Individual differences in meaning-making: Considering the variety of sources of meaning, their density and diversity

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A B S T R A C T

By employing a multi-dimensional inventory of sources of meaning (SoMe), individual differences in meaning-making are analysed. Sources of meaning as well as their density and diversity are related to experienced meaningfulness. It is hypothesised that sources of meaning are not functionally equivalent. Density and diversity are expected to relate positively to experienced meaningfulness. Drawing on a representative sample ($N = 603$), functional equivalence of sources of meaning is indeed refuted. Generativity is established as the most powerful predictor of meaningfulness. Meaningfulness increases significantly with density and diversity of sources of meaning; the relationship between density and meaningfulness is largely mediated by diversity. Findings indicate that commitment to numerous, diverse, and, especially, selftranscendent sources of meaning enhances the probability of living a meaningful life.

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1. Introduction

Research on meaning in life is expanding, enhancing conceptual differentiation (King & Hicks, 2009; Schnell, 2009b, 2010; Steger, Kashdan, Sullivan, & Lorentz, 2008) and applicability (Krause, 2007; Mascaro & Rosen, 2005; Park, 2010). The study of sources of meaning, however, is startlingly neglected. The present study aims to contribute to the description and explanation of individual differences in meaning-making by investigating the functional equivalence of sources of meaning, their density and diversity with regard to the experience of meaningfulness. What sources do people draw on to generate or find meaning? How are individual differences in meaning-making linked to outcome variables such as the experience of meaningfulness?

In their philosophically-informed framework for the contours of positive human health, Ryff and Singer (1998) state that purpose and meaning result from "invested, committed living" (p. 8). Though the importance of commitment has been highlighted (e.g., Emmons, 2005; Maddi, 2006), little is known about the variety of commitments. Indubitably, there is a plethora of potential commitments to make and a wide range of possible sources of meaning to draw on. While a comprehensive view of individual differences in meaning-making is still a considerable way off, some

research has been undertaken to identify sources of meaning and analyse their density and diversity.

1.1. The variety of sources of meaning

Sources of meaning represent commitments to different areas of life from which meaning is derived (Schnell, 2009b). The most common research route to identify sources of meaning has been through the employment of qualitative methods. Among the first to empirically assemble major sources of meaning were Battista and Almond (1973). They reported six orientations: *interpersonal*, *service*, *understanding*, *obtaining*, *expressive*, and *ethical*. Building on a research program to categorise types of meaning, Ebersole (1998) differentiated this classification further. After asking adolescents, students, and other adults to describe their personal meaning, he identified eight types of meaning (see Table 1 for these and the following). O'Connor and Chamberlain (1996) conducted interviews to elicit in-depth accounts of sources of meaning, asking "What do you think of as an important source of meaning in your life?" (p. 466). All thus identified sources of meaning were allocated to five categories developed from analysis of previous research, plus an additional sixth category. Wong (1998) asked participants to describe characteristics of an ideal meaningful life; based on these, he developed the Personal Meaning Profile. In subsequent factor-analyses, seven sources of meaning were identified. Debats (1999) yielded a final system of eight

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meaning-in-life categories after inviting participants to describe "the three most important things that give meaning to [their] personal life" (p. 37). Bar-Tur, Savaya, and Prager (2001) arrived at 11 sources of meaning after factor-analysing items from the Sources of Life Meaning scale. The SLM had been developed by data from focus groups discussing the questions "What are the most important things in life?", "What are the things that you consider most meaningful and necessary in life?", and "What gives you a taste for life?" Moreover, students responded in writing to the open-ended question "What are the things you consider most meaningful and necessary in life?" (Prager, Savaya, & Bar-Tur, 2000, p. 126). Reker (2000), after reviewing relevant publications, named 17 sources of meaning occurring most often in the literature.

