The logo of the American Psychological Association, featuring a stylized blue and white floral design on the left side of the slide.

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Semantics of "Spirituality:" Empirical Explorations

Heinz Streib

This presentation is based on the data of

The Bielefeld-based Cross-cultural Study of “Spirituality”

Sociological, Psychological, Semantic and Biography-Reconstructive Analysis of Spiritual Self-Attribution as Instance for, and in Context of, Contemporary Forms of Religiosity and Religious Quest

A cross-cultural research project of the Center for Biographical Studies in Contemporary Religion, Bielefeld University (Germany) in co-operation with the Department of Psychology, University of Tennessee at Chattanooga (USA)



Professores Streib und Hood



Dr. Barbara Keller



Christopher F. Silver



Constantin Klein

Hypothetical Model for the Investigating “Spirituality”

Socio-Biographical Dispositions

- Culture
- Religious Affiliation
- Position in the Social Space

Psychological Dispositions

- Personality (Big Five, NEO-FFI)
- Attachment / Mentalization
- Wisdom-Related Performance
- Religious Schemata / Faith Development
- Attitudes Toward God (Exline)

Semantic Analysis

- Semantic Differentials
- Subjective Definitions
- Interview Responses
- Implicit Association Test

Self-Identification as „spiritual“

in relation to „religious“ and secular self-identifications

Spirituality Scale

- Mysticism Scale (Hood)

Socio-Biographical Consequences

Everyday Decisions;
e.g. about Religious Affiliation
or Deconversion (primarily in Interview)

Psychological Consequences

- Psychological Well-Being (Ryff)
- Prosocial Attitudes (LGS)

Quantitative Measures in the “Spirituality” Project

Items/Scales	Author(s)	items
Demographics		22
Measures for “Religiosity” and “Spirituality”		
Forced-choice self-identification as “more religious than spiritual,” “more spiritual than religious,” equally or neither		1
Rating respondent’s environment at age 12 as “more religious than spiritual” etc.		1
Continuous 5-point measures of self-identifications as “religious,” “spiritual,” and “dedicated to causes greater than myself”		3
Measures for the Semantics of “Spirituality”		
Implicit Association Tests (identical stimuli both for “religion” and “spirituality” in contrast to “atheism”)		2 x 7 Stimuli
Osgood Semantic differential (identical polar adjectives for both “religion” and “spirituality”)	Osgood	2 x 18
Context-specific semantic differential		2 x 30
Free Entries of subjective Definitions of “Religion” and “Spirituality”: “How would you define the term “religion”?” “How would you define the term “spirituality”?”		2
Scales		
Big Five (NEO-FFI)	Costa & McCrae	60
Attachment	Granqvist	8
Psychological Well-being & Growth	Ryff	42
Loyola Generativity Scale	McAdams	20
Religious Schema Scale	Streib, Hood & Klein	15

Sampling Strategy in Spirituality Study

U.S.-Sample
n = 1113

63.1% female

Mean age 34.4 years
(ranging from 15 to 82 years)

Instrument: Online Questionnaire

U.S. Interview
Sample

n = 70

Faith
Development Interview

BRD-Sample
n = 773

56.8% female

Mean age 43.2
(ranging from 16 to 90 years)

Instrument: Online Questionnaire

BRD Interview
Sample

n = 50

Faith
Development Interview

Self-identification as „religious“ and/or „spiritual“

	USA (n = 1113)		BRD (n = 773)	
	n	%	n	%
<i>I am more religious than spiritual</i>	71	6,4%	79	10,2%
<i>I am equally religious and spiritual</i>	304	27,3%	146	18,9%
<i>I am more spiritual than religious</i>	566	50,9%	377	48,8%
<i>I am neither religious nor spiritual</i>	172	15,5%	171	22,1%

... was used as first criterion for focus group construction

Self-identification as “Atheist” or “Non-theist”

	USA (n = 1113)		BRD (n = 773)	
	n	%	n	%
	1019	91,6%	646	83,6%
„I am a non-theist“ / „I am atheist“	94	8,4%	127	16,4%

... was used second criterion for focus group construction

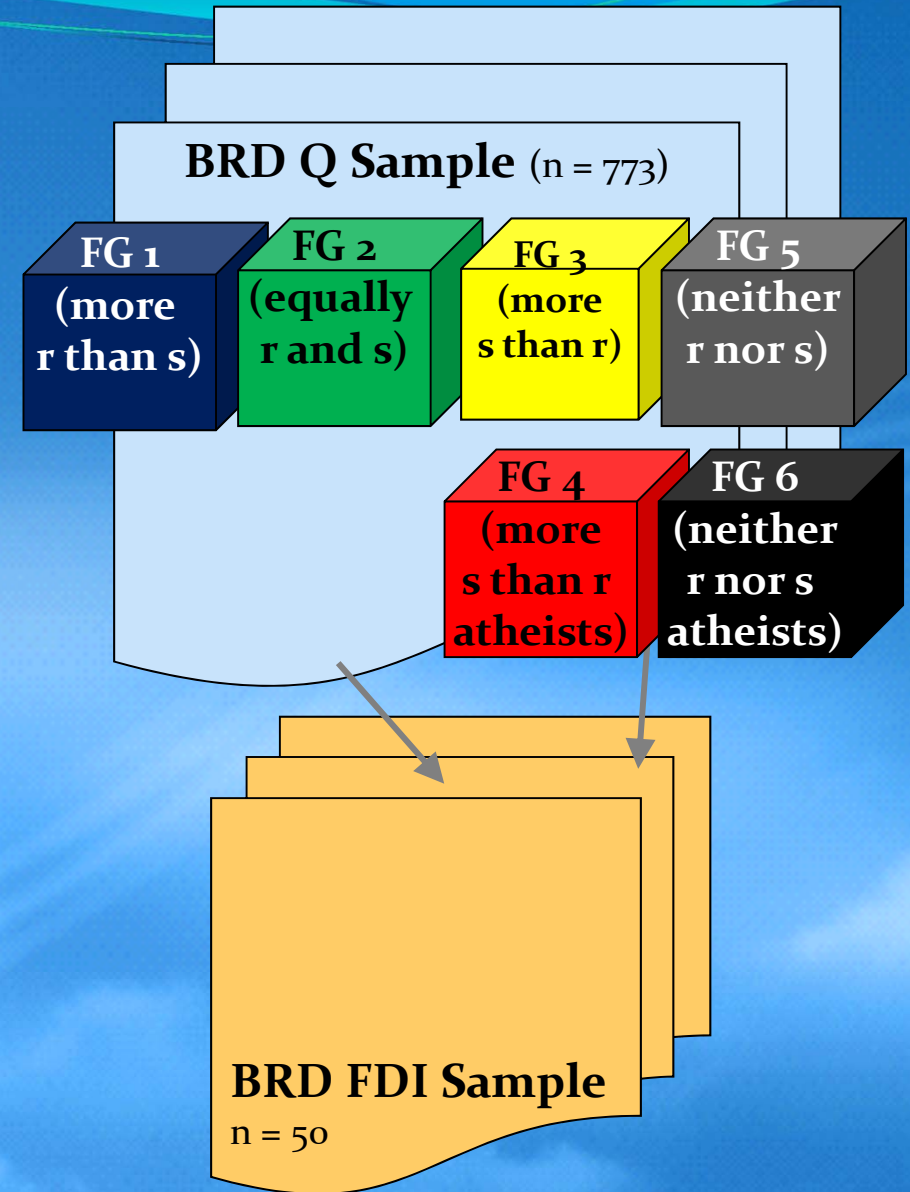
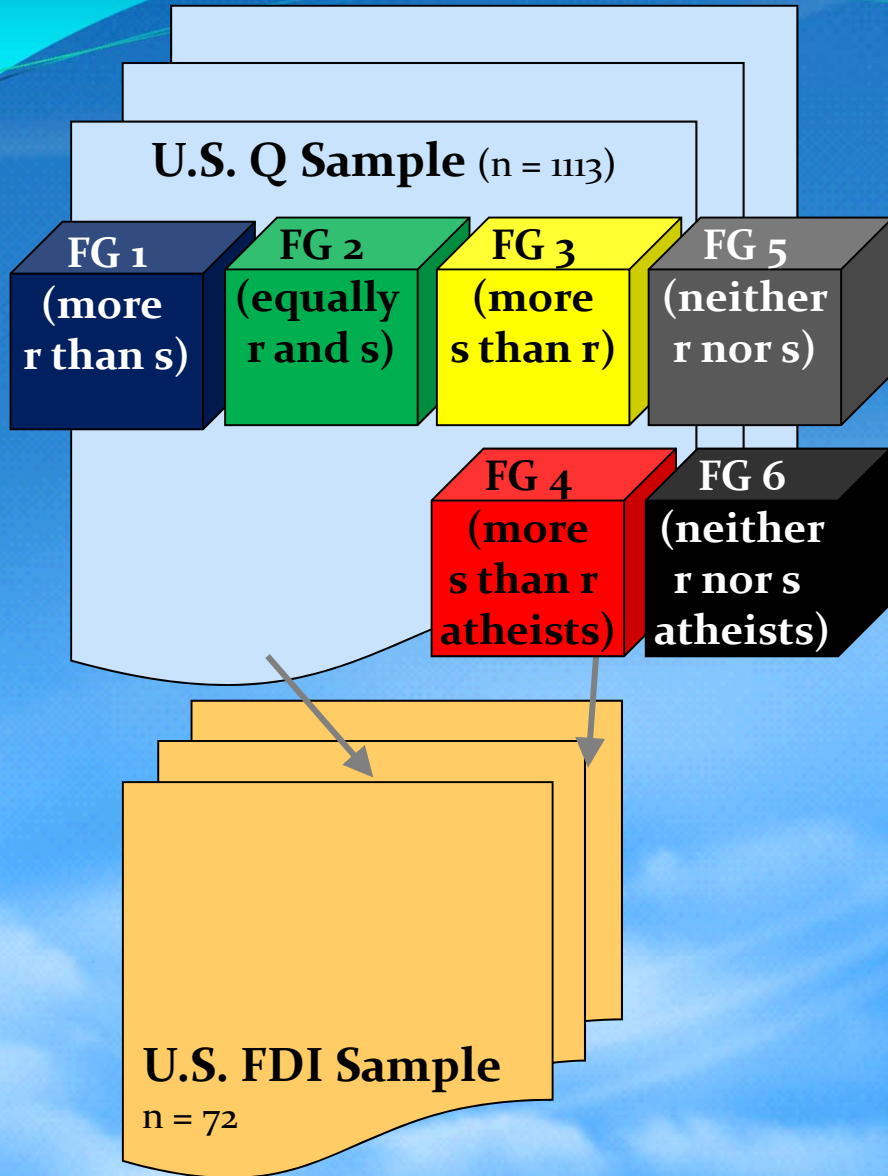
Construction of Focus Groups

	USA (n = 1113)		BRD (n = 773)	
	n	%	n	%
more religious than spiritual (except non-theists)	70	6,3%	75	9,7%
equally religious and spiritual (except non-theists)	302	27,1%	140	18,1%
more spiritual than religious (except non-theists)	540	48,5%	337	43,6%
more spiritual than religious atheists/non-theists	26	2,3%	40	5,2%
neither religious nor spiritual (except non-theists)	107	9,6%	94	12,2%
neither religious nor spiritual atheists/non-theists	65	5,8%	77	10,0%
more religious than spiritual atheists/non-theists	1	0,1%	4	0,5%
equally religious and spiritual atheists/non-theists	2	0,2%	6	0,8%

