

Original Papers

Polish Psychological Bulletin
2019, vol. 50(2) 114–118
DOI - 10.24425/ppb.2019.126026

Katarzyna Cantarero*
Wijnand A. P. van Tilburg**
Beata Kuźma***
Agata Gąsiorowska****
Bogdan Wojciszke*****

Some People Probably Need to Make More Sense: An Exploratory Study on Individual Differences and the Need for Sense-Making

Abstract: We define the need for sense-making as the desire to find reliable connections between the objects, situations, and relationships that people encounter. We have proposed and tested that there are possible individual differences in the need for sense-making and that these individual differences are insightful in characterizing individuals and their behaviors. A correlational study ($N = 229$) showed that need for sense-making was positively related to self-esteem, extroversion, conscientiousness, openness, and sense of control. Additionally, a higher need for sense-making was associated with greater perception of it as an important part of people's identity. Thus, need for sense-making is relevant to understanding individual differences and can furthermore comprise a significant element of people's identity. These results break new ground in the study of individual differences in the need for sense-making and can be of great importance in work and organizational psychology.

Keywords: need for sense-making, individual differences, personality traits

Does everybody feel the urge to make sense of the activities they undertake, or do people vary in this regard? We explored if there exist individual differences in the extent to which people possess a need for sense-making, how these differences correspond to personality factors, and if a need for sense-making features as element of people's identities. Chater and Loewenstein (2016, p. 138) argue that one of the goals that drives people's behavior is to "construe our lives in a way that makes sense (sense-making)." They argue that a general drive for sense-making motivates people to gather and process information, which facilitates this sense-making process. The need to make sense of the world around us is argued to be a central component of human life (Frankl, 2006).

Psychologists have long investigated the process of meaning making (e.g., Baumeister, 1991; Park, 2010; Steger, Oishi, & Kesebir, 2011; Van Tilburg & Igou, 2011). According to the Meaning Maintenance Model (Heine, Proulx, & Vohs, 2006; Proulx, 2013) people have a need for meaning. Inconsistent perceptions or knowledge discrepancies (i.e. violations of meaning) trigger sense-making efforts (e.g., Proulx & Heine, 2009; Proulx & Inzlicht, 2012). Additionally, it has been demonstrated that people prefer to perform meaningful over meaningless activities (e.g., Chandler & Kapelner, 2013; Hu & Hirsh, 2017). Ariely, Kamenica, & Prelec (2008) found that task meaningfulness was related positively to labor supply.

* SWPS University of Social Sciences and Humanities, Faculty in Sopot; SWPS University of Social Sciences and Humanities, Social Behavior Research Center, Wrocław Faculty of Psychology

** King's College London

*** SWPS University of Social Sciences and Humanities, Faculty in Poznań

**** SWPS University of Social Sciences and Humanities, Wrocław Faculty of Psychology

***** SWPS University of Social Sciences and Humanities, Faculty in Sopot

Corresponding author: Katarzyna Cantarero, e-mail: kcantarero@swps.edu.pl

Meaningful work is positively related to well-being, positive self-image, and lower-levels of anxiety (see Steger, 2017 for an overview). Lobene and Meade (2013) have shown that perceiving one's work as meaningful was related to performance at work. We argue that people differ in the extent to which performing meaningful activities will be of significance to them. Importantly, although there are measures of individual differences related to meaning processes (e.g., *searching for meaning in life*, Steger, Frazier, Oishi, & Kaler, 2006), none of the measures cover a more basic need for sense-making.

