THE INTERNATIONAL JOURNAL FOR THE PSYCHOLOGY OF RELIGION
2019, VOL. 29, NO. 3, 204–221
https://doi.org/10.1080/10508619.2019.1596000

Routledge
Taylor & Francis Group

RESEARCH

The Road Not Taken: Fostering Research on the Psychology of Religiosity and Spirituality via Underused Representative, Open-Access Datasets (ROADs)

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ABSTRACT

Psychologists studying religiosity and spirituality (R/S) often face several challenges when conducting their research, such as collecting data from nationally representative samples, cross-cultural generalizability, statistical power, and integrated multilevel approaches. We examined one potential solution—the use of Representative, Open-Access Datasets (ROADs), which are currently underutilized. In this article, we define ROADs; discuss affordances, obstacles, and best practices in using them; document the R/S variables available in various waves of ongoing ROADs collection efforts; and delineate ways to increase usage of ROADs as a research tool in the future. This will enhance the capability of psychologists to address theory-driven questions and to better understand the role of R/S in everyday life, including social attitudes, health, and well-being, as well as social change, cohesion, and conflict. Looking forward, we recommend (a) adding more, and more nuanced, variables to future ROADs data collection efforts; (b) publishing more frequently using ROADs data; and (c) conducting workshops to promote the use of ROADs and to train researchers in secondary data analysis techniques.

From its humble origin as the enterprise of a few scholars, the psychology of religion and spirituality (R/S) has become a dynamic field of research that both draws upon and contributes to broad psychological theories and uses advanced quantitative methods. Researchers across disciplines understand that R/S plays an important role in personal lives as well as national, cultural, and global affairs. Yet to maximize the relevance and theoretical advancement of their work, researchers must be attentive to issues such as generalizability of their research findings; well-powered statistical tests; and the need for integrated, multilevel research (Emmons & Paloutzian, 2003; Pargament et al., 2013). We believe that publicly available data sets that provide the responses to surveys of large nationally or internationally representative samples (typically administered by sociologists) have the potential to play an important role in attaining these goals. We refer to these data sets as ROADs, an acronym for Representative, Open-Access Datasets.

The current article has three major aims: (a) to define ROADs and to discuss affordances, obstacles, and best practices in using ROADs; (b) to document the R/S variables available in various waves of ongoing ROADs collection efforts; and (c) to discuss ways to increase ROADs usage in R/S psychology research. The overarching goal is to begin to provide solutions to what we see as the underutilization of ROADs so that psychologists are able to address theory-driven questions and to better understand the role of R/S in everyday life, including social attitudes, health, and well-being, and social change, cohesion, and conflict.

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Definition of ROADs

We elaborate on the term abbreviated as ROADs by considering each component. In a *representative* sample, the distribution of characteristics among the elements of the sample is the same as the distribution of those characteristics among the target population. *Open-access* means that these data sets are available to any researcher with a university e-mail address. In most cases, anyone can register for an account and download the data sets, but a few hosts do confirm that the requester has an official (e.g., academic, governmental) email address. Many of the ROADs are also available from the Association of Religion Data Archives (theARDA.com). Most of the ROADs mentioned in this article were available as fully labeled and coded SPSS files, and most were also available in other software formats such as R, SAS, or STATA. One study, the National Survey of Family Growth, offered only a data file (.da).

The meaning of *Dataset* is obvious, but it bears mentioning that appropriate, complete codebooks for each survey are also publicly available on the host's or the ARDA website as well as quantitative weights for some samples. Although ROADs can be easily downloaded and the data analyzed using familiar statistical analysis software, it is increasingly common for the websites to include a basic crosstabs analyzer so that preliminary research questions can be addressed without downloading the entire data set. These websites are easily found by searching for any of the ROADs by name.

Each ROAD was built with a specific set of purposes in mind, so variables are diverse within and between surveys. For instance, the Health and Retirement Study and the Midlife in the United States Study are substantially focused on measurement of health among mature Americans, resulting in numerous repeated measures of medical and cognitive indicators. On the other hand, the Global Barometer studies (e.g., Latin Barometer, Eurasian Barometer) are strongly focused on sociopolitical issues, so these measurements are not only numerous but targeted to a particular political region and time (see the upcoming Cultural Specificity section). Some studies are cross-sectional, whereas others are longitudinal, meaning that the same participants are measured repeatedly over survey waves. Describing the characteristics of each ROAD in detail is beyond the scope of this article, but we encourage readers to explore the nuances of each data set to find which ones might address their research questions.

In conducting our search of variables, we found ROADs and their associated codebooks to be generally user-friendly. However, these rich resources are severely underrepresented in psychology of religion research. For example, we were able to identify only one article published in *The International Journal for the Psychology of Religion* that used data from the General Social Survey (Kim, Martin, & Nolty, 2016). This lack of utilization of ROADs may stem from unfamiliarity with the variables, difficulties locating and downloading data, or simply overlooking the availability of ROADs, all of which can be readily rectified.

Affordances and obstacles in the use of ROADs

Diverse variables

Because they are typically designed by sociologists, ROADs often provide a wealth of information regarding social attitudes, health and well-being, and variables relevant to social change, cohesion, and/or conflict. Some of the diverse variables available include attitudes toward sustainability, volunteerism, palliative care, financial and medical decision-making, social media usage, gender roles, leisure, alcohol use, health, and well-being. For example, the New Zealand Attitudes and Values Survey measures health efficacy, attitudes toward the indigenous Maori, feelings of safety, and vaccination attitudes, to name but a few (Sibley, 2014). The 2014 General Social Survey (Smith et al., 2018) contains a diverse array of items pertaining to topics as varied as police brutality, quality of sleep, actual scientific knowledge, and whether immigrants should retain their original country's culture. Potentially, ROADs could be used to link R/S with political attitudes; to understand how R/S may act as a buffer of (or contribute to)

economic stress; or to understand how R/S might buffer (or contribute to) group exclusivity, intergroup conflict, or changes in social norms and/or values. In short, ROADs are a rich, readily available data source that incurs very little cost for interested researchers.

National representation

Important to note, ROADs are nearly always built from nationally representative samples, meaning that a set of chosen demographics in the sample match those of the larger target population. Findings from studies of nationally representative samples provide strong generalizability to their target populations, and thus provide substantially more external validity than convenience samples such as college students. Codebooks for such surveys commonly include statistical weights for each demographic category thought to affect representation. Nationally representative samples enable impactful, definitive studies that can faithfully describe and compare large populations at the national level (e.g., Reimer, 1995).

