

RESEARCH ARTICLE

Beneath the Surface: A Critique of the Common Survey Model in the Study of Nonreligion

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When measuring nonreligiosity, a common approach is to ask about the participants' religious or nonreligious affiliation and belief in God. In this critical commentary, this type of methodological approach – referred to as the “survey model” – is first placed in its historical context. The article suggests that understanding the historical context and cultural function of the survey model illuminates various theoretical and methodological limitations that have been previously recognized in multiple areas of research from the study of religion and sociology to survey methodology and cognitive sciences. Based on this interdisciplinary review, it is noted that, if relying on the survey model in either qualitative or quantitative research, the studies are likely to sustain the cultural categories of “religion” and “nonreligion” that, paradoxically, are implicitly defined by the survey model, and remain at the level of reputation management. To overcome these limitations and allowing researchers to assess cultural and cognitive aspects of the forming and construing of a human phenomenon like nonreligiosity, the article emphasizes the importance of multi-methodology along with an interdisciplinary theoretical framework.

Introduction

The ability to define strata and to see objects depends on the technique and the intensity of effort applied. For example, clearance of the topsoil with a back-actor is fast but visibility is sacrificed – smaller objects and more subtle edges in the soil will not be noticed. By contrast, to ensure that everything is noticed in a feature of special importance, such as a furnished grave, the excavator will proceed with the greatest caution, not only taking care to define every tiny anomaly in the ground, but *screening* (sieving) all the waste soil (*spoil*) to make sure nothing escapes. (Carver, 2015, p. 46)

At an archeological excavation, archeologists scrape the surface of the ground with their chosen method until they detect anomalies in the soil. After this, the researchers define the boundaries of each context, identifying deposits made at different times. At each site, both the archeologists' definition of the context as well as their decision to put the contexts in order creates the story of the site. The more careful the methods of digging is (bulldozer vs. trowel and brush) the more detailed the records and the story. (Carver, 2015.) When collecting data of nonreligiosity, researchers obviously do not dig in the ground. Yet, similarly to an archeological excavation, the method and manner of data collection will have an effect on what one uncovers and how the story is told.

Sometimes, the method and story are seemingly straightforward. For example, Pew Research Center has approached the task of measuring nonreligiosity by posing a direct question: “What is your present religion, if any? Are you Protestant, Roman Catholic, Mormon, Orthodox such as Greek or Russian Orthodox, Jewish, Muslim, Buddhist, Hindu, atheist, agnostic, something else, or nothing in particular?” In this case, nonreligiosity is determined either as respondents' reluctance to identify with any religious tradition or as an identification as an atheist (defined in the interviewer notes as “do not believe in God”) or agnostic (defined as “not sure if there is a God”) (see Pew Research Center, 2017, p. 4). Similarly, yet more narrowly, General Social Survey (2018, p. 131) asks: “What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?” This question is further followed by specifications concerning the particular denomination as well as questions about the participants' belief in a life after death, frequency of praying, feelings about the Bible and belief in God.

Both approaches represent a commonly used surveying approach that I will from now on refer to as a “survey model”. The survey model measures religion and nonreligion as a dichotomous opinion that is discovered via single or few direct questions of one's affiliation, belief in God, religious attendance, and praying. Although these questions sound relatively simple, a short peek to the history of this method reveals that the story can quickly get more complicated.

This critical commentary discusses the methodological effects that the survey model potentially has in the research of nonreligion. I will start by placing the common surveying approach of nonreligion into its historical

context. I suggest that understanding the original cultural function of the survey model, often used both in the public and scholarly spheres, illuminates various theoretical and methodological limitations that are previously recognized in various areas of research from the studies of nonreligion and religion to sociology, survey methodology and cognitive sciences. As a conclusion, I will discuss the need for both an interdisciplinary and multimethodological outlook that would better allow the exploration of people's identities, beliefs and implicit inferences as a connected multilevel phenomenon.

