

# **What Do Seculars Understand as ‘Spiritual’?**

## **A Replication of Eisenmann et al.’s Semantics of Spirituality**

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# What Do Seculars Understand as ‘Spiritual’? A Replication of Eisenmann et al.’s Semantics of Spirituality

Abstract:

Eisenmann, Klein et al. developed a system consisting of forty-four categories to code the definitions of spirituality in samples from the USA and Germany. We tested this category system in a sample of seculars in Switzerland. All original categories were applicable to the individual understandings of spirituality in our sample. Only two additional categories of marginal relevance were formed. This result confirms the validity of the category system. Furthermore, the German and the Swiss samples both stress an understanding of spirituality as transcending without emphasizing transcendence. This concept should be used to construct spirituality scales for quantitative studies.

Keywords: spirituality; replication; qualitative; Switzerland; cross-cultural

## 1. Introduction

A replication study is a double-edged sword. On the one hand, replications are a necessary scientific standard, which allow for approval of robustness, i.e., of the reliability of the results of the original study. On the other hand, scientists value innovation more highly than replication and are often urged not to engage in replication studies due to the lack of incentives for such research.<sup>1</sup> This trend has resulted in the current replication crisis in psychology, as well as in

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<sup>1</sup> On the preference for innovation, see Open Science Collaboration, “Estimating the Reproducibility of Psychological Science,” *Science* 349/6251 (2015), aac4716. For the lack of incentives, see Scott O. Lilienfeld, “Psychology’s Replication Crisis and the Grant Culture: Righting the Ship,” *Perspectives on Psychological Science* 12/4 (2017), 660–664.

many other empirical sciences.<sup>2</sup> Another often neglected scientific standard is the cross-cultural and cross-religious validity of psychological findings.<sup>3</sup> This includes the basic research of how people from different cultural-religious backgrounds understand terms that are heavily used in questionnaires.<sup>4</sup> When it comes to the term ‘religious,’ cross-cultural and cross-religious understanding has been highly disputed (e.g., ‘How religious are you?’) and has triggered studies on the controversial term ‘spiritual’ (e.g., ‘How spiritual are you?’).<sup>5</sup> Regarding the latter term, the first study on emic semantics of spirituality using an inductive approach was conducted by Clemens Eisenmann, Constantin Klein et al.<sup>6</sup> As this study is of high importance

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<sup>2</sup> Leonard P. Freedman, Iain M. Cockburn, & Timothy S. Simcoe, “The Economics of Reproducibility in Preclinical Research,” *PLOS Biology* 13/6 (2015), e1002165. For a contribution to studies on religion and spirituality, see Ralph W. Hood, “The Replication Crisis in the Psychology of Religion,” Keynote, International Association for the Psychology of Religion Congress, Gdansk, Poland, 31 August 2019.

<sup>3</sup> Joseph Henrich, Steven J. Heine, & Ara Norenzayan, “The Weirdest People in the World?,” *Behavioral and Brain Sciences* 33/2–3 (2010), 61–83.

<sup>4</sup> See Marsha Cutting & Michelle Walsh, “Religiosity Scales: What Are We Measuring in Whom?,” *Archive for the Psychology of Religion* 30/1 (2008), 137–154.

<sup>5</sup> Regarding the term ‘religious,’ see Zuhal Ağilkaya-Şahin, “The Problem of Appropriate Psychology of Religion Measures for Non-Western Christian Samples with Respect to the Turkish-Islamic Religious Landscape,” in: Zuhal Ağilkaya-Şahin, Heinz Streib, Ali Ayten, & Ralph Hood (eds.) *Psychology of Religion in Turkey* (Leiden: Brill, 2015), 65–105; David Wulff, “Prototypes of Faith: Findings with the Faith Q-sort,” *Journal for the Scientific Study of Religion* 58/3 (2019), 643–665. Regarding the term ‘spiritual,’ see David O. Moberg, “Assessing and Measuring Spirituality: Confronting Dilemmas of Universal and Particular Evaluative Criteria,” *Journal of Adult Development* 9/1 (2002), 47–60; compare Heinz Streib & Ralph W. Hood, “Understanding ‘Spirituality’: Conceptual Considerations,” in: idem (eds.), *Semantics and Psychology of Spirituality* (Berlin: Springer, 2016), 3–17.

<sup>6</sup> Clemens Eisenmann, Constantin Klein et al., “Dimensions of ‘Spirituality’: The Semantics of Subjective Definitions,” in: Heinz Streib & Ralph W. Hood (eds.), *Semantics and Psychology of Spirituality: A Cross-cultural Analysis* (Berlin: Springer, 2016), 125–151.

for basic research on spirituality, we want to put it on a solid foundation by trying to reproduce its findings in a different cultural-religious context.

In their multimethod study, Eisenmann, Klein, et al.<sup>7</sup> asked for individual definitions of ‘spirituality’ in an online questionnaire by using a free-text answer format, which was limited to 250 digits. The whole sample consisted of  $N=1779$  spiritually interested participants. Among them, 1,039 belonged to a US-American subsample, the rest to a German subsample. The vast majority of them identified themselves as spiritual. Women, participants with high education, and those with high income were overrepresented in their sample. In a first step, a complex inductive cross-cultural qualitative analysis of more than 8,400 codes resulted in forty-four categories of semantics of spirituality. In a second step, thirty-six of these categories (seven categories with frequencies  $<5\%$ , and the ‘rest’ category were excluded) were reduced to ten overarching components (explaining 42.11% of variance) by using a principal component analysis (see Appendix A). The third and last step, a second-order principal component analysis, revealed three higher dimensions, which were mystical versus humanistic transcending, theistic versus non-theistic transcendence, and individually ‘lived’ religion versus dogmatism.

On the level of the categories, the most frequently used semantics ( $>20\%$  of cases) are linked to individual beliefs, connectedness, and everyday values (see Table 1). This is also reflected in the level of components, but additionally code V ‘higher power(s)’ is also one of the most present semantics here (see Figure 1). Similar to the frequency of categories, the component IX ‘opposition to religion’ is the least frequent one.

