.70
Development	Personal growth, determination, goal attainment	.82
Freedom	Autonomy, liberty, self-rule	.92
Knowledge	Questioning, keeping informed, trying to understand	.66
Achievement	Competence, skill, success	.76
Creativity	Fantasy, aesthetic sense, originality	.80
Self-knowledge	Confrontation with and analysis of oneself	.93
Order		.94
Reason	Rationality and logic	.73
Morality	Values and rules	.69
Tradition	Conservation, order, holding on to the well-established	.80
Practicality	Pragmatism and realism	.76
Well-being and communality		.88
Fun	Humour and enjoyment	.77
Wellness	Pleasure and hedonism	.73
Harmony	Balance and accord with oneself and others	.85
Attentiveness	Awareness, continuity, ritualisation	.72
Love	Romanticism and intimacy	.81
Community	Close contacts and friendship, sense of family	.78

in an average of .75 for the 26 scales, and .85 for the dimensions. All items are answered by means of a six-point rating scale.

4.1.2. Assessment of personality

For the assessment of personality traits, the Trier Integrated Personality Inventory (TIPI, Becker, 2003) was used. The TIPI is a multidimensional personality inventory designed to measure the Big Four Neuroticism, Extraversion/Openness, Disagreeableness, and Conscientiousness, as well as their facets. It comprises all aspects of personality proposed by the Big 5 model, but unites Extraversion and Openness in one factor due to their inter-correlation (for evidence for four main factors, see also Ashton, Lee, & Goldberg, 2004; Widiger & Simonsen, 2005). As an

innovative feature, the TIPI is construed according to the Rasch model and thus guarantees measurement on interval scale level. It is composed of 254 items, four domain scales, and 34 facet scales. Items are answered by means of a six-point rating scale. In the article at hand, only the four domain scales are being used. Their internal consistencies (Cronbach *alpha*, this sample) range from .88 to .94; retest-reliabilities (one-year interval) vary from .82 to .88 (Becker, 2003). A confirmatory factor analysis shows the following correlations between the four TIPI-factors and the five personality factors as assessed by the NEO-PI-R (Costa & McCrae, 1992): Neuroticism: $r = .84$; Extraversion/Openness–Extraversion: $r = .74$; Extraversion/Openness–Openness to experience: $r = .51$; Disagreeableness: $r = -.57$, and Conscientiousness: $r = .71$ (Becker, 2004). Further indications of the TIPI's validity were found in numerous studies (cf. Becker, 2003; Becker & Kupsch, 2002).

4.2. Participants

Participants were 202 men and women from all over Germany. They were assembled as a convenience sample: Students of Trier University (from different places in Germany) completed the tests themselves and motivated another person over 30 years of age to do so. Sixty-nine percent of the sample are female. The participants' age ranges from 19 to 68 years, with a mean of 31.7 and a standard deviation of 13.7. 29% are singles, 43% live with a partner, and 23% are married. 60% of the sample are students, 34% go to work.

Searching for outliers by means of Mahalanobis distance, four cases were identified as multivariate outliers with $p < .001$ (cf. Tabachnick & Fidell, 2001). All four outliers were deleted, leaving 198 cases for analysis.

4.3. Procedure

4.3.1. Predicting meaningfulness by personality factors

To determine the percentage of variance in meaningfulness predictable by the four personality factors Neuroticism, Extraversion/Openness, Conscientiousness, and Disagreeableness, a multiple regression was carried out. All four personality factors were entered simultaneously as independent variables.

4.3.2. Predicting meaningfulness by personality factors via sources of meaning

The assumption that personality factors predict sources of meaning which, in turn, predict meaningfulness, was examined with AMOS 5. To obtain an acceptable ratio of variables and sample size, the four composite scales (“dimensions of sources of meaning”)—instead of the 26 scales—were included in the model. Maximum likelihood estimation was employed to estimate all models. A backward selection approach was chosen to identify the model with the best fit: Starting with the saturated model, non-significant ($p < .10$) path coefficients and covariances were consequently eliminated, and modification indices applied.

4.3.3. Predicting specific sources of meaning by personality factors

To gain a detailed picture of personality profiles associated with particular sources of meaning, one multiple regression analysis for each of the 26 sources of meaning was carried out. To avoid

the problem of *alpha* error accumulation due to multiple tests of significance, *alpha* levels were adjusted according to the sequential Bonferroni–Holm correction (Holm, 1979). Only *beta* weights with levels of significance lower than those demanded by the correction (initial value $p \leq .00048$) are considered trustworthy and will be discussed.