Schnell (2009a, 2009b) combined qualitative and quantitative methods to arrive at a comprehensive inventory of sources of meaning. In contrast to previous studies, this research program did not rely on conscious notions of meaning in life. Instead, structured in-depth interviews were conducted to identify ultimate meanings underlying the contents of existentially relevant cognition ('personal myth'), action ('personal rituals'), and emotion ('experiences of transcending'). A laddering technique (cf. Leontiev, 2007) was applied to all contents mentioned by the interviewees: they were repeatedly asked about contents' meanings until an ultimate meaning was brought up that was no longer reducible to other meanings. After several cyclical processes of content-analyses, 26 sources of meaning remained. They are operationalised in the *Sources of Meaning and Meaning in Life Questionnaire* (SoMe; see below).

Table 1 shows a synopsis of sources of meaning identified by the different research programs. As the most comprehensive list, the SoMe 26 sources of meaning determine the composition of the synopsis. They represent almost all categories identified by the various research programs. They do *not* cover the level of basic needs common to all individuals, since these can be classified as deficit needs *sensu* Maslow (1970) and thus, show no inter-individual variation. Neither do they include *extrinsic* sources of meaning that are *not* pursued for their inherent worth, such as 'obtaining', 'materiality', or 'financial security'. Commitments represented by sources of meaning are – by definition – inherently intrinsic (Schnell, 2009b); they represent ultimate levels of meaning. Wong's 'fair treatment' scale measures the degree of feeling treated in a fair way by others; it represents no commitment and is therefore located on another conceptual level.

The fact that several of the 26 sources of meaning have not been identified by other research programs might be attributable to the methods employed. Sources of meaning can be described as 'meaning in action'. They represent an active construction of reality, generating or seizing meaning (Leontiev, 1982; Schnell, 2009a). As such, they are accessible to reflection, but not easily retrievable spontaneously. The use of a laddering technique takes this into account, eliciting sources of meaning *implicit* in action, cognition, and emotion. When asked to produce sources of meaning spontaneously, the results can be expected to be (a) less differentiated, and (b) more effected by social expectations, norms and desirability.

1.2. Functional equivalence of sources of meaning

Avenues to a meaningful life are believed to be multiple: "many (e.g., theistic, atheistic, and humanistic) ways of developing meaning in life coexist" (Debats, 1999), and various sources of meaning have the potential to generate meaningfulness (Battista & Almond, 1973; De Vogler-Ebersole & Ebersole, 1985; Kaufman, 1986; Reker & Wong, 1988; Schnell, 2009a; Schnell & Becker, 2006). Are all sources of meaning functionally equivalent? Some findings seem to indicate that certain sources of meaning, such as religiosity

(Emmons, 2005; Schnell, 2010), or community (Debats, 1999; O'Connor & Chamberlain, 1996), are more predictive of meaningfulness than others. However, neither as yet has proven to contribute more to meaningfulness than other sources of meaning.

1.3. Breadth of sources of meaning: Density and diversity

In considering the breadth of sources of meaning, two dimensions are potentially confounded, as is evident from the way it has been conceptualised, so far. Reker and Wong (1988) assumed the sense of meaning to increase with the variety of sources of meaning drawn on. De Vogler-Ebersole and Ebersole (1985) assessed breadth by asking participants to record how many areas of their lives they found meaningful, whereas O'Connor and Chamberlain (1996) counted the number of categories represented by specific reported sources, thus defining breadth as "diversification of sources of meaning" (p. 464). In order to distinguish clearly between different understandings of breadth, the following terminology is proposed: *Density* is measured by the number of sources of meaning an individual draws on; *diversity* stands for the number of domains of meaning represented by the sources of meaning relevant to an individual.

2. Predictions

The present study expects sources of meaning not to be functionally equivalent with regard to experienced meaningfulness. Density and diversity of sources of meaning are predicted to be positively related to meaningfulness.

3. Material and methods

3.1. Measures

Sources of meaning and meaningfulness were assessed by use of the SoMe (Schnell, 2009b; Schnell & Becker, 2007). This 151-item inventory allows for a highly differentiated measurement of 26 sources of meaning and provides separate measures for *meaningfulness* and *crisis of meaning*. All items are statements rated on a scale from 0 (strongly disagree) to 5 (strongly agree). Sources of meaning scales quantify the degree of realisation for each of the 26 orientations. The scales' mean inter-correlation is .26, ranging from −.19 to .64. Repeated orthogonal as well as oblique factor analyses suggest a summary of these by four (or five, resp.) dimensions (for details see Schnell, 2009b; Schnell & Becker, 2007):

(1) *Selftranscendence*: Commitment to objectives beyond one's immediate needs.

