

SOCIAL RESEARCH ON SCIENCE AND RELIGION IN NORDIC COUNTRIES

by Pia Vuolanto , Paula Nissilä, and Ali Qadir

Abstract. This article presents a review of the literature on science and religion in Nordic countries. Seventy-seven articles, books, and chapters on the topic were collected from five major scholarly databases between 1997 and 2018. We scrutinized how research in this data set was engaged with social scientific research. Most of the research was not social scientific. It was primarily philosophical, theological, and historical research; very little presented empirical and theoretical social scientific research. The studies reflected societal discussions, bringing out some cultural dimensions and social issues, but not specifically in the Nordic context. Some societal aspects were highlighted, such as ethics and climate change, but these were not necessarily tied to the Nordic societies. We propose that in the Nordic context there seems to be a need for social scientific research on science and religion. This research could use theoretical perspectives from, for instance, sociology, science and technology studies, higher education studies, and anthropological research.

Keywords: literature review; Nordic; science and religion; social sciences

The Nordic countries present an interesting locus for the study of science and religion. The five countries—Finland, Sweden, Norway, Denmark, and Iceland—have acquired a worldwide reputation as post-Lutheran welfare states with a generally strong culture of state–church legal separation (Christoffersen, Modéer, and Andersen 2010) and high levels of postindustrial scientific achievement (OECD 2017). This confluence is matched by a rapidly changing social and religious demographic landscape (Furseth et al. 2018) and public discourse (Bäckström 2014). Yet, there has been remarkably little reflection in Nordic countries on how the two domains—science and religion—come together in people’s daily lives, or on in what

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way the Nordic social context informs the lived interface between science and religion.

Based on a year-long research project on science and religion focusing on social scientific approaches (*Science and Religion in Northern Europe*), our primary concern is to identify how Nordic research has examined science and religion. We are particularly interested in finding out how Nordic research engages with what many have termed a social scientific understanding of science and religion (e.g., Ecklund 2010; Elsdon-Baker 2015; Kaden et al. 2018). In other words, we seek to map the foothold that social scientific approaches have been able to build within discussions on science and religion in the Nordic context.

The key feature in social scientific research—which may, of course, be theoretically or empirically oriented—is to move beyond the “epistemic conflict” between science and religion, and rather to understand how the contours of the two domains are mapped and negotiated by various types of publics (Evans 2011; Elsdon-Baker 2015). Social scientific research (quantitative or qualitative) is typically attentive to people’s social and cultural values and views and lived contexts, as well as the contextual environments within which people engage in science and religion. For example, social science may be interested on the lived experiences of religion of individuals, groups, and social organizations who are also active in scientific endeavors, that is, among others, researchers, medical doctors, lawyers, or teachers. We are interested in which contextual picture of the Nordic countries gets highlighted in research concentrated on science and religion.

We retrieved data from five major scholarly databases which cover international social scientific research, arts and humanities, as well as, partly, health research. We found altogether seventy-seven pieces of research (articles, books, or book chapters) that focused on science and religion from the five Nordic countries. It is important to note that we did not aim at a comprehensive literature review. Rather, we focused on finding a representative data set of studies on science and religion by Nordic authors within which we could probe into how the international social scientific research tradition on science and religion has emerged in the Nordic arena. For this reason, we concentrated on the international arenas of research: publications in international scientific journals and books. Thus, this is a study of the kind of arguments through which Nordic researchers participate in international discussions within the field of science and religion.

Most of the research we found in our data retrieval was not social scientific. The bulk of research was primarily philosophical, theological, or historical studies, and we found very little empirical and theoretical social scientific research. A similar trend has also been pointed out by other researchers of science and religion. For example, in introducing the recently launched volume *Science, Belief and Society*, Stephen Jones, Tom Kaden, and Rebecca Catto (2019, xix) argue that social scientific research

on science and religion has been very limited (see also Elsdon-Baker and Mason-Wilkes 2019, 3). In the same volume, Fern Elsdon-Baker and Will Mason-Wilkes (2019, 4) argue that this scarcely existent social scientific research has predominantly used quantitative methods, and qualitative research has been used, especially outside the United States, few and far between. Partially due to this distortion, in survey-based research on science and religion there has been, as Jonathan Hill (2019, 47) argues, “lack of understanding of social context and group dynamics.” What is even more surprising, as Silke Gülker (2019) points out, is the lack of science and technology studies (STS) perspectives on the issue.