The authors conclude that there is not only a broad range of semantics of spirituality, but also cross-cultural differences: on the level of components,  $z$ -standardized regression scores of all ten components differed significantly, but almost all effect sizes were rather small. Transcendental components (esp. code I ‘connectedness’ and VII ‘existential truth’), i.e.,

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<sup>7</sup> Eisenmann et al. state that they “are equally contributing first authors.” Ibid., 125.

transcending “boundaries of an individual’s ego or of ordinary reality, yet without necessarily postulating the existence of a transcendent sphere or entity,” which show influences of notions of Eastern and New Age spirituality, are more pronounced in the German subsample.<sup>8</sup> In contrast, components related to a transcendent sphere (code II ‘part of religion,’ V ‘higher power(s),’ VI ‘something beyond,’ and code X ‘individual religious praxis’), i.e., to “assume the existence of an ontologically ‘higher’ sphere or entity,”<sup>9</sup> which is closer to the semantics of traditional religions, are more common in the United States’ subsample. The component IX ‘opposition to religion’ was a bit more pronounced within the German subsample.

Finally, the authors stress the cross-cultural similarities of understandings of spirituality, which seem higher than their differences. This becomes apparent because all categories could be identified in both subsamples (only half of them showed significant cross-cultural differences) and—except for code V ‘higher power(s)’—all effect sizes regarding the components were rather small.<sup>10</sup> The final discussion highlights the match of all ten components with different conceptualizations of spirituality that can be found in the literature and earlier empirical studies, and, thereby, this emic approach contributes to solving former contradictory results.

As shown, the original study by Eisenmann, Klein et al. considers different cultural backgrounds (USA, Germany), and the authors put their results from the German sample into a European frame by referring to remarkably similar results in earlier studies from other European countries.<sup>11</sup> In contrast, our aim is to test whether the semantics of spirituality are not only cross-culturally but also cross-religiously robust (self-identified spirituals in the original study versus seculars in our replication study).

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<sup>8</sup> Ibid., 141.

<sup>9</sup> Ibid, 141.

<sup>10</sup> For a detailed overview of cross-cultural differences, see *ibid.*, 133–136.

<sup>11</sup> Ibid.

## **2. Study Aims**

The aim of this study is to test the reproducibility of the categories of Eisenmann, Klein et al. in a sample of German-speaking individuals in Switzerland who participated in a representative study.<sup>12</sup> They considered themselves to be non-religious or atheistic. Hence, we defined them as ‘secular.’

The first question that arises is whether Eisenmann, Klein et al.’s category system is also valid in this specific sample. This would be the case if, firstly, most categories also occur within seculars and, secondly, hardly any new categories are needed to encode the spirituality concepts of seculars. Furthermore, the question arises of whether the general understanding of spirituality that prevails among seculars is compatible with the dominant understanding of spirituality in Eisenmann, Klein et al.’s sample. Finally, we want to outline differences in the semantic components between the original samples and the replication sample.

## **3. Method**

### *3.1. Procedure and Sample*

The here presented data, based on a sample of seculars, i.e., people who consider themselves to be non-religious or atheists, is a part of a bigger mixed-method research project on seculars in

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<sup>12</sup> Ibid.

Switzerland.<sup>13</sup> It uses the quantitative data from the *Religion Monitor* from 2013, which was collected among a representative sample ( $N=1003$ ) that represents all three language areas of Switzerland (German, French, Italian).<sup>14</sup> During the applied telephone interview in November and December 2012, using a standardized questionnaire on religiosity,  $n=341$  participants defined themselves as non-religious or atheist and were categorized as ‘seculars’—nevertheless, they can be religiously affiliated or unaffiliated. Among them,  $n=113$  agreed to an additional face-to-face interview, and, from those, a stratified sample according to age, gender, language, and religious affiliation of  $n=83$  participants was randomly drawn. This procedure minimizes biases between the sample and the general population.

The current study is based on the German-speaking subsample ( $n=48$ ). Thereby, we simplified the analyses by keeping the variables of language and culture constant. The following socio-demographic and socio-religious data of our subsample is derived from the earlier representative questionnaire study. The age of the sample ranges from eighteen to eighty-three years old ( $M=51.46$ ,  $SD=14.32$ ); a majority of 72.9% are male. Regarding marital status, half of the sample reports to be married or to live with a partner, 20.8% do not, while the rest left the question unanswered. Our sample is highly educated: 64.6% have a university or college degree, 12.5% have an A-level qualification, and only 22.9% hold a secondary or upper secondary education as their highest qualification. Moreover, the self-assessed economic situation is above the scale average (scale ranges from 1–4; higher scores indicate higher economic status) with  $M=3.19$  ( $SD=.53$ ). Regarding socio-religious variables, a majority of 52.1% report that they are religiously non-affiliated. Those who were religiously socialized

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<sup>13</sup> see <http://p3.snf.ch/Project-156241> (accessed 19 February 2020).

<sup>14</sup> Gert Pickel, *Religionsmonitor—Verstehen was verbindet: Religiosität im internationalen Vergleich* [Religion Monitor—To Understand What Connects: Religiosity in International Comparison]. [https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/GP\\_Religionsmonitor\\_verstehen\\_was\\_verbindet\\_Religioesitaet\\_im\\_internationalen\\_Vergleich.pdf](https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/GP_Religionsmonitor_verstehen_was_verbindet_Religioesitaet_im_internationalen_Vergleich.pdf) (accessed 19 February 2020).

during their childhood constitute 43.8%, 31.3% report that they were at least partly religiously socialized, and the rest were non-religiously socialized. In summary: our sample reflects a typical European ‘secular’ sample as it is predominantly male, highly educated, and of high economic status.<sup>15</sup> Additionally, on average the sample scores higher on spirituality ( $M=2.13$ ,  $SD=1.20$ ) than on religiosity ( $M=1.63$ ,  $SD=.96$ ; both answer scales range from 1–5) and can consequently be labeled as ‘more spiritual than religious.’