5. Results

5.1. Predicting meaningfulness by personality factors

A multiple regression analysis, using the four personality factors as predictors of meaningfulness, is significant with $F(4, 193) = 9.10, p < .001$. Altogether, 16% of the variance in meaningfulness can be explained by personality ($R = .40$). All personality factors but Neuroticism contribute significantly to the prediction. In Table 2, results of the regression analysis are given in detail.

5.2. Predicting meaningfulness by personality via sources of meaning

An independence model, testing the hypothesis that all variables are uncorrelated, is easily rejectable, $\chi^2(36, N = 198) = 646.47, p < .001$. The final model, derived from the saturated model by eliminating non-significant path coefficients and covariances and applying modification indices, is not significant ($\chi^2(16, N = 198) = 19.98, p = .22$) and shows a tolerable fit (see Table 3).

The final model, including significant coefficients in standardised form, is illustrated in Fig. 1.

As Fig. 1 demonstrates, substantial relationships between personality factors, sources of meaning, and meaningfulness exist. Personality factors explain 32% of the variance in

Table 2

Bivariate correlations (r), standardised beta weights (β), 95%-confidence intervals for β , levels of significance (p), and multiple correlation (R^2, R) for the multiple regression of four personality factors on meaningfulness

	Meaningfulness (r)	β	95%-Confidence intervals for β	p
Neuroticism	-.08	.09	-.06 to .25	.23
Extraversion/Openness	.21**	.30	.16 to .44	.000
Conscientiousness	.24***	.20	.07 to .34	.004
Disagreeableness	-.21**	-.26	-.42 to -.10	.001
$R^2 = .16$ (corrected: .14), $R = .40$ ***				

** $p \leq .005$.

*** $p \leq .001$.

Table 3

Goodness-of-fit statistics for independence, initial, and final model using AMOS

	χ^2	df	p	χ^2/df	TLI	CFI	RMSEA
Independence model	646.47	36	.000	17.957	.000	.000	.293
Saturated model	.000	0	–	–	–	1.000	–
Final model	19.98	16	.22	1.249	.985	.993	.036

TLI: Tucker–Lewis index, CFI: Comparative-fit index, RMSEA: Root mean square error of approximation.