Diverse cultures

The sheer inclusiveness of multinational ROADs enables broad, cross-cultural research that can accurately assess social trends (e.g., Barro, Hwang, & McCleary, 2010; Lun & Bond, 2013) and test the universality or particularity of psychological theories (e.g., Gervais & Najle, 2015) among different cultures. These have become important aims since psychologists widely acknowledged that reliance on Western, educated, industrial, rich, democratic (WEIRD) samples limits the ability to test predictions among the majority of cultures (Henrich, Heine, & Norenzayan, 2010). Notably, religion itself is an important and underexplored form of cross-cultural variance (Cohen, 2009; Tarakeshwar, Stanton, & Pargament, 2003), and there is much work to be done in the cross-cultural study of religion.

The main barriers to cross-cultural research have been logistical inasmuch as it has been difficult (and sometimes impossible) to obtain large, representative samples. Furthermore, collaborating across cultures, languages, and regions presents its own set of challenges. ROADs provide a partial solution to these problems because they offer easily accessed, large sample survey data from widespread regions and cultures with the data typically collected by locals or administrators living in that area (see individual ROAD websites). This is not to say that all ROADs address the WEIRD sample bias. Historically, most of the funding for big survey research has been focused on these populations. Furthermore, the problem of generalizability has only very recently been meaningfully addressed by psychologists. Most of the ROADs in existence have therefore focused on WEIRD populations, but several multinational, non-WEIRD ROADs do exist. The countries sampled in each of our analyzed ROADs are specified in Table 1.

We acknowledge that ROADs are only a partial solution, because even carefully constructed measurements might not be invariant between cultures; therefore, international data might include less than ideal measurement properties. For example, Cohen et al. (2017) examined the structure and measurement invariance of a commonly used intrinsic–extrinsic religiosity measure (Gorsuch & McPherson, 1989) and concluded that some items should be dropped because of their uncertain interpretability outside of the United States. Moreover, the factor structure varied between U.S. Protestants, Turkish Muslims, and Irish Catholics. This finding supported previous arguments that measurements may contain cultural, linguistic, and religious bias (Hill & Pargament, 2003). Researchers should therefore proceed with caution when interpreting cross-cultural findings. Ideally researchers might test for measurement invariance when using measures across cultural groups.

Cultural specificity

Some ROADs hone in on specific—sometimes non-Western—geographical areas with impressively fine-grained questions that provide nuanced measures germane to the area. For instance, the Arab Barometer

Table 1. Descriptions of current Representative, Open-Access Datasets.

Americans' Changing Lives (2011–2012)	
N (latest wave)	1,427
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal
Baylor Values and Beliefs of the American Public (2017)	
N (2010 wave)	1,714
Country of origin	USA
Countries surveyed	USA
Type	Cross-sectional
Cross-Cultural Databases	
N	NA
Country of origin	NA
Countries surveyed	NA
Type	Cross-Sectional Culture-Level Data
European Values Study (2008)	
N	66,281
Country of origin	Various
Countries surveyed	Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Northern Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Republic of Macedonia, Malta, Republic of Moldova, Republic of Montenegro, Netherlands, Northern Ireland, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine
Type	Cross-Sectional
Gallup World Poll (2016)	
N (2010 wave)	Dataset not freely available
Country of origin	USA
Countries surveyed	Over 150 countries
Type	Cross-sectional
General Social Survey (2014)	
N (2014 wave)	2538
Country of origin	USA
Countries surveyed	USA
Type	Cross-sectional
Global Barometers Research Surveys (2008–2016)	
N	Arab Barometer 4 (2016–2017): 9,000; Afro Barometer 6 (2016): 53,935 Asia Barometer: Unavailable at time of writing; Eurasia Barometer 2 (2014): 18,000; Latin Barometer 2016: 20,201
Country of origin	Arab Barometer: USA; Afro Barometer: South Africa, Ghana, USA; Asia Barometer: Taiwan; Eurasia Barometer: Austria, UK; Latin Barometer: Chile
Countries surveyed	Afro Barometer 3: Algeria, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Cote d'Ivoire, Egypt, Gabon, Ghana, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe; Arab Barometer 4: Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine, Tunisia; Asian Barometer 3: Japan, Hong Kong, Taiwan, Korea, Thailand, Philippines, Mainland China, Mongolia, Indonesia, Singapore, Vietnam, Cambodia, Malaysia; Eurasia Barometer 2: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Ukraine, Uzbekistan; Latin Barometer 2016: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Rep., Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela
Type	Cross-sectional
Health and Retirement Study (2016)	
N (2014 wave)	18,747
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal
International Social Survey Program (2008)	
N (Religion III)	59,986
Country of origin	Australia, Germany, Great Britain, USA

(*Continued*)

Table 1. (Continued).

Countries surveyed	Australia, Germany, Great Britain, USA, Austria, Hungary, Italy, Ireland, Netherlands, Norway, Sweden, Czech Republic, Slovenia, Poland, Russia, New Zealand, Philippines, Israel, Japan, Spain, Latvia, Slovak Republic, France, Cyprus, Portugal, Chile, Denmark, Switzerland, Belgium, Taiwan, Croatia, Dominican Republic, Finland, South Korea, Mexico, South Africa, Turkey, Ukraine, Uruguay, Venezuela
Type	Cross-Sectional
Midlife in the United States (2013–2014)	
N (2014 wave)	3,294
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal
National Longitudinal Survey of Youth[a]	
N (initial wave)	8,984
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal
National Survey of Family Growth (2013–2015)	
N	10,205
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal
New Zealand Attitudes and Values Study (2016–2017)	
N (2015)	13,945 (3,344 retained from Wave I)
Country of origin	New Zealand
Countries surveyed	New Zealand
Type	Longitudinal with refreshment
Panel Study of Income Dynamics (2013–2017)	
N (2015 Family)	9,048 families
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal
Wisconsin Longitudinal Study (2010)	
N	6,152 of the original 10,317
Country of origin	USA
Countries surveyed	USA
Type	Longitudinal with sibling refreshment
World Values Survey (2013–2014)	
N	86,274
Country of origin	Austria
Countries surveyed	Algeria, Azerbaijan, Argentina, Australia, Bahrain, Armenia, Brazil, Belarus, Chile, China, Taiwan, Colombia, Cyprus, Ecuador, Estonia, Georgia, Palestine, Germany, Ghana, Hong Kong, India, Iraq, Japan, Kazakhstan, Jordan, South Korea, Kuwait, Kyrgyzstan, Lebanon, Libya, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Nigeria, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, Rwanda, Singapore, Slovenia, South Africa, Zimbabwe, Spain, Sweden, Thailand, Trinidad and Tobago, Tunisia, Turkey, Ukraine, Egypt, USA, Uruguay, Uzbekistan, Yemen
Type	Cross-sectional

Note. USA = United States of America; NA = not applicable.
[a]Initial wave used because sample varies according to modules.