In this article, we concentrate on analyzing what the mostly philosophical, theological, and historical research that we found as our data set can tell about the societal and cultural context where the research on science and religion was conducted. We also scrutinize what kind of platform for discussions on science and religion the Nordic countries appear to be based on in these studies. What are the kinds of societal and cultural issues that arise from this material, even though they mostly discuss philosophical, theological, and historical issues regarding science and religion? And, even though the questions of science and religion have rarely been studied by social scientific means, we are interested in how, if at all, these questions have been approached with social scientific research tools and starting points. Furthermore, aiming at eventually building up potential significance and a niche for social sciences, we contribute to giving ideas about how social scientists should start analyzing this topic in order to be sensitive to the societal context and to understand how people living in the science–religion interface perceive the categories “science” and “religion.”

The article proceeds as follows. In the next section, we describe our methods of data collection and analysis including characteristics of the data collected. We then proceed to present our findings. We conclude by discussing the prospects of social scientific research on science and religion in Nordic countries.

DATA AND METHODOLOGY

Search Procedure and Analysis

We aimed at finding Nordic research involved in international academic debates on science and religion. To find a representative data set, we used five major, acknowledged research databases to collect academic publications on science and religion. Three databases were large, interdisciplinary sources (*Scopus*, *Web of Science*, *Academic Search Ultimate*), whereas two search engines were specialized in social sciences (*Social Science Premium Collection*, *Sociology Source Ultimate*).

As a search strategy, the two terms “science” and “religion” were searched as a phrase. We are conscious that scholars of science and religion may adopt different terms to describe both science and religion. Science may be termed “research,” “academic,” “academy,” “higher education,” “discipline,” or the like. And there is a wealth of terms for religion as well, including “belief,” “faith,” “spirituality,” even “ethics.” It is important to note that some of the research on science and religion may be discussed under terms such as “values,” “secularization,” “moral,” or “metaphysics,” and limiting to the term “science and religion” overlooks these terminological possibilities. A broader, more comprehensive study would need to take these terms into account. However, in order to narrow the search results to research that concentrated on the interface rather than mentioning both terms incidentally, it was necessary to limit the search to one search term. Also, in the international research, it seems that the term “science and religion” is an established and much-used term. Our aim was not to conduct a comprehensive literature review but rather to test what we can find with this primarily academically established search term about the international research tradition of science and religion in the Nordic context. Also, we needed to find a balance between retrieving enough relevant publications while at the same time restricting the search and screening to a functionally reasonable level.

There are other limitations regarding the search strategies that ought to be addressed here. All the searched databases were biased toward material in the English language. Tracking native-language material would have required utilization of country-specific databases such as Finnish *Arto*, Norwegian *NorArt*, or Swedish *ArtikelSök*. This task was considered outside the scope of this review, which focused on the general mapping of the international discussions and dynamics of the Nordic study area. In addition, more subject-specific databases, like *Medline* or *Cinabl* with their content of health sciences, would offer possibilities to perform more specific mapping, for instance, on religion or spirituality in medical practices. Yet, the utilized databases provided also some such publications, and those were included in this review (e.g., Krupic, Sayed-Noor, and Fatahi 2017).

The search was performed at the beginning of 2019. The databases that we used are updated with a delay, so many recent publications may not be present in the databases even if published in 2018. For example, Karl Bråkenhielm’s *The Study of Science and Religion* from 2018 did not appear in our searches for this reason. In addition, the databases are limited in the sense that they cover mostly articles in international scholarly journals, and books are not included to the same extent (Moed 2005). This may be the reason why such studies as Stephen LeDrew’s *The Evolution of Atheism* (2015) may have been left out from the utilized databases. Besides, this review’s focus on the interplay between science and religion could have excluded studies concentrating on more specific subjects within these

domains (like atheism and its history). Overall, it is estimated that journals are the most important medium for publication, and that this trend would be strengthened in the future (Nederhof 2006, 86).