Drawing on this literature, we define need for sense-making as the desire to find reliable connections between the objects and situations that one encounters. Making sense¹ is related to placing items into framework, constructing meaning and comprehending (Weick, 1995). It is thus finding reliable connections between objects and/or situations. We propose that need for sense-making can be a positive resource as the need to form reliable relationships in the surrounding environment is likely related to successful moving around in the world. High need for sense-making is thought to be related to higher propensity to search for meaning in new or discrepant situations. Kelly (1966, p. 4) wrote that "A person who spends a great deal of his time hoarding facts [...] is more likely to want them bound." We propose that as a consequence of frequent sense making efforts, one should be more inclined to find meaning and thus to evaluations of higher meaningfulness. Additionally, we assume that high need for sense-making is related to a preference for meaningful (vs. meaningless) activities and a feeling of discomfort in meaningless situations. Overall, we thus propose that people differ in the extent to which they are inclined to respond to new or discrepant situations by trying to make sense of them and in the extent to which they show preference of meaningful over meaningless activities.

Individual Differences and the Need for Sense-Making

Why should we expect there to exist individual differences in need for sense-making if people in general have a drive to make sense of their experiences, which should allow them to more successfully function in the environment? Turning to individual differences in universal motivations allows us to acknowledge variance that there is among people. Consider the desire for control, which is indeed characterized as a "fundamental human motivation" (Greenway, Storrs, Philipp, Louis, Hornsey, & Vohs, 2015; Skinner, 1996) and one of the most important factors that ensure psychological well-being and physical health (Whitson & Galinsky, 2008). However, people differ in the extent, to which they have a sense of personal control (e.g., Lachman & Weaver, 1998). The same applies to other fundamental psychological motives (e.g., belongingness/affiliation, status; Aronson, 2011; Chen et al., 2015; Leary, Kelly, Cottrell, & Schreindorfer, 2013; Mahadevan, Gregg, & Sedikides, 2019). If we turn to the context of cognitive

functioning that is necessary for adaptation, we can give the example of need for structure. The need for structure is in general proper to the human kind, but at the same time there are individual differences in the levels of the need (Neuberg & Newsom, 1993). By the same token, we expect that there are individual differences in need for sense-making.

We propose that those who have high level of the need are the ones that are more prone to make sense-making efforts in situations that they evaluate as new or discrepant. These individuals are the ones who strive to perform and engage in meaningful activities. Low need for sense-making would be expressed by low discomfort and ease at remaining in meaningless situations. Individuals with low levels of the need would not engage frequently in sense-making efforts.

We assumed that possible individual differences in the need for sense-making should relate to well established personality traits and individual differences. We thus deliberately decided to focus on self-esteem (Rosenberg, 1965), the Big Five personality traits (e.g., Costa & McCrae, 1992a; Costa & McCrae, 1992b) and sense of control (Lachman & Weaver, 1998), as we considered these constructs to be significantly related to possible individual differences in the need for sense-making.

Generally speaking, need for sense-making can serve as resource and benefit psychological functioning, and hence we expect this construct to correlate positively with general self-esteem. Furthermore, we expect that need for sense-making is positively related to openness, extraversion, and conscientiousness, while negatively related to neuroticism. People with high need for sense-making might be characterized by a high desire to find reliable relationships between objects, which in turn can be reflected in a general openness to novelty, the core component of openness to experience (e.g., Costa & McCrae, 1992a; Costa & McCrae, 1992b). A heightened tendency to seek stimulation and a desire to be engaged in activities is what constitutes one of the facets of extroversion (e.g., Zawadzki, Strelau, Szczepaniak, & Sliwiska, 1998). We think that people high in need for sense-making have a preference for staying in meaningful situations over meaningless ones, and prefer to avoid pointless activities, similarly to extroverts (Chen et al., 2018). Individuals with high level of need for sense-making are likely motivated to set meaningful goals and engage in their pursuit. Because goal focused motivation is related to the trait conscientiousness, we anticipate it to correlate positively with need for sense-making. Finally, we base our expectations of the negative relation between neuroticism and need for sense-making on the fact that neuroticism is a tendency to frequently experience negative emotions and produce irrational thoughts. As such, this trait is considered negatively related to adaptation to the environment (e.g., Zawadzki et al., 1998), while we consider that need for sense-making is likely a positive resource.