(Jamal et al., 2014) assesses nuanced sociopolitical variables as well as Muslim-specific beliefs and practices. As one example of cultural specificity, Wave 2 measured reasons for the recent revolutions (i.e., the Arab Spring) differently for each affected country. Tunisians were asked whether the most important reason for the protests between December 17, 2010, and January 14, 2011, was "demands for improving the economic situation," "demands for civil and political freedoms and liberation from oppression," "combating corruption," "replacing the Ben Ali's regime with an Islamic regime," or "objecting to pro-Western Tunisian policy" (T909). In the same survey, Egyptians were asked whether the most important reason for the protests between January 25 and February 11, 2011, was "demands for

improving the economic situation," demands for civil and political freedoms and liberation from repression," "demands for authority not to be passed down to Gamal Mubarak," "combating corruption," "replacing the Mubarek regime with an Islamic regime," "objecting to pro-Western Egyptian policy," or "objecting to pro-Israel Egyptian policy" (EG8091, EG8092).

Furthermore, ROADS participants are nested within several layers of variables such as country, region, language, and political system, enabling researchers to examine relationships at multiple levels. For example, the World Values Survey Wave 6 data contains country (V2) as well as region of country (V256), ethnic group (V254), and religious conflict (V106). Thus researchers could examine whether the relation between ethnic group and religious conflict varies across both regions and countries.

Statistical advantages

The large sample sizes common to ROADs—with thousands of participants in each wave of some surveys—provide sufficient statistical power to find associations between variables even when the effect sizes are small and one is looking for interactions or mediation effects (e.g., Diener, Tay, & Myers, 2011). With such power comes some responsibility in interpreting effects. On one hand, researchers should be cautious not to overinfer the importance of a small effect because it has reached the statistical significance threshold with a large sample. On the other hand, even small effects can be practically important. Rosenthal and Rubin (1982) demonstrated that relatively small correlations can have nontrivial policy implications. For example, in a meta-analysis of the relation between religiosity and subjective well-being, Witter, Stock, Okun, and Haring (1985) found that the mean r (i.e., effect size) was .16. Thus, in a 2×2 display of religiousness (yes vs. no) and happiness (happy vs. not happy), the percentage of happy among religious people equals 100 $(.50 + r/2)$, or 58%, and the percentage of happy among nonreligious people equals 100 $(.50 - r/2)$, or 42%. Thus the difference in the happiness rate between religious and nonreligious people equals +16%, which has considerable practical importance for public mental health. To assess the impact of being religious on mortality risk, McCullough, Hoyt, and Larson (2001) also used the binomial effect size display. Given that mortality risk is the penultimate health outcome variable, they concluded that the 5.2% advantage in survival rate for religious people in comparison to nonreligious people was meaningful and important.

Several researchers in R/S psychology have recommended moving toward interdisciplinary, multilevel analyses (Emmons & Paloutzian, 2003; Pargament et al., 2013), and ROADs can support that goal through interdisciplinary inclusion (e.g., Bloom & Arikan, 2013) and multiple levels of nesting (e.g., Bloom & Arikan, 2013; Diener et al., 2011; Ruiter & De Graaf, 2006). Indeed, most of the ROADs mentioned in this article include items pertaining to sociological and political interests and theories in addition to psychological phenomena.

Longitudinal designs

Some ROADs have the same participants complete multiple waves with certain variables measured repeatedly, allowing researchers to study intraindividual change (e.g., Gunnoe & Moore, 2002). The typically large and diverse samples associated with longitudinal ROADs support population inferences that smaller longitudinal samples cannot. Important to note, some of the general benefits of ROADs just listed also apply to longitudinal studies so that researchers can examine interdisciplinary, multilevel relationships in terms of intraindividual change. These studies often use nationally representative samples (e.g., the National Longitudinal Survey of Youth; Bureau of Labor Statistics, 2015) that maximize generalization to a population.

Epidemiologists studying the causal links between religion and mental health have argued that social scientists should move toward using longitudinal designs because cross-sectional observational data cannot support rigorous causal modeling and inference (e.g., VanderWeele, Jackson, & Li, 2016). Some of the ROADs cited in this article do employ longitudinal designs (see Table 2) with measurement beginning at various time points such as high school (e.g., Wisconsin Longitudinal Study) and

Table 2. Availability of Representative, Open-Access Datasets variables related to religion and spirituality topics.

Category	Item Description	Variable ID
Americans' Changing Lives (2011–2012)		
Practices[a]	Attend Services	V16401
	Attend Other Church Activities	V16402
	Religion Important to R	V16403
Baylor Values and Beliefs of the American Public (2017)		
Afterlife	Certainty of R Reaching Heaven	21
	Fear of Hell Quantitative	22
Coping	Frequency That R/S Beliefs Help R	24
	R Consults Religion for Decisions	25
Development	R's Childhood Service Attendance	23
Fundamentalism	View of Biblical Literalism	16
God Concepts[a]	God Exists	17
	Specific Qualities of God	19a…f
God Relationship	Personal Involvement with R	20a…h
	R's Mechanism for Sensing God's Wishes	26
Practices[a]	How Religious Is R	3
	Service Attendance	5
	Pray Outside of Services	12
	Read Holy Books Outside of Services	13
	Meditation/Quiet/Chanting	14
Prosociality	Amount of Church Donations	11
Religious Conflict[a]	Opinions on Hot Social Topics/Groups	27a…k, 34a…f, 35
	R's Prejudice Against Specific Religious Groups	36a…i
	R's Anti-Atheist Prejudice	36j…l
R/S Identity[a]	Name of Church	6
	How Long R Has Attended Current Church	8
	Size of Church	10
Social Support	Proportion of Friends in Same/Diff./No Church	15
Spirituality	How Spiritual Is R	4
	Belief in Fate	20g
	Effect of Technology on R's	76b
Cross-cultural Databases[1]		
God Concepts[a]	Presence of Personally Involved High Gods	238
	Sex of Gods	576
Practices[a]	Sex of Shamans	578
	Ritual Participation	580
	Funeral Practices	581
	Religion Is Classical vs. Preclassical	713
	Shamans, Mediums, Healers, Sorcerers, Witches	879–884
	Changes in Native Religion	1836–1837
	Evolutionary Stage of Religion	2013
Prosociality	Prosociality Encouraged in Children	1762
Religious Conflict[a]	Interethnic Violence	1778
Spirituality[a]	Spiritual Causes of Illness	645–656
	Illness Caused by Loss of Soul	653
	Karmic Beliefs	2180
	Reincarnation Beliefs	2181
Supernat. Beliefs	Presence of Specific Supernatural Theories	649–656
	Evil Eye Beliefs	1188–89
Witchcraft	Sex of Witches	579
	Witchcraft Causes Illness	656
European Values Study (2008)		
Conflict[a]	Atheists Unfit for Public Office	v134
	Religion Should Not Influence Government	v135
Conversion	Former Religion	v107, v108
Coping	Seek Comfort Through Religion	v130
Developmental	Childhood Service Attendance	v110
	Qualities Important in Children (including Religion)	v170-181
Emotions	Concern for Others	v284-294
God Concepts[a]	God Exists	v119
	God Is Personally Involved	v125