Limitations of bibliographic databases are well acknowledged, not just concerning this review. These limitations cover—as well as the above-mentioned emphasis on articles instead of monographs—also language bias in favor of English, especially in *Web of Science* and *Scopus* (used as sources in this review). That notwithstanding, in this review we are interested in the international level, which is, in general, suggested to be the research frontier in social and behavioral sciences (Nederhof 2006, 84). It is, in any case, unlikely that particular social scientific debates on science and religion will be carried out in a particular language that does not show up at all in international scientific research presented in English. Further, comprehensive literature reviews in each country's language can test our findings.

We aimed to seek Nordic research involved in international academic debates on science and religion. Potentially relevant national reports, such as *Finnish Science Barometer* or the Swedish *Vetenskap att tro på?* were not considered to be part of international academic debates on science and religion even though they might generate some interesting social scientific results. Monographs, like reports, are more common at the national level (see Nederhof 2006, 84; Mongeon and Paul-Hus 2016); therefore, in order to locate those it would have required utilization of national databases on library materials (like *Libris* in Sweden or *Melinda* in Finland). Moreover, we did not use manual search methods or snowball sampling (e.g., skimming through the bibliographies of the articles or books) to complete our retrieval.

Database-specific subject headings were utilized where possible to doublecheck the refinement of results. In *Social Science Premium Collection*, the inquiry was accompanied by a string that combined science and religion as separate keywords because this database is limited in size. The results of the topic search were then restricted to all five Nordic countries. This was undertaken either by combining the phrase search with a string “Denmark, or Finland, or Iceland, or Norway, or Sweden” or by utilizing available limitations in the database (affiliation, location). For a citation to be included as Nordic, it was required that at least one of the authors be affiliated with an institution or organization in a Nordic country. Since the retrieved literature was mostly produced during the past two decades, the limitation by publication year was not considered necessary. This means we took all the publications that we found in these databases. With this approach we found 213 studies. The first publication that appeared was from the year 1997 and the last was from 2018. The search strategies complemented by the numbers of assessed and included publications are presented in Figure 1.