A semi-structured interview guideline was applied by trained interviewers that asked about three main topics: religiosity (e.g., religious socialization; ‘Is there anything religious in your life?’; ‘What do you think about prayer?’), meaning of life (e.g., ‘Do you find meaning in your life?’; ‘Did you ever experience a meaning crisis?’), and spirituality (e.g., ‘Is there anything spiritual in your life?’; alternative healing). These in-depth interviews lasted between twenty-eight and 233 minutes (average: seventy-seven minutes). Compared to the original study, these questions generate much longer utterances on spirituality than the 250-digit limit of the answers in the standardized questionnaire. Hence, we tried to maximize comparability by restricting our coding procedure to the answers to the question ‘Is there anything spiritual in your life?’, as this question triggered individual definitions of spirituality.

### *3.2. Data Analysis*

Our replication study used the coding system developed by Eisenmann, Klein et al. and applied it by using deductive coding according to the qualitative content analysis by Phillip Mayring

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<sup>15</sup> Barbara Keller et al., “The Semantics of ‘Spirituality’ and Related Self-identifications: A Comparative Study in Germany and the USA,” *Archive for the Psychology of Religion* 35/1 (2013), 71–100.



with the support of MAXQDA software.<sup>16</sup> Content analysis is defined as a systematic (i.e., according to explicit rules), theory-based analysis of fixed communication material. The system of categories is a central part of this analysis, as it enables the assignment of categories to text passages in an interpretative way. Therefore, categories must be precisely defined, transformed into coding rules, explained by anchor examples, and differentiated from similar categories.

The final coding rules of the categories were derived from the original study and via personal correspondence with one of the first authors of the original study, Eisenmann. The final guideline is displayed in Appendix A. As in the original study, coding units were “‘meaning units’ or ‘themes,’”<sup>17</sup> and the sub-technique frequency analysis, meaning “to count certain elements in the material and compare them in their frequency with the occurrence of other elements,”<sup>18</sup> was applied.

The rater, who was at the same time involved in the aforementioned project on seculars in Switzerland, was intensively trained by two psychologists of religion according to this category system. In order to assure inter-rater reliability, a second independent rater coded a subsample of ten cases simultaneously. The inter-rater reliability on the level of components amounts to 97.66% and can be evaluated as very high.

## **4. Results**

### *4.1. Results of the Frequency Analysis on the Level of the Categories*

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<sup>16</sup> See, respectively, Eisenmann et al., “Dimensions”; Phillip Mayring, *Qualitative Content Analysis: Theoretical Foundation, Basic Procedures and Software Solution*. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-395173> (accessed 19 February 2020).

<sup>17</sup> Eisenmann et al., “Dimensions,” 130.

<sup>18</sup> Mayring, *Qualitative*, 22.

Table 1 shows the results of the frequencies of the categories of the semantics of spirituality of the original study and the replication study. As in the study by Eisenmann, Klein et al., the frequencies were also related to the number of cases.<sup>19</sup> First, all categories were also found in the replication study. Second, two generic categories that had not been a part of the original category system had to be formed, but they were only marginally presented. The first was II-generic: ‘part of religion, other,’ which was given twice (4.2%), containing semantics of spirituality that cover ‘a surrogate religion’ and ‘has a sectarian nature.’ The second category, VIII-generic: ‘esotericism, other,’ was found only once (2.1%) and contains one semantic that links spirituality to zodiac signs. The latter one could possibly be grouped into the category ‘esotericism, occultism, spiritism, mystic, magic,’ which was excluded from further analysis by Eisenmann, Klein et al. due to its low frequency, as it was in our study as well.

Third, there seem to be differences in the frequencies of the semantics between the original study and the replication study. In our sample of seculars, spirituality as all-connectedness (I-1) and as a relation to the world/nature/environment/universe (I-2) are among the most often found categories. While spirituality is viewed as a part of religion for many more seculars (II-4), they connect it to God in less than half of the cases (II-2). Spirituality as seeking/a path/a journey (III-2) is found more often in this study than in the original study. Spirituality as within/self/higher self (III-1), in contrast, was only found in about one quarter of the cases. Spirituality as values (IV-1) or a component of everyday life (IV-2) seems to play a minor role among seculars compared to the spiritual subsample of the study by Eisenmann, Klein et al. Spirituality is seldom defined as a faith/belief (V-2) or something higher/beyond/greater (VI-2) in our sample but, therefore, is more often understood as an experience (VII-3) or as otherworldly (VIII-1), as well as a vague/unclear/bullshit/fantasy

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<sup>19</sup> Eisenmann et al., “Dimensions,” 134–135.

concept (VIII-4). Spirituality as something else than religion (IX-1) was given as a definition almost three times more often in our secular sample. Lastly, spirituality as practice/music/prayer/worship/meditation was the most frequently given code in our study: this category was found forty-four times in forty-eight cases. Interestingly, the emphasis on spirituality as individual/personal/private/subjective was less prominent than in the original study.

- insert table 1 about here –

The frequency analysis of the categories gave the first insight into the difference of the semantics of spirituality between a spiritual sample (original study) and a secular sample (replication study). In order to acquire a more differentiated view, we want to test for significant differences between all three subsamples on the levels of the components in the next step.

#### *4.2. Results of the Comparison of Three Subsamples on the Level of Components*

As the frequencies of the components related to the cases can amount to more than 100% (i.e., a category can be coded several times in one individual definition of spirituality) and in order to achieve a better compatibility between the three subsamples of different sizes, the further analysis used the frequencies of the components in relation to the number of given codes in the relevant subsample ( $k=4621$  for the US sample and  $k=3315$  for the German subsample of the original study, and  $k=268$  in the replication study).

Figure 1 displays the relative frequencies of the components in each subsample. At first sight, relative frequencies of most components seem similar across all three subsamples, but the frequencies of code I ‘connectedness’ and X ‘individual religious praxis’ seem to be much higher and V ‘higher power(s)’ much lower in our sample. Nevertheless, only the latter two differences between the US and the Swiss subsamples are significant ( $\chi^2=5.22^*$  for X

‘individual religious praxis’ and  $\chi^2=5.04^*$  for V ‘higher power(s)’). There is no significant difference between the German and the Swiss subsample as well as only one difference between the whole original sample and the replication sample, which is again code X ‘individual religious praxis’ ( $\chi^2=4.46^*$ ). However, it must be taken into consideration that the statistical power to detect significant differences is quite low due to our small sample size.

[Figure 1 here]

## 5. Discussion

The main aim of our study was to test the reproducibility of the categories of the semantics of spirituality in a sample of German-speaking individuals in Switzerland, who consider themselves to be non-religious or atheistic.<sup>20</sup> All forty-four original categories were found in the Swiss sample, which contributes to the reliability of the findings of the original study. Two new categories had to be formed, which were only found in three of the total cases and are, therefore, as marginal as the categories excluded by Eisenmann, Klein, et al.<sup>21</sup> Both of these generic categories were grouped into one of the ten components (II ‘part of religion’ and VIII ‘esotericism’), which adds further empirical evidence to the robustness of the original semantics. With regard to our first study aim, we can confirm that the category system is also valid in this specific sample of seculars as most categories also occur within seculars’ semantics and hardly any new categories were needed to encode the spirituality concept of seculars. Therefore, the general understanding of spirituality that prevails among seculars in Switzerland

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<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

is compatible with the dominant understanding of the same term in the spiritual samples in the USA and Germany from the original study.

Concerning our second research aim, to outline the differences in the semantic components between the original samples and the replication sample, the here replicated wide range of semantics of spirituality has a different accentuation on the level of categories than the spiritual samples of the original study. Seculars' definitions of spirituality stress an all-connectedness and being a part of something bigger, a relation to the world/nature/environment/universe, being a part of religion but also—to a lesser degree—as something other than religion, seeking/a path/a journey, an experience, a practice, and the otherworldly. Furthermore, they also view spirituality as a vague/unclear or bullshit/fantasy concept.<sup>22</sup> Additionally, seculars place less emphasis on spirituality as something within/self/higher self, as values or a component of everyday life, as faith/belief, as individual/personal/private/subjective and in connection to God or something higher/beyond/greater.<sup>23</sup>

In line with Eisenmann, Klein et al., who discuss their findings regarding the German subsample as a consequence of the Euro-secular tradition, no cultural difference regarding semantics between Germans and German-speaking Swiss could be observed.<sup>24</sup> Moreover, the non-significant differences also mean that *spiritual* individuals in Germany and *secular*

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<sup>22</sup> See Keller et al., “The Semantics.”

<sup>23</sup> The findings regarding spirituality as a component of everyday life conform to Brian Steensland, Xiaoyun Wang, & Lauren C. Schmidt, “Spirituality: What Does It Mean and to Whom?,” *Journal for the Scientific Study of Religion* 57/3 (2018), 450–472; but contradicts Jeremiah Carey, “Spiritual, but Not Religious? On the Nature of Spirituality and Its Relation to Religion,” *International Journal for Philosophy of Religion* 83/3 (2018), 261–269. For a discussion, see Sarah Demmrich & Stefan Huber, “Multidimensionality of Spirituality: A Qualitative Study among Secular Individuals,” *Religions* 10/11 (2019), 613.

<sup>24</sup> Eisenmann et al., “Dimensions.”

individuals in Switzerland do not use a different range of semantics of spirituality. The difference is, therefore, a cross-cultural one: the significant differences between the USA and Switzerland resemble the differences between the USA and Germany in the original study.<sup>25</sup> In both European samples, spirituality is more often understood as connectedness, existential truth, esotericism, and in opposition to religion. This European-situated spirituality can be interpreted in the same way as Eisenmann, Klein et al. interpreted it: the understanding of spirituality in European samples is more strongly affected by semantics that transcend reality influenced by Eastern and New Age spirituality, with less emphasis on transcendent entities and with fewer semantics that are close to established religions, especially Christianity. This was more strongly pronounced regarding individual praxis (e.g., meditation, yoga, contemplation, and individually created rituals) in our sample, which adds a ritual element to the same interpretation. These semantics, found in the German and the Swiss samples, can be summarized as transcending without emphasizing transcendence and could be used to construct spirituality scales for quantitative studies.

In contrast, US-situated spirituality emphasizes higher power(s) and ‘something beyond’ more so than the European samples in both studies. Again, it can be embedded into the interpretation of the authors of the original study that spirituality in the USA is more strongly connected to a transcendent entity or sphere and closer to the semantics of religious traditions.

Like in the original study, there are more commonalities than differences regarding the understanding of spirituality, and these small differences can probably not be traced back to a spiritual/secular self-definition but to cultural, linguistic differences as demonstrated between the US sample versus the German and the Swiss sample in the two studies on the semantics of spirituality. In short, individuals who define themselves as non-religious or atheist do not understand spirituality fundamentally differently from spiritual individuals but rather display

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<sup>25</sup> The original study could reveal many more significant differences due to the larger sizes of the subsamples.

the same broad range of individual definitions of this term. As the presented replication study showed, the robustness of the semantics of spirituality across cultures and across spiritual/secular self-descriptions seems to highlight the appropriateness of the term ‘spiritual’ in scales and questionnaires despite the accentuation of a few semantics in some samples.

By applying a deductive approach to the emically and inductively developed category system of the semantics of spirituality, we have opened a door for future studies to use this system (see Appendix A) in order to re-test, refine, and question the components and categories. This corollary and yet consequential deductive approach even allows for rule-based testing in large sample sizes.<sup>26</sup> However, we suggest that further studies on the semantics of spirituality use an inductive approach by replicating not only the categories but also the principal component analysis that leads to overarching components and dimensions by using bigger samples. Our sample was drawn by a sampling procedure that minimizes biases between the sample and the general population, and we do not, therefore, expect any major differences in the results. Nonetheless, a larger sample size could uncover more significant differences due to higher statistical power. Moreover, as spirituality research grows around the world, a replication study of the here-presented semantics regarding the cross-cultural validity beyond the Western context is of high interest.<sup>27</sup> Only such an approach can test whether the exclusion of the term ‘spiritual’ from our quantitative measurements would indeed be a necessary step for cross-cultural and cross-religious comparisons.<sup>28</sup> The three suggested approaches—further deductive studies with large samples, an inductive replication, and a replication of semantics beyond the

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<sup>26</sup> Mayring, *Qualitative*.

<sup>27</sup> Regarding the expansion of spirituality studies, see, e.g., Nima Ghorbani et al., “Measuring Muslim Spirituality: Relationships of Muslim Experiential Religiousness with Religious and Psychological Adjustment in Iran,” *Journal of Muslim Mental Health* 8/1 (2014), 77–94.

<sup>28</sup> See Wulff, “Prototypes.”

Western context—are generally considered as ways to overcome questionable reliability and validity of the results that empirical sciences produce.<sup>29</sup>

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<sup>29</sup> Henrich, Heine, & Norenzayan, “The Weirdest”; Lilienfeld, “Psychology’s.”



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Table 1: Frequencies of the Categories of Semantics of Spirituality from the Original Study (Eisenmann et al., “Dimensions,” 134–135) and the Replication Study

| Categories  | Original |           | Replication |           |
|---|----------|-----------|-------------|-----------|
|   | <i>k</i> | <i>n%</i> | <i>k</i>    | <i>n%</i> |
| I-1 All-connectedness, part of something bigger   | 136      | 7.6       | 15          | 31.3      |
| I-2 Relation to the world, nature, environment, universe                                | 235      | 13.2      | 24          | 50.0      |
| I-3 Transcendental absolute, ‘unity of existence’ omnipresent & indiscriminate, the one | 127      | 7.1       | 1           | 2.1       |
| I-4 Connectedness, relationship, in touch with, harmony                                 | 447      | 25.1      | 6           | 12.5      |
| II-1 Jesus, Christ, Holy Spirit, the Son  | 92       | 5.2       | 2           | 4.2       |
| II-2 God (also the Father, Lord, Creator, the Divine)                                   | 333      | 18.7      | 4           | 8.3       |
| II-3 Guided, destined, controlled, saved, healed, dependent                             | 142      | 8.0       | 5           | 10.4      |
| II-4 Part of religion, Christian, biblical  | 139      | 7.8       | 13          | 27.1      |
| II-generic: Part of religion, other   | -        | -         | 2           | 4.2       |
| III-1 Within, self, higher self, inner core, essence                                    | 293      | 16.5      | 2           | 4.2       |
| III-2 Seeking, path, journey, reaching, to evolve, to achieve                           | 268      | 15.1      | 15          | 31.3      |
| III-3 (Inner) peace, enlightenment, and other attitudes and states of being             | 144      | 8.1       | 7           | 14.6      |
| IV-1 Values, (higher) order, morals, karma  | 398      | 22.4      | 4           | 8.3       |
| IV-2 Everyday, daily life, way of life, to act  | 425      | 23.8      | 4           | 8.3       |
| IV-3 Relation to others, community, all humanity, mankind                               | 194      | 10.9      | 8           | 16.7      |
| V-1 Transcendent*, higher power/forces/energy   | 235      | 13.2      | 5           | 10.4      |
| V-2 Faith and belief, believing, belief system  | 589      | 33.1      | 1           | 2.1       |
| V-3 Greater being/person, deities, gods   | 90       | 5.1       | 3           | 6.3       |
| VI-1 Unspecified transcendent: something bigger, beyond, greater; ‘may be’              | 319      | 17.9      | 8           | 16.7      |
| VI-2 Higher/beyond/greater/other than oneself/humans/this life                          | 202      | 11.4      | 2           | 4.2       |
| VI-3 Feeling, emotion, intuition, empathy, heart, love                                  | 301      | 16.9      | 8           | 16.7      |
| VII-1 The truth, true nature of existence, wisdom, reality                              | 100      | 5.6       | 8           | 16.7      |
| VII-2 Cannot be explained or scientifically proven, beyond understanding                | 223      | 12.5      | 6           | 12.5      |
| VII-3 Experience, sensory perception  | 183      | 10.3      | 10          | 20.8      |
| VII-4 Thinking about, to understand, to reflect, contemplation                          | 236      | 13.3      | 2           | 4.2       |

|   |     |      |    |      |
|---|-----|------|----|------|
| VII-5 Meaning and (higher) purpose, questions and answers                   | 134 | 7.5  | 5  | 10.4 |
| VIII-1 Otherworldly, beyond this world, ‘spiritual’ realms                  | 126 | 7.1  | 7  | 14.6 |
| VIII-2 Supernatural, non-material, cannot see or touch                      | 246 | 13.8 | 5  | 10.4 |
| VIII-3 Energies, vital principle, ghosts, angels and demons, spirits        | 100 | 5.6  | 6  | 12.5 |
| VIII-4 Vague, unclear, unsure, bullshit, fantasy, hocus pocus (reverse)     | 121 | 6.8  | 11 | 22.9 |
| VIII-5 Awareness, consciousness, sense of, feeling a presence, in tune      | 264 | 14.8 | 2  | 4.2  |
| VIII-generic: Esotericism, other  | -   | -    | 1  | 2.1  |
| IX-1 Something else than religion, without worship                          | 102 | 5.7  | 7  | 14.6 |
| IX-2 Without rules, traditions, norms, dogma, structure, directions         | 114 | 6.4  | 3  | 6.3  |
| X-1 Individual, personal, private, subjective                               | 432 | 24.3 | 6  | 12.5 |
| X-2 Spirit and mind (reverse)   | 175 | 9.8  | 4  | 8.3  |
| X-3 Practice, to practice (one’s faith), music, prayer, worship, meditation | 148 | 8.3  | 44 | 91.7 |
| X-4 Acknowledge, to recognize, to accept, to realize (reverse)              | 123 | 6.9  | 2  | 2.1  |

Note: \* The authors of the original study used the term “transcendental” (Eisenmann et al., “Dimensions,” 139) in their definition of code V ‘higher power(s),’ while we prefer the term ‘transcendent,’ as it refers to entities beyond of the material world (vertical level of spirituality; see Streib & Hood, “Understanding”). In contrast, the term ‘transcendental’ refers to principles within the material world (horizontal level of spirituality; see *ibid.*), such as whole and transcendental absolutes, the indiscriminate, a unity of existence, or a kind of monistic worldview (see code I-3).

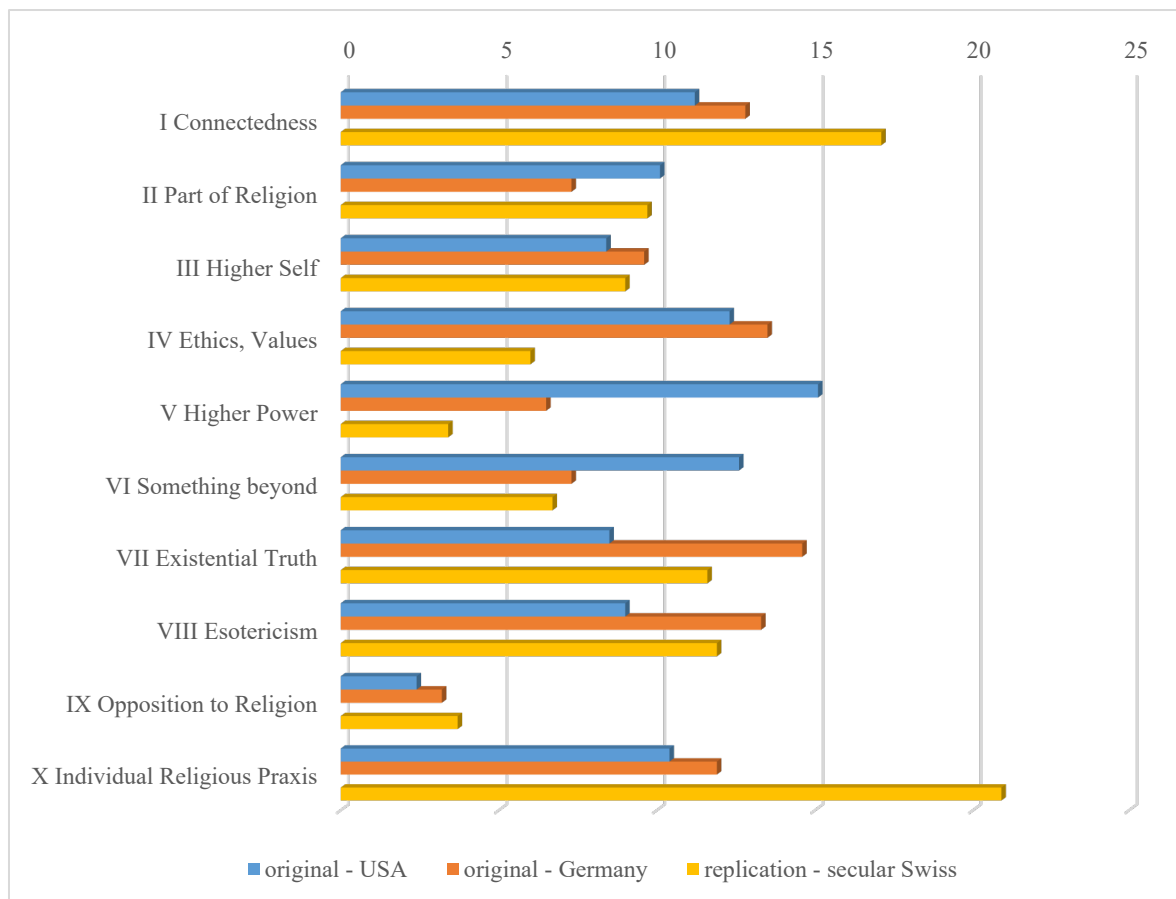


Figure 1: Relative Frequencies of the Components of the Semantics of Spirituality in the Three Subsamples

Appendix A: Category System. Components and Categories Developed by Eisenmann, Klein et al. (2016), Related Definitions, Coding Rules, and Anchor Examples

| Components and Categories  | Definition/Coding Rule  | Anchor Examples   |
|--|---|---|
| <b>I Connectedness</b>   | Definition: Spirituality refers to connectedness, a relationship, or harmony with the universe, nature, and the world, as well as the whole and transcendental absolutes, perhaps in a kind of monistic world view.   |   |
| I-1 All-connectedness, part of something bigger  | ...an all-connectedness or as a part of something bigger/greater.   | “It [spirituality] is being part of something bigger” (E & K).<br>“We are quite a small crumb in something bigger” (R).   |
| I-2 Relation to the world, nature, environment, universe                                 | ...a (horizontal) relation with the universe, nature, environment, and the world.   | “[...] it [spirituality] is enjoying the world and its people” (E & K).<br>“We are part of the universe” (R).<br>“Spirituality, if at all, that is [...] nature” (R).   |
| I-3 Transcendental absolute, ‘unity of existence,’ omnipresent & indiscriminate, the one | ...whole and transcendental absolutes, perhaps in a kind of monistic world view. Is not coded when a higher power is addressed (then: V Higher Power[s]).   | “Realizing that we are all part of a wonderful whole” (E & K)<br>“An energy field. Maybe a sphere or a cube or something like that. An energy field, a huge, extremely strong one, which holds the whole thing together. In a spiritual way, of course also in a material way” (R). |
| I-4 Connectedness, relationship, in touch with, harmony                                  | ...a connectedness, relationship, or harmony that is not further specified. Is not coded when an all-connectedness is expressed (then: I-1) or a relation to the world/nature/environment/universe (then: I-2).   | “Spirituality is feeling connected” (E & K).<br>“When you meditate a bit or go inside yourself a bit and a kind of connection happens” (R).   |
| <b>II Part of Religion</b>   | Definition: Spirituality is a form, a part of, or nothing else than ‘religion’ and mainly expressed by Christian beliefs, referring to God, Jesus, and the Holy Spirit, and experiences of guidance, destiny, and salvation attributed to the persons of the Christian trinity. |   |
| II-1 Jesus, Christ, Holy Spirit, the Son   | ...a reference to Jesus, the Holy Spirit, the Son.  | “Spirituality is believing in [...] his son” (E & K).<br>“God's Spirit is actually leading my life, you could say actually that's the spiritual thing about me” (R).  |

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| II-2 God (also the Father, Lord, Creator, the Divine)                       | ...a reference to God.  | “Spirituality is believing in God” (E & K).<br>“[...] simply to seek closeness to God [...] that is spirituality” (R).   |
| II-3 Guided, destined, controlled, saved, healed, dependent                 | ...guidance, destiny, and salvation attributed to the persons of the Christian trinity.   | “I believe God leads and guides me” (E & K).<br>“[...] looking for [...] support and orientation” (R).   |
| II-4 Part of religion, Christian, biblical                                  | ...a form, a part, or nothing else than ‘religion,’ with reference to Christian religion and the Bible.   | “Christianity is not only a belief, but a way of life based on the teachings of the Bible” (E & K)<br>“Religion fulfills this need to a certain extent, yes, too. All the people who chant and seek ecstasy. And I think the more charismatic Free Churches with speaking in tongues” (R). |
| <b>III Higher Self</b>  | Definition: Spirituality is seeking a higher self or essence, which is often framed as a path or journey. Also encompasses experience of meaning and purpose, as well as states of being, like inner peace, joy, and enlightenment. |  |
| III-1 Within, self, higher self, inner core, essence                        | ...something within, the inner core, essence, the self, a higher self.  | “[...] enabling a person to discover the essence of their being” (E & K).<br>“To learn self-awareness. Simply to learn to feel myself” (R).  |
| III-2 Seeking, path, journey, reaching, to evolve, to achieve               | ...seeking, evolving, achieving, which is often framed as a path or journey.  | “An inner path” (E & K).<br>“[...] many people seek for something” (R).  |
| III-3 (Inner) peace, enlightenment, and other attitudes and states of being | ...meaning and purpose, as well as states of being, like inner peace, joy, and enlightenment.   | “[...] our [...] meaning in the universe” (E & K);<br>“finding/known you have a purpose” (E & K).<br>“There’s also a self-forgetfulness in it [...] like another perception” (R).  |
| <b>IV Ethics, Values</b>  | Definition: Spirituality is integrating values and morality into daily life and acting upon these values, especially in relation to other beings, the community, and humankind in general.  |  |
| IV-1 Values, (higher) order, morals, karma                                  | ...values, a (higher) order, morals, or karma.  | “There are fundamental ideas about what’s good and bad” (E & K).<br>“[...] it all comes back to you” (R).  |

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| IV-2 Everyday, daily life, way of life, to act                             | ...integrated part of everyday, daily life, way of life, way to act.  | “Live life with kindness and morals” (E & K).<br>“And it is also the idea of being present in everyday life. After all, the practice would be that you are actually careful in everyday life” (R).                          |
| IV-3 Relation to others, community, all humanity, humankind                | ...ethics in relation to others, community, all humanity, humankind. Is not coded when connection/relation to others is emphasized without an ethical connotation (then: I Connectedness).  | “Being purposeful towards the greater good of [hu]mankind as well as other living beings” (E & K).<br>“[...] spirituality, by being there for people [...] just wanting to give something to take on their journey” (R).    |
| <b>V Higher Power(s)</b>   | Definition: Spirituality is a belief in higher power(s) or beings, such as gods or deities. It encompasses abstract descriptions of transcendent forces (higher power, energy) and personified transcendence (God).   |   |
| V-1 Transcendent*, higher power/ forces/energy                             | ...an abstract, non-personified higher power(s), forces, transcendent energy. Not coded when energies are expressed as esoteric concepts (then: VIII Esotericism).  | “Spirituality is the belief in something outside yourself, a greater being or elemental force that helps guide the universe” (E & K).<br>“[...] somehow, you might come closer to something like [...] a higher power” (R). |
| V-2 Faith and belief, believing, belief system                             | ...a general belief system. It is not coded when the participant expresses a belief that has strong Christian or biblical implications (then: II Part of Religion).   | “[...] involving a worship or recognition of these powers” (E & K).<br>“For me it [spirituality] is like believing in forces” (R).  |
| V-3 Greater being/person, deities, gods                                    | ...as a personified greater being, deity, God/gods.   | “The belief in greater powers be it God or other deities” (E & K).<br>“If I lose a wallet—I’ve tested it—if you promise something to Saint Anthony—money, very, very mundane—you’ll find the wallet” (R).                   |
| <b>VI Something Beyond</b>   | Definition: Spirituality is intuition or feeling of something unspecified higher and beyond oneself. As this transcendence is not further specified, all that can be said is that there is this particular feeling or impression of the mere existence of this transcendent ‘something,’ which transcends the personal self or ego. |   |
| VI-1 Unspecified transcendent: something bigger, beyond, greater; ‘may be’ | ...something or some being(s) that remains unspecified.   | “Feeling connected to something higher than oneself” (E & K).<br>“There are certainly more things between heaven and earth than you can imagine” (R).   |



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| VI-2 Higher/beyond/greater/other than oneself/humans/this life           | ...something or some being(s) with the emphasis that it is higher than oneself/humans/this life.  | “[...] connection with something larger than myself” (E & K).<br>“[...] an existing force that shows you something” (R).   |
| VI-3 Feeling, emotion, intuition, empathy, heart, love                   | ...an intuition or feeling of something unspecified, something beyond.  | “The feeling associated with knowing there is something greater than us” (E & K).<br>“I felt it [spirituality] physically. I could feel my heart. I felt warmth in my body” (R).   |
| <b>VII Existential Truth</b>   | Definition: Spirituality is a deep truth, which exceeds reason or rational and scientific understanding but nevertheless is to be cognitively reflected, perceived, and experienced, and thus provides meaning, deeper insights, and purpose of life. |  |
| VII-1 The truth, true nature of existence, wisdom, reality               | ...a deep truth, the true nature of experience, wisdom, or reality.   | “Recognizing that there is more to life than the visible and physical” (E & K).<br>“[The spiritual realm is real], yes, you could definitely say that” (R).  |
| VII-2 Cannot be explained or scientifically proven, beyond understanding | ...somethings that exceeds reason or rational and scientific understanding.   | “[...] which reason will never be able to explain” (E & K).<br>“I just cannot see it. I am a being made of these atoms, somehow of these protein compounds with some peptides lying around. But that’s where my understanding ends because I do not know how these peptide and amino acids ended up in this soup. [...] I cannot explain that, and NOBODY can explain that” (R). |
| VII-3 Experience, sensory perception                                     | ...something that can be (only) experienced and perceived.  | “An experience that can only be cheapened with words” (E & K).<br>“[...] a good experience, slowing down and calming down” (R).  |
| VII-4 Thinking about, to understand, to reflect, contemplation           | ...something that can be cognitively reflected.   | “An interest in discovering truth in life” (E & K).<br>“[A spiritual aspect in my life is] I’m thinking endlessly. Want to organize, want to understand, want to discard and rediscover” (R).  |
| VII-5 Meaning and (higher) purpose, questions and answers                | ...meaning, deeper insights, and purpose in life.   | “Being ‘spiritual’ means attuning oneself to such aspects of reality in order to find meaning, direction, or fulfillment in life” (E & K).<br>“Spirituality for me is that I [...] can live, what gives meaning to me ” (R).   |