(*Continued*)

Table 2. (Continued).

Category	Item Description	Variable ID
God Relationship	Importance to R	v129
Morality	Clear Guidelines Exist for Good and Evil	v104
	Justifiableness of Specific Immoral Acts	v233-252
Practices [a]	Religion Important to R	v6
	Important: Religious Service at Birth	v111
	Important: Religious Service at Marriage	v112
	Important: Religious Service at Death	v113
	How Religious Is R	v114
	Meditate/Quiet/Chant	v131
	Pray Outside of Just Services	v132
Prosociality	Organized Volunteering	v28-43
Religious Conflict[a]	Attitude Toward Neighbors of Different Race	v47
	Attitude Toward Neighbors of Different Religion	v53, v58, v60
	Truth in All vs. None vs. One Religion	v128
	Believes There Are Too Many Immigrants	v275
Religious Doubt	Churches Have Answers (Specific Categories)	v115-118
Social Support	Member of Religious Organization	v11
Spirituality[a]	Belief in Afterlife	v120
	Belief in Hell	v121
	Belief in Heaven	v122
	Believe in Sin	v123
	Belief in Reincarnation	v124
	Respondent Connects w/God Without Churches	v126
	Respondent Spirituality Level	v127
Supernat. Beliefs	Lucky Charms Protect	v133
Gallup World Poll (2016)		
Emotion	Social Wellbeing Index	INDEX_GWSOC
	Positive Daily Experience Index	INDEX_PX
Prosociality	Organization Donation	WP108
	Organization Volunteering	WP109
	Engaged in Altruistic Behaviors	WP110
	Non-Organization Donation	WP12316
Religious Conflict[a]	Sharia Should Be the Only Law	WP645
	Respondent Respects All Religions	WP7462
	Attitude Toward Neighbors of Different Religion	WP7464
	R Receives Religious Discrimination	WP7465
	R Has Learned From Other Religion	WP7466
R/S Identity[a]	How Closely Identified w/Religion	WP7838, 14598
	Religion Important to R	WP119
Social Support	Has Dependable People in Life	WP127
	Received Money or Goods	WP9086
	Religion Is a Force for Good	WP7463
General Social Survey (2014)		
Conversion	Born Again	REBORN
God Concepts[a]	God Exists	GOD
Practices[a]	Attempts to Save Other Souls	SAVESOUL
	Grace at Meals	SAYGRACE
Prosociality	Specific Altruistic Behaviors Performed	GIVBLOOD[2]
	Specific Prosociality Attitudes	SELFLESS[3]
	Organization Donation	VALGIVEN
	Organization Volunteering	VOLMONTH
Supernat. Beliefs	Read Horoscope	ASTROLGY
	Astrology is Scientific	ASTROSCI
Global Barometers Research Surveys (2008–2013)		
Development	Service Attendance of R's Parents	Q611.3[4]
Practices[a]	Read Religious Literature	52[5]
	Follow Religion's Requirements	Q604[4]
	Frequency of Practices (Including Prayer)	Q610.1[4]
	Ramadan Fast Important for Piety	Q610.2[4]
	Attends Church/Temple Activities	Q610.3[4]
	Consume Religious Programming	Q610.6–7[4]

(*Continued*)

Table 2. (Continued).

Category	Item Description	Variable ID
	Attends Services	SE7[6]
	How Religious Is R	SE7a[6], Q92[7], Q609, S14.A[8]
Prosociality	Helping Is Important for Piety	Q611.4[4]
Religious Conflict[a]	Believes Politicians Qualified by Their Religion	Q34[4]
	Attitude re: Neighbors of a Different Religion	Q602.1[4]
	Attitude Toward Interfaith Marriage	Q604.9[4]
	Should Base Law on Religion	Q605[4]
	Religion Should Influence Politics	Q606[4]
	All Religions Deserve Equal Rights	Q608.7[4]
Social Support	Received Emotional Support	41[5]
	Received Money or Goods	48[5]
Health and Retirement Study (2016)		
Coping	R Finds Strength and Comfort in Religion	Q27[9]
Development	R's Childhood Religion	V351-354[11]
	R's Childhood Attendance Frequency	V355[11]
	R Considers Child Self as Religious	V356[11]
	R Considers Child Self as Spiritual	V357[11]
	Service Attendance Ages 16–29	V358[11]
	Service Attendance Ages 30–49	V359[11]
God Concepts[a]	God Is Watchful	Q27[9]
Meaning in Life	Life Goes According to Divine Plan	Q27[9]
	Purpose and Direction in Life	Q33[9]
	Optimism/Futility	Q18[9]
	Control Over Future	Q21,22[9]
Mentalizing	R Enjoys Analytical/Abstract Thought	Q32a[9]
Practices[a]	Service Attendance	B082_O[10]
	Carry Beliefs into Daily Life	Q27[9]
	Pray Outside of Services	Q1[9], V366[11]
	How Religious is R	V364[11]
Religious Conflict[a]	R Received Religious Discrimination	Q30[9]
Religious Doubts	Ever Had Significant Gain, Loss in Faith	V362, 363[11]
R/S Identity[a]	Denomination	B050-052[10]
Spirituality	Major Spiritual Experience, Age of Occurrence	V360,361[11]
	How Spiritual Is R	V365[11]
	Meditate/Contemplate Frequency	V367[11]
Social Support	Specific Types of Support From Spouse	Q4, 5a, 5b[9]
	Support From Children	Q7[9]
	Support From Other Family	Q11[9]
	Support From Friends	Q15[9]
	General Feeling of Social Support	Q19[9]
International Social Survey Program (2008)		
Afterlife	Afterlife Exists	18a
	Heaven	18b
	Belief in Hell	18c
	R Reincarnated	18e
	Nirvana	18f
	Deceased Ancestors Are Powerful	18g
Atheism/Unbelief	Attitude Toward Unbelievers	O-18 (8f)
Conversion	Born Again	O-18 (1)
Development	Mother's and Father's Religion	20,21
	Religion Raised in	22
	Mother's and Father's Service Attendance Quant.	24,25
	Child's Religious Participation	26
God Concepts[a]	God Exists	16–17
	God Is Personally Involved	16, 19a
	God as Mother, as Judge, etc.	O-18 (5a-5d)
Meaning in Life	Life Course Predetermined	19b
	Life Meaningful Because of God	19c
	Life Serves No Purpose	19d
	Life Meaningful Because We Give It Meaning	19e
Practices[a]	Grace at Meals	27
	Attends Church/Temple Activities	28, 30