Historical Context of the Opinion Called "Nonreligious"

Understanding religion and nonreligion as a dichotomous opinion is characteristic for the surveying approach that was developed in the United States since the 1930s, using modern sampling techniques (Wuthnow, 2015; Gobo & Mauceri, 2014; Groves et al., 2009). Although surveying about religion existed prior to George Gallup deciding to ask about it, the particular "survey culture model" (Gobo & Mauceri, 2014) and its manner of operationalizing religion and nonreligion can be understood to have its origins in the public polling that was developed in the United States (Wuthnow, 2015; see also Field, 2014).

According to historian Sarah Igo (2006), the original aim of the pollsters, such as opinion surveyors Gallup and Elmo Roper, was to deliver the authentic voice of the public, or the "man on the street", to politicians and policymakers, and therefore serve both democracy and science. Igo's historical analysis reveals that these promises fell short in various ways. For example, although the pollsters often spoke about Americans in unitary and singular terms such as "average American" and "we", the collected samples were only a cross-section of the nation and purposefully focused on the population who were assumed to vote in the presidential elections (i.e., white, educated, male). Igo also notes that public polling was both enabled and shaped by commercial sponsors. Gallup's access to publishing his findings in the weekly newspaper columns was tied to the constant need to produce newsworthy material. Polling was a market-driven business, and its ability to not only collect but to *shape* opinions was not lost on its creators. (Igo, 2006; see also Wuthnow, 2015.)

Relevant for the research of both nonreligion and religion, sociologist Robert Wuthnow (2015) writes that the question about one's religion, or the lack of it, was immediately part of the national poll design in the United States. In the late 1930s, Gallup started asking whether the participants were members of a church, went to church and read the Bible. This means that, from the beginning, the religion that was being tracked in the polls was mainly Christian. During World War II, in 1944, followed a question about one's belief in God. Wuthnow notes that, in the history of polling, this was a landmark event; it was an effort to measure and capture a belief with a single opinion. The results showed that nearly all respondents believed in God, which made God-belief one of the few opinions in which Americans appeared united. After the war, and especially in the rise of the Cold War, polling

and news about religion – which was seen mainly as a Christian belief in God – became an essential and intentional political tool to create a sense of unified identity and harmonious nation (see also Igo, 2006). By the 1950s, a mark of being an American was to believe in God and locate oneself as a Protestant, Catholic or Jew, whereas denying the existence of God became synonymous with being a "godless" communist or anti-American. (See more Wuthnow, 2015.) These meanings were so present in the cultural discourse that they potentially affected the very fabric of the interviews. For example, when writing about the interviewers' biases, Igo notes:

Essential links in the polling chain, interviewers could not themselves always be counted upon. Questioners could improperly reveal their own biases, guide the respondents too much, or simply bungle the job. When a respondent showed no understanding of the word "atheist," for example, a Gallup Poll interviewer was reported to have rephrased the question as: "Would you vote for a sinner for President?" (Gallup Jr., 1969, p. 17). (Igo, 2006, p. 118–119).

Still in the present day, in the middle of a section asking about the participant's religiosity, Pew Research Center (2017, p. 5) inquires the level of agreement with the statement: "I am proud to be American."

Wuthnow (2015) presents that polling has shaped the way the public perceives religion and nonreligion. Instead of offering a voice, polls have invited people to see themselves through lenses that were created in a very particular point in time (the United States during World War II and Cold War) for a particular purpose (to create newsworthy material and a sense of Americans as a unified nation). Via the ability to create constant news and repeat the same survey for several decades (see e.g., Newport, 2016), the tool that measures the adherence to American national identity has defined for many what religion and nonreligion mean, or the way many think about religion and nonreligion. (See again Wuthnow, 2015).