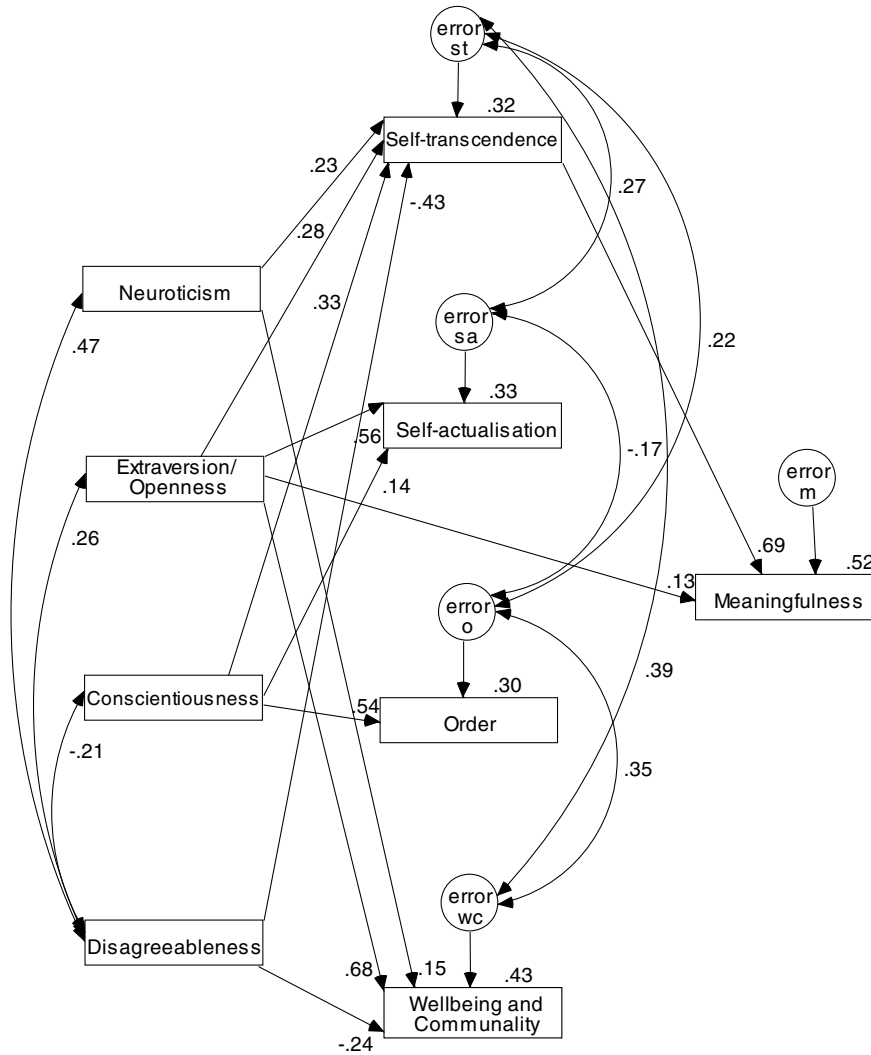


Fig. 1. Prediction of meaningfulness by personality traits via sources of meaning: final model.

self-transcendence, 33% in *self-actualisation*, 30% in *order*, and 43% in *well-being and communality*. Several significant correlations between the dimensions' residuals point out common variance that is not explained by the personality factors. An additional direct path from Extraversion/Openness to meaningfulness contributes to the prediction of meaningfulness of which, in total, a considerable 52% of variance are explained.

5.3. Predicting sources of meaning by personality factors

Results of the path analysis demonstrate close associations between sources of meaning and personality factors; hence, searching for more specific information on predictability of sources

Table 4

Standardised beta weights and levels of significance for the prediction of sources of meaning by personality factors ($N = 198$)

Personality traits	Neuroticism	Extraversion/Openness	Conscientiousness	Disagreeableness
Sources of Meaning				
Fun	-.01	.64	-.08	-.08
Challenge	-.08	.59	.03	-.11
Individualism	-.02	.48	-.07	.04
Attentiveness	.18	.45	.05	-.25
Freedom	-.02	.41	-.03	-.06
Creativity	-.02	.40	.01	-.14
Wellness	-.05	.40	-.13	.06
Self-knowledge	.26	.30	.10	-.27
Development	-.20	.39	.25	-.06
Achievement	.03	.27	.40	.16
Care	.11	.40	.33	-.43
Reason	-.05	-.16	.53	.17
Morality	.14	-.14	.43	-.10
Practicality	-.14	.06	.36	.05
Tradition	.22	-.18	.35	.07
Health	.00	.05	.31	-.16
Knowledge	-.04	.20	.30	-.08
Generativity	.03	.24	.26	-.15
Social commitment	.15	.17	.05	-.37
Community	.14	.50	-.03	-.27
Power	-.24	.45	.24	.41
Unison with nature	.01	-.04	.24	.10
Explicit Religiosity	.21	.09	.19	-.25
Spirituality	.31	.20	.12	-.25
Love	.42	.44	.03	-.28
Harmony	.34	.30	.15	-.51

Bold values: significant after correction of *alpha* error.

of meaning suggests itself. In fact, all 26 multiple regression analyses result in F values significant at $p < .003$. Every source of meaning can thus be predicted by personality factors to a considerable degree. R s reach from .20 to .65, with percentage of explained variance ranging accordingly from 4% (*explicit religiosity*) to 43% (*power*). In Table 4, standardised *beta* weights and levels of significance are reported. (Relevant values are bold; to save space, confidence intervals are omitted.)

6. Discussion

6.1. Predicting meaningfulness by personality factors

As expected, meaningfulness can be predicted significantly, but moderately, by personality factors. Altogether, 16% of the variance are explained. Extraversion/Openness, Disagreeableness, and Conscientiousness contribute to the prediction. The association between Extraversion/

Openness and meaningfulness mirrors previous results. The result fits well into an understanding of Extraversion as being closely linked with constructs such as optimism, subjective well-being, happiness, etc. (Costa & McCrae, 1980; Eysenck & Eysenck, 1975). Conscientiousness and Disagreeableness contribute positively and negatively, respectively, to the prediction of meaningfulness. People experiencing their lives as meaningful can thus be described as fairly conscientious and agreeable. However, they do not show less Neuroticism than those with low meaningfulness. Though significant negative correlations between meaningfulness and Neuroticism have been reported by others, they are not replicated here. This could be put down to the new scale to measure meaningfulness, as illustrated above: In contrast to widely used scales, the meaningfulness scale of the SoMe measures the construct as clearly as possible; no other constructs, such as happiness, optimism, etc. are tapped by the items. Meaningfulness—as assessed by the SoMe—thus is a quality of life that can be experienced by people with high Neuroticism just as by those who are mentally healthy and stable.