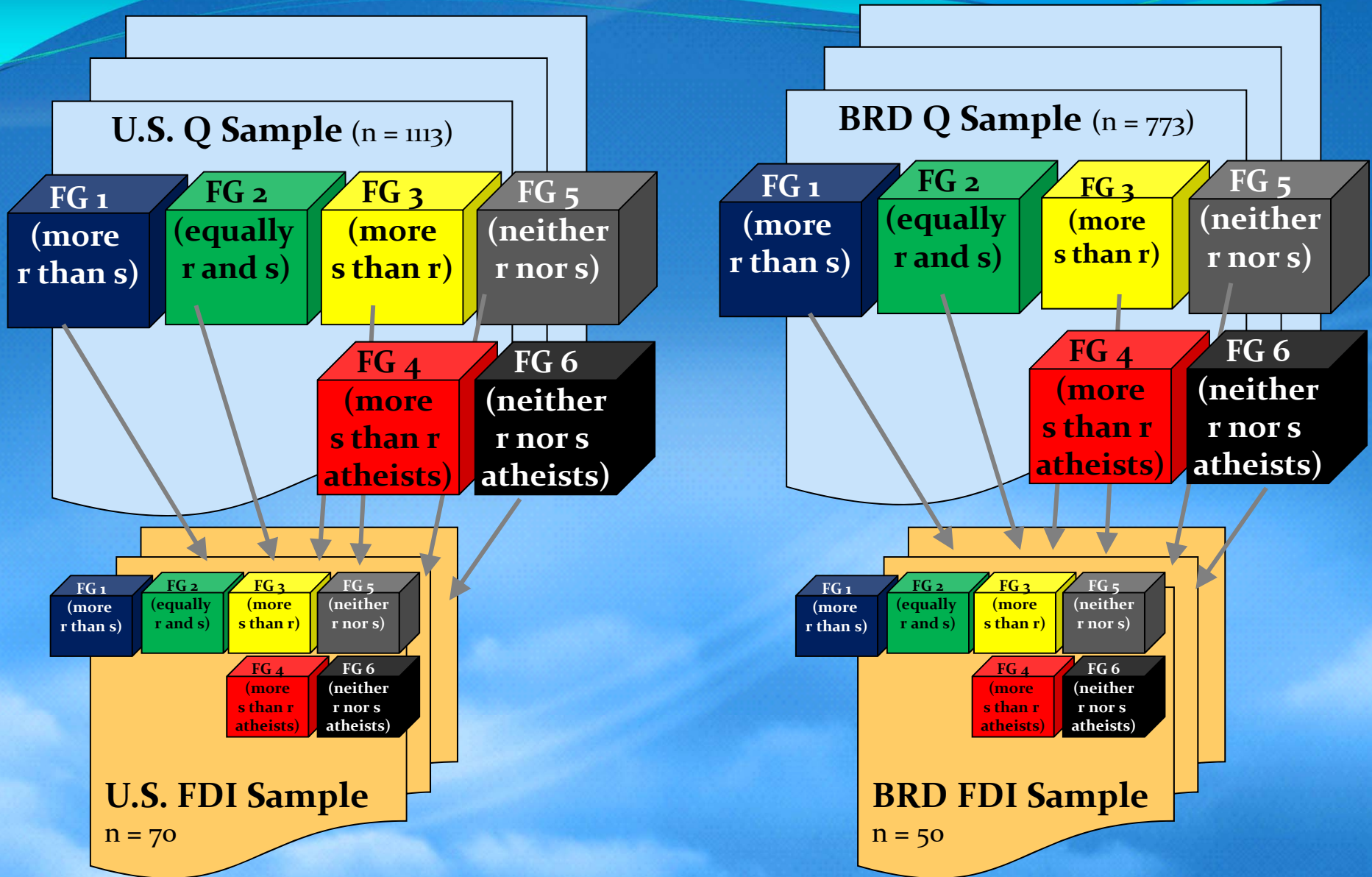
Construction of Focus Groups

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neither religious nor spiritual (except non-theists)	107	9,6%	94	12,2%
neither religious nor spiritual atheists/non-theists	65	5,8%	77	10,0%
more religious than spiritual atheists/non-theists	1	0,1%	4	0,5%
equally religious and spiritual atheists/non-theists	2	0,2%	6	0,8%

Focus Groups Constructed in Spirituality Study



Focusgroup Construction in Spirituality Study



Results on the Semantics of „Spirituality“

Results with Osgood's Semantic Differential

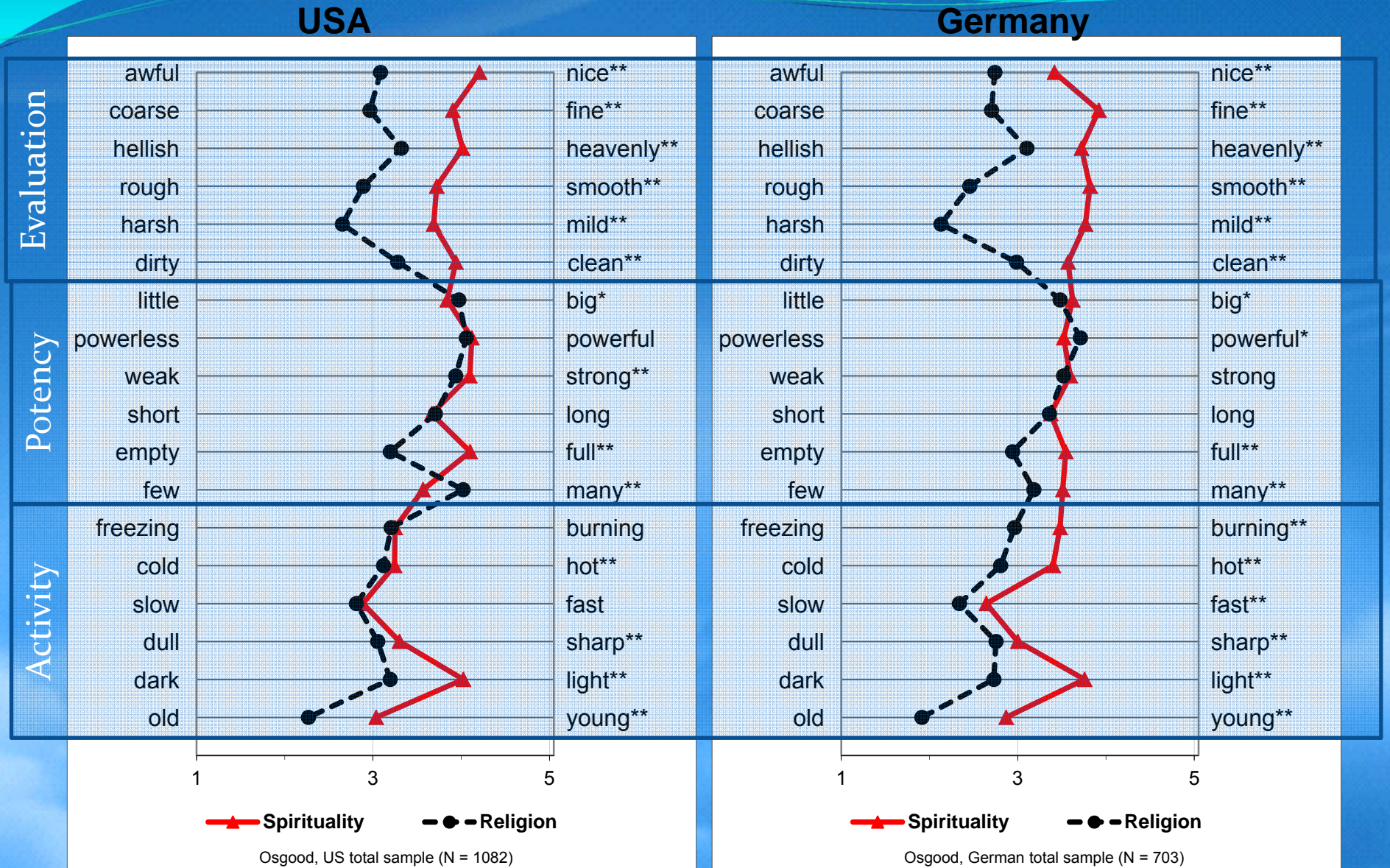
#25 Here we ask you to choose the one of both adjectives that best describes "spirituality":

You may find it hard to make a judgment in some cases. However, we ask you to follow your personal intuition and spontaneously mark what you consider fitting. There is no right or wrong.

nice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	awful
fine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	coarse
heavenly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	hellish
smooth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	rough
mild	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	harsh
clean	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dirty
big	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	little
powerful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	powerless
strong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	weak
long	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	short
full	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	empty
many	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	few
burning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	freezing
hot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	cold
fast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	slow
sharp	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dull
light	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dark
young	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	old

Osgood, C. E. (1962).
 Studies on the Generality of
 Affective Meaning Systems.
American Anthropologist,
 17, 10-28.

Evaluation of „Spirituality“ and „Religion“ in German and US Total Samples with Osgood’s Semantic Differential

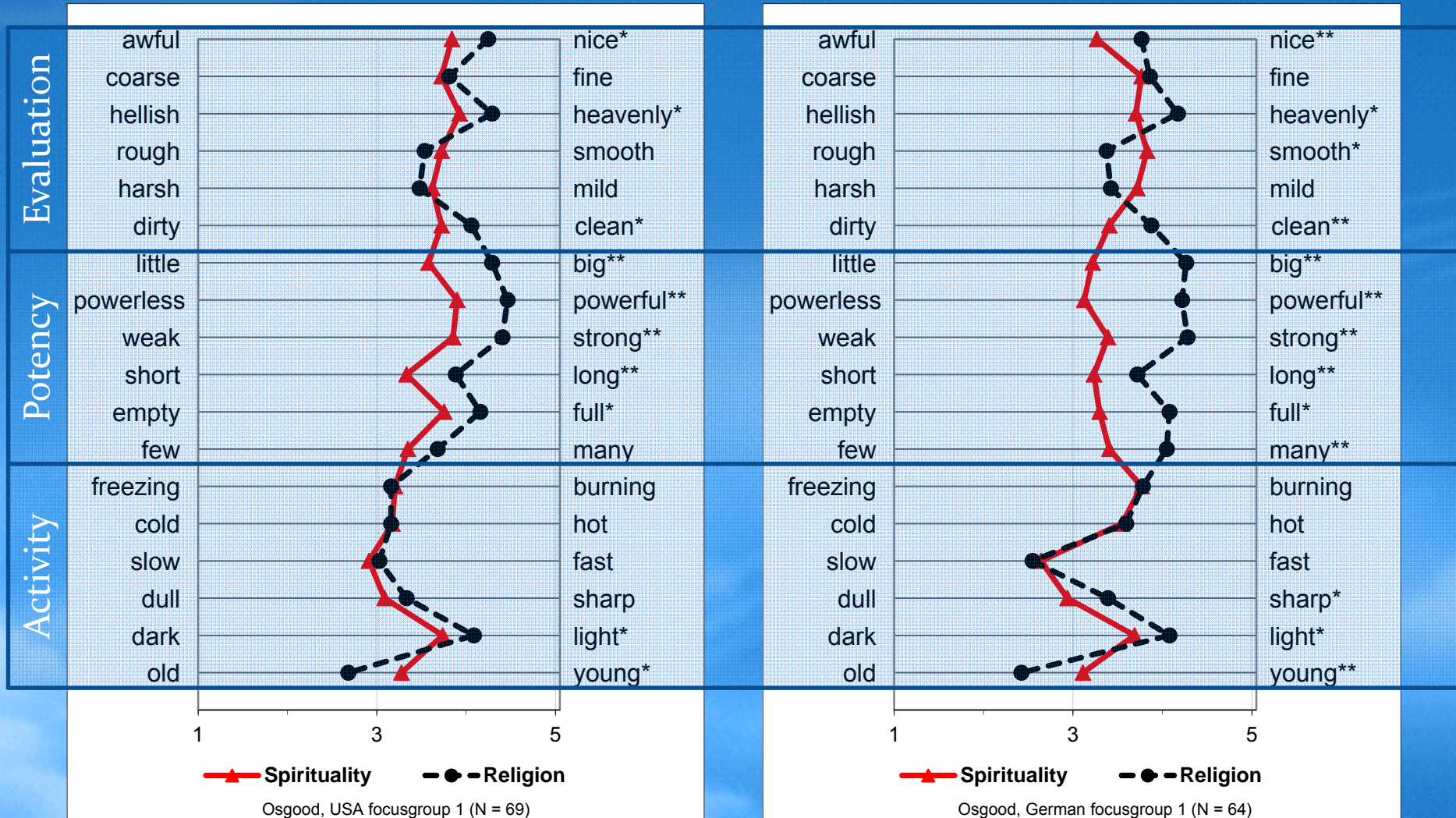


Black dotted line indicates values for „religion,“ the red solid line indicates values for „spirituality.“ Evaluation is based on a paired *t*-test for both the German and the US samples. ** indicates significant differences on the $p < .001$ level; * indicates significant differences on the $p < .05$ level.

Focusgroup 1 „More religious than spiritual“ Respondents in Osgood Semantic Differential

USA

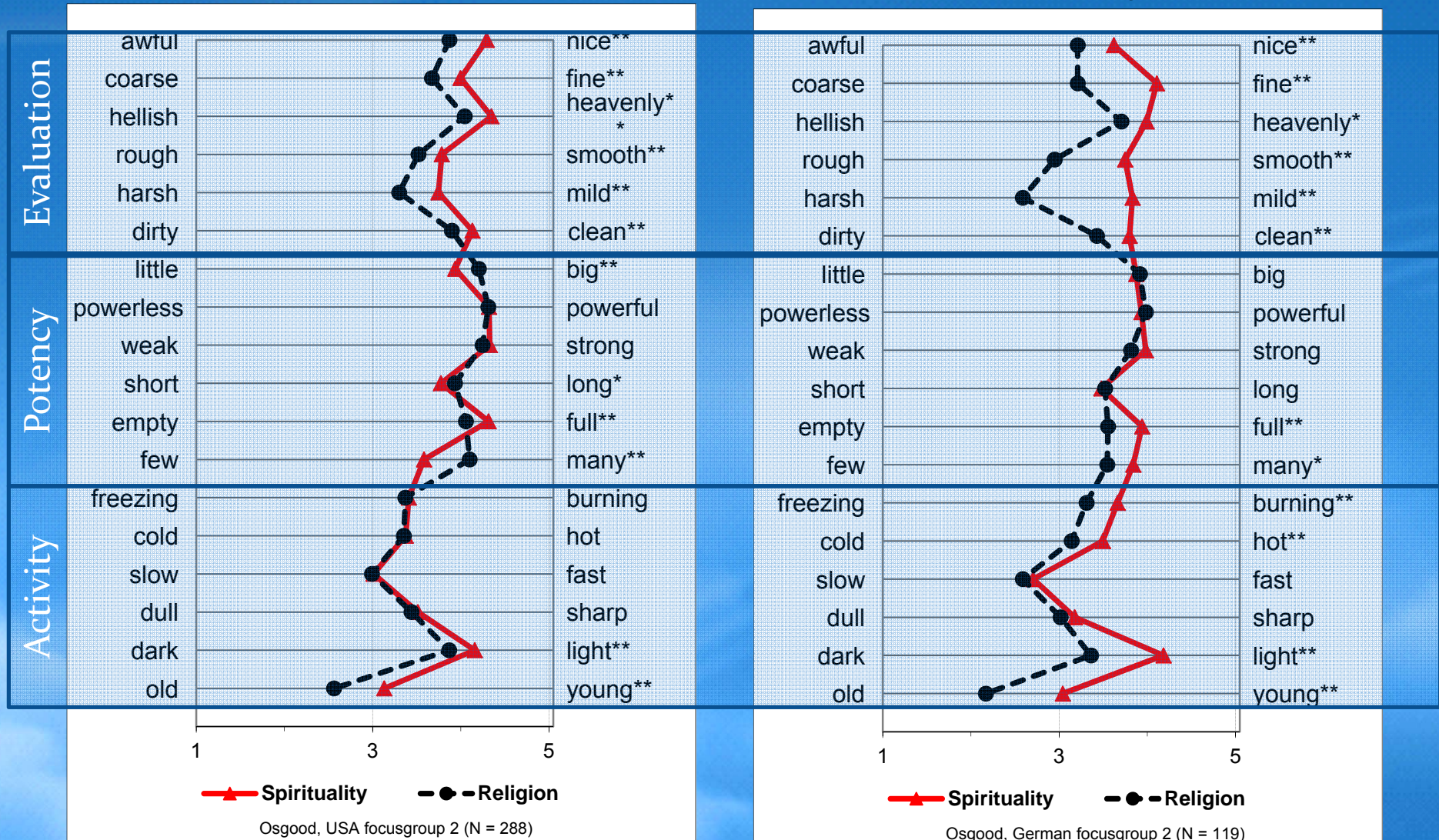
Germany



Focusgroup 2 „Equally religious and spiritual“ Respondents in Osgood Semantic Differential

USA

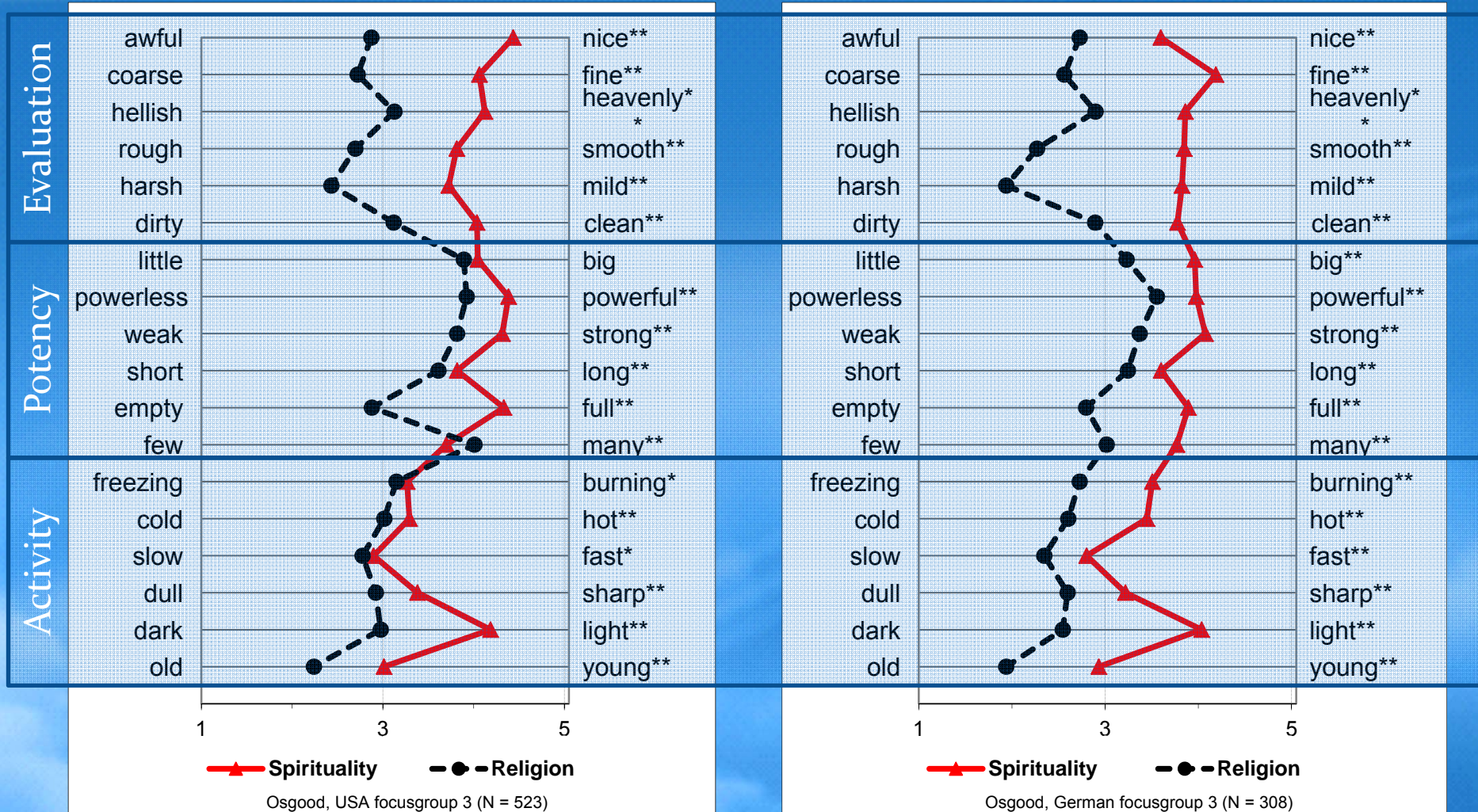
Germany



Focusgroup 3 „More spiritual than religious (except atheists/non-theists)“ in Osgood Semantic Differential

USA

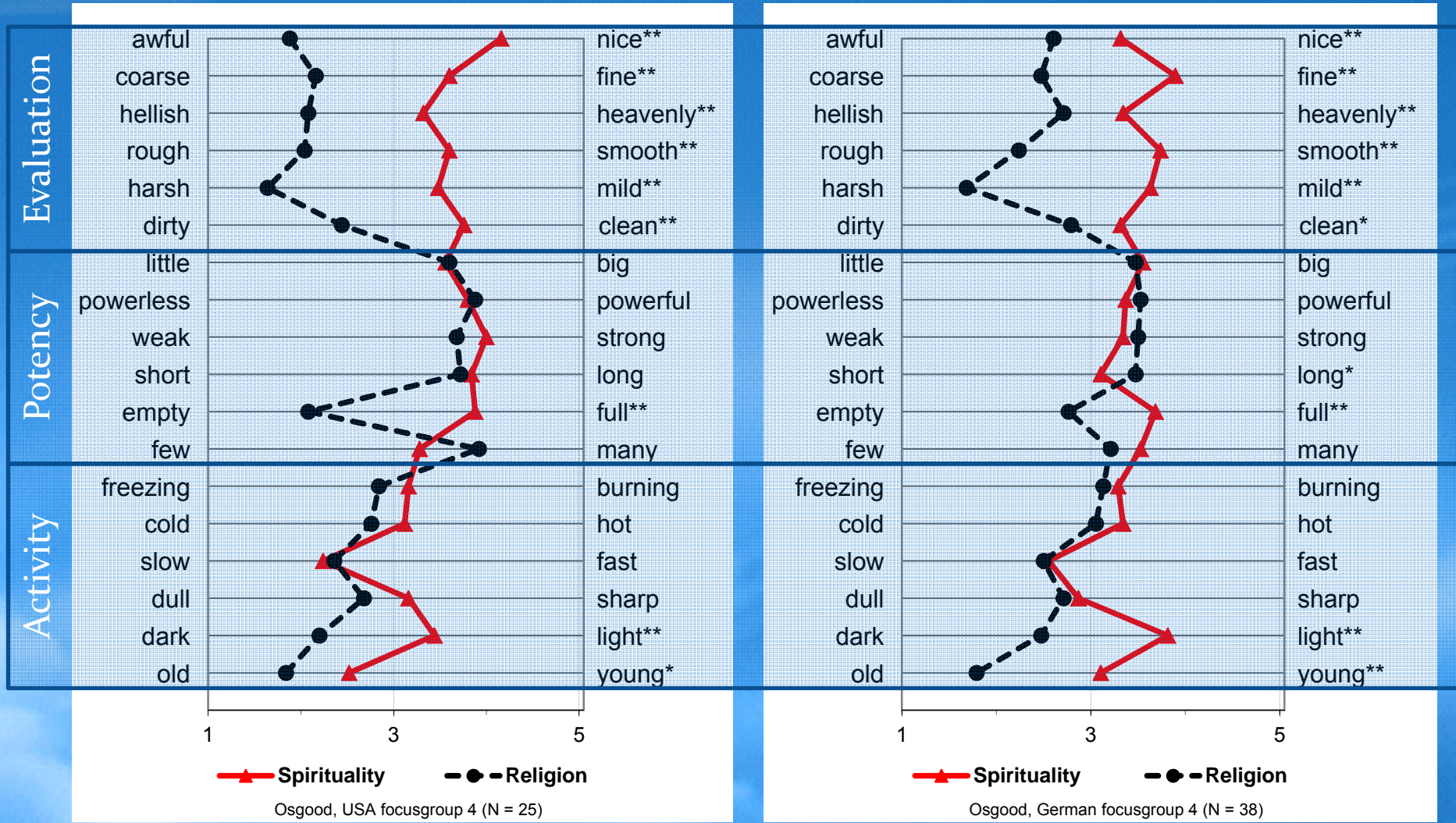
Germany



Focusgroup 4 „More spiritual than religious atheists/non-theists“ in Osgood Semantic Differential

USA

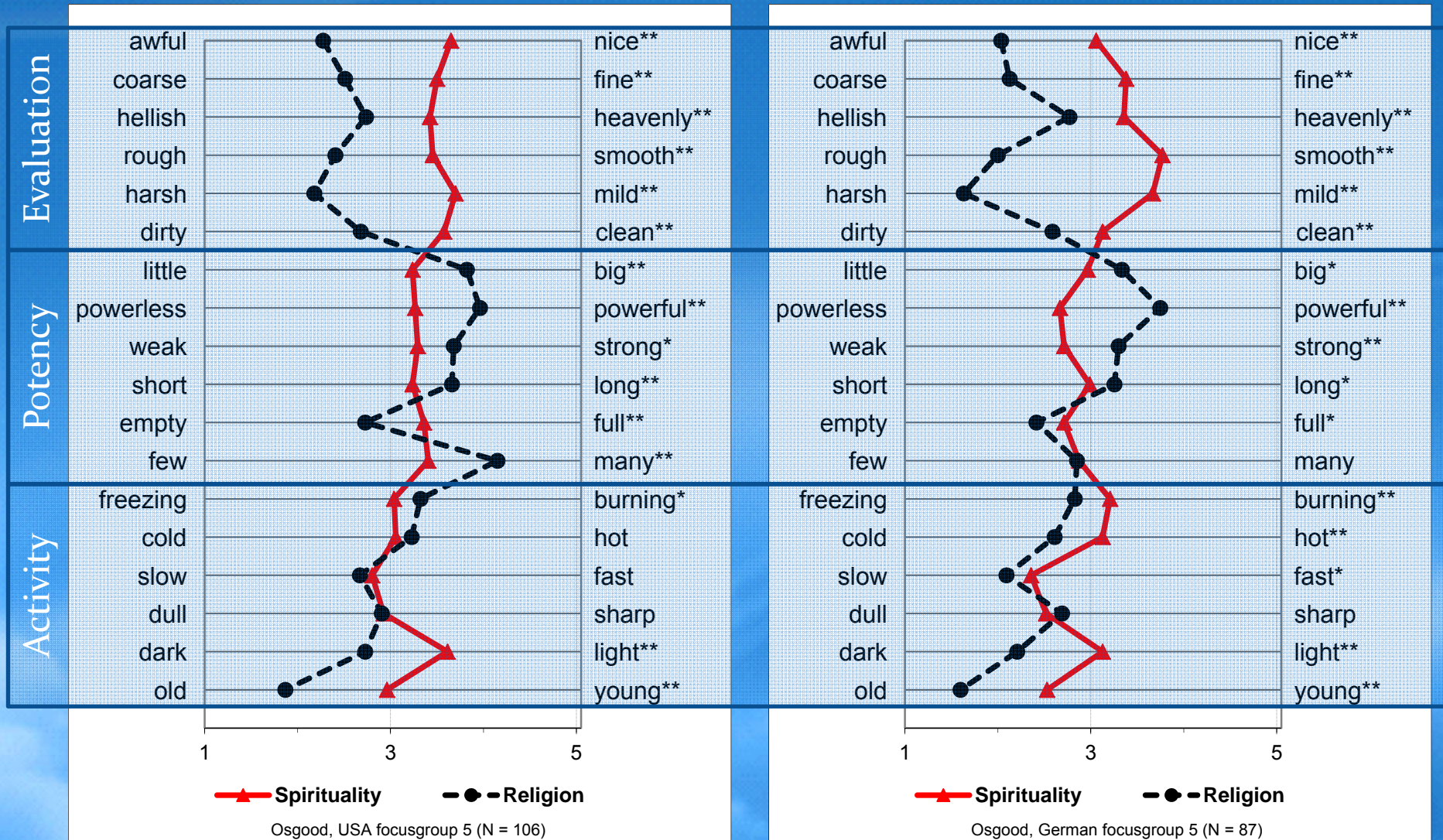
Germany



Focusgroup 5 „Neither spiritual nor religious (except atheists/non-theists)“ in Osgood Semantic Differential

USA

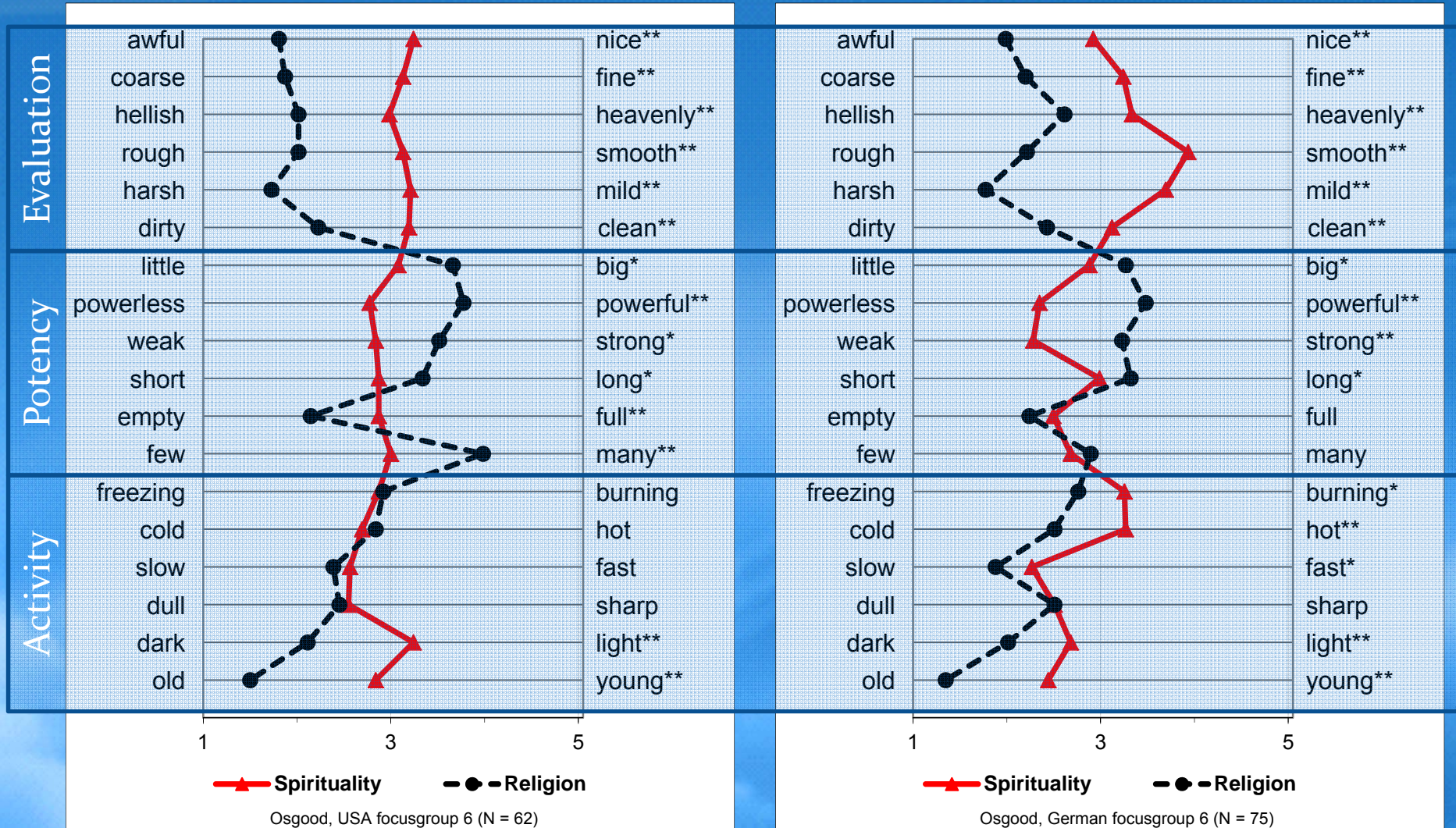
Germany



Focusgroup 6 „Neither spiritual nor religious atheists/non-theists“ in Osgood Semantic Differential

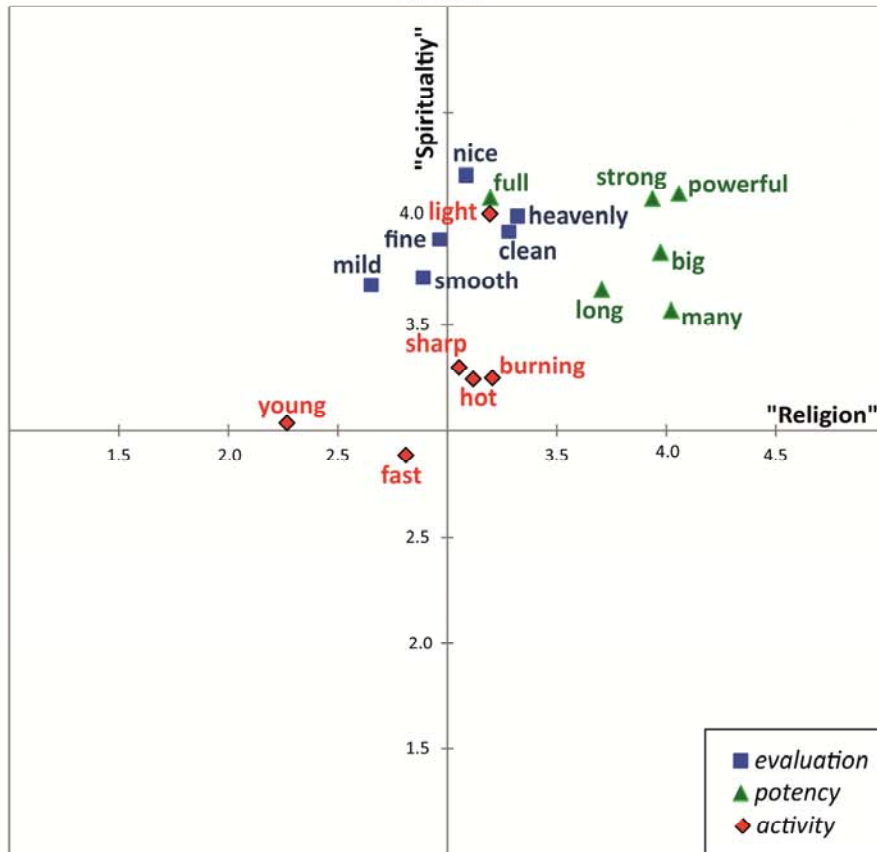
USA

Germany

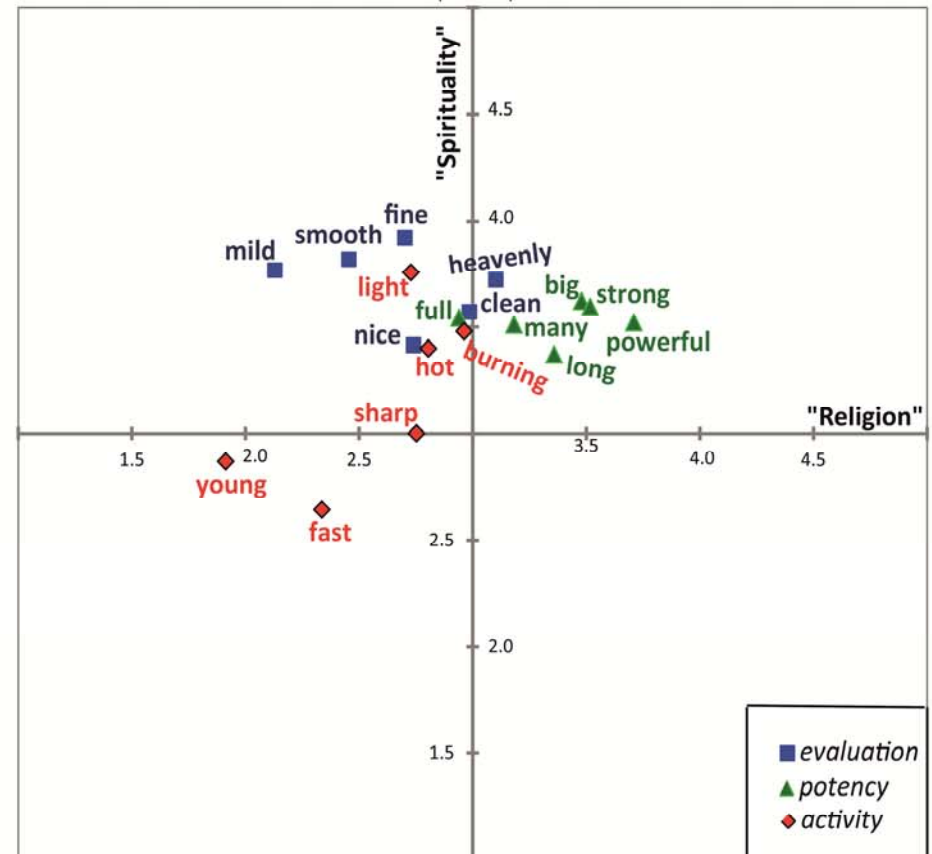


Positive Adjectives for „Spirituality“ and „Religion“ in Semantic Space Based on Osgood’s Semantic Differential, Including Factor Structure

US Sample
(n = 1802)

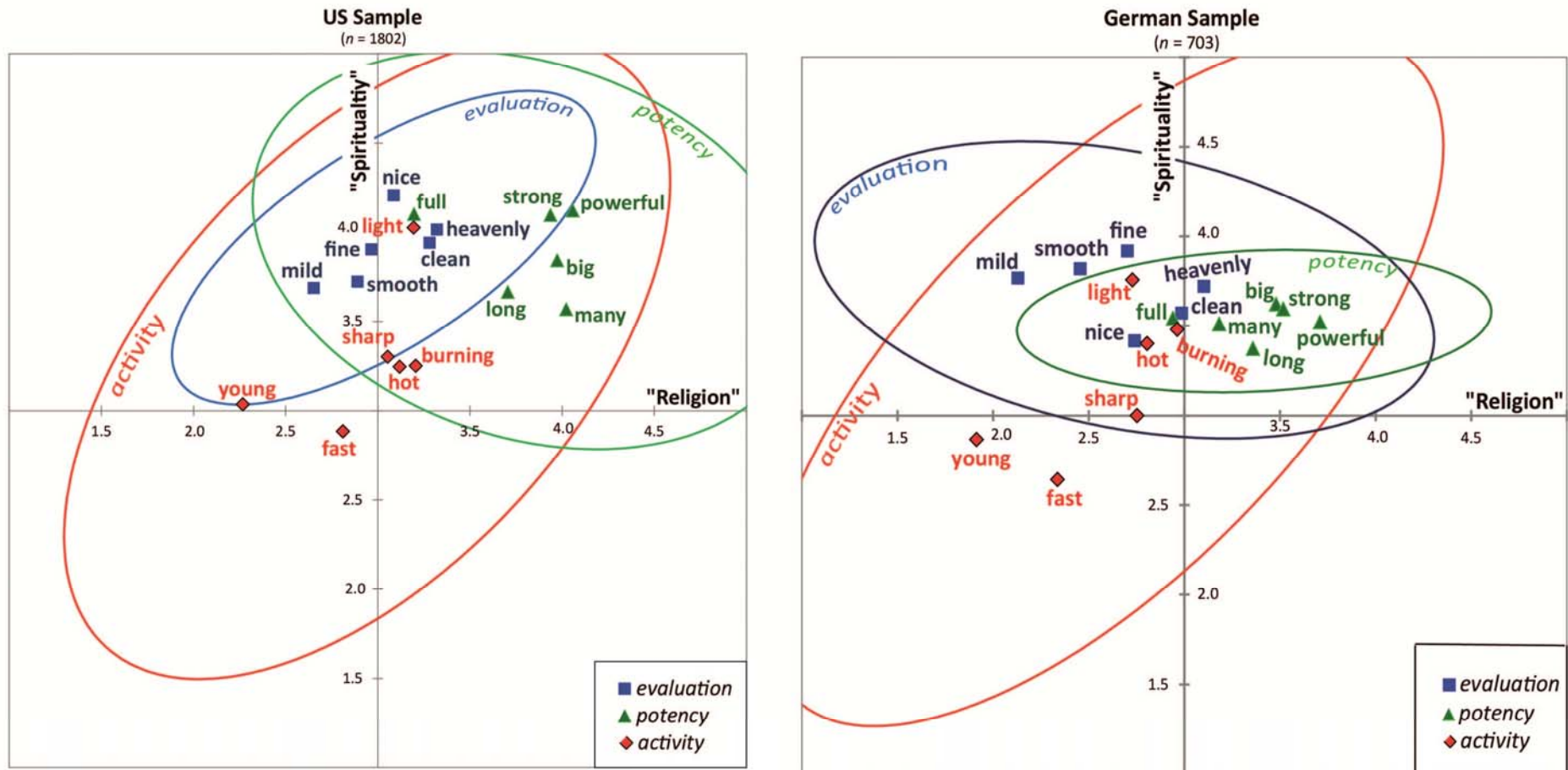


German Sample
(n = 703)



Evaluation is based on a paired *t*-test for both the German and the US samples. Positive adjectives were selected for visualization in the scatter plots, whereby values are taken as vectors for „spirituality“ resp. „religion.“

Positive Adjectives for „Spirituality“ and „Religion“ in Semantic Space Based on Osgood’s Semantic Differential, Including Factor Structure



Evaluation is based on a paired t -test for both the German and the US samples. Positive adjectives were selected for visualization in the scatter plots, whereby values are taken as vectors for „spirituality“ resp. „religion.“ Ellipses indicate the gravity fields for the factors.

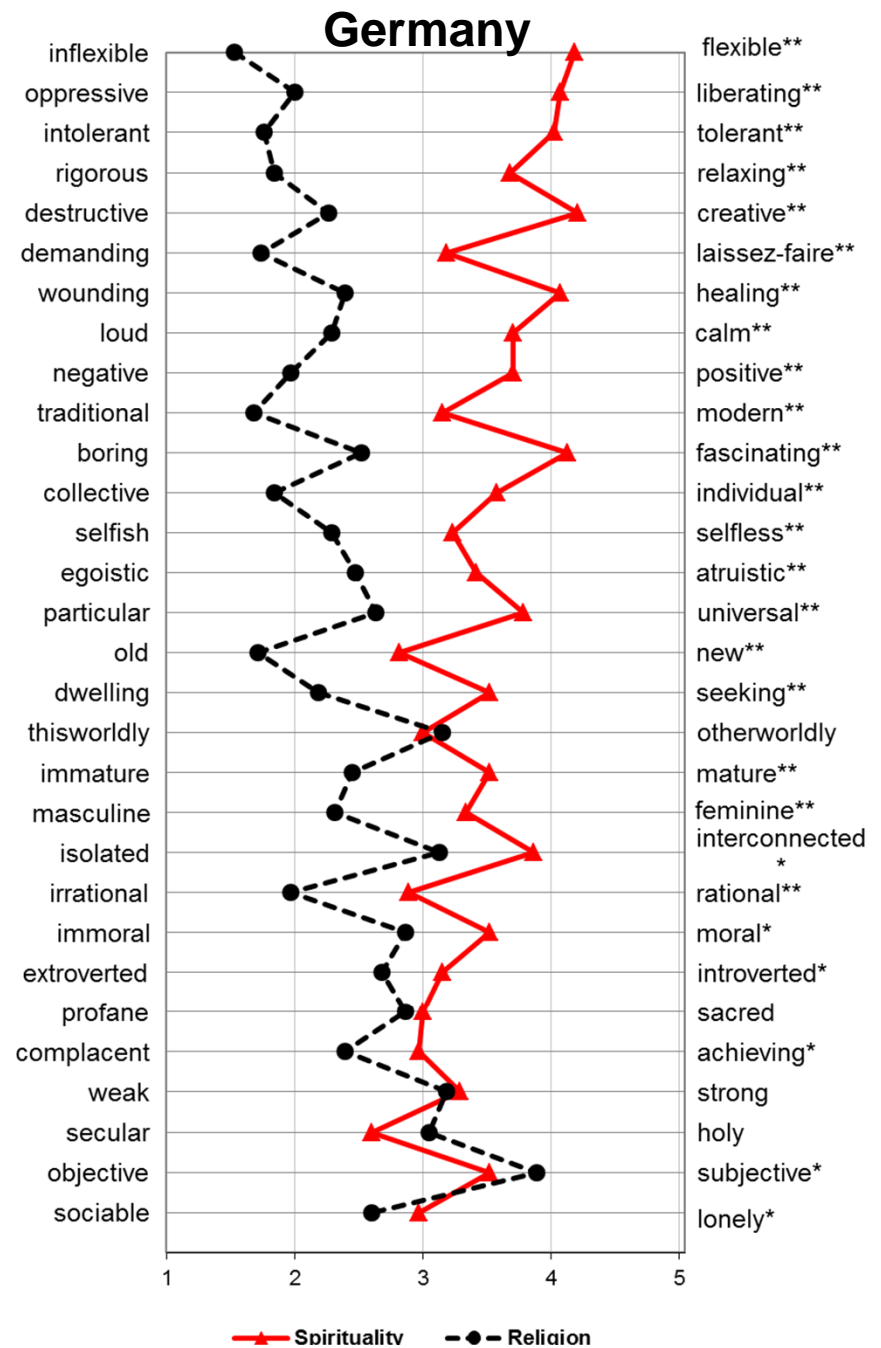
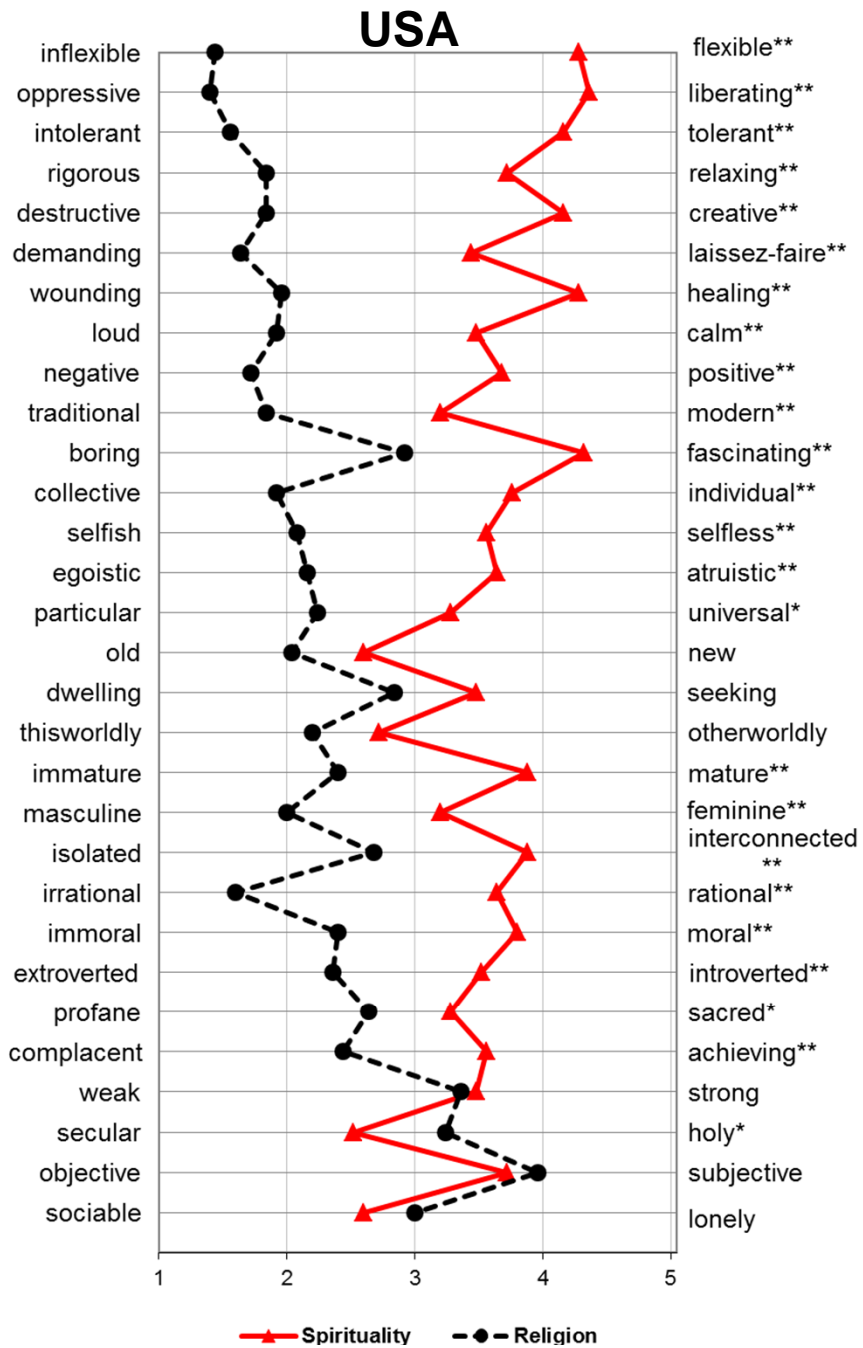
Contextual Semantic Differential

#27 Here we ask you to choose the one of both adjectives that best describes "spirituality".

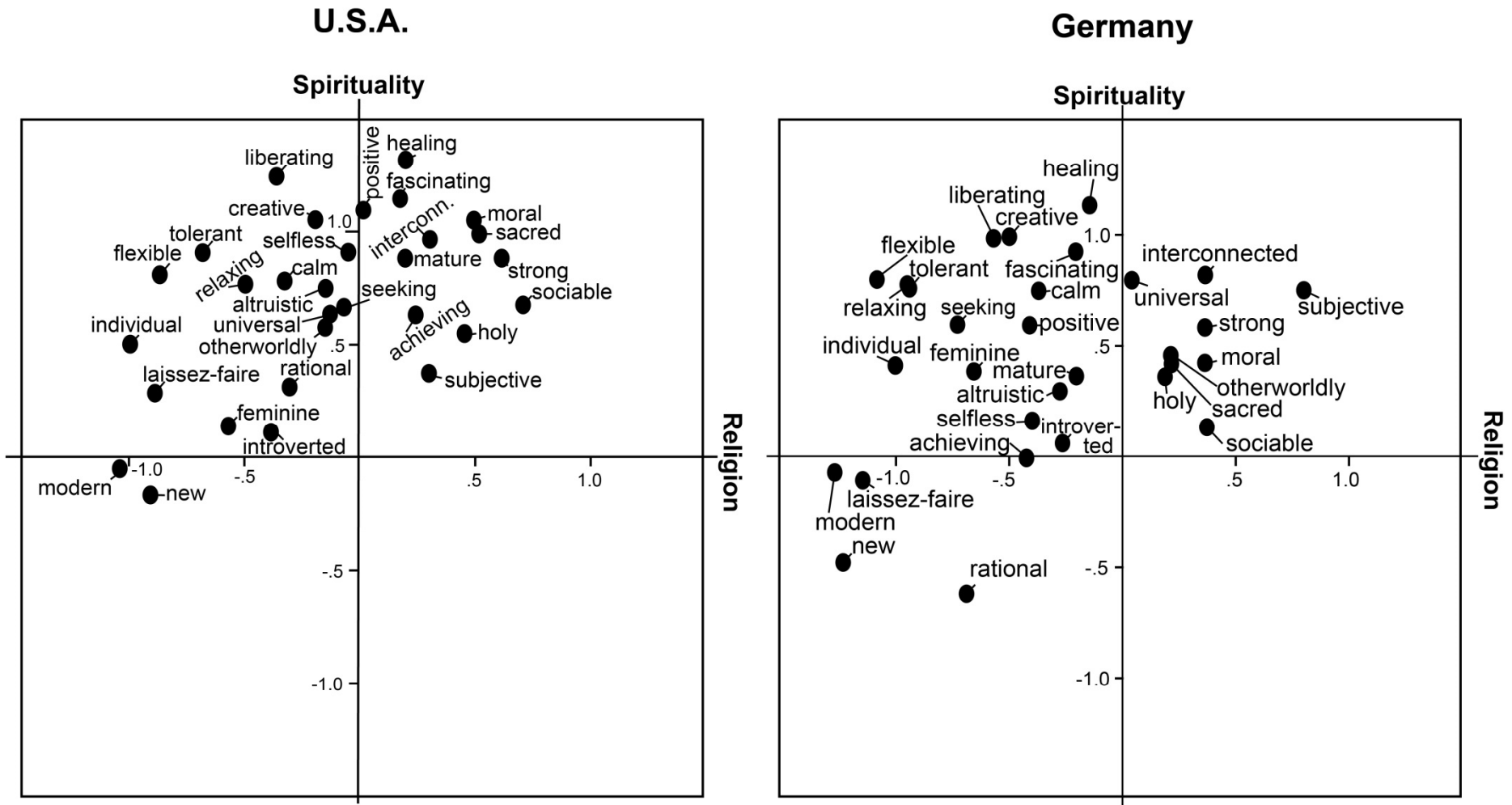
Again, you may find it hard to make a judgment in some cases. However, we ask you to follow your personal intuition and spontaneously mark what you consider fitting. There is no right or wrong.

otherworldly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	thisworldly
healing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	wounding
liberating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	oppressive
sociable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	lonely
secular	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	holy
individual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	collective
rational	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	irrational
inflexible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	flexible
laissez-faire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	demanding
intolerant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	tolerant
relaxing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	rigorous
destructive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	creative
fascinating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	boring
selfish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	selfless
universal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	particular
isolated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	interconnected
objective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	subjective
immoral	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	moral
profane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	sacred
introverted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	extroverted
new	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	old
masculine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	feminine
positive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	negative
weak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	strong
calm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	loud
altruistic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	egoistic
immature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	mature
achieving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	complacent
traditional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	modern
seeking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	dwelling

„More spiritual than religious atheists/non-theists,“ Contextual



Adjectives Associated with „Spirituality“ and „Religion“ in the Contextual Semantic Differential



Note. The position of the dots is determined by the means for „spirituality“ (y) and „religion“ (x) resulting from a paired t-test with the contextual semantic differential items in the U.S. ($n = 1082$), the German ($n = 703$) samples.

Results from the Analysis of Osgood's Semantic Differentials with „Spirituality“ and „Religion“

1. On the basis of Osgood's (1962) Semantic Differential, a difference between „spirituality“ and „religion“ emerges – especially in the Factor *Evaluation*. Thereby „spirituality“ is generally evaluated positively.
2. Difference in *Evaluation* (“spirituality” is good; “religion” is bad) greatly varies between the focus groups – difference is highest for “more spiritual atheists” and neither/nors. This depends primarily on how negative „religion“ is evaluated.
3. How positive „spirituality“ is generally evaluated, is visible in all of the scatter plots: almost all (positive poles of the) adjectives fall in the upper half. In contrast, a mixed evaluation for “religion” is indicated.
4. A cross-cultural difference becomes visible as general trend in the *Evaluation* factor of the Osgood instrument: while for the US sample, „religion“ and „spirituality“ are both evaluated rather positively, in the German sample, there are more positive adjectives in the segment that is exclusive for „spirituality“ (upper left).

Semantics of „Spirituality“ in the Free Text Entries (Subjective Definitions) about „Spirituality“ and „Religion“

Semantics of „Spirituality“ in the Free Text Entries (Subjective Definitions) about „Spirituality“ and „Religion“

#23 How would you define the term “spirituality” ?

#24 How would you define the term “religion” ?

Corpus Analysis of Free Entries

Special thanks for the corpus analytic calculations to
Stefen Altmeyer, University of Bonn

Procedure of Corpus Analysis (in WordSmith software)

Procedure in WordSmith software:

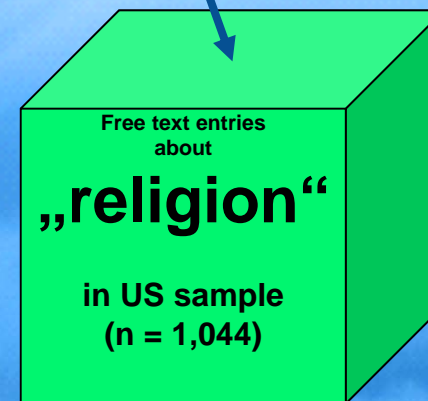
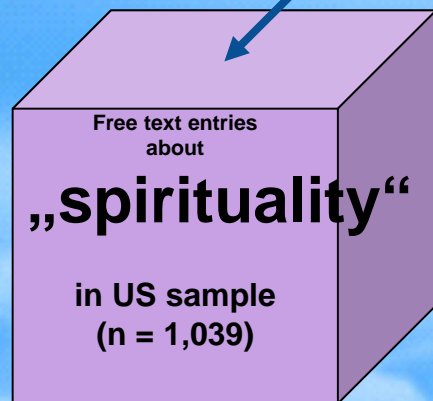
1. frequency sorted wordlists are generated for the reference corpus and for the corpus under investigation (research corpus)
2. each word in the research corpus is compared with its equivalent in the reference corpus and the program evaluates a statistical test based on the **log-likelihood procedure to calculate the keyness**
3. the wordlist for the research corpus is reordered in terms of the 'keyness' of each word.

Baron, A., Rayson, P., & Archer, D. (2009). Word frequency and key word statistics in historical corpus linguistic. *International Journal of English Studies*, 20, 41-67. with reference to Tribble, 2000.

Comparison of Free Entries with the Reference Corpora of Contemporary Language

For US Data:

American National Corpus / written part (ANC-written)



High Keyness Words from Comparing Free Text Entries about „Religion“ with ANC-written (US)



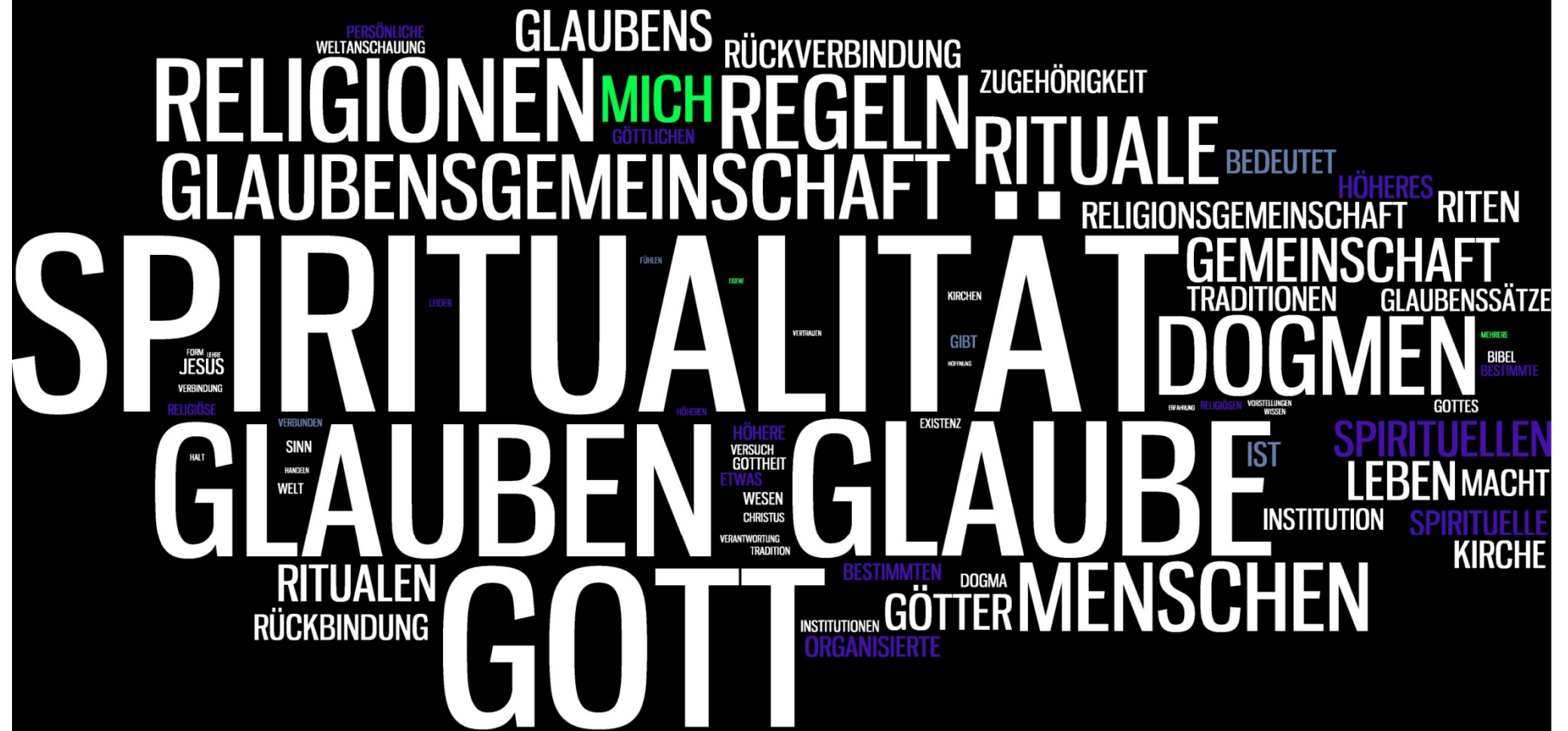
Reference corpus: ANC-written;
Freq. > 10; $p < .000001$ ▪ Selection: first 80 words

High Keyness Words from Comparing Free Text Entries about „Spirituality“ with DWDS (GER)



Reference corpus: DWDS;
Freq. > 10; $p < .000001$ ▪ Selection: first 80 words

High Keyness Words from Comparing Free Text Entries about
„Religion“ with DWDS (GER)

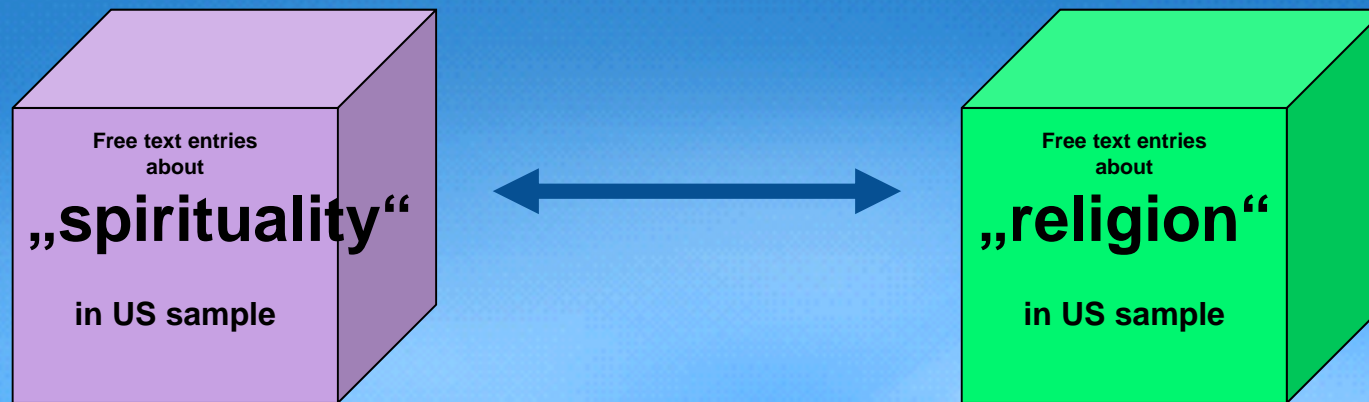


Reference corpus: DWDS;
Freq. > 10; $p < .000001$ ▪ Selection: all (74) words

Results: Corpus Analysis with Reference Corpora of Contemporary Language

1. “Belief” and “God” are outstanding keywords not only in the text corpora for “religion,” but surprisingly also in the text corpora for “spirituality.”
2. Likewise surprising: In the text corpora for „religion“ in both cultures, „spirituality“ is a outstanding keyword
3. From a bird’s-eye view, there appears to be little semantic difference between “spirituality” and “religion.”

Comparison of Free Entries about „Spirituality“ with the Free Entries about „Religion“

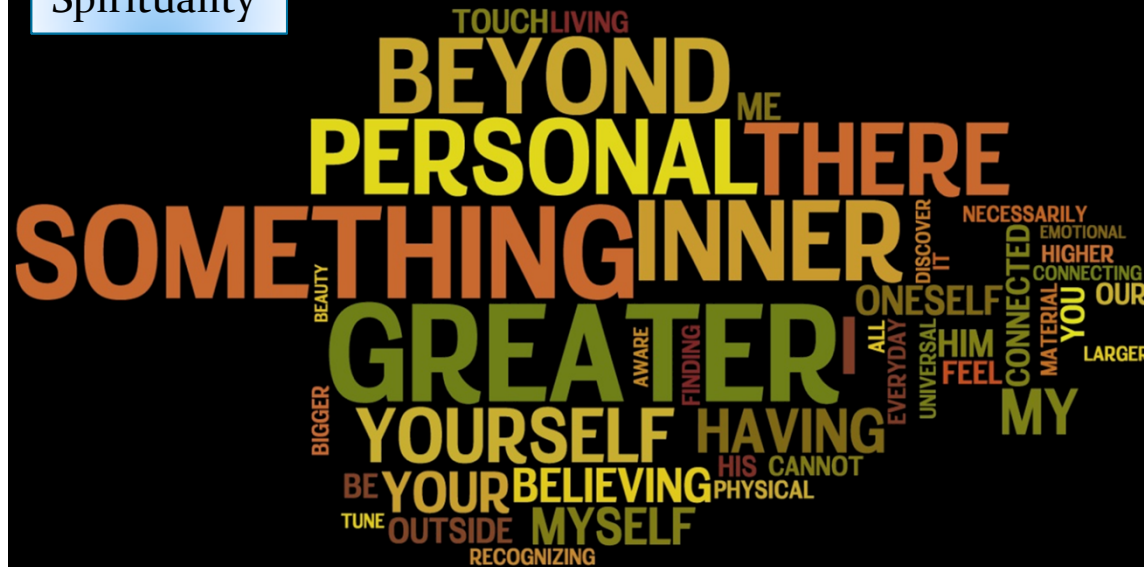


High Keyness Words (Nouns) from Comparing Free Text Entries about „Spirituality“ with Entries about „Religion“ and vice versa (US)



High Keyness Words (Rest) from Comparing Free Text Entries about „Spirituality“ with Entries about „Religion“ and vice versa (US)

Spirituality



Religion



Reference corpus: Rel. vs. Spir.;
Freq. > 5; $p < .0015$ ▪ Selection: rest

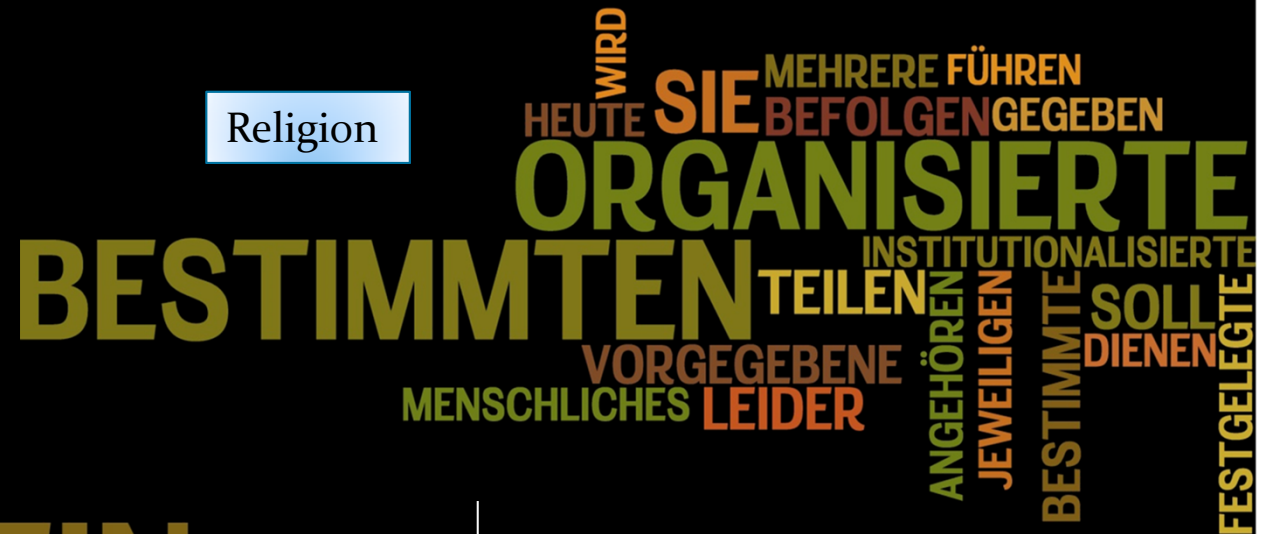
High Keyness Nouns from Comparing Free Text Entries about „Spirituality“ with Entries about „Religion“ and vice versa (GER)



Reference corpus: Rel. vs. Spir.; Freq. > 5;
 $p < .0025$ • Selection: nouns

High Keyness Words (Rest) from Comparing Free Text Entries about „Spirituality“ with Entries about(GER) „Religion“ and vice versa

Religion



Spiritualität



Reference corpus: Rel. vs. Spir.;
Freq. > 5; $p < .005$ ▪ Selection: Rest

Results: Corpus Analysis Between Corpora „Spirituality“ and „Religion“

1. From the direct comparison of the corpora for “spirituality” and “religion,” a clear difference becomes visible:
 - a. „Religion“ is associated with nouns such as „group,“ „rules,“ „beliefs,“ „worship“ or „system,“ and the adjective „organized“ stands out.
 - b. In contrast, „spirituality“ appears associated with nouns such as „connection,“ „feeling,“ „soul“ and „spirit,“ and also with adjectives such as „inner“ and „personal.“
2. We observe a considerable semantic difference between “spirituality” and “religion” from direct comparison of the corpora.
3. The contrast between “spirituality” and “religion” is similar in the German and the US samples. Not much of a cross-cultural difference.

Categories Assigned to the Free Text Entries on „Spirituality“

An Interpretative Approach for Quantitative Assessment

Interpretation of Free Text Entries about „Spirituality“

The free text entries about “spirituality” ($n_{\text{GER}} = 726 + n_{\text{USA}} = 1039$) have been analyzed using a content-analytic procedure which has been adapted from Mayring (2010). In the interpretation of these subjective definitions of “spirituality” we proceeded as follows:

- 1) Identification of “units of meaning” in each of the free entries
- 2) Construction of categories (codes) for each unit of meaning
- 3) Assigning codes to all similar units of meaning in the sample
- 4) Condensing categories and to keep the number of codes < 50
- 5) After coding the free entries in German and US subsample separately, a common list of categories for both samples has been constructed, following a re-coding of the entire sample

This resulted in 44 codes which all were entered in dichotomous variables for further quantitative analysis.

44 Categories Assigned to the Free Text Entries about „Spirituality“

- (1) Transcendental absolute, "unity of existence", omnipresent & indiscriminate, the one
- (2) Transcendental / higher power/forces/energy
- (3) God (also the Father, Lord, Creator, the Divine)
- (4) Jesus, Christ, Holy Spirit, the Son
- (5) (Inner) peace, enlightenment and other attitudes and states of being
- (6) Within, self, higher Self, inner core, essence
- (7) Spirit and mind
- (8) Soul
- (9) Unspecified transcendent: something bigger, beyond, greater; "may be"
- (10) Meaning and (higher) purpose, questions and answers
- (11) Values, (higher) order, morals, karma
- (12) Relation to others, community, all humanity, mankind
- (13) Faith and belief, believing, belief system
- (14) Connectedness, relationship, in touch with, harmony
- (15) Feeling, emotion, intuition, empathy, heart, love
- (16) Thinking about, to understand, to reflect, contemplation
- (17) Awareness, consciousness, sense of, feeling a presence, in tune
- (18) Experience, sensory perception
- (19) Greater being/person, deities, gods
- (20) Without rules, tradition, norms, dogma, structure, directions
- (21) Something else than religion, without worship
- (22) Obedience, devotion, to follow
- (23) Seeking, path, journey, reaching, to evolve, to achieve
- (24) Practices, to practice (one's faith), music, prayer, worship, meditation
- (25) Individual, personal, private, subjective
- (26) Energies, vital principle, ghosts, angels and demons, spirits
- (27) Esoteric, occultism, spiritism, mystic, magic
- (28) Guided, destined, controlled, saved, healed, dependent
- (29) Vague, unclear, unsure; bullshit, fantasy, hocus pocus
- (30) Relation to the world, nature, environment, universe
- (31) Rest (unfinished sentences/ not categorizable)
- (32) Acknowledge, to recognize, to accept, to realize
- (33) Otherworldly, beyond this world, "spiritual" realms
- (34) Higher/beyond/greater/other than oneself/ humans/ this life
- (35) Cannot be explained or scientifically proven, beyond understanding
- (36) Supernatural, non-material, cannot see or touch
- (37) Part of religion, Christian, biblical
- (38) Everyday, daily life, way of life, to act
- (39) Deal with, interest in, engagement, focus
- (40) The truth, true nature of existence, wisdom, reality
- (41) Life after death, beyond this life
- (42) All-connectedness, part of something bigger
- (43) Universal category, basis of mankind
- (44) Not necessarily religion, part of and beyond religion

Principal Component Analysis with the Categories

Principal Component Analysis using Varimax Rotation with Kaiser Normalization was run including all assigned categories (with frequency > 4), in order to reduce dimensions, find a coherent structure of the semantics of „spirituality,“ but nevertheless account for differences, resp. diversity of semantic associations to „spirituality.“

Observing the scree plot and the loading structure, a **solution with 10 components** has been identified as optimal; it explains **39.17% of the variance**.

The resulting 10 components have been interpreted and can be understood as components of the semantic field of „spirituality“ for both the US and the German respondents in our study.

Total Sample (USA + GER)

Rotated Component Matrix^a

Variance explained: 39.17%

	Component									
	1	2	3	4	5	6	7	8	9	10
(23) Seeking, path, journey, reaching, to evolve, to achieve	,648									
(6) Within, self, higher Self, inner core, essence	,501							,261		
(16) Thinking about, to understand, to reflect, contemplation	,493									
(10) Meaning and (higher) purpose, questions and answers	,458									
(5) (Inner) peace, enlightenment and other attitudes and states of being	,360							,291		
(40) The truth, true nature of existence, wisdom, reality	,353									
(42) All-connectedness, part of something bigger		,681								
(1) Transcendental absolute, "unity of existence", omnipresent & indiscriminate, the one		,542								
(30) Relation to the world, nature, environment, universe		,493			,347					
(14) Connectedness, relationship, in touch with, harmony		,475	,354							
(43) Universal category, basis of mankind		,330								
(4) Jesus, Christ, Holy Spirit, the Son			,649							
(3) God (also the Father, Lord, Creator, the Divine)			,622							
(37) Part of religion, Christian, biblical			,494							
(24) Practices, to practice (one's faith), music, prayer, worship, meditation			,331							,282
(11) Values, (higher) order, morals, karma					,693					
(12) Relation to others, community, all humanity, mankind					,573					
(38) Everyday, daily life, way of life, to act					,252	,566				
(9) Unspecified transcendent: something bigger, beyond, greater; "may be"						,691				
(34) Higher/beyond/greater/other than oneself/ humans/ this life						,679				
(19) Greater being/person, deities, gods						,314				
(15) Feeling, emotion, intuition, empathy, heart, love						,269				
(36) Supernatural, non-material, cannot see or touch										,623
(33) Otherworldly, beyond this world, "spiritual" realms										,616
(18) Experience, sensory perception										,354
(26) Energies, vital principle, ghosts, angels and demons, spirits										,305
(17) Awareness, consciousness, sense of, feeling a presence, in tune										,265
(2) Transcendental / higher power/forces/energy										,616
(28) Guided, destined, controlled, saved, healed, dependent										,517
(32) Acknowledge, to recognize, to accept, to realize										,442
(13) Faith and belief, believing, belief system										,368
(35) Cannot be explained or scientifically proven, beyond understanding										,332
(8) Soul										,723
(7) Spirit and mind										,539
(21) Something else than religion, without worship										,619
(20) Without rules, tradition, norms, dogma, structure, directions										,580
(25) Individual, personal, private, subjective										,325
(27) Esoteric, occultism, spiritism, mystic, magic										,654
(29) Vague, unclear, unsure; bullshit, fantasy, hocus pocus										,550
(39) Deal with, interest in, engagement, focus										-,327

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 17 iterations.

Note. For calculation excluded: Cat.31 (Rest), Cat. (< 4%): 22, 41, 44

10 Components of „Spirituality“

Part of religion,
Christian beliefs
and practices (3)

Holding and
everyday acting
upon values
and morality in
relation to the
social (4)

Individualistic
opposition to
religion and
dogmatic rules,
traditions (9)

Inner search for (higher)
self, meaning, peace,
enlightenment &
understanding of the truth
(1)

(All-)Connectedness &
harmony with the
universe, nature & whole
(2)

Attention to soul, spirit &
mind (8)

Intuition of something or
some being(s) unspecified
higher and beyond oneself
(5)

Belief in a higher power or
force & acknowledging its
guiding & controlling
impact, beyond
understanding (7)

Awareness of a non-material,
invisible world and
experience of supernatural
energies &
beings such as spirits, etc.
(6)

Criticism of obscure,
esoteric beliefs & practices
(10)

Praxis (Ritual Dim.) Experience (Experiential Dim.) Beliefs (Ideological Dim.)
(as one possible option of conceptually grouping the 10 components)

Second-order Principal Component Analysis with Ten Components from First-order PCA

Rotated Component Matrix^a and Interpretation of Secondary PCA of the Ten Components from (Primary) PCA of Categories Assigned to Free Entries on “Spirituality” in USA and Germany

	Component			<i>Component Interpretation</i>
	1	2	3	
(9) Individualistic opposition to religion and dogmatic rules, traditions	,670	-.059	-.127	
(6) Awareness of a non-material, invisible world and experience of supernatural energies and beings (spirits, etc.)	-,487	.175	-.183	
(4) Holding and everyday acting upon values and morality in relation to the social	.077	-,522	.125	
(8) Attention to soul, spirit and mind	-,414	-,472	-.098	
(1) Inner search for (higher) self, meaning, peace, enlightenment and understanding of the truth	-.025	,410	.085	
(2) (All-)Connectedness and harmony with the universe, nature and whole	-.082	,382	-.119	
(5) Intuition of something or some being(s) unspecified higher and beyond oneself	-.126	,302	,613	
(3) Part of religion, Christian beliefs and practices	.226	.019	,471	
(7) Belief in higher power/force and acknowledging its guiding and controlling impact, beyond understanding	.241	.222	-,460	
(10) Criticism of obscure, esoteric beliefs and practices	.065	-.125	,307	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations. Variance explained: 30.00%. Component scores > .3 in **bold** print. Interpretation in *italics*; keyword in **bold italics**.

Rotated Component Matrix^a and Interpretation of Secondary PCA of the Ten Components from (Primary) PCA of Categories Assigned to Free Entries on “Spirituality” in USA and Germany

	Component			<i>Component Interpretation</i>
	1	2	3	
(9) Individualistic opposition to religion and dogmatic rules, traditions	,670	-.059	-.127	<i>Individual freedom from religion and tradition (+) vs. awareness of a non-material or invisible world (-)</i>
(6) Awareness of a non-material, invisible world and experience of supernatural energies and beings (spirits, etc.)	-,487	.175	-.183	
(4) Holding and everyday acting upon values and morality in relation to the social	.077	-,522	.125	
(8) Attention to soul, spirit and mind	-,414	-,472	-.098	
(1) Inner search for (higher) self, meaning, peace, enlightenment and understanding of the truth	-.025	,410	.085	
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(10) Criticism of obscure, esoteric beliefs and practices	.065	-.125	,307	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations. Variance explained: 30.00%. Component scores > .3 in **bold** print. Interpretation in *italics*; keyword in **bold italics**.

Rotated Component Matrix^a and Interpretation of Secondary PCA of the Ten Components from (Primary) PCA of Categories Assigned to Free Entries on “Spirituality” in USA and Germany

	Component			<i>Component Interpretation</i>
	1	2	3	
(9) Individualistic opposition to religion and dogmatic rules, traditions	,670	-.059	-.127	<i>Individual freedom from religion and tradition (+) vs. awareness of a non-material or invisible world (-)</i>
(6) Awareness of a non-material, invisible world and experience of supernatural energies and beings (spirits, etc.)	-,487	.175	-.183	
(4) Holding and everyday acting upon values and morality in relation to the social	.077	-,522	.125	<i>Search for and experience of meaning and (all)connectedness (+) vs. holding and everyday acting upon values and morality and attention to soul, spirit, and mind (-)</i>
(8) Attention to soul, spirit and mind	-,414	-,472	-.098	
(1) Inner search for (higher) self, meaning, peace, enlightenment and understanding of the truth	-.025	,410	.085	
(2) (All-)Connectedness and harmony with the universe, nature and whole	-.082	,382	-.119	
(5) Intuition of something or some being(s) unspecified higher and beyond oneself	-.126	,302	,613	
(3) Part of religion, Christian beliefs and practices	.226	.019	,471	
(7) Belief in higher power/force and acknowledging its guiding and controlling impact, beyond understanding	.241	.222	-,460	
(10) Criticism of obscure, esoteric beliefs and practices	.065	-.125	,307	

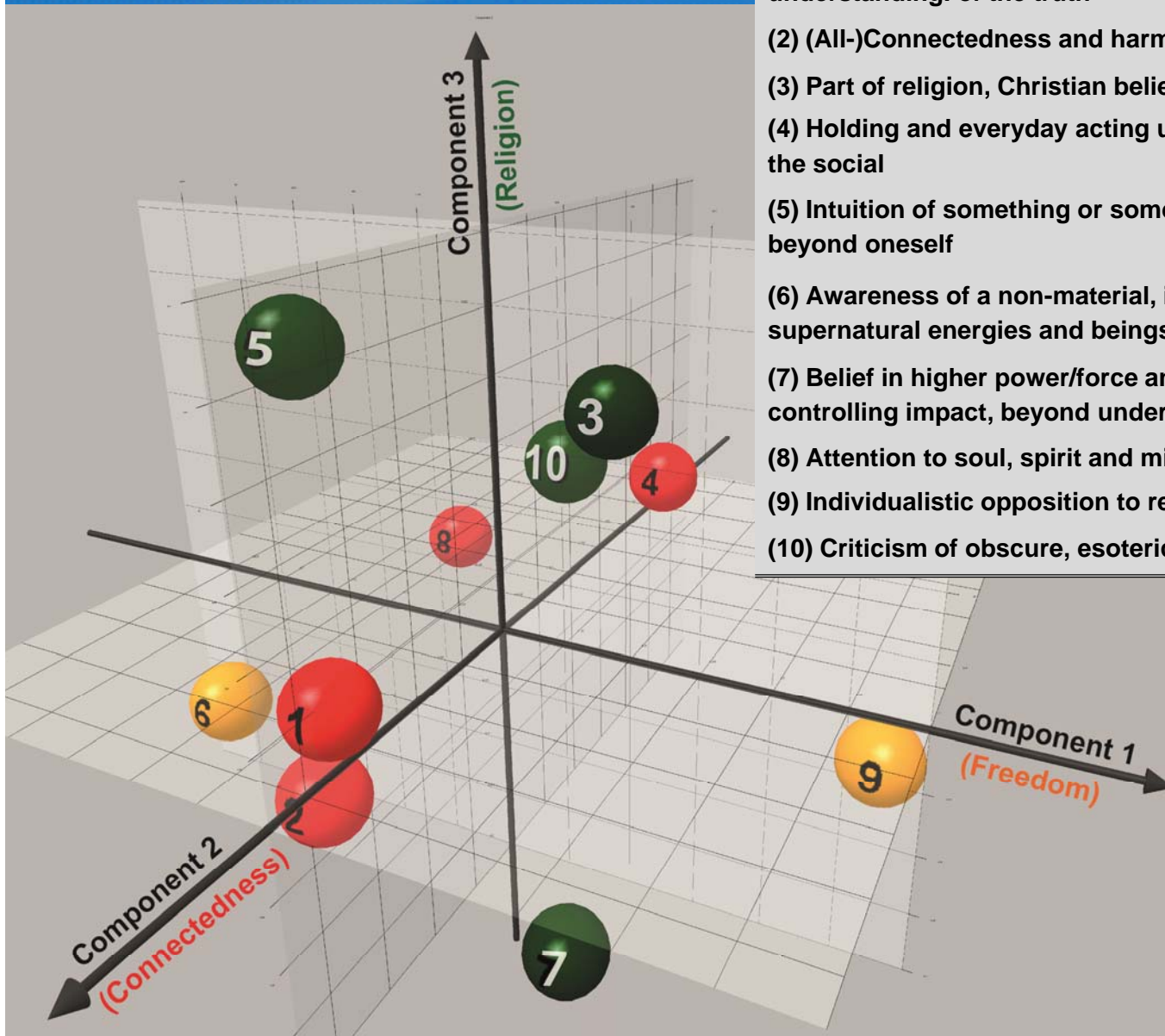
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations. Variance explained: 30.00%. Component scores > .3 in **bold** print. Interpretation in *italics*; keyword in **bold italics**.

Rotated Component Matrix^a and Interpretation of Secondary PCA of the Ten Components from (Primary) PCA of Categories Assigned to Free Entries on “Spirituality” in USA and Germany

	Component			Component Interpretation
	1	2	3	
(9) Individualistic opposition to religion and dogmatic rules, traditions	,670	-.059	-.127	<i>Individual freedom from religion and tradition (+) vs. awareness of a non-material or invisible world (-)</i>
(6) Awareness of a non-material, invisible world and experience of supernatural energies and beings (spirits, etc.)	-,487	.175	-.183	
(4) Holding and everyday acting upon values and morality in relation to the social	.077	-,522	.125	<i>Search for and experience of meaning and (all)connectedness (+) vs. holding and everyday acting upon values and morality and attention to soul, spirit, and mind (-)</i>
(8) Attention to soul, spirit and mind	-,414	-,472	-.098	
(1) Inner search for (higher) self, meaning, peace, enlightenment and understanding of the truth	-.025	,410	.085	
(2) (All-)Connectedness and harmony with the universe, nature and whole	-.082	,382	-.119	
(5) Intuition of something or some being(s) unspecified higher and beyond oneself	-.126	,302	,613	<i>Intuition of transcendence, in terms of religion (eventually Christian), criticism of obscure esoteric beliefs (+) vs. belief in a higher power and acknowledging its guiding power (-)</i>
(3) Part of religion, Christian beliefs and practices	.226	.019	,471	
(7) Belief in higher power/force and acknowledging its guiding and controlling impact, beyond understanding	.241	.222	-,460	
(10) Criticism of obscure, esoteric beliefs and practices	.065	-.125	,307	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 4 iterations. Variance explained: 30.00%. Component scores > .3 in **bold** print. Interpretation in *italics*; keyword in **bold italics**.

Interpretation and Visualization of Second-order PCA of the Ten Components from (First-order) PCA of Categories Assigned to Free Entries on “Spirituality” in USA and Germany



- (1) Inner search for (higher) self, meaning, peace, enlightenment and understanding. of the truth
- (2) (All-)Connectedness and harmony with the universe, nature and whole
- (3) Part of religion, Christian beliefs and practices
- (4) Holding and everyday acting upon values and morality in relation to the social
- (5) Intuition of something or some being(s) unspecified higher and beyond oneself
- (6) Awareness of a non-material, invisible world and experience of supernatural energies and beings (spirits, etc.)
- (7) Belief in higher power/force and acknowledging its guiding & controlling impact, beyond understanding
- (8) Attention to soul, spirit and mind
- (9) Individualistic opposition to religion and dogmatic rules, traditions
- (10) Criticism of obscure, esoteric beliefs and practices

C1 Individual **freedom** from religion and tradition (+) vs. awareness of a non-material or invisible world (-)

C2 Search for and experience of meaning and (all)**connectedness** (+) vs. holding and everyday acting upon values and morality and attention to soul, spirit, and mind (-)

C3 Intuition of transcendence, in terms of **religion** (eventually Christian), criticism of obscure esoteric beliefs (+) vs. belief in a higher power and acknowledging its guiding power (-)

10 Components of „Spirituality“ in 3-Component-Association (Columns)

Freedom

Individualistic
opposition to religion
and dogmatic
rules, traditions (9)



Awareness of a non-
material, invisible
world and experience
of supernatural
energies &
beings such as spirits,
etc. (6)

Connectedness

Inner search for (higher) self,
meaning, peace,
enlightenment &
understanding of the truth (1)

(All-)Connectedness &
harmony with the universe,
nature & whole (2)



Holding and everyday
acting upon values
and morality in relation to
the social (4)

Attention to soul, spirit
& mind (8)

Religion

Intuition of something or
some being(s)
unspecified higher and
beyond oneself (5)

Part of religion, Christian
beliefs and practices (3)

Criticism of obscure,
esoteric beliefs &
practices (10)



Belief in a higher power or
force & acknowledging its
guiding & controlling
impact, beyond
understanding (7)

Results and General Conclusion about the Semantics of „Spirituality“

1. Comparing our different evaluation paths for the semantics of “spirituality,” it appears that the coding of the free text entries for “spirituality” and principal component analyses are the most revealing evaluations.
2. In the three second-order components, freedom, connectedness and religion, we have a representation of the semantics of „spirituality“ in most condensed form – which can be visualized in the 3-dimensional space.
3. These three components not only include the ten first-order PCA components in an interpretable way, they also reflect the semantic characterization of the free text entries as it emerged from corpus analyses, where „spirituality“ is associated with nouns such as „connection,“ „feeling,“ „soul“ and „spirit,“ and also with adjectives such as „inner“ and „personal.“
4. The surplus of coding the free text entries and the subsequent PCAs over corpus analysis is the detailed attention to the semantic contents and associations in each free text entry.

Thank you for your attention!

For more information visit the website of the
Bielefeld-based Cross-cultural Study of “Spirituality” at
<http://www.uni-bielefeld.de/spirituality-research>



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AMERICAN PSYCHOLOGICAL ASSOCIATION

ANNUAL CONVENTION

HONOLULU, HAWAII • JULY 31–AUGUST 4, 2013



For more information

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