Bringing up this historical backdrop and the cultural function of the survey questions concerning nonreligiosity and religiosity is important when discussing the methodology in the research of nonreligion. That is because, instead of occurring as a culture-specific phenomenon relating solely to the commercial polling in the United States, the survey model has spread around the world and beyond the context of commercial polling, including into international academic research (Gobo & Mauceri, 2014). As Wuthnow (2015) notes, although the academic research of religion and commercial polling have separate histories, the need to say something about religion or nonreligion in general has brought attention to the polls.¹ For example, in the context of the scholarly research of secularity and nonreligion, a common analytical tool either when relating or focusing on nonreligiosity is to rely on the participants' opinion about their level of religiosity, religious affiliation and/or belief in God. This occurs in various academic fields, for example, from sociology (e.g., Cragun,

Kosmin, Keysar, Hammer & Nielsen, 2012; Edgell, Frost & Stewart, 2017) to cognitive psychology (e.g., Banerjee & Bloom, 2014; Järnefelt, Kelemen & Canfield, 2015) as well as from neuropsychology (e.g., Harris, Kaplan, Curiel, Bookheimer, Iacoboni & Cohen, 2009) and social psychology (e.g., Gervais et al., 2018; Gervais, Shariff & Norenzyan, 2011) to science education (e.g., Lombrozo, Thanukos & Weisberg, 2008; McPhetres & Zuckerman, 2018).² This means that, across disciplinary borders, the survey model is a typical or often used way of operationalizing both nonreligion and religion when forming research-based information about these phenomena.

In the next section I will discuss more in detail how the picture of nonreligion, based on the survey model, might both create and maintain various theoretical and methodological limitations that have been previously recognized in the various areas of scholarly research.

The Assumptions That Come Within

As noted in the beginning, no matter the discipline, the method has an effect on what one discovers and how the phenomenon is perceived. If relying on the survey model when collecting the data of nonreligion some indirect assumptions follow. Next, I will list each expectation and shortly discuss their problems based on the wider interdisciplinary information.

a. *An expectation of a clear distinction and stable definition of religion and nonreligion.* Religion scholar Ann Taves (2018) points out that defining nonreligion as a binary contrast to religion creates a sense that the difference between the two is clear and stable. It also implies that nonreligion is something that is necessarily thought about in relation to religion. In this case, nonreligion faces the same definitional problem as religion. That is, there is no clear definition of religion. Subsequently, the research of the phenomenon relies on the negation of a concept that is undefined. Wuthnow (2015) presents that the very lack of definition has made religion so successful to poll: whereas elections actually take place and the validity of the poll can be assessed, a similar point of reference is absent when assessing the results concerning religion or nonreligion.

b. *An expectation that participants' religious or nonreligious affiliation is found from the provided list.* Related to the previous notion, sociologists Abby Day and Lois Lee have noted that not all identities that are relevant to either nonreligion or religion are reached with a single question about religion or a list of religious affiliations (Day & Lee, 2014; Lee, 2014, 2015; see also Cragun, 2019). Similarly, also Wuthnow (2015) points out that the current model of surveying dismisses the possibility for hybridity and multiple affiliations that recur in various cultures.

c. *An expectation that nonreligiosity looks like a denial of Christian religion and God-belief in particular.* Continuing from the latter, Wuthnow (2015) writes that both due to the skewed sampling as well as the wording of the questions, the common surveys about religion end up often being white norming and Christocentric. For example, focusing on the belief in a supernatural agent called "God" and tracking religious practice via questions concerning

the frequency of "praying" and "attending religious service" (see again e.g., General Social Survey, 2018) are characteristic of religious commitment within Christianity, and within the Western Protestant tradition in particular, but do not accurately relate with beliefs, religious behavior and signaling beyond this context. Subsequently, non-religiosity, that is often operationalized in the studies as a disagreement with these items, looks like a denial of Christian affiliation and the belief in God in particular (see also Sosis & Kiper, 2014 and Taves, 2018 for the critique of popular and scholarly tendency to reduce religion and worldviews to beliefs).

d. *An expectation that people truthfully report their views.* As any method, survey method is subject to various types of measurement errors. To mention a few examples, survey questions might include unfamiliar terms, grammar of the question might make it ambiguous or overly complex to comprehend, and questions can make assumptions that are not true, leading to survey designs that do not make sense or apply to the participants' experience or understanding of the subject. In order to proceed in these types of situations the participants might rely on various shortcuts that subsequently weaken the validity of the survey, such as acquiescence and social desirability. This means that participants might just agree with any given option, or they seek to choose an option that puts them in a favorable light. (See more Groves et al., 2009; see also Cragun, 2019.) These notions should be regarded by any study using a survey method but they are particularly relevant for the research that relates with a topic like nonreligion that is known to cause social stigma in various cultures (see e.g., Cragun et al., 2012; Edgell, Gerteis & Hartmann, 2006; Gervais et al., 2017). In these types of sensitive contexts, the risk for social desirability as well as overreporting increases even further (Gobo & Mauceri, 2014; Tourangeau & Yan, 2007).

Using the terminology of social and cognitive scientists Hugo Mercier and Dan Sperber (2017), this is an example of "reputation management." Rather than being fully aware of their intuitions or the process of reaching a belief or a view, human reasoning functions as a justification of their beliefs and actions.³ In other words, when people reason, they tell a story about themselves that fits with the relevant social norms and ensures one's good reputation. (See more Mercier & Sperber, 2017.) In relation to this, survey answers can be understood as a tool in keeping a social record (see also Day & Lee, 2014; Gobo & Mauceri, 2014; Lee, 2014). Telling whether one identifies as religious or nonreligious, or believes in the existence of God, is a form of interaction that influences one's reputation and stabilizes social norms like any other social interaction. What we tell and do in front of others influences the way we are seen by them. Subsequently, when asked to offer an answer in a survey, people may form responses that do not necessarily refer as much to what they think or do, but to how they like to appear in the particular social context (see Gobo & Mauceri, 2014; Mauceri, 2015). To some degree these effects can be regarded, for example, by ensuring anonymity as well as paying attention to the interviewer presence and the order of the items in the survey (Gobo

& Mauceri, 2014; DeTourangeau & Yan, 2007; see also Gervais & Najle, 2017). However, if we acknowledge that the very formation process of human reasoning is inherently tied to the reputation management, it follows that people do not stop managing their reputation in privacy or in anonymity. Instead, the act of reasoning is always social. (See again Mercier & Sperber, 2017; see also Taves, Aspsem & Ihm 2018).

e. *An expectation that, by default, people have a view of their own religiosity that is linguistically articulated and can be meaningfully measured as an opinion.* Asking a question concerning a person's opinion of their nonreligiosity or religiosity presumes an opinion. As was noted already in the latter point, this is not always the case and by means of acquiescence and reputation management, participants might create their identity or beliefs in the context of the survey. For example, when interviewing people's reasons to self-identify as a Christian on the UK census, Abby Day has found that, although people were ambivalent of their religiosity, once "presented with a list of options, their identity suddenly crystallised in a way that seemed to suggest not that they were, for example, Christian but – perhaps more importantly – that they were not one of the 'others'" (Day & Lee, 2014, p. 346).

In case of having a clear religious or nonreligious identity, the previous research that has made comparisons between the religious affiliation or identity, beliefs and actual inferences shows that people commonly operate in terms of "theological incorrectness" (Barrett, 1999; Slone, 2004). This means that, *inadvertently*, the way both self-identifying religious and nonreligious individuals think is not necessarily in line with what they tell or believe to think. For example, when asked to apply their reasoning in a vignette or recall a narrative, both Christian and Hindu participants are found to conceptualize God as tied to various physical constraints, deviating from the theologically correct descriptions of the supernatural agents (Barrett, 1998; Barrett & Keil, 1996). Once atheist participants are not reminded of their nonreligious identity but prompted to freely discuss their life-events in a semi-structured interview, the later coding of the content reveals that both theists and atheists held similar purpose-based notions about their lives. This means that the actual inferences that people form do not necessarily vary in reference to people's opinion of their religiosity or nonreligiosity. (See Heywood & Bering, 2013). Again, when operating under cognitive load (i.e., having to make their decision instantly without being able to reflectively reason), both American, Finnish and Chinese participants, who in the surveys disagree with a belief in any kind of higher power, God or gods, form ideas of some non-human being purposefully making both living and non-living natural phenomena (Järnefelt, 2013; Järnefelt, 2013; Järnefelt et al., 2018; Järnefelt et al., 2015). These examples illustrate that a person's explicit opinion of their own beliefs is only a half of the story. People can hold various and often contradictory views, depending on the context as well as the level of information processing (i.e., spontaneous inferences vs. reflective reasoning). People's daily lives include forms of religious or supernatural behavior and inferences that are

not necessarily realized as such or expressed in language, leaving them inevitably beyond the reach of the basic survey method (see also Taves et al., 2018).

f. *An expectation that people are fully able to access their motivations and beliefs.* Continuing from the latter, cognitive anthropologist Pascal Boyer (2018) discusses the anthropomorphism in the research of human behavior. Boyer points out that, apart from other areas of research, in human sciences:

[–] we assume that people's behavior is caused by their intentions, that people have access to these intentions, that they can express them. We also assume that people are units, that is, each individual has preferences, for example, for coffee over tea, so that it would be strange to ask what part of them has those preferences or how many subparts of them favor coffee. We treat people as whole and integrated persons. In other words, we anthropomorphize them. (Boyer, 2018, p. 24).

In the context of the current discussion, reaching beyond the level of individuals' self-understanding, takes us to the territory of an "enacted worldview" (Taves & Aspsem, 2019; Taves et al., 2018) or thoughts, reactions and practices, which occur spontaneously and unconsciously but yet are connected and elemental for the understanding of the processes that form on the conscious level or intentionally. Spontaneous cognitive processes can be roughly understood to form via two different routes: a) via cognitive maturation (i.e., evolved domain-specific inference systems; see more e.g., Boyer, 2018; Boyer & Barrett, 2005; Mercier & Sperber, 2017) and b) via repeated cultural exposure (i.e., cultural skills that have become automatized via practice; see more McCauley, 2011).

Paying attention to the spontaneous level of cognitive processing is relevant because the explicit and reflective formulations are inherently connected and reliant of the nonconscious, intuitive and nonlinguistic processes (Taves & Aspsem, 2019; see also Boyer, 2018; Mercier & Sperber, 2017). Although people constantly form socially fitting reasons for their thoughts and actions, they are not able to think just anything. Instead, as noted above, people arrive at various intuitive conclusions both due to cognitive maturation and cultural exposure (see again McCauley, 2011). When encountering a novel idea in the culture, intuitions play a crucial role in what sounds plausible or makes "instant sense." People tend to prefer ideas that cohere with the thoughts they already have, which is a safe move; as humans we constantly rely on culturally transmitted information that forces us to rely on other people's accounts of the world, instead of experiencing and learning things directly. What serves as a cognitive anchor or reference point are the thoughts we already have. Early on, both children and adults are more likely to accept an idea and trust the speaker if the speaker's ideas are consistent with their ideas. (See more e.g., Mercier, 2012; Mercier & Sperber, 2008; Clément, Koenig & Harris, 2004.) Intuitions direct behavior and set the shape and tone of reasoning without people necessarily being aware

of it. People end up acquiring and representing information selectively. Some actions come more naturally, and some beliefs sound more believable and are remembered more easily than others (see also Boyer, 2018; McCauley, 2011; Mercier & Sperber, 2017). Knowing what people spontaneously and unconsciously hold in their minds does not explain everything but adds several layers more to the understanding of the anatomy and functioning of people's views.