(*Continued*)

Table 2. (Continued).

Category	Item Description	Variable ID
	Private Holy Place (e.g., home shrine)	29
	How Religious is R	31
	Believes Important to Celebrate with Ingroup	34
	Engage in Sacrifice (e.g., fasting)	O-18 (4)
Religious Conflict[a]	Religion Causes More Conflict Than Good	11c
	Strong Believers are Intolerant	11d
	All Religions Deserve Equal Rights	13a
	We Must Respect All Religions	13b
	Attitude Toward Interfaith Marriage	14a
	Attitude Toward Interfaith Political Candidates	14b
	Extremists Can Hold Public Meetings	15a
	Extremists Can Publish Books	15b
	Truth in All vs. None vs. One Religion	33
	Attitudes Toward Specific Groups	O-18 (8a-8f)
Spirituality[a]	Respondent Connects w/God without Churches	19f
	Respondent is Spiritual or Religious	32
Supernat. Beliefs	Believes in Miracles	18d
	Specific Superstitions	O-18 (6a-6d)
Midlife in the United States (2013–2014)		
Conversion	R Born Again	C1SN6
Coping	Seek Comfort Through Religion	C1SN10A
	Consult Religion for Help	C1SN10B
	Assess Situations WITHOUT God	C1SN10C
	Sought Religious Mental Health Care	C1SA50D
	Look to God for Support	C1SN10F
	Work w/God as Partner	C1SN10G
	Life Part of Larger Spiritual Force	C1SN10H
	Specific Mindful Qualities From Religion	C1SN12A…I
Fundamentalism	Against Overturning Religious Authority	C1SE7Z
	Good to Explore Other Teachings	C1SN4
	Bible is God's Word	C1SN7
Meaning in Life	R's Life has Purpose	C1SE1K
	Sense of Purpose Important to Have Good Life	C1SE2
Practices[a]	Meditate/Quiet/Chant	C1SN3B
	Reads Religious Literature	C1SN3C
	Attends Services	C1SN3D
	Attends Church/Temple Activities	C1SN3E
	Important to Celebrate with Ingroup	C1SN2I
Prosociality	Current Contribution to Others' Welfare	C1SH1
	Past Contribution to Others' Welfare	C1SH2
	Future Contribution to Others' Welfare	C1SH3
	Feel Needed by Others	C1SH6D
	Like Teaching Others	C1SH6F
	Organized Volunteering	C1SH7A…D
	Give Emotional Support	C1SH9A…F
	Specific Altruistic Behaviors	C1SH11A…E
	Unorganized Donation	C1SH13A…E
	Organized Donation	C1SH13F…G
Religious Conflict[a]	Attitude Toward Religious Authority	C1SE7Z
	Prefers People of Own Religion	C1SN2G
	Attitude Toward Interfaith Marriage	C1SN2H
	Prejudice Frequency in Private	C1SN3A
	Attitude Toward Exploring Other Teachings	C1SN4
R/S Identity[a]	How Closely Identified w/Religion	C1SN2F
	Consider Self a Christian	C1SN5
Social Support	Warm-Trusting Relationships	C1SE1HH
	Confidants/Close Friends_Quant	C1SE1P
	Receive Emotional Support	C1SH10A…F
	Receive Unpaid Help	C1SH12A…H
	Have Religious Community	C1SN8
	Cong Help if R Was Ill	C1SN9A
	Cong Comfort if Problem	C1SN9B

(*Continued*)

Table 2. (Continued).