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| <b>VIII Esotericism</b>   | Definition: An awareness of a non-material, invisible world, and supernatural energies, and the existence of beings, such as spirits, angels, or ghosts.   |  |
| VIII-1 Otherworldly, beyond this world, ‘spiritual’ realms              | ...a spiritual realm that is beyond the world.   | “Spirituality is the realization that something else than the physical world exists outside of scientific explanation” (E & K).<br>“[...] if, for example, your wishes to the universe, if you wish for something, then that will someday come true [...]. For me that is also a kind of spirituality because it is esoteric” (R). |
| VIII-2 Supernatural, non-material, cannot see or touch                  | ...something supernatural, non-material, which is not sensually perceivable, as a demarcation from materialism.  | “[...] a phenomenon that takes place outside the material realm” (E & K).<br>“[...] black magic [...] that windows open and close where there is no breeze, nothing, no draft” (R).  |
| VIII-3 Energies, vital principle, ghosts, angels and demons, spirits    | ...a non-material, invisible world, or supernatural energies/beings, such as spirit, angels, or ghosts.  | “[...] this definition would include things like ghosts, angels, and demons” (E & K).<br>“[...] the connection to my deceased husband. He is like a kind of guardian angel” (R).   |
| VIII-4 Vague, unclear, unsure; bullshit; fantasy, hocus pocus (reverse) | ...unclear, unsure, fantasy, hocus pocus (negative connotation).   | “So I attended a tourist voodoo show once. Fascinating. But when I drink too much liquor, I am also a voodoo priest” (R).<br>“You mean séances and such (makes ghostly sound)” (R).  |
| VIII-5 Awareness, consciousness, sense of, feeling a presence, in tune  | ...an awareness or consciousness of or to be in tune with a non-material sphere.   | “An awareness that there is an energy” (E & K).<br>“A sunset in the mountains, where you are deeply moved [this presence] is simply beautiful” (R).  |
| <b>IX Opposition to Religion</b>  | Definition: Spirituality is in demarcation from established forms of religion, and from norms, rules, traditions, and dogmata, which are refused. This also points to the relevance of a private, subjective, and personal view of spirituality. |  |
| IX-1 Something else than religion, without worship                      | ...something other than religion or emphasizing the lack of worship.   | “Spirituality depicts the acknowledgement of a higher power but does not necessarily require the following of set traditions and rules that organized religions do. The way one reaches spirituality is unique to each individual” (E & K).<br>“A kind of religiosity, detached from any church” (R).                              |

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| IX-2 Without rules, traditions, norms, dogma, structure, directions         | ...something without rules, traditions, or dogmas.  | “[...] without being bound by dogma or tradition” (E & K).<br>“[Spirituality is] if you open yourself, then it will be given to you. [...] And the other [religion] is a little bit forced. And that is less free” (R).  |
| <b>X Individual Religious Praxis</b>  | Definition: Spirituality is individual religious practice, like prayer or meditation, and highlights the performative approach to the spiritual realm, which they provide—in contrast to cognitive reasoning or mere acknowledgement. |  |
| X-1 Individual, personal, private, subjective                               | ...a practice whereby the emphasis is on the individual, personal, private, and/or subjective character of this practice.   | “I would define spirituality as the personal practice one performs to achieve a connection with the divine” (E & K).<br>“Spirituality for me is what I’m searching for [...] for ways I ritualized” (R).   |
| X-2 Spirit and mind (reverse)   | ...a cognitive reasoning to develop spirit and mind. Can be expressed in contrast to practices.   | “My sister-in-law thinks she can forecast the future with stones and Bach flowers. If someone asks me for advice [...] then they would like to know my rational opinion” (R).<br>“[Spirituality is] not going on Sunday and listening and then waiting five hours to finally get to communion and then you have to sit for another ten minutes, until you finally go home” (R).  |
| X-3 Practice, to practice (one’s faith), music, prayer, worship, meditation | ...a practice such as music, worship, meditation.   | “Spirituality consists of reading the bible, personal prayer, and testimony” (E & K).<br>“Praying and not thinking” (R).   |
| X-4 Acknowledge, to recognize, to accept, to realize (reverse)              | ...a mere acknowledging, recognizing, accepting and/or realizing. Can be expressed in contrast to practices.  | “If you just try to accept an object for what it is. And at the same time, for me, it’s an approach that can give us a great deal by trying to make things look like a miracle or perceive them as something special” (R).<br>“[...] the thing in itself really has such a value for me, that it can stand alone. And by itself has its justification. And something special. And therefore it can be a spiritual experience” (R). |

Note: Anchor examples are extracted from the original study by Eisenmann, Klein et al. (E & K) and the here-presented replication study (R). \* The authors of the original study used the term “transcendental” (Eisenmann, Klein et al., “Dimensions,” 139) in their definition of code V ‘higher power(s),’ while we prefer the term ‘transcendent,’ as it refers to entities beyond the material world (vertical level of spirituality; see Streib & Hood, “Understanding”). In contrast, the term ‘transcendental’ refers to principles within the material

world (horizontal level of spirituality; see *ibid.*), such as whole and transcendental absolutes, the indiscriminate, a unity of existence, or a kind of monistic worldview (see code I-3).