Beyond Managing Reputation Within the Survey Model

Based on the notions above, I suggest that the common tool choice – the survey model of religion that was originally created within the context of American polling – has both partly formed and maintained the everyday meanings of “religion” and “nonreligion” as stable categories within the research context. Consequently, this implicit model of the basic characteristics of both religion and nonreligion (e.g., the list of mutually exclusive affiliations and focus on God-belief) has affected on what is studied as nonreligion as well as religion. This has occurred in various fields of research where the data is collected via questions that are alike with the survey model. (See also Wuthnow 2015).

The reliance on this model is problematic for multiple reasons. Firstly, the survey design concerning one's religiosity was not formed for the use of research of religion or nonreligion per se. When tracing the survey model's historical roots and cultural function, the approach can be recognized more appropriately as a measure of an American identity, which was purposeful to create in a specific historical era and cultural place (United States during World War II and the Cold War; see Wuthnow, 2015; see also Igo, 2006). Secondly, relying on a method that function was formed in relation to another aim, has led to various limitations both in the research of secularism and nonreligion as well as religion. As listed above, the survey model offers a view to people's identity, beliefs and behavior that does not align either with the research in the humanities and social sciences (i.e., a highly restricted list of affiliations and identities as well as Christocentric and white norming view of what religiosity or nonreligiosity looks like; see e.g., Day & Lee, 2014; Wuthnow, 2015), survey methodology (i.e., a research design that is highly susceptible to acquiescence and social desirability in responding; see e.g., Gobo & Mauceri, 2014; Groves et al., 2009), or the research in various areas of behavioral and cognitive sciences (i.e., excludes the level of enacted worldview as well as nonlinguistic, nonconscious and spontaneous forms of behavior that yet are relevant both for the initial formation as well as cultural distribution of the beliefs and behavior; see e.g., Boyer, 2018; Mercier & Sperber, 2017; Taves & Asprem, 2018).

Acknowledging the incompatibility between the academic knowledge and the polls' view of religion or nonreligion is not novel but a problem that has long weighed on, for example, the experts of religion whose knowledge of a particular issue or phenomena is impossible to express or operationalize as one survey question (see e.g.,

Wuthnow, 2015). A scholar of religion who is trained to conduct in-depth studies of a framed phenomenon would easily note that the category of “religion” that is commonly represented in the surveys is often reduced to refer to “North American and Northern European Protestantism” (Slingerland, 2014). However, although historically the polls are not taken seriously by the academic researchers of religiosity, both quantitative and qualitative research in various fields has taken these categories as the starting point of their analysis when stating something about non-religious and/or religious individuals in general. So, paradoxically, why has the academic research repeatedly used tools or categories that are known to offer an extremely limited and even skewed view of the phenomena?

One possibility can be the lack of definition of religion and the subsequent tendency to define nonreligion as a binary contrast of religion (see again e.g., Taves, 2018). It can be that the absence of specification of the term “religion” has allowed the survey model to become the implicit definition of both religion and nonreligion (see also Wuthnow, 2015). As a solution, I do not suggest a fixed definition of religion or nonreligion. I acknowledge that relying on these categories and forming fixed meanings for them can easily lead to a competition between various essentialistic notions of the “true” nature of the phenomenon (see e.g., Slingerland & Collard, 2012). Yet, from the research perspective, the object of any study and the meaning of its core concepts need to be specified as asking a question from the participant – either by using a qualitative or quantitative research method – inevitably operationalizes the phenomenon. In other words, in case the phenomenon is not defined, the operationalization of the item created in the measure becomes its implicit definition.

To form a research framework that better enables assessing both the validity and reliability of the studies as well as allows interdisciplinary comparison between multiple levels and disciplines, I agree in many ways with the approach suggested by Taves (2018; see also Taves & Asprem, 2019; Taves et al., 2018 for the more specific presentation of the program; see also Cotter, 2019). Rather than relying on the categories of religion and nonreligion as the starting point, the research within this program is set in the context of worldviews and meaning making systems that are grounded in the notion of the big questions posed by natural selection. The suggested program enables exploring people's tendencies and capacities within one framework as a multilevel and interconnected web of phenomena, from nonconscious intuitions and behavior to implicit “taken-for-granted ways of life” and highly articulated forms of cultural systems. However, when turning the attention to conducting this type of multilevel research in practice, instead of asking scholars to form surveys in the light of the novel framework (see Taves & Asprem, 2018), I am cautious of the use of the survey method as the primary tool for data collection, or as a stand-alone method.

I agree that, sometimes, surveys are purposeful. For example, in the future, rather than using the categories provided by the survey model as an unquestioned starting point of the studies, more research could focus on

exploring what does the survey model of religion and nonreligion actually measure in various countries and cultures, given the now recognized limitations of this model to capture religiosity or nonreligiosity in depth. However, when using the survey model or conducting any survey research, it should be done by being aware of the various limitations that accompany any study using this method (Groves et al., 2009; see also Cragun, 2019). In many cases – in relation to the multilevel nature of any human phenomena – various multimethodological approaches become more relevant (see also Gobo & Mauceri, 2014; Mauceri, 2015). This means that, in addition to just providing the participants with more relevant survey answer options (see Cragun, 2019; Lee, 2014), the studies could include measures that explore participants' responses indirectly. This can be done by combining the survey method with the understanding of both experimental and qualitative methodology. Instead or in addition to asking participants to report their own evaluation of their identity, beliefs and behavior *per se*, participants would not be fully aware of the particular behavior the researchers are measuring. This happens, for example, when using vignettes, priming, cognitive load as well as open-ended responses and interviews that are afterwards coded for their content (see e.g., Barrett & Keil, 1996; Gervais & Norenzayan, 2012; Heywood & Bering, 2013; Järnefelt et al., 2015).⁴ These types of methods, of which the previous are only few examples, better reach beyond the level of reputation management (Mercier & Sperber, 2017) and respond to the critique of anthropomorphism in the human sciences (Boyer, 2018). Multimethodological approaches can also be seen as a return to the methodological roots of human sciences. Prior to the spread of the American survey model, especially in Europe, surveys were conducted by relying on the mixed methodology (see Gobo & Mauceri, 2014; see also Wuthnow, 2015).

Rather than suggesting that one scholar alone is able to respond to both the novel theoretical and methodological demands, I acknowledge that these suggestions involve combining the knowledge of multiple scholars and expertise across the humanities, social, behavioral and natural sciences. Apart from novel theoretical and methodological understanding, this level of interdisciplinary collaboration asks scholars on all sides of academia for a novel type of openness and willingness to appreciate knowledge that might be traditionally deemed either “reductionist” or “irrelevant” (see e.g., Slingerland & Collard, 2012). It also asks the scholars to actively accept the role of a student and re-thinking themselves as members of a larger community, beyond department, discipline and faculty borders. One model for this type of interdisciplinary collaboration and learning experience could be evolutionary biologist David Sloan Wilson's (2005) university-wide EvoS program at Binghamton University that teaches evolution in an interdisciplinary manner, involving university-wide talks and collaborations. As a crucial first step, prior to learning any basic concepts and being introduced to the interdisciplinary breadth of the subject, every student is invited to discuss the implications of the research and

acknowledge and put on hold their own potentially negative associations and suspicions toward it – a step that would carry relevance to any context or situation seeking to foster collaboration between the scholars in humanities, social, behavioral and natural sciences, or the scholars accustomed to use either qualitative or quantitative methodologies.