Sense of control is complemented by the motivation to work hard to improve one's fate in contrast to a sense of hopelessness (Lachman & Weaver, 1998). Need for sense-making is related to the desire to engage in meaningful pursuits and to avoid meaningless ones, and as such, is undoubtedly related to a propensity to act towards achieving

¹ We use the terms sense making and meaning making interchangeably.

these goals. As a consequence, we expect a positive relation between need for sense-making and sense of control.

In the present study we considered potential correlations between need for sense-making on the one hand and other individual differences on the other. We additionally explored whether possible individual differences in the need for sense-making are of personal significance. The assertion that need for sense-making forms an important part of how individuals perceive themselves suggests that identity-driven processes may be related to need for sense-making (such as social identification).

Method

The study was approved by the Research Ethics Committee of the Faculty in Sopot at the SWPS University of Social Sciences and Humanities. All subjects gave written informed consent in accordance with the Declaration of Helsinki.

Participants and Recruitment

We aimed at reaching 200 participants in order to achieve power in excess of $(1 - \beta) = .80$, for absolute r value of .13 ($\alpha = .05$, two-tailed). Participants were 229 Polish university students (188 women), $M_{age} = 26.50$, $SD_{age} = 7.92$ who received course credit points in exchange for participation in this online study. Participants could withdraw from participation without negative consequences. None did.

Procedure and Materials

After giving informed consent, participants read a definition of the need for sense-making: “the desire to find reliable connections between objects and situations.” We then explained that:

[...] reliable connections can be understood as, for example, doing something that is related to the goals that one sets. A reliable connection also occurs when you successfully join new information with the information you already possess. Triggers of the need for sense-making are being in a new situation or a situation where one finds discrepancies.

We next gave an example of a hypothetical person with a high need for sense-making as someone who eagerly engages in activities that make sense to that person.

Participants then answered three questions: “Please state what is your level of need for sense-making” (1 = *definitely low*, 7 = *definitely high*), “Comparing to other people, what is your level of need for sense-making” (1 = *lower than other people*, 7 = *higher than other people*) and “Need for sense-making is an important part of who you are” (1 = *definitely no*, 7 = *definitely yes*).

Afterwards, participants completed three additional scales that were presented to them in random order. Participants completed the Rosenberg Self-Esteem Scale ($\alpha = .89$, Rosenberg, 1965; Dzwonkowska, Lachowicz-Tabaczek, & Laguna, 2008) and the ten-item personality inventory (TIPI; Gosling, Rentfrow, & Swann, 2003; Sorokowska, Slowinska, Zbieg, & Sorokowski, 2014), which measures extroversion ($\alpha = .78$), conscientiousness ($\alpha = .76$), agreeableness ($\alpha = .55$), openness ($\alpha = .25$) and neuroticism ($\alpha = .72$). We also asked them to complete the Sense of Control Scale ($\alpha = .86$, Lachman & Weaver, 1998). At the end of the study participants reported demographic data.

Results

On average, participants reported levels of need for sense-making to be rather high ($M = 5.70$, $SD = 1.08$). Higher need for sense-making was associated with the impression that one’s need was higher than that of others, $r(229) = .62$, $p < .001$. Furthermore, the higher the need for sense-making was, the more it was perceived as an important part of the individual’s identity, $r(229) = .62$, $p < .001$; people who felt that they possessed higher need for sense-making than others also reported need for sense-making to be a more prominent feature of their identity, $r(229) = .53$, $p < .001$.

So far, these results suggest that at least in the population in question (university students) high need for sense-making is considered relatively prominent in comparison to others. Furthermore, it seems that need for sense-making can indeed form an important part of people’s identity. We next estimated zero-order correlations between need for sense-making and the various measures of individual differences.

As expected, need for sense-making was positively related to self-esteem, extroversion, conscientiousness, openness to experience and sense of control. There was no statistically significant relationship between need for sense-making and both agreeableness and neuroticism (Table 1).