Category	Item Description	Variable ID
	Cong Makes Too Many Demands	C1SN9C
	Cong Criticizes R	C1SN9D
Spirituality[a]	Faith Important for a Good Life	C1SE2G
	Respondent's Level of Spirituality	C1SN2B
	Spirituality Important	C1SN2C
	Daily Spiritual Experiences	C1SN11A…E
Struggles	Wonder if God Abandoned R	C1SN10D
	Feel God Is Punishing for Sins	C1SN10E
National Longitudinal Survey of Youth (2017)[12]		
Development	Parent: Service Attendance	P2-015[14]
	Parent: Partner Service Attendance	P2-051[14]
	Parent: "Don't Need Religion to Have Values"	P6-011[14]
	Parent: Literalist Obedience	P6-015 thru P6-018[14]
	Parent: "I Often Ask God to Help Me Decide"	P6-019[14]
	Parent: God Personally Involved	P6-020[14]
	Parent: Prayer Frequency	P6-021A[14]
	Peers: Service Attendance	YPRS-600[15]
	Family: Religious Practice_Quantitative	YSAQ-010[16]
Fundamentalism	Literalist Obedience to Religion	YSAQ-282A3[17]
God Concepts[a]	God Is Personally Involved	YSAQ-282A5[17]
Morality	Religion Not Necessary to Have Values	P6-011[14]; YSAQ-282A2[17]
Practices[a]	Asks God to Help Make Decisions Often	YSAQ-282A4[17]
	Frequency of Practices	YSAQ-282A6[17]
	How Religious Is R	YSAQ-282A7[13]
Prosociality	Organized Donation	YSAQ-300V1[18]
	Attitudes	YSAQ-300V2[18]
	Specific Altruistic Behaviors	YSAQ-300V4-V5[18]
National Survey of Family Growth (2013–2015)		
Development	Childhood Attendance	ATTND14
	Childhood Religion	RELRSD
Fundamentalism	R Is Fundamentalist Y/N	FUNDAM
Practices[a]	Service Attendance	ATTNDNOW
	Religion Important to R	RELDLIFE
New Zealand Attitudes and Values Study (2016–2017)[19]		
Atheism/Unbelief	Attitude Toward Unbelievers	2:12
	R Opposes All Religion	6:22
Fundamentalism	Personal Standards vs. Religious Standards	2:17
	Traditional Religion Still Helpful	3:24
	Christianity Should Be Taught in School	5:17
God Concepts[a]	God Exists	7:22,23
Morality	Censorship Is Good	2:5
	Wish for More Self-Discipline	2:8
	OK to Step on Other Groups	2:13
	Country Weakened by Moral Perversions	2:20
	Trust Religious Authorities Not Rabble-rousers	2:23
	Women More Moral Than Men	3:10
	Have High Self-Control	3:12
	Homosexuality Acceptable	3:28
	Importance of Authority	4:4
	Importance of Equality	4:5
	Importance of Family Safety	4:8
	Value of Social Justice	4:10
	Value of Self-Discipline	4:12
Practices[a]	Attends Services	7:18b
	Frequency of Practice	7:18c
	Reads Religious Literature	7:18d
	Religion Important to R	7:18f
Prosociality	Organized Donation	7:09
Religious Conflict[a]	Attitude Toward Equal Conditions For Everyone	2:9
	Attitude Toward Number of Immigrants	2:14, 3:16
	Votes for Own Ethnic Group's Benefit	2:18

(*Continued*)

Table 2. (Continued).

Category	Item Description	Variable ID
	At Ease Around Immigrants	2:19
	Believes Inferior Groups Should Stay in Place	3:20
	Warmth Toward Specific Groups	4:unnumbered box at top
	Respondent Receives Religious Discrimination	6:33
R/S Identity	Identifies as Spiritual	6:37
Social Support	R Has Dependable People in Life	3:4
	R Has No One	3:31
Spirituality[a]	Believes Religion Is a Force For Good	6:42
Panel Study of Income Dynamics (2013–2017)[20]		
Coping	Strength from Beliefs	SES9[21]
Developmental	Child's Religious Participation	E32-E34[17–22]
	Retro Childhood Social Support	E Section[21]
God Concepts[a]	God Is Watchful	SES6[21]
Meaning in Life	R's Life Has Purpose	A6A[23], M14[24]
Mentalizing	Understand Others	C1J, C1K[24]
	Self-Awareness	C2C[24], C2G[24], F1[23]
	Basic Math Problems	Section K[23]
Practices[a]	Religion Important to R	L2[24], S41[22], SES8[21], A4J[23]
	Attends Services	M56[20], L3[24]
Prosociality	Organization Donation	A13-A14[24]
	Specific Prosocial Behaviors Performed	M1-M12[20]
Social Support	Confidants/Close Friends_Quant	N10-N15[22], A6B[23]
Spirituality[a]	Spiritually Satisfied	A5J[23]
	Respondent Is Spiritual (Y/N)	L4[24]
	Believes Spirituality Is Important	L5[24], S39[22], S42[22]
	Believes in a Divine Plan	SES7[21]
Wisconsin Longitudinal Study (2010)		
Coping	Consult Religion for Decision Help	IX.3h
	Will Consult Religion for Medical in Future	IX.3i
	Seek Comfort Through Prayer	IX.5a
	Seek Comfort Through Meditation	IX.5b
	Seek Comfort Through Religion	IX.5c
	Sought Religious Mental Health Care	IX.5d
Developmental	Religion Was Important in R's Childhood Home	IX.3g
Fundamentalism	Important to Keep One Faith	IX.3f
	Bible is God's Word	IX.6a
	Bible Answer to All Problems	IX.6b
Practices[a]	Attends Services	IX.2
	Religion Important to R	IX.3a
Religious Conflict[a]	Attitude Toward Interfaith Marriage	IX.3d
	Prefers People of Own Religion	IX.3e
R/S Identity[a]	Closeness of Identification w/Religion	IX.3c
Spirituality[a]	Believes Spirituality Is Important	IX.3b
World Values Survey (2013–2014)		
Afterlife	Belief in Hell	V149
	Religion Exists to Explain Afterlife vs. Now	V151
Developmental	Religion an Important Child Quality	V19
Fundamentalism	Religion Always Trumps Science	V153
	Only My Religion Acceptable	V154
	Religions Should Be Taught in Public Schools	V155
	Believes People of Other Religions Just as Moral	V156
God Concepts[a]	God Exists	V148
God Relationship	Importance in R's Life	V152
Meaning in Life	Think About Purpose	V143
Morality	More Respect for Authority Needed in Society	V69
	Schwartz: Behave Properly	V77
	Schwartz: Tradition	V79
Practices[a]	Religion Important to R	V9
	Attends Services	V145
	Frequency of Prayer	V146
	How Religious Is R	V147

(*Continued*)

Table 2. (Continued).

Category	Item Description	Variable ID
Prosociality	Schwartz: Important to Do Good for Society	V74
	Schwartz: Important to Help Others	V74B
	Religion Exists to Do Good vs. Follow Norms	V150
Religious Conflict[a]	Attitude re: Neighbors of a Different Religion	V41
	Trusts People of Other Religions	V106
Social Support	Member of Religious Organization	V25

Note. Ellipses indicate a series of related items. Superscript numbers indicate the following: [1]All variables measured at the cultural level; [2]Items GIVBLOOD…LOANITEM; [3]Items SELFLESS…SELFFRST; [4]Arab Version; [5]Eurasian Version; [6]Asian Version; [7]African Version Wave 3; [8]Latin Version; [9]Psycho-Social Questionnaire; [10]Demographics Questionnaire; [11]Religious Life Histories Module–Experimental; [12]Survey is divided into subsections and waves; [13]Rounds 12 and 15; [14]Parent Questionnaire; [15]Round 1; [16]Rounds 1–4; [17]Rounds 6, 9, 12, 15; [18]Round 15; [19]Item locations are page:item number. Pagination begins with the first survey items in the 2016/2017 Follow-Up Questionnaire; [20]Panel Study of Income Dynamics contains multiple staggered-administration questionnaires. List reports upon latest wave of each questionnaire; [21]2013 Disability and Use of Time; [22]2014 Primary Caregiver Household; [23]2014 Wellbeing and Daily Life; [24]2015 Transition to Adulthood. R = respondent; R/S = religiosity and spirituality.
[a]Variables related to the five topics deemed most important to R/S psychologists.

retirement (e.g., Health and Retirement Study). As evidenced by Table 1, these longitudinal data sets can contain a useful (though not yet rich; see next section) collection of R/S variables to investigate within the context of the other multidisciplinary survey items. Because longitudinal data are expensive and time-consuming to collect, R/S psychologists might do well leveraging these existing multidisciplinary resources to investigate the trajectories of religious variables and their antecedents and consequences.

Obstacles (and one remedy)

The great potential of ROADs for R/S psychologists hinges on the quantity, quality, and relevance of the religion and spirituality variables that have been assessed. However, as we demonstrate later, R/S variables are not a major focus of current ROADs (with the exception of the Baylor Religion Survey; Baylor University, 2010). We suspect that researchers familiar with these data sets will have also discovered a paucity of theoretically relevant or appropriately nuanced R/S variables. Furthermore, R/S variables have often been administered inconsistently across waves. For example, the World Values Survey has included items assessing God representations and spirituality in various waves and countries; however, sporadic administration of these items constrains focusing on cross-cultural differences or changes over time.

Online data clearinghouses such as the ARDA (TheARDA.com) are powerful tools that undoubtedly are greatly appreciated by their users, but the search features are limited to the keywords one can summon. Consequently, direct searches of the survey codebooks may reveal a more complete list of desired variables. However, searching the gamut of current ROADs for religious variables that may have been inconsistently administered is a time-consuming task that most researchers simply cannot justify, and understandably so. Conveniently, the authors had received support from the John Templeton Foundation to systematically investigate the availability of R/S variables in current waves of ongoing ROADs with an eye toward improving the functionality of future waves for R/S psychology researchers. Our hope is that other researchers (psychologists and sociologists alike) will refer to the Table 2 presented ahead when designing future waves and be motivated to include additional and more nuanced variables in future data collection efforts. Our ultimate goal is to increase the visibility, usability, and publication in R/S psychology using ROADs data sets.

Best practices for working with ROADs

ROADs can be powerful tools for testing psychological hypotheses among large and diverse samples of carefully recruited participants. However, data from ROADs can be misused, such as when researchers engage in atheoretical data exploration by examining correlations among a wide array of variables and then, perhaps, writing an article based on a few relationships between variables that were statistically significant. In an effort to curtail such inimical practices, the next section briefly addresses what we consider to be the current best practices when working with ROADs.

A priori hypotheses

Given the extremely strong pressure on scientists to publish statistically significant effects, some may be tempted to engage in fishing expeditions with ROADs inasmuch as they do offer high statistical power and numerous diverse variables. Fishing expeditions are associated with lack of replicable findings because the findings are more likely to represent Type I errors or spurious correlations and be based on improper motivated reasoning rather than sound theory. To counteract this practice, researchers should specify a priori hypotheses (including moderators and mediators of the effect) that are based on a theoretical rationale.

Planned analyses and cutoffs

Even when hypotheses and variables are preselected, data-driven analyses can lead to findings that capitalize on chance (Gelman & Loken, 2013). Therefore, it is best, before analyzing the data, to specify which statistical tests will be used, how the data will be categorized and coded, and which participants will be included.

Researchers might also prespecify the minimum effect size or, less ideally, the *p* value that they would consider to be a significant finding because vanishingly small effects can reach the 95% confidence threshold with large samples. The threshold for a given effect should depend on careful reasoning, but we expect that researchers will want to ensure that their effect size has meaningful consequences. A simple declaration that "$\alpha = .05$" will often allow trivial effects to pass the threshold of significance when carrying out multiple significance tests using ROADs, so caution is advised.

Open data and materials

Recommendation to openly share data and materials may seem odd given that the data and codebooks for ROADs are effectively public resources. However, scientists commonly recode items to construct scales for their own research interests, leading to results that can be verified only by others with access to the researchers' recoding syntax. In addition, of course, researchers should specify their statistical model and assumptions with sufficient clarity that other researchers can verify their findings. Therefore, we recommend open sharing of all syntax and other materials that would enable full verification of any reported ROAD-related findings. Psychological science is undoubtedly moving toward greater transparency (Munafò et al., 2017; Nosek et al., 2015), so we recommend that researchers apply open science principles to their findings from ROADs.

Preregistration

The preceding recommendations can all be enacted privately, but preregistration adds considerable researcher accountability and therefore veracity to a given finding, because faithful completion of a preregistered study means that it was immune to post hoc reasoning. Preregistration may seem to be at odds with serendipity and exploration, but its main proponents report that it is merely a way to prevent packaging hypothesis generation as hypothesis testing (Miguel et al., 2014). In other words,

exploration and creativity are still valuable ways of generating knowledge, but they come with unlimited researcher degrees of freedom and therefore should not be presented as true hypothesis tests, although the latter has traditionally been more publishable. These exploratory findings are more accurately described as hypothesis generation, in that these tentative findings need to be rigorously tested on a new sample without researcher degrees of freedom in order to qualify as a test. The best way to remove researcher degrees of freedom is preregistration of hypotheses and analytical plans.

Religion and spirituality variables in representative Open-Access datasets

Guided by informal suggestions from the John Templeton Foundation staff, TheARDA.com, and our own research, we identified 16 ROADs that were well known, were accessible, contained at least some R/S variables, and were planning future waves of data collection. Our list is by no means exhaustive, and we encourage researchers to look for other potential ROADs if so inclined. For each ROAD of interest, we first searched the codebook electronically for the keywords *God, relig**, and *spirit** in order to locate variables and adjacent clusters of related items, which we then recorded. Next, we scanned each ROAD's codebook for any variables related to religion and spirituality. We wish to stress that our list of variables is also not exhaustive because researchers are bound to vary in their definitions of religious topics. We included any variables that explicitly related to religion or spirituality, as well as those that were of significant, historical importance to the R/S psychology field, such as social support and meaning in life.

In addition, based on recommendations derived from a set of surveys of psychologists specializing in the psychology of religion, we were particularly interested in identifying variables associated with five specific R/S topics: Religious Practices (including religious service attendance), Religious Conflict, God Representations, Spirituality, and Religious Identity (including religious group affiliation). We found a substantial number of R/S variables for these and other topics among the 16 ROADs that are included in this article but also substantial room for improvement that would maximize their usefulness in psychological research.

Regrettably, however, we found that some of the survey items were poorly worded, used a single item, were inconsistently administered across times or countries, or had overly constrained response choices such as binary measures of belief that God exists. Looking forward, we believe it is crucial that ROADs include additional, well-measured, theoretically grounded R/S items. Table 2 provides a list of the R/S items we identified in the 16 ROADs surveyed.

Looking ahead to the use of ROADs

Large, repeating, open-access, publicly available data sets (ROADs) should provide excellent research opportunities for psychologists interested in religion and spirituality. Many of these data sets are based on representative samples, are cross-cultural, are longitudinal, and have been rich sources of information for sociologists.

Engaging in the kinds of time-dependent, cross-cultural research that ROADs make possible, researchers can investigate novel trends at the global level, satisfying some of the generalization demands inherent to modern psychology. Recent calls in the psychology of religion for integrative, multilevel research can also be addressed by using ROADs because these data sets are multidisciplinary by design and commonly are amenable to multilevel analyses. As an example, individual-level variables such as political, medical, consumption, and religion variables can all be found in certain survey waves along with higher level variables such as region and country.

Engaging in such integrative, multilevel research has positive implications for our science because it increases engagement with larger theory and populations, which will increase our body of theoretical knowledge. This should bode well for the relevance of our field both within the scientific discourse and in the larger world. As we engage the psychology of religion with sociological, medical, and political

variables that drive public discourse, we make the psychology of religion relevant in the public mind by answering timely questions with our science. As we create public value, we attract more funding to answer important questions about human behavior and well-being. ROADs enable R/S researchers to study public-salient topics on a large scale because they are widely available and usable.

Nonetheless, these secondary data sources seem to be underutilized by psychologists in the scientific study of religion and spirituality, and we seek to address this issue. Overall, we hope that this article fosters more ROADs usage in the short term by guiding researchers to religion variables that are currently available, which are useful inasmuch as R/S psychologists are willing to engage with them. Sociologists are perhaps the target drivers of ROADs-based analyses, and they often focus on variables such as service attendance or religious affiliation (e.g., Adamczyk & Pitt, 2009). Yet psychologists, too, can leverage some of the ROADs measures as proxies for more nuanced R/S variables. For example, Brandt and Reyna (2010) used GSS data to demonstrate that the relationship between religious fundamentalism (as measured by belief that the Bible is the infallible word of God and by a GSS coding for whether a religious denomination is fundamentalist, moderate, or liberal) and prejudice against homosexuals (measured by opposition to homosexual relations and opposition to same-sex marriage) is mediated by the motivational variable, need for cognitive closure (measured by belief that right and wrong are black and white). Levin (2012) used data from the World Values Survey to show that the importance of God in one's life is associated with greater life satisfaction—but not happiness—among Israeli Jews, but that among diaspora Jews the importance of God in one's life is associated with greater happiness but not with life satisfaction.

Our research team continues to work with survey administrators toward adding more, and more nuanced, R/S variables to upcoming data collection efforts. Meanwhile, R/S researchers can, and should, publish their findings from ROADs research. In our contacts with the various survey administrators, we found that increased publications using R/S variables currently available would likely convince survey administrators of the importance of including additional R/S psychological variables, ideally increasing their inclusion on future waves of ROADs.

Another important next step would be to offer workshops to train R/S researchers in secondary data analysis and multivariate quantitative analyses. This type of analysis requires some specialized data management and quantitative skills that are rarely addressed in standard graduate programs but are covered in periodic workshops, such as the Summer Program in Quantitative Methods of Social Research offered by the Interuniversity Consortium for Political and Social Research, within the Institute for Social Research at the University of Michigan (see Pienta, O'Rourke, & Franks, 2011). Shorter workshops have been successfully conducted in various formats and places such as research conferences. These workshops might include representatives of individual survey programs, quantitative experts, and experts in R/S theory that would discuss and demonstrate effective use of ROADs. Methodological issues germane to ROADs, such as inclusion of sample weights and navigation of codebooks, might form one training track of a workshop, whereas quantitative skills that enable the assessment of change over time and cultures might form another training track. Regarding the latter track, longitudinal analyses require somewhat advanced techniques such as growth curve modeling to establish the trajectory for belief in a benevolent God across adulthood and multilevel modeling is also an advanced regression technique that, for example, can be used to examine whether the relation between religious spiritual variables and prosocial behavior is different in collective versus individual-oriented cultures. Missing data are nearly ubiquitous among ROADs, and are an especially important consideration for longitudinal data sets, so workshops might convey techniques for handling different forms of missing data. Examples of research including the preceding methods can be found in various literatures, and because each analysis and data set are unique, providing specific instruction is beyond the scope of this article. We encourage readers to pursue any needed training in ROAD analysis methodology. We suggest a primer by Pienta et al. (2011), which provides firmer grounding in the analysis of secondary data.

Finally, as previously mentioned, there is a public data repository at the Association of Religion Data Archives (ARDA; www.thearda.com). This interactive website hosts some of the data sets we

have mapped in this article along with hundreds more that assess religion and related constructs. Users can simply click on links, search for variables by keyword, peruse standardized codebooks, and run crosstabs on combinations of items. There is no easier way to familiarize oneself with the measures in a given survey than to use the ARDA. More in-depth analysis will require downloading the data sets into a statistical analysis program along with viewing the codebook specifics. However, the ARDA can also facilitate this process by linking users to the original survey website. The ARDA is an indispensable and constantly improving tool that R/S researchers should keep in mind.

Conclusion

The use of secondary data or existing data that are freely available to researchers who were not involved in the original study has a long and rich tradition in the social sciences. In recent years, the Internet has made secondary data sets readily available at the click of a mouse. Yet, whether due to a lack of methodological training, broad indifference, or alternative data collection strategies, psychologists have been surprisingly slow to turn to ROADs. Our hope is that the information presented here will drive R/S researchers toward representative open access data sets to answer interesting and theoretically important questions regarding the psychology of religion and spirituality.

Acknowledgments

We thank our collaborators, Roger Finke and Christopher Bader, for their expertise and assistance in contacting the administrators of various open access data sets.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This research was conducted thanks to the generous support of the John Templeton Foundation (no. 60735).

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