Conclusions

In the beginning I wrote about the effects that the archaeologist's tool choice has on their ability to find a detailed record and tell the story of a place. In the provided quote it was given that – although the level of intricacy of each tool varied – the overall aim of the researcher was to separate the anomalies from the soil. (See again Carver, 2015). Traditionally, this – paying attention to the artifacts and other physical remains in the soil that is framed by the individual trenches or sites – has been at heart of archeology. The ground itself is investigated by a whole other field of study – geology. These two academic fields have not necessarily collaborated. Even on the campus map, archeology and geology are placed in different departments and, in some cases, different faculties. However, recently, in the context of the discussion of Anthropocene (i.e., a geological epoch marked by global-scale human impact on Earth systems) it is noted that such a large portions of the Earth's surface consist of various anthropogenically modified deposits that it can be understood to form its own layer: archaeosphere. This means that the natural soil (unmodified geological deposits) is intertwined with ground that has been in various historical points of time modified or made by humans. In other words, in many areas, the soil itself is the anomaly. From the research perspective, this asks for a shift in the scales of analysis and revision of the existing categories of both archeological and geological thought. Seeing the ground via the traditional field-specific lenses would hide the scale of the phenomenon. (See more Edgeworth, 2016; Edgeworth et al., 2015).

Similar novel findings that lead to the need of a perspective shift can happen in any area of research, including the research of secularity and nonreligion. In this area of research, as well as in the research of religion, the collaboration between various disciplines is actually even expected. The researchers are already working based on the assumption that the research on this area is, if not interdisciplinary, at least multidisciplinary (see also Taves, 2011).

In this critical commentary, I suggest that in addition to the common epistemological roadblocks, such as the difficulty to understand the mechanistic, vertical or synchronic models of interfield integration⁵ and conflating the notion of reduction with eliminative reductionism (see Craver, 2005; Slingerland, 2008; Taves, 2011), the research on both nonreligion and religion faces an additional obstacle that has gone unnoted in several disciplines. That is, when collecting information related to either nonreligion or religion, researchers have implicitly defined these terms via the use of a tool – the survey model – that was

originally aimed for measuring a very different phenomenon and can now be understood to create partly arbitrary categories. In the future, when developing a research program that allows abandoning categories of nonreligion and religion as the anchor of the research (Taves, 2018; Taves & Asprem, 2018; Taves et al., 2018), a special attention is also needed to the use of methods. In addition to relying on the interdisciplinary framework, the future research is similarly in need for multimethodological approaches that allow reaching beyond the level of reputation management within the categories of “nonreligion” and “religion.”

Notes

- ¹ It might be clarifying to note that although the word “poll” is often used when discussing the commercial or private-sector opinion studies whereas the word “survey” is in use in the academic context, from the perspective of the actual methodology, there is no clear distinction between the two (Groves et al., 2009). On the level of analysis, in contrast to pollsters, survey researchers are often more interested in the interrelations between the various components (e.g., correlations, causal models) (Gobo & Mauceri, 2014).
- ² This list is not meant to be in any way exhaustive but shows via few examples how widespread across the academia this manner of research is when investigating nonreligion or religion, or creating a category of nonreligious or religious for the further analysis of the data.
- ³ The meanings of the concepts ‘intuition’, ‘belief’ and ‘reasoning’, as well as ‘inference’ that is used later in the article, derive from the terminology used by Mercier and Sperber (2017; see also Boyer, 2018).
- ⁴ I am aware that these studies have partly relied on the now criticized survey model, for example, when grouping or recruiting the participants. However, their use of methodology per se can be taken as an example of the indirect approaches.
- ⁵ Mechanistic (Craver, 2005), vertical (Slingerland, 2008) and synchronic (Taves, 2011) models of interfield integration refer to somewhat similar suggestions concerning the formation of scientific explanation that integrates multiple levels of information. In contrast to the traditional model of reduction (see Oppenheim & Putnam, 1958), where the theories about phenomena at a higher level (e.g., culture, social groups, individuals) are reduced to theories about phenomena at lower levels (e.g., physiological systems), these models present that the relevant parts (both on the higher and lower level) of a mechanism are in constant interaction. This means that no single level (e.g., culture, cognitive processing) alone can be understood as the primary one when forming scientific understanding of the phenomena but the phenomena are explained as a constantly interacting multilevel mechanism.

Competing Interests

The author has no competing interests to declare.

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