For further, practically relevant, differentiation between vertical and horizontal orientations (cf. Goodenough, 2001; Schnell, 2003, 2009a) and supported by factor-analysis of its items, this dimension is divided into two sub-dimensions:

(1a) *Vertical selftranscendence*: Orientation towards an immaterial, supernatural power (sample item: *My religion gives me strength.*)
(1b) *Horizontal selftranscendence*: Taking responsibility for (worldly) affairs beyond one's immediate concerns (sample item: *I strive to do something for future generations.*)
(2) *Selfactualisation*: Employing, challenging, and fostering one's capacities (sample item: *I am always striving to change and improve myself.*)
(3) *Order*: Holding on to values, practicality, decency, and the tried and tested (sample item: *I like to hold on to traditions.*)

Table 1
Sources of meaning identified by different research programs.

8 types of meaning (Ebersole, 1998)	6 sources of meaning (O'Connor and Chamberlain, 1996)	7 sources of meaning (Wong, 1998) →PMP	7 meaning-in-life categories (Debats, 1999)	11 sources of meaning (Bar-Tur et al., 2001) →SLM	17 most frequently cited sources of meaning (Reker, 2000)	**26 sources of meaning** (Schnell, 2009b) →SoMe
Religious & spiritual belief	Religious and spiritual		Beliefs/religious, spiritual			**Vertical Self-transcendence**
		Religion			Religious Activities	Explicit religiosity Spirituality
						Horizontal Self-transcendence
Service	Social and political		Beliefs/social, political	Communal activity	Social causes/humanistic concerns	Social commitment
	Relationship with nature			Being with animals	Relationship with nature	Unison with nature
Health		Self-acceptance	Personal well-being/health			Self-knowledge Health
		Selftranscendence			Leaving a legacy	Generativity
			Self-actualisation			**Self-actualisation** Challenge Individualism
				Autonomy and independence		
Growth Life work	Personal development			Self-development	Personal growth	Power Development
		Achievement	Lifework		Personal achievements	Achievement Freedom Knowledge
	Creativity				Creative activities	Creativity
				Family and communal values	Tradition and culture	**Order** Tradition
						Practicality
					Human values and ideals	Morality Reason
						Well-being and relatedness
Relationships	Relationships with people	Relationship	Relationships/family, friends, others	Interpersonal/family relationships	Personal relationships family/friends	Community
				Leisure activities with others	Hedonistic activities	Fun
		Intimacy	Relationships/partner, lover	Spouse relationship		Love
Pleasure			Personal well-being/pleasure		Leisure activities	Comfort
		Service			Altruism	Care Attentiveness
			Personal well-being/appreciation of life			
				Attainment of tranquility		Harmony
Obtaining		Fair treatment	Materiality	Materialistic concerns	Basic, everyday needs Financial security Material possessions	Not classifiable

Note: Representation is based on explanations and examples given for specific sources of meaning.

(4) *Well-being and relatedness*: Cultivating and enjoying life's pleasures in privacy and company (sample item: *I take trouble to cultivate my relationships.*)

Internal consistencies for the domains average .89, for the scales, .79.

Meaningfulness is defined as a fundamental sense of meaning, based on an appraisal of one's life as coherent, significant, directed, and belonging (Schnell, 2009b).The *meaningfulness* scale (Cronbach α = .74) measures the degree of subjectively experienced meaningfulness. Its items (revised English translation) read:

- I think that there is meaning in what I do.
- I have a goal in life.
- I feel I belong to something bigger than myself.
- I lead a fulfilled life.
- I think my life has a deeper meaning.

The SoMe's construct, discriminant, factorial, and incremental validity have been demonstrated in numerous studies (Hoof, 2010; Schnell, 2009a, 2009b, 2010; Schnell & Becker, 2006, 2007; Schnell & Hoof, in press; Schnell & Keenan, 2011).

Density of meaning (range 0–26) is measured by adding up all personally relevant sources of meaning, i.e. those with mean values of agreement $\geqslant 1$ SD from the population mean.

Diversity of meaning (range 0–5) is calculated by counting the number of domains represented by the personally relevant sources of meaning.

3.2. Participants

The SoMe was completed by a representative German sample (N = 616). Individual participants were randomly selected, following a proportionate stratification strategy. Return rate was 67%. Distribution of sex, age, and place of residence are analogous to that in the total population. After eliminating incomplete records and excluding multivariate outliers, 603 datasets remained. A total of 53% of these respondents are female. Age ranges from 16 to 85 years (M = 45, SD = 17); 15% are single, 18% live with a partner, 55% are married. One fifth of the respondents only has general education; 25% have obtained O-levels, 17% A-levels. Thirty-eight percent have graduated from technical college or university. Different aspects of this dataset have been analysed in Schnell, 2009b and 2010.

4. Results

4.1. Descriptive statistics

Table 2 provides correlations of all 26 sources of meaning with meaningfulness (independently measured). Generativity is most closely related to meaningfulness (r = .67), followed by attentiveness (r = .52) and harmony (r = .50).

Fig. 1 shows the distribution of density values. Seventeen percent of the sample report no personally relevant source of meaning, 14% one, and 55% two to eight. The median is 3.

The majority of the sample (63%) reports sources of meaning from two to five domains (see Fig. 2) and can thus be said to demonstrate diversity at different degrees. Nineteen percent are
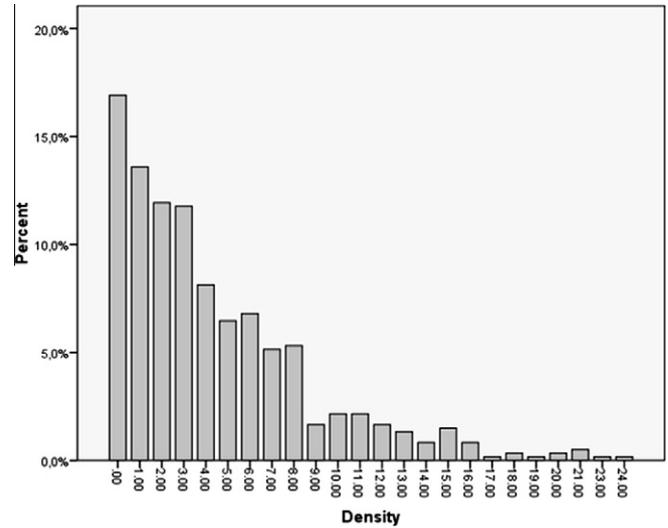

Fig. 1. Distribution of density of sources of meaning; range 0–26.

committed to only one domain. The mean diversity value is M = 2.21 (SD = 1.54).

4.2. Functional equivalence of sources of meaning?

As shown in Table 2, correlations between sources of meaning and meaningfulness vary significantly ($X^2 = 273.27$, df = 25, $p < .001$; cf. Meng, Rosenthal, & Rubin, 1992); they are thus not functionally equivalent. A standard multiple regression of the 26 sources of meaning on meaningfulness identifies eight positive predictors of meaningfulness: *generativity, harmony, explicit religiosity, power, practicality, spirituality, development*, and *creativity* (see Table 2). The predictor weight for *tradition* is negative, in spite of its positive correlation with meaningfulness, and thus seems to result from net suppression. Altogether, 60% of the variability in meaningfulness are predicted by the 26 sources of meaning (F(26, 576) = 33.26, $p < .001$, with R = .78).

4.3. The relationship between density and meaningfulness

Density is strongly related to meaningfulness ($\rho = .52$). It is best understood as a quadratic function ($R^2 = .35$), as shown by Fig. 3.
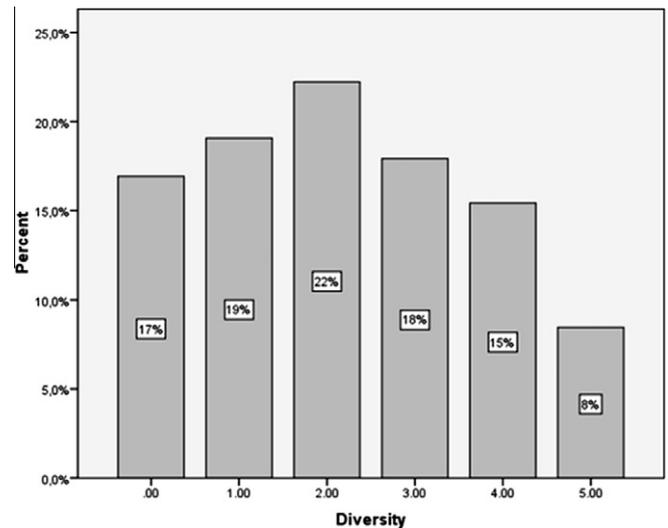
Table 2
Regression of 26 sources of meaning on meaningfulness: beta weights and correlations.

	Standardised coefficient beta	Sig.	Zero-order correlation with meaningfulness
Vertical Selftranscendence			
Explicit religiosity	**.16**	.00	.42[*]
Spirituality	**.11**	.00	.44[*]
Horizontal selftranscendence			
Generativity	**.33**	.00	.67[*]
Unison with nature	.02	.60	.40[*]
Social commitment	.05	.20	.35[*]
Health	.02	.52	.33[*]
Self-knowledge	.06	.11	.35[*]
Selfactualisation			
Individualism	−.07	.11	.23[*]
Challenge	−.07	.10	.17[*]
Development	**.10**	.03	.45[*]
Power	**.15**	.00	.33[*]
Freedom	−.03	.35	.14[*]
Creativity	**.08**	.02	.40[*]
Knowledge	−.02	.51	.32[*]
Achievement	−.05	.22	.23[*]
Order			
Reason	.04	.22	.26[*]
Tradition	−.16	.00	.17[*]
Morality	.01	.78	.40[*]
Practicality	**.13**	.00	.29[*]
Well-being and relatedness			
Community	.04	.37	.38[*]
Fun	−.01	.80	.24[*]
Love	−.03	.44	.31[*]
Harmony	**.19**	.00	.50[*]
Comfort	−.01	.85	.16[*]
Care	−.04	.25	.40[*]
Attentiveness	.07	.09	.52[*]

Note: N = 603; [*] p < .001.

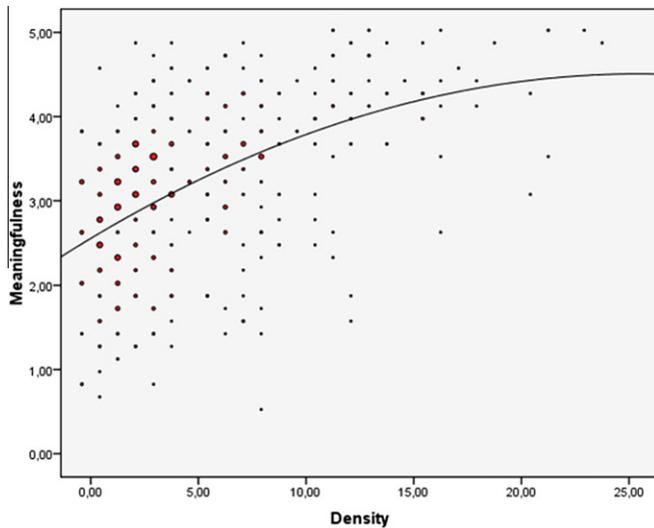**Fig. 2.** Distribution of diversity of sources of meaning; range 0–5.

Fig. 3. The relationship between density and meaningfulness as a quadratic function.

Meaningfulness clearly increases with density, but the gradient starts to flatten after a density of about five sources of meaning.

4.4. The relationship between diversity and meaningfulness

Since diversity is confounded with density of sources of meaning ($\rho = .93$), the relationship between diversity and meaningfulness is established by means of a partial correlation (of ranks). The resulting correlation coefficient is $\rho = .23$ ($p < .001$).