Table 1. Correlation matrix between need for sense-making, self-esteem, personality traits, and sense of control

Variable	1	2	3	4	5	6	7
1. Need for Sense-Making	–						
2. Self-esteem	.20**	–					
3. Extroversion	.23***	.50***	–				
4. Conscientiousness	.23***	.35***	.30***	–			
5. Agreeableness	.06	.17**	.22**	.30***	–		
6. Openness	.17*	.20**	.24***	.09	.13*	–	
7. Neuroticism	–.03	–.62***	–.49***	–.28***	–.22**	.10	–
8. Sense of Control	.20**	.62***	.47***	.35***	.22**	.29***	–.57***

Note. $N = 226$; * $p < .05$; ** $p < .01$; *** $p < .001$; two-tailed.

Results indicate that people with high levels of need for sense-making are likely open towards novelty and have positive self-views. High need for sense-making is also related to feeling of control over one's actions and a tendency to aim for achievement of goals that one sets.

Discussion

The aim of the study was to explore possible individual differences in the need for sense-making, relating these differences to personality traits, and exploring their importance to identity. As expected, need for sense-making was positively related to self-esteem, extroversion, conscientiousness, openness and sense of control. There was no statistically significant relationship between need for sense-making and neuroticism or agreeableness. It should be further investigated whether neuroticism and need for sense-making are indeed unrelated or if this is a matter of measurement.

The pattern of results suggests that need for sense-making is possibly advantageous. It is likely that the need to see how one thing is connected to another makes it more probable that one will be better at predicting what to expect from the world and how to achieve one's goals. For this reason we think that need for sense-making is most likely a positive resource for individuals.

We know that people state having higher levels of positively viewed features when they compare themselves to others, which has been identified as the better than average effect (e.g., Taylor & Brown, 1988; Brown, 2012). The results of our study suggest that need for sense-making is likely perceived as a desirable trait, as the higher the levels of that need, the more it is seen as higher as compared to others. Additionally, the result pointing to a positive correlation between subjectively stated levels of need for sense-making and its value for the self indicates that the study of this construct should be of high importance.

Hackman and Oldham (1976) in their Job Characteristics Model have identified factors that are important for work outcomes. They argued that core job dimensions (e.g., skill variety, task identity and significance) are related to experiencing meaningfulness at work. They found this psychological state to be significantly related to work effectiveness. It is possible that individual differences in need for sense-making will serve as a predictor in searching and experiencing meaningful work, which in turn will relate to work engagement. We think that further works on the construct can help to establish an individual difference important for the process of motivating workers and job crafting efforts. Focusing on individual differences in need for sense-making can have vast applications in work and organizational psychology.

Limitations and Future Directions

We acknowledge that using a single item to evaluate possible differences in need for sense-making has limitations. Although using a one-item assessment does give the benefit of brevity and such measures do generate reliable

data (e.g. Robins, Hendin, & Trzesniewski, 2001), we believe that it would be advisable to develop a reliable instrument to measure individual differences in need for sense-making and such efforts are being undertaken (Cantarero, Van Tilburg, Gąsiorowska, & Wojciszke, 2019). We also cannot assess the reliability of the additional questions regarding the need for sense-making that were presented to the participants, which is a limitation. Furthermore, this study was conducted on students, which limits possibilities for generalization of the obtained results. Although we consider the relationship between need for sense-making and personality traits to remain similar regardless of education level, this assumption should be tested in future studies.

Future studies could expand on the relationship between need for sense-making and other variables not measured in this study (e.g., work engagement). Given that need for sense-making is most likely a desirable feature, it would be worth to control for social desirability effects in future studies. Additionally, it would be interesting to explore the links between need for sense-making and achievement tests in subsequent research on the subject matter.