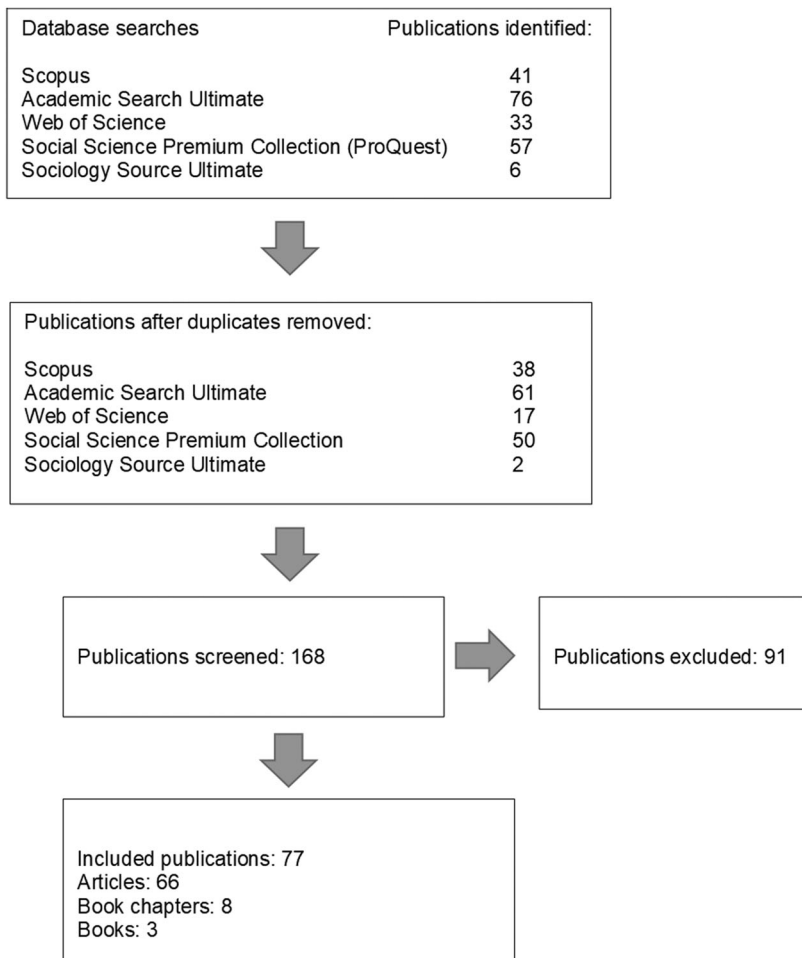


Figure 1. Literature search and screening process.

First, the obtained publications were screened for doubles. Of the original 213 publications retrieved, forty-three were duplicates, either within a single database, or overlapping with the publications retrieved from other databases. After this exclusion, a total of 170 publications were assessed in detail by two researchers exploring the publication type, title, and abstract. This task was performed double-blinded. The result was a coded table that included the variables listed earlier as well as responses to these questions. Naturally, answering each of these questions involves some subjective judgment on the part of the two coders. To minimize variance, both researchers coding the data assessed each work independently, discussed any variations, and agreed on the final assessment of each of the final seventy-seven works.

In this process, ninety-one publications were ruled out based on the following, preset eligibility criteria. Editorials, letters, interview, book reviews, or other such types of publications were excluded. The few publications mentioning a Nordic country only incidentally in the body text were also excluded from our review. Third, we included only those publications whose focus was on science and religion, specifically the interface between them. For instance, we excluded some publications that focused merely, on the one hand, on science and, on the other hand, on the internal discussions across one discipline, and not on the interaction between science and religion. Some such articles concerned, for instance, the cognitive sciences and its emergence as a discipline in general, and some examined religious education without consideration of its scientific dimensions. The limitation to peer-reviewed publications was used only in *Social Science Premium Collection* due to the diversity of its content when it comes to publication types. Regarding the other databases, we paid close attention to whether the publications had been reviewed.

The analysis was done in the following way. Two of us read through the abstracts of the articles with a primary aim to understand the approach to science and religion in these pieces of research. The analysis included mapping the theme and research frame, possible group of people that had been studied, the context of the study (Nordic or other, the population group or societal issue studied), and the aspect(s) of science–religion interface approached in the study. As an analytical toolkit, these questions helped us form our impression about the issues that were especially relevant for social sciences in these articles. After this in-depth analysis phase, we formed preliminary categories of the articles and discussed which articles belonged to each category. Consequently, four preliminary categories were formed: (1) studies on science and religion not tied to the cultural and societal context, (2) research on science and religion that could tell about the cultural and societal context or social issues, (3) research that discussed some societal aspect of the debate on science and religion, and (4) contextually tied, empirical studies on science and religion. These categories were refined, further developed, and preliminarily written out descriptively. After several rounds of rewriting, these categories formed the backbone of this article, the four analytical sections presented in the Findings.

Sample Characteristics

Overall, we identified seventy-seven eligible publications that scrutinize the interface between science and religion. These publications cover the date range from 1997 to 2018. A total of 66 percent of the Nordic literature was published between 2010 and 2018. More precisely, 4 percent were published in the 1990s, 30 percent between 2002 and 2009,

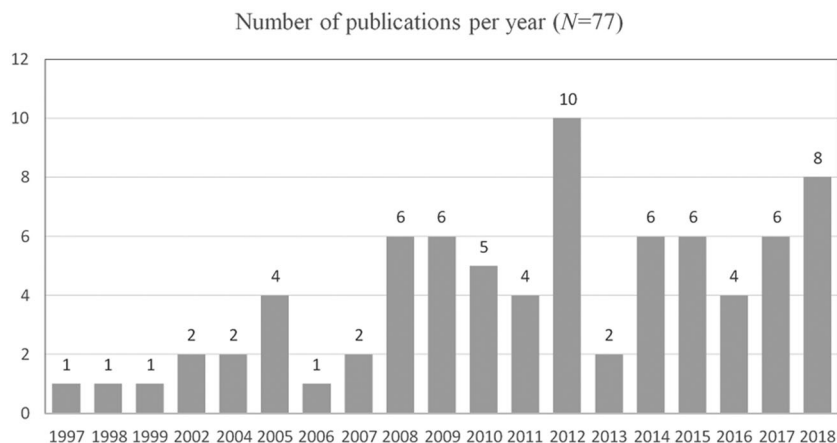


Figure 2. Annual trend of Nordic publications on science and religion.

43 percent between 2010 and 2015, and 23 percent between 2016 and 2018 (see Figure 2).

Of these, 32 percent of the affiliations of the publications originated in Sweden, 31 percent in Denmark, 24 percent in Norway, and 13 percent in Finland. We did not find relevant publications on science and religion from Iceland. In Denmark, the top two most productive affiliations were Aarhus University and University of Copenhagen. In Sweden, Uppsala University was clearly ahead, followed by Lund University. In Finland, the most active was University of Helsinki, and in Norway, the most active was University of Bergen. Yet, considering that this review is not a bibliometric analysis, the above evaluation on affiliations is only indicative. That is, the affiliations were investigated based on distinctive affiliations marked in the publications, not on the numbers of the authors connected *per se*. Naturally, one acknowledged and active author in an institution can also increase the figures substantially.

The reviewed pieces cover articles (sixty-six), books (three), and book sections (eight). Still, a total of 86 percent of the publications were articles. When it comes to the book material, several book sections were parts of a single book *Sacred Science: On Science and its Interrelations with Religious Worldviews*, edited by Simen Andersen Øyen, Tone Lund-Olsen, and Nora Vaage (2012). The limitation to peer-reviewed publications was used only in *Social Science Premium Collection* due to the diversity of its content when it comes to the publication types. Regarding the other databases, closer attention was paid to the scientific quality of the publications during the review process.

The articles were most frequently published in *Zygon: Journal of Religion and Science*, which suggests that Nordic literature has its

international presence in this multidisciplinary mainstream journal. *Zygon* published altogether twelve of the articles. *Theology and Science* published five articles, and *Studia Theologica: Nordic Journal of Theology* published four articles. According to the subject area categorization of *SCImago* journal and country rank, *Zygon* represents both arts and humanities and social sciences. Further, its subcategories are religious studies, cultural studies, and education. *Theology and Science* is ranked in the categories of arts and humanities and multidisciplinary with subcategories of history and philosophy of science and religious studies. *Studia Theologica: Nordic Journal of Theology* represents arts and humanities and, then, the subcategory of religious studies.

Yet, the overall range of journals is somewhat versatile. Besides more established disciplines dealing with science and religion (philosophy, theology, history), the reviewed literature was published in various journals within various subject categories, like in *EMBO Reports* (biochemistry, genetics, and molecular biology), *Mental Health, Religion and Culture*, and *Scandinavian Journal of Caring Sciences* (medicine, psychology), *Astrobiology and Physics Education* (agricultural and biological sciences, physics, and astronomy), *Scandinavian Journal of Management* (business, management and accounting, psychology), *Science and Education*, *Research in Science Education* and *Punishment and Society* (social sciences, education, law).

FINDINGS

The Philosophical, Historical, and Theological Research Tradition on Science and Religion

The bulk of the research we analyzed consisted of philosophical, theological, and historical research. The dominant approach was text-based analysis of writings about science and religion. Some of the authors analyzed scientists' writings. Especially the works of Charles Darwin, Galileo Galilei, and the Nordic natural scientists Carl von Linné and Hans Christian Ørsted were discussed. Darwin was discussed, on the one hand, in the light of historical responses (Gregersen and Kjærgaard 2009; Hjermitsev 2011; Hellström 2012) and, on the other hand, more connected to contemporary perspectives, for instance, to neo-Darwinism (Stenmark 2004; Thorvaldsen and Øhrstrøm 2013; Gregersen 2017). Some of the research was concentrated on philosophical thinkers such as George Berkeley (Airaksinen 2011) and Ludwig Wittgenstein (Pihlström 2005). It must be noted that many of the analyzed thinkers could be classified either as philosophers or natural scientists, such as the polymath Pierre Duhem, whose thoughts on "the physics of the believer" were analyzed, for example, by Helge Kragh (2008). Another thinkers in this kind of philosophical, theological, and historical research were contemporary thinkers in the area

of science and religion (e.g., Barbour, Dembski, Golshani, Wilson, Lakoff, Pinker, van Huyssteen, Peacocke, Stenmark, Kärkkäinen).

The research on scholars and thinkers highlights the dynamics between scientific rationality and religious worldview and the contemporary debates in the field today. However, they do not deal with the boundary between science and religion as a societal question. In this research, the authors bring out very little detail about the society where the writings were published. Also, the research typically does not highlight the specificities of the Nordic context. In this sense, this research could have been conducted in any part of the world and indeed it is research very much rooted in the international debates regarding a particular thinker, for example, Darwin. Thus, the research clearly does not tell about how people in their everyday life live science and religion and how people actively make and negotiate the boundary between science and religion in the Nordic context.

However, this kind of research can tell about the themes and ideas that might be especially relevant in the academic Nordic context. This, in turn, might reveal something about the ongoing discussions around science and religion among the general public today. Based on our research material it could be concluded that central to many arguments among the assessed work is the theory of evolution and its compatibility or incompatibility with religion. One issue that is quite absent in the Nordic literature compared to the more general debates in the field of science and religion is creationism. Only two pieces of research among the reviewed material dealt with this phenomenon more common maybe in the North American religious landscape. Yet the theme does appear in the research material. For instance, Stefaan Blancke et al. (2013) have conducted a review, with a multifaith approach, of European creationism. On the other hand, intelligent design as a more modern version of creationism was dealt with by several authors (e.g., Täljedahl 2010; Höst and Bohlin 2015; Loikkanen 2018).

However, a more thorough analysis of the themes and ideas that are academically discussed on science and religion in the Nordic context would be needed to draw broader conclusions. Our research material does not include all discussion about the themes of research in the Nordic countries as it is heavily concentrated on English-language publications. Yet, based on our research material, we could conclude that within the philosophical, historical, and theological research studied here, the absence of the social and cultural aspects of science and religion is evident. This is because the idea of this type of research, as we understand it, is to participate in discussions on science and religion *regardless of context* and as such, it does not respond to questions about the social and historical surroundings within which these debates take place (see also Elsdon-Baker and Mason-Wilkes 2019, 8).

The Nordic Cultural Dimensions and Social Issues Brought Up by Research on Science and Religion

Although the theological, philosophical, historical research on science and religion could be said to dismiss the social and cultural aspects, it does bring out several cultural dimensions and social issues that are relevant for understanding the science and religion interface in the Nordic context. Namely, a clear majority of the reviewed literature drew on Western culture and institutional Christianity. This is no wonder given that the Nordic states share a strong Lutheran Christian heritage. The emphasis on Christianity in the assessed literature denotes also the overall dominance of Christianity in the study field of science and religion (Burdett 2017). Furthermore, the abundance of philosophical, theological, and historical analysis instead of social scientific empirical explorations might have an impact on this situation.

However, there was also research in our material that embodied the religious plurality in contemporary societies (e.g., Mortensen 2002). In fact, two of the most productive Nordic scholars among the reviewed publications, Stefano Bigliardi (2012, 2016) and Mikael Stenmark (2005a,b), viewed the relationships between both Islam and science and between Islam and Christianity. The Muslim perspective was also discussed in the context of medical sciences. Jonas Svensson (2014) investigates the persistence of Muslim representations of HIV/AIDS as divine punishment, and Ferid Krupic, Arkan Sayed-Noor, and Nabi Fatahi (2017) analyze empirically the decision making of immigrants, most of whom were Muslims, regarding organ donation. Only one study investigated sociologically the interface between science and Islam on an empirical level (Fischer 2008). However, instead of focusing on a Nordic society, this anthropological study, aiming to reveal the interplay