Degrees of meaningfulness associated with different levels of diversity are further investigated by an analysis of covariance. Adjustment is made for density. Meaningfulness is significantly related to diversity ($F(5,594) = 9.42$, $p < .001$, $\eta^2 = .07$). Fig. 4 shows estimated means of meaningfulness. From level 2–5, meaningfulness is higher than on level 0 (Tukey-HSD); it is especially marked when personally relevant sources of meaning represent three or more domains (all higher than level 0–2; Tukey-HSD).
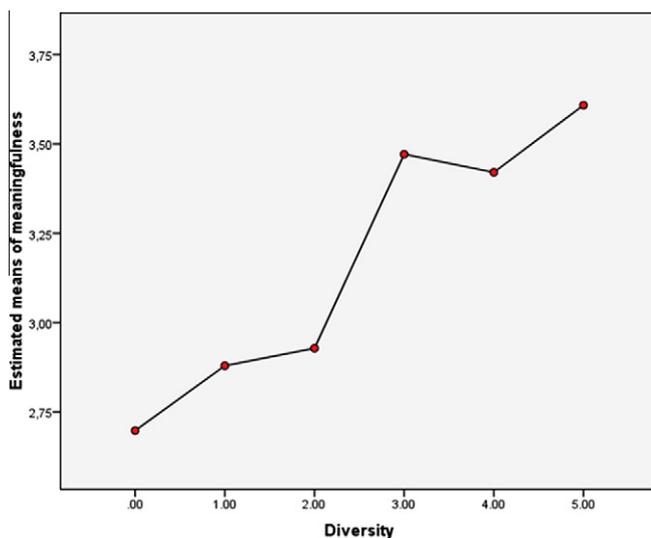

Fig. 4. Estimated means of meaningfulness for six levels of diversity (adjusted for density).

4.5. Hierarchic regression of density and diversity on meaningfulness

In order to identify unique contributions of density and diversity to the prediction of meaningfulness, a hierarchic multiple regression is conducted. To this end, the substantially skewed density variable is log transformed. After step 1, with density ($\beta = .51$, $p < .001$) in the equation, $R^2 = .27$, $p < .001$. Addition of diversity ($\beta = .40$, $p < .001$) results in a small but significant increment in R^2 ($\Delta R^2 = .02$, $p < .001$). Moreover, the relation between density and meaningfulness is reduced to insignificance when diversity is included ($\beta = .15$, $p = .11$). Density is thus mediated by diversity – as also indicated by Sobel $z = 4.35$, $p < .001$ (Preacher & Hayes, 2004). With 96% of the total effect being mediated by diversity (cf. Frazier, Tix, & Barron, 2004), the mediation is practically complete.

5. Discussion

Several taxonomies of sources of meaning exist. Derived from explicitly addressing the question of what makes life meaningful, they encompass between six and eleven sources of meaning. The *Sources of Meaning and Meaning in Life Questionnaire* (SoMe) is a more comprehensive inventory. It is based on the elicitation of *implicit* ultimate meanings underlying cognition, behavior, and emotion. The SoMe covers 26 sources of meaning which can be summarised by five domains. By means of this dimensional inventory, individual degrees of commitment to different sources of meaning can be assessed simultaneously. This allows for the investigation of functional equivalence of sources of meaning, their density, and diversity with regard to the experience of meaningfulness. In contrast to both alternative measures of sources of meaning, the *PMP* (Wong, 1998) and the *SLM* (Bar-Tur et al., 2001), meaningfulness is measured *independently* from the sources of meaning in the SoMe. Only then, sources of meaning, including their density and diversity, can be validly and unconfoundedly linked to meaningfulness.

As expected, the functional equivalence of sources of meaning was challenged by the data. Correlations between sources of meaning and meaningfulness vary significantly. This indicates that some commitments are more likely to generate experiences of meaning than others. Generativity is established as the strongest predictor of meaningfulness. Doing or creating things valued beyond one's death seems to particularly promote a sense of being fulfilled. According to Erikson, who was probably the first to underline the importance of the concept, generativity is associated with a change of perspective typically occurring in later age (1982). He described it as a concern for guiding, nurturing, and establishing the next generation through an act of care. The generative person is ready to accept this responsibility, and exercises it by procreative, productive, and creative activities (Erikson, 1982). Generativity thus represents a strongly integrative attitude, encouraging selftranscendence and advancing personal development.