Conclusion

We argue that there is space for individual differences in need for sense-making. We think that the need might benefit individuals and expect it to manifest with regards to not only cognitive and emotional processes, but also behavior. Acknowledging the variance in one of the universal human motivations is a theoretical gain, that could be further investigated. Our study elaborates preliminary characteristics of individuals with different levels of the need and gives new grounds for interesting research on the subject.

References

- Ariely, D., Kamenica, E., & Prelec, D. (2008). Man's search for meaning: The case of Legos. *Journal of Economic Behavior & Organization*, 67, 671–677. <https://doi.org/10.1016/j.jebo.2008.01.004>
- Aronson, E. (2011). *The Social Animal*. Palgrave Macmillan: Worth Publishers.
- Baumeister, R. F. (1991). *Meanings in Life*. Guilford: New York.
- Brown, J. D. (2012). Understanding the better than average effect: motives (still) matter. *Personality and Social Psychology Bulletin*, 38, 209–219. <https://doi.org/10.1177/0146167211432763>
- Cantarero, K., Van Tilburg, W. A. P., Gąsiorowska, A., & Wojciszke, B. (2019). *Need for sense-making as a personal resource. Conceptualization and scale development*. Manuscript under review.
- Chandler, D., & Kapelner, A. (2013). Breaking monotony with meaning: Motivation in crowdsourcing markets. *Journal of Economic Behavior & Organization*, 90, 123–133. <http://dx.doi.org/10.1016/j.jebo.2013.03.003>
- Chater, N., & Loewenstein, G. (2016). The under-appreciated drive for sense-making. *Journal of Economic Behavior & Organization*, 126, 137–154. <https://doi.org/10.1016/j.jebo.2015.10.016>
- Chan, C. S., Van Tilburg, W. A. P., Igou, E. R., Poon, C. Y. S., Tam, K. Y. Y., Wong, V. U. T., & Cheung, S. K. (in press). Situational meaninglessness and state boredom: Cross-sectional and experience-sampling findings. *Motivation and Emotion*. doi: 10.1007/s11031-018-9693-3
- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Van der Kaap-Deeder, J., ... & Ryan, R. M. (2015). Basic psychological need

- satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion*, 39, 2, 216–236.
- Costa, P. T. Jr., & McCrae, R. R. (1992a). Four ways Five Factors are basic. *Personality and Individual Differences*, 13, 653–665. [http://dx.doi.org/10.1016/0191-8869\(92\)90236-1](http://dx.doi.org/10.1016/0191-8869(92)90236-1)
- Costa, P. T. Jr., & McCrae, R. R. (1992b). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEOFFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Dzwonkowska, I., Lachowicz-Tabaczek, K., & Laguna, M. (2008). *Samoocena i jej pomiar. Polska adaptacja skali SES M. Rosenberga. Podręcznik*. Warszawa: Pracownia Testów Psychologicznych.
- Frankl, V. (2006). *Men's search for meaning*. Boston: Beacon Press.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. Jr. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality*, 37, 504–528. [http://dx.doi.org/10.1016/S0092-6566\(03\)00046-1](http://dx.doi.org/10.1016/S0092-6566(03)00046-1)
- Greenaway, K. H., Storrs, K. R., Philipp, M. C., Louis, W. R., Hornsey, M. J., & Vohs, K. D. (2015). Loss of Control Stimulates Approach Motivation. *Journal of Experimental Social Psychology*, 56, 235–241. <https://doi.org/10.1016/j.jesp.2014.10.009>
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: A test of a theory. *Organizational Behavior and Human Performance*, 16, 250–279. [https://doi.org/10.1016/0030-5073\(76\)90016-7](https://doi.org/10.1016/0030-5073(76)90016-7)
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The meaning maintenance model: On the coherence of human motivations. *Personality and Social Psychology Review*, 10, 88–110. doi: 10.1207/s15327957pspr1002_1
- Hu, J., & Hirsh, J. B. (2017). Accepting lower salaries for meaningful work. *Frontiers in Psychology*, 8, 1649. doi: 10.3389/fpsyg.2017.01649
- Lachman, M. E., & Weaver, S. L. (1998). The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*, 74, 763–773. <https://doi.org/10.1037//0022-3514.74.3.763>
- Leary, M. R., Kelly, K. M., Cottrell, C. A., & Schreindorfer, L. S. (2013). Construct validity of the need to belong scale: mapping the nomological network. *Journal of Personality Assessment*, 95(6), 610–624. <http://dx.doi.org/10.1080/00223891.2013.819511>
- Lobene, E. V., & Meade, A. W. (2013). The effects of career calling and perceived overqualification on work outcomes for primary and secondary school teachers. *Journal of Career Development*, 40, 508–530. <http://dx.doi.org/10.1177/0894845313495512>
- Mahadevan, N., Gregg, A. P., & Sedikides, C. (2019). Where I am and where I want to be: Perceptions of and aspirations for status and inclusion differentially predict psychological health. *Personality and Individual Differences*, 139, 170–174.
- Neuberg, S. L., & Newsom, J. T. (1993). Personal need for structure: Individual differences in the desire for simpler structure. *Journal of Personality and Social Psychology*, 65, 1, 113.
- Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, 136, 257–301. <http://dx.doi.org/10.1037/a0018301>
- Proulx, T. (2013). Meaning Maintenance Model: Introducing soren to existential social psychology. In J. A. Hicks & C. Routledge (Eds.), *The Experience of Meaning in Life: Classical Perspectives, Emerging Themes and Controversies* (pp. 47–60). New York: Springer. http://dx.doi.org/10.1007/978-94-007-6527-6_4
- Proulx, T., & Inzlicht, M. (2012). The Five “A”s of Meaning Maintenance: Finding Meaning in the Theories of Sense-Making. *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory*, 23, 4, 317–335. <http://dx.doi.org/10.1080/1047840X.2012.702372>
- Proulx, T., & Heine, S. J. (2009). Connections from Kafka: Exposure to meaning threats improves implicit learning of an artificial grammar. *Psychological Science*, 20, 1125–1131. doi: 10.1111/j.1467-9280.2009.02414.x
- Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a Single-Item Measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, 27, 151–161. <https://doi.org/10.1177/0146167201272002>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press. <http://dx.doi.org/10.1515/9781400876136>
- Skinner, E. A. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology*, 71, 549.
- Sorokowska, A., Slowinska, A., Zbieg, A., & Sorokowski, P. (2014). *Polska adaptacja testu Ten Item Personality Inventory (TIPI) – TIPI-PL- wersja standardowa i internetowa*. Wrocław: WrocLab.
- Steger, M. (2017). Creating meaning and purpose at work. In L. G. Oades, M. F. Steger, A. Delle Fave, & J. Passmore (Eds.), *The Wiley Blackwell Handbook of the Psychology of Positivity and Strengths-Based Approaches at Work* (pp. 60–81). Hoboken, New Jersey: Wiley-Blackwell.
- Steger, M. F., Oishi, S., & Kesebir, P. (2011). Is a life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgments. *Positive Psychology*, 6, 173–180. <http://dx.doi.org/10.1080/17439760.2011.569171>
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53, 80–93. <http://dx.doi.org/10.1037/0022-0167.53.1.80>
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193–210. <https://doi.org/10.1037//0033-2909.103.2.193>
- Van Tilburg, W. A. P., & Igou, E. R. (2011). On the meaningfulness of existence: When life salience boosts adherence to worldviews. *European Journal of Social Psychology*, 41, 740–750. <http://dx.doi.org/10.1002/ejsp.819>
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks: Sage.
- Whitson, J. A., & Galinsky, A. D. (2008). Lacking control increases illusory pattern perception. *Science*, 322, 5898, 115–117.
- Zawadzki, B., Strelau, J., Szczepaniak, P., & Sliwiska, M. (1998). *Inwentarz osobowości Costy i McCrae. Adaptacja polska*. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego.