
**How Religious Styles Develop: Longitudinal,
Cross-cultural and Multi-method Research with
Faith Development Interviews**

Wave III Hypotheses

**for the JTF-funded Project "Faith Development Revisited"
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The way religiosity is understood, appropriated and lived, is changing over an individual's life-time. This idea is not new, but has roots, for example, in Christian theology and philosophy and in Muslim theology. Fowler's (1981) model of faith development certainly is a milestone in the discussion, and his work has resulted not only in a respectable tradition of research with the faith development interview (FDI), but also in a widespread dissemination of the developmental idea in religious studies, religious education, and partially in the psychology of religion. However, Fowler did not invent the developmental perspective on religiosity. He rather explicated an old idea in light of Erikson's model of psycho-social development of identity, but especially in terms of cognitive-structural stage-wise development that Kohlberg and many others found resonating with Piaget's genetic epistemology.

Precisely, Fowler was interested in the development of structural operations by which the individual operates on, understands, and appropriates the contents of faith. In our view, Fowler's assumption regarding these operations are still valid, and we could move forward with these assumptions under two conditions: First, if 'faith' was understood by everyone as human universal of trust and meaning-making in the way Cantwell Smith (1963; 1979) has defined it, and second, if 'structure' was not limited to a cognitive-structural model that assumes mono-directional, sequential, irreversible development of so-called structural wholes. Unfortunately, both conditions are not fulfilled in the current discussion, and we are thus engaged in the project "Faith development revisited" that aims at both a revision of the conceptual framework in terms of religious styles and the rigorous empirical investigation of religious development based primarily on FDIs.

In our current data base we have already two waves of data that include evaluations of an FDI combined with questionnaire responses, and field work of collecting questionnaire data. Since re-interviewing participants for another FDI and inviting interviewees for participation in our questionnaire is currently underway, it is time for pre-registering analysis plans and hypotheses for the third wave.

Preparatory Work

What had been accomplished before this project started, was a conceptual revision of faith development theory (Streib, 2001) and research (Streib, 2005) in terms of religious styles. Methodologically, we have contributed to FDI evaluation by a series of articles and chapters (Keller & Streib, 2013; Keller, Klein, & Streib, 2013; Streib, Wollert, & Keller, 2016b; Streib & Keller, 2018a) and by the 4th revision of the Coding Manual (Streib & Keller, 2018b).

In all Bielefeld-Chattanooga research projects, interviewing with the FDI was included, resulting in FDIs with $N = 272$ ($n = 123$ US and $n = 149$ German) participants who were interviewed between 2003 and 2005 in the *Deconversion Project* (Streib, Hood, Keller, Csöff, & Silver, 2009), with $N = 104$ ($n = 54$ US and $n = 50$ German) participants who were interviewed between 2010 and 2011 in the *Spirituality Study* (Streib & Keller, 2015; Streib & Hood, 2016), and with $N = 301$ participants (2017 Sample) who were interviewed with the FDI between 2015 and 2017 in the US ($n = 89$) and Germany ($n = 212$) in the first phase one of the current research on religious development—which now is continued in the current project "Faith Development Revisited." Part of this third sample, which we call the *2017 Sample*, are $N = 90$ participants who were interviewed with the FDI for a second time. We therefore structure the longitudinal sample in Wave I with $n = 45$ from the *Deconversion Study* plus $n = 45$ from the *Spirituality Study*, who we re-interviewed with the FDI in Wave II and included in the *2017 Sample*.

As one of the preparatory steps for the study that we register in this text, we have analyzed all 677 FDIs from the three previous studies to determine a person's type of religious identity. To do this we used Latent Class Analysis (LCA) and Latent Transition Analysis (LTA), a machine-learning based algorithm (GLMNET), and finally a theory-driven approach to determine the types by incorporating frequencies of religious style assignments from the evaluation of their FDI (Streib, Chen, & Hood, submitted). Results based on all three samples converge on four religious identity types: Substantially Ethnocentric, Predominantly Conventional, Predominantly Individuative-Reflective, and Emerging Dialogical-Xenosophic types. This method of type construction will be used also for the third wave FDI data. We also used the currently available data for profiling the four types.

Participants, Measures, and Analyses

Participants

Regarding participants, the entire *2017 Sample* is of interest, because all participants will be invited for a re-interview with the FDI. We estimate a loss of ca. 15% participants who are disinterested, cannot be located, or have deceased, resulting in a 3rd wave sample of $N \approx 250$ participants with two or three FDIs. Thus the characteristics of this new FDI sample will be rather similar to the current *2017 Sample*. Therefore we describe characteristics here: The *2017 Sample* consists of $N = 301$ participants who were interviewed with the FDI between 2015 and 2017 in the US ($n = 89$) and Germany ($n = 212$). In this sample, 47.5% are female. Mean age is 45.8 years in a range between 16 and 82 years. Cultural capital assessment (ISCED) indicates that 69.4% have tertiary education and higher; per-capita income per year has a mean of \$52,558 with a range from \$3,250 to \$140,000. For religious affiliation, 29.4% identify with Protestantism, 13.1% with the Roman Catholic Church, 1.4% with Islam, 1.4% with Hinduism, 4.5% with a Buddhist tradition, 3.8% with other spiritual groups, 8.0% indicate another religious affiliation, and 38.4% indicate to not belong to a religious tradition. The mean religious self-identification (on a 5-point scale from 1 to 5) is 2.47 (with 36.7% not at all, and 10.2% very religious); mean spiritual self-identification (on a 5-point scale from 1 to 5) is 3.16 (with 18.4% not at all, and 21.2% very spiritual).

Even more important for our longitudinal research is that part of this *2017 Sample* will be invited for a third FDI. This current 2-wave FDI sample consists of $N = 90$ participants. Three cases were excluded from the analysis, because 50% or more answers to the FDI questions were entered as "uncodable," therefore, it actually consists of $N = 87$ cases. If we—again—reckon with 10% loss, we may expect to obtain a sample with 3 FDIs of $N \approx 80$, when field work is completed and FDI are evaluated. Because this sample will not differ considerably from the current 2-wave re-interviewee sample, we give the demographic details here (for the time of the re-interview): 44.2% are female; mean age is 54.1 years in a range between 24 and 82 years; cultural capital assessment (ISCED) indicates that 70.5% have tertiary education and higher; per-capita income per year has a mean of \$50,458 with a range from \$3,250 to \$140,000; 35.8% identify with Protestantism, 14.8% with the Roman Catholic Church, 1.2% with Islam, 3.7% with Hinduism, 6.2% with a Buddhist tradition, 1.2% with other spiritual groups, 4.9% indicate another religious affiliation, and 32.1% indicate to not belong to a religious tradition; mean religious self-identification (on a 5-point scale from 1 to 5) is 2.64 (with 35.0% not at all, and 12.5% very religious); mean spiritual self-identification (on a 5-point scale from 1 to 5) is 3.19 (with 16.7% not at all, and 20.5% very spiritual).

Measures

Measures include, of course, the FDI, which is a semi-structured interview that may last between 30 minutes to 2 hours or longer. The interview format (for wording of interview questions, see Streib & Keller, 2018) consists of 25 questions (including associated follow-up questions) that address *life review* (Sample question: “Reflecting on your life, identify its major chapters”), *relationships* (“Focusing now on the present, how would you describe your parents and your current relationship to them?”), *present values and commitments* (“Are there any beliefs, values, or commitments that seem important to your life right now?”) and finally *religion and world view* (“If people disagree about religious issues, how can such religious conflicts be resolved?”). Evaluation of the FDI is an interpretative process of identifying, in the responses to the respective FDI question, the structural pattern as described in detail in the *Coding Manual* (Streib & Keller, 2018); and this evaluation concludes with the assignment of one of the styles to the respective interact(s) in the FDI transcript. After entering evaluation results into the quantitative data base, we have 25 variables with integers for the style assignments.

For the hypotheses that will be proposed and preregistered here, the *Religious Schema Scale* (RSS, Streib, Hood, & Klein, 2010) is of special importance. This scale consists of three subscales measuring three religious schemata: The schema that features an exclusivist and authoritative understanding of one’s own sacred texts is assessed by the subscale *truth of texts and teachings (ttt)* (sample item: “What the texts and stories of my religion tell me is absolutely true and must not be changed”). For the assessment of the opposite notion, the appreciation of difference, of the other, and of dialog, the subscale *xenosophia/inter-religious dialog (xenos)* was constructed (sample item: “We need to look beyond the denominational and religious differences to find the ultimate reality”). The third subscale, *fairness, tolerance and rational choice (ftr)*, shares with *xenos* the opposition to *ttt*, but has its own profile of an “objectifying” and supposedly “neutral” approach focusing on justice and fairness (sample item: “It is important to understand others through a sympathetic understanding of their culture and religion”). Items are rated on five-point scales.

As correlate and potential predictor of religious styles development, we assess *openness to experience*, a factor of the Five Factor Inventory (NEO-FFI, Costa & McCrae, 1985). With 12 items for each dimension, the NEO-FFI measures five dimensions of personality: *neuroticism*, *extraversion*, *openness to experience*, *agreeableness* and *conscientiousness*. The NEO-FFI is included in full length. The English version is taken from Costa and McCrae (1985); for the German versions, the translation by Borkeanu and Ostendorf (1993) is used. Responses are possible on a 5-point rating scale ranging from 1 = “strongly disagree” to 5 = “strongly agree.”

For the assessment of outcomes of religious styles development we include the *Psychological Well-Being and Growth Scale* (Ryff & Singer, 1996). The German version has been validated and used in the Berlin Aging Study (BASE). This scale assesses six characteristics related to personal growth and well-being (Ryff, 1989; Ryff & Singer, 1998a; 1998b). The first is *autonomy* which measures the extent an individual is able to govern him- or herself and function independently of others. The second is *environmental mastery* or how well individuals adapt to and function well in the world around them. The third is *personal growth* or the process of healthy psychological development over time. The fourth characteristic is *positive relationships with others*. This is an indicator of how well people are able to form meaningful relationships. The fifth characteristic is *purpose in life*. This is an assessment of meaning often found through a purposeful striving. The final characteristic of the *Ryff-Scale* is *self-acceptance* or how comfortable one is with one’s self. Self-acceptance includes the feeling that one is

worthwhile and is associated with a positive self-concept. We assume that especially two subscales will play important roles as outcomes of religious style development: *autonomy* and *personal growth*.

Analyses

The 3rd wave data consisting in a considerably large number of re-interviews with the FDI combined with the online questionnaire are currently being collected and we expect completion of field work in August 2020. This indicates that the data have not been inspected or analyzed. The FDIs will be evaluated using the 4th edition of the *Coding Manual* (Streib & Keller, 2018b)—which will take at least another six months to complete.

For the construction of the types of religious identity, we will use our conceptual-model-based (CMB) approach, which is based on the conceptualization of the four types that emerged from the LCA/LTA, as detailed in Streib, Chen, and Hood (submitted). The 3-wave FDI sample ($N \approx 80$) will be analyzed using Latent Growth Curve Analysis (LGCA) and Cross-lagged Panel Analysis (CLPA) (Bollen & Curran, 2006; Byrne, Lam, & Fielding, 2008; Preacher, Wichman, MacCallum, & Briggs, 2008; McArdle, 2009; Little, 2013; Duncan, Duncan, & Strycker, 2013; Vicente & de Fatima Salgueiro, 2013; Gunzler, Morris, & Tu, 2016) using AMOS 25 or Mplus 8.2 (Muthén & Muthén, 2017). The 2-wave sample ($N \approx 250$) will allow for rather simple cross-lagged predictions—but based on more statistical power.

Hypotheses

Trajectories of Religious Styles Development

Based on the results from our conceptual-model-based (CMB) approach (Streib, Chen, & Hood, submitted), we can establish assumptions about the trajectories of religious styles development in the future 3-wave sample. In particular, we assume for stayers and movers that...

- H1. Between 40% and 50% of our participants will reveal as stayers, i.e. they will belong to the same type of religious identity across all times of measurement.
- H2. Movers, i.e. the other ca. 50%-60% of the cases that have different types of religious identity at different times of measurement, include movers upward to a higher type and movers downward to a lower type.

As explained by Streib and colleagues (submitted), the existence of movers downward that is predicted in H2 rejects the assumption of a solely upward, mono-directional path of religious development.

Correlates to Religious Styles Development

As detailed by Streib, Chen and Hood (submitted), the most important scale for profiling the four types of religious identity on the basis of our current 2-wave data has been the RSS (Streib, et al., 2010). The RSS was conceptualized on the basis of the faith development and the religious styles models. Even though the RSS is not simply a scale to quantitatively measure Fowler's stages of faith or Streib's religious styles, the RSS subscales are presumed to specifically relate to the religious styles. From analyses in our *Spirituality Study* about the relation between the religious schemata and the stages of faith, Streib, Wollert and Keller (2016a, p.389) concluded that "it is not the ratings on the single RSS subscales, but their combination which identifies the faith stages resp. religious

styles.” Thus, based on such assumptions and findings on the cross-sectional correlative perspectives, we hypothesize for the longitudinal analysis including the 3rd wave data that...

- H3. Changes in the RSS subscales *ttt* and *xenos* across the times of measurement relate to changes in religious styles across the times of measurement, whereby...
- a. change (slope) of *xenos* correlates with change (slope) of higher religious styles (styles 4 and 5); and
 - b. change (slope) of *ttt* correlates with change (slope) of lower religious styles (styles 2 and 3).

The hypothesis that changes in *openness to experience* (NEO-FFI) correlate with higher religious styles is suggested by the findings in Saroglou’s (2002; 2010) extensive meta-analysis of research in personality and religion that included 71 studies from 19 countries with a total of more than 20,000 participants, which revealed that, after the implementation of a typological distinction in ‘religion’ between a fundamentalist version and a spiritual/mature version in the analyses, *openness to experience* clearly relates—positively and negatively—to these two version of religion. Also in our ANOVAs with the four types of religious identity (Streib, Chen, & Hood, submitted), *openness to experience* clearly differentiated the four types. Now, we move forward and hypothesize for the longitudinal analysis including the 3rd wave data that:

- H4. Change (slope) of *openness to experience* (NEO-FFI) across the times of measurement correlates with change (slope) of higher religious styles (styles 4 and 5).

Predictors for Religious Styles Development

Being able to identify predictors will be a major step forward in research on religious development. And we expect our data base, after inclusion of the 3rd wave data, to yield results on the predictors of religious styles development. Both LGCA and CLPA are expected to produce significant results. Correlational analyses based on cross-sectional data that are presented by Streib, Chen, and Hood (submitted) suggest that *openness to experience* and the RSS subscale *ttt* reveal as significant predictors for religious styles development. We therefore hypothesize that...

- H5. *Openness to experience* (NEO-FFI) at a previous time of measurement predicts religious styles development, as documented in higher frequencies of higher religious style assignments, or migration to a higher type of religious identity.
- H6. The RSS subscale *ttt* at a previous time of measurement predicts religious styles development, as documented in higher frequencies of higher religious style assignments, or migration to a higher type of religious identity.

Outcomes of Religious Styles Development

Finally, Ryff’s Psychological Well-being and Growth Scale, which had been included in all waves including the questionnaire for the current 3rd wave survey, may open a perspective on the outcomes of religious style development. Correlational analyses based on cross-sectional data that are partially presented by Streib, Chen, and Hood (submitted) suggest that the subscales for *autonomy* and *personal growth* may reveal also as significant outcomes for religious styles development. We therefore hypothesize that:

- H7. The scores on the subscales *autonomy* and *personal growth* of Ryff’s Psychological Well-being and Growth Scale in the 3rd wave data are predicted by religious styles development.

Reference List

- Bollen, K. A. & Curran, P. J. (2006). *Latent Curve Models: A Structural Equation Perspective*. Hoboken: Wiley.
- Byrne, B. M., Lam, W. W. T., & Fielding, R. (2008). Measuring Patterns of Change in Personality Assessments: An Annotated Application of Latent Growth Curve Modeling. *Journal of Personality Assessment*, *90*, 536-546.
- Cantwell Smith, W. (1963). *The Meaning and End of Religion*. Minneapolis: Fortress Press 1991.
- Cantwell Smith, W. (1979). *Faith and Belief*. Princeton: Princeton University Press.
- Costa, P. T. & McCrae, R. R. (1985). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor-Inventory (NEO-FFI)*. Professional Manual. Odessa: Psychological Assessment Resources 1992.
- Duncan, T. E., Duncan, S. C., & Strycker, L. A. (2013). *An Introduction to Latent Variable Growth Curve Modeling: Concepts, Issues, and Application, Second Edition*. (2nd ed.) New York: Psychology Press.
- Fowler, J. W. (1981). *Stages of Faith. The Psychology of Human Development and the Quest for Meaning*. San Francisco: Harper&Row.
- Gunzler, D., Morris, N., & Tu, X. M. (2016). Causal Mediation Analysis Using Structure Equation Models. In H. He, P. Wu, & D.-G. D. Chen (Eds.), *Statistical Causal Inferences and Their Applications in Public Health Research*, (pp. 295-314). Cham, Switzerland: Springer International Publishing.
- Keller, B., Klein, C., & Streib, H. (2013). Das Interview zur Glaubensentwicklung: Zur Exploration von Spiritualität im psychotherapeutischen Setting. *Spiritual Care*, *2*, 35-43.
- Keller, B. & Streib, H. (2013). Faith Development, Religious Styles and Biographical Narratives: Methodological Perspectives. *Journal of Empirical Theology*, *26*, 1-21. doi: 10.1163/15709256-12341255.
- Little, T. D. (2013). *Longitudinal Structural Equation Modeling*. New York: Guilford Press.
- McArdle, J. J. (2009). Latent Variable Modeling of Differences and Changes with Longitudinal Data. *Annual Review of Psychology*, *60*, 577-605.
- Muthén, B. O. & Muthén, L. K. (2017). *Mplus User's Guide. Eighth Edition*. Los Angeles: Muthén & Muthén.
- Preacher, K. J., Wichman, A. I., MacCallum, R. C., & Briggs, N. E. (2008). *Latent Growth Curve Modeling*. Thousand Oaks: SAGE.

- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*, 1069-1081.
- Ryff, C. D. & Singer, B. H. (1998a). The Role of Purpose in Life and Growth in Positive Human Health. In P. T. P. Wong & P. S. Fry (Eds.), *The Human Quest for Meaning. Handbook of Psychological Research and Clinical Applications* (pp. 213-235). Mahwah: Lawrence Erlbaum Associates.
- Ryff, C. D. & Singer, B. H. (1998b). The Contours of Positive Human Health. *Psychological Inquiry*, *9*, 1-28.
- Ryff, C. D. & Singer, B. H. (1996). Psychological well-being: Meaning, measurement, and implications for psychotherapy research. *Psychotherapy and Psychosomatics*, *65*, 14-23.
- Saroglou, V. (2002). Religion and the Five Factors of Personality: A Meta-Analytic Review. *Personality and Individual Differences*, *32*, 15-25.
- Saroglou, V. (2010). Religiousness as a Cultural Adaptation of Basic Traits: A Five-Factor Model Perspective. *Personality and Social Psychology Review*, *14*, 108-125.
- Streib, H. (2001). Faith Development Theory Revisited: The Religious Styles Perspective. *The International Journal for the Psychology of Religion*, *11*, 143-158. doi: 10.1207/S15327582IJPR1103_02.
- Streib, H. (2005). Faith Development Research Revisited: Accounting for Diversity in Structure, Content, and Narrativity of Faith. *The International Journal for the Psychology of Religion*, *15*, 99-121. DOI:10.1207/s15327582ijpr1502_1.
- Streib, H., Chen, Z. J., & Hood, R. W. (submitted). Categorizing People's Religious Identity: Four Types Derived from Religious Style Assignments in Faith Development Interviews. *The International Journal for the Psychology of Religion*.
- Streib, H. & Hood, R. W. (Eds.) (2016). *Semantics and Psychology of Spirituality. A Cross-cultural Analysis*. Cham, Switzerland: Springer International Publishing.
- Streib, H., Hood, R. W., Keller, B., Csöff, R.-M., & Silver, C. (2009). *Deconversion. Qualitative and Quantitative Results from Cross-Cultural Research in Germany and the United States of America*, Göttingen: Vandenhoeck & Ruprecht.
- Streib, H., Hood, R. W., & Klein, C. (2010). The Religious Schema Scale: Construction and Initial Validation of a Quantitative Measure for Religious Styles. *The International Journal for the Psychology of Religion*, *20*, 151-172. doi:10.1080/10508619.2010.481223.
- Streib, H. & Keller, B. (2018b). *Manual for the Assessment of Religious Styles in Faith Development Interviews (Fourth, revised edition of the Manual for Faith Development Research)*. Bielefeld: Bielefeld University/readbox unipress.
- Streib, H. & Keller, B. (2015). *Was bedeutet Spiritualität? Befunde, Analysen und Fallstudien aus Deutschland*. Research in Contemporary Religion (RCR), *20*, Göttingen: Vandenhoeck & Ruprecht.
- Streib, H. & Keller, B. (2018a). How Faith Development Interviews Reflect Biographical Paths to Xenosophia: Conceptual and Methodological Considerations. In H. Streib & C. Klein (Eds.), *Xenosophia and Religion: Biographical and Statistical Paths for a Culture of Welcome* (pp. 85-

- 106). Cham, Switzerland: Springer International Publishing. doi: 10.1007/978-3-319-74564-0_3.
- Streib, H., Wollert, M. H., & Keller, B. (2016a). Faith Development, Religious Styles, and "Spirituality". In H. Streib & R. W. Hood (Eds.), *Semantics and Psychology of "Spirituality". A Cross-cultural Analysis* (pp. 383-399). Cham, Switzerland: Springer International Publishing. doi: 10.1007/978-3-319-21245-6_24.
- Streib, H., Wollert, M. H., & Keller, B. (2016b). The Faith Development Interview: Methodological Considerations. In H. Streib & R. W. Hood (Eds.), *Semantics and Psychology of "Spirituality". A Cross-cultural Analysis* (pp. 239-249). Cham, Switzerland: Springer International Publishing. doi: 10.1007/978-3-319-21245-6_15.
- Vicente, P. C. R. & de Fatima Salgueiro, M. (2013). Cross-Lagged Structural Equation Models vs Latent Growth Curve Models: A Study of Material Deprivation in Portugal with ICOR. In P. E. Oliveira, M. da Graca Temido, C. Henriques, & M. Vichi (Eds.), *Recent Developments in Modeling and Applications in Statistics* (pp. 13-20). New York; Heidelberg: Springer Science+Business Media.