Results of a multiple regression designate eight sources of meaning contributing specifically to the prediction of meaningfulness. Again, generativity is established as the strongest predictor. All five domains are represented: Generativity stands for *horizontal selftranscendence*; harmony (balance and accord with oneself and others) for *well-being and relatedness*; explicit religiosity (faith in a personal god) and spirituality (belief in a supernatural reality) for *vertical selftranscendence*; power (influence and dominance), development (personal growth and goal striving), and creativity (aesthetic sense and originality) for *selfactualisation*, and practicality (a hands-on, realistic and direct stance) for *order*. Each of them contributes substantially, demonstrating that aspects from all domains are of relevance to the experience of meaningfulness.

Density values yield further insights. Given the criteria employed within this present study, a considerable fraction of the population (17%) holds no commitments, at all. The great majority reports up to eight personally relevant sources of meaning, with only 14% committed to nine or more. Correlational analysis establishes a clear positive relationship between the number of personally relevant sources of meaning and the experience of meaningfulness. No commitment (density = 0) is associated with the lowest level of meaningfulness. Meaningfulness rises with each additional source of meaning. Though the gradient slowly flattens after about five commitments, the contribution of further sources of meaning is still substantial. It can thus be concluded that, in this case, quantity matters. Numerous commitments are likely to enhance personal feelings of belonging and significance, resulting in a strong sense of purpose and meaning.

Diversity of commitments matters, as well, as is indicated by the findings. Nearly two-third of the population show diverse sources of meaning, with commitments from two to five different domains. Nineteen percent 'stand on one leg' being committed to one domain, only. Their level of meaningfulness is not significantly higher than that of those with no commitments. A diversity value of two is associated with a significantly higher meaningfulness than level zero, but, interestingly, it is the involvement of at least three domains which coincides with a steep increase of meaningfulness. It can be concluded that a strong sense of meaning benefits from a broad basis. This conclusion is evidently confirmed by the results of a hierarchic regression analysis, indicating that the relation between density and meaningfulness is largely mediated by the diversity of sources of meaning. Hence, more than the sheer amount of commitments, the accessibility of a variety of sources of meaning is of importance. This might partly be due to "fluid compensation", a concept introduced by Heine, Proulx, and Vohs (2006). They found evidence for the assumption that people whose sense of meaning is threatened reaffirm alternative representations. "According to the model, people can reaffirm meaning in domains that are different from the domain in which the threat occurred" (Heine et al., 2006, p. 88). Fluid compensation will be considerably easier for individuals with commitments in different domains, hence facilitating the maintenance of a sense of meaning.

6. Conclusions

By employment of a multidimensional inventory of sources of meaning, two main insights into individual differences in meaning-making could be gained. The first refers to the quantity of sources of meaning: Experiences of meaningfulness are clearly related to the variety of commitments held by an individual. Ryff and Singer's (1998) claim, following Russell, that "purpose and meaning are, not in most instances, dropped effortlessly in one's lap, but result from invested, committed living" (p. 8) can therefore be specified: rather than making a large investment in one specific asset, commitments should be numerous, and, above all, varied, referring to different domains of meaning. In this way, a personal sense of belonging and significance will be supported. In the case of one domain being threatened (as, e.g., the domain *selfactualisation* might be threatened by a dismissal), multiple and diverse commitments will facilitate fluid compensation, i.e. turning to another domain to reaffirm meaning (e.g., commitment to spiritual practices – *vertical selftranscendence*, or engagement in volunteer work – *horizontal selftranscendence*).

The second major finding refers to the quality of sources of meaning. While Debats (1999) declared to have disconfirmed Frankl's postulate "that the core of each persons' [sic] search for meaning in life involves a process of self-transcendence" (p. 48), the present study substantiates the role of selftranscendence in the experience of meaning. The source of meaning most strongly related to meaningfulness is generativity. Also in relation to all other sources of meaning, generativity proves to be the best predictor of meaningfulness. With generativity being a genuinely self-transcending commitment, these findings corroborate the meaning-making potential of committing oneself to objectives beyond one's immediate needs. It can therefore be concluded that, although pathways to meaning are manifold, an ability and willingness to selftranscend will enhance the probability of actually living a meaningful life.

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