6.2. Prediction of meaningfulness by personality factors via sources of meaning

A path model linking personality factors with sources of meaning and those in turn with meaningfulness, as theoretically proposed, is only partially supported. All personality factors contribute to the prediction of sources of meaning. However, *self-transcendence* is the only dimension of sources of meaning mediating between personality and meaningfulness. The final model thus partly contradicts the hypothesis: While sources of meaning are closely linked with both personality factors and meaningfulness, they cannot be viewed as generally mediating the influence of personality on meaningfulness. As displayed in Fig. 1, agreeable, conscientious, and to some extent also neurotic(!) and extraverted/open individuals have an inclination to *self-transcendence*, which is a strong predictor of meaningfulness. Self-transcendent persons place great importance on aspects beyond themselves, such as spirituality, generativity, attentiveness, nature, or religion; their interests surpass themselves and their immediate needs. This result confirms Frankl's definition of self-transcendence as a precondition for meaningfulness, as held also by Jaspers and Maslow: A will to meaning manifests itself in the commitment to something beyond oneself (Frankl, 1972).

Additionally, a direct path from Extraversion/Openness to meaningfulness proves fitting. It thus indicates an alternative way to a meaningful life: Irrespective of the sources of meaning they realise, extraverted and open people show higher levels of meaningfulness. Characteristics like activity, self-confidence, and broad-mindedness thus seem to facilitate the experience of meaningfulness.

6.3. Prediction of specific sources of meaning by personality factors

As the pattern of highly significant *beta* weights indicates, sources of meaning are linked with personality factors in differential ways. Extraverted and open people tend to find meaning in *fun*, *challenge*, *individualism*, *attentiveness*, *freedom*, *creativity*, *wellness*, and *self-knowledge*. These sources of meaning can be associated with traits typical for extraverted and open people; they imply activity, spontaneity, and imagination. *Development* and *achievement* are predicted by Extraversion/Openness as well as Conscientiousness; discipline and a sense of duty thus seem to be favourable to realise these sources of meaning. *Care* is put into practice by active, open, and conscientious persons who also show low Disagreeableness.

Some sources of meaning are especially linked with Conscientiousness, showing no further links with other personality factors; they are *reason, morality, practicality, tradition, health, knowledge, and generativity*. Being ready to orient oneself by a set of principles seems to be their major personality prerequisite, be it rational, moral, practical, long-established, nutritional, scientific, or societal. Low Disagreeableness increases the probability to find meaning in *social commitment*; if also Extraversion/Openness is pronounced, *community* is a likely source of meaning.

Power is closely linked to all personality factors. Extraversion/Openness and Conscientiousness positively contribute to its prediction. Furthermore, it is the only source of meaning showing a clear negative correlation with Neuroticism; primarily mentally healthy people thus tend to find meaning in exerting and experiencing power. However, such persons have a propensity to be distinctly disagreeable.

Rather surprisingly, some sources of meaning show a clear, moderate *positive* connection with Neuroticism: The only significant predictor of *spirituality* is Neuroticism; *love* and *harmony* can be predicted by Neuroticism as well as Extraversion/Openness, and low Disagreeableness. Though unexpected, these findings cannot be viewed as artefacts; in a previous study with 171 student participants, similar positive correlations of the mentioned sources of meaning and Neuroticism have been found (Schnell, 2004). Taken as substantial, they could be attributed to an insecure and dependent personality. For such persons, turning towards love, spirituality, or harmony might be a coping strategy: Romantic attachments and spiritual beliefs might imply self-sacrifice, but also give support. A high consideration of harmony prevents confrontation with the environment and avoids jeopardising a fragile sense of security. However, the predictability of sources of meaning by Neuroticism and other personality traits will have to be replicated with different and more representative samples.

7. Conclusion

To conclude, investigating relationships between personality and different aspects of meaning in life proved fruitful. New insights can be gained from distinguishing between meaningfulness and sources of meaning. However, these results are not based on representative samples. Replications are necessary, especially to clarify the somewhat unsettling finding of positive correlations between certain sources of meaning and Neuroticism. Since all data presented are cross-sectional, nothing is known so far about the direction of influences. Even if it is probable that genetically influenced personality traits affect sources of meaning and meaningfulness, interactions can be expected. Last but not least, future research on meaning should take the call for “clean” measurement of meaningfulness seriously. Should previous correlations between meaningfulness and Neuroticism actually be overestimated, the role of meaning in positive psychology must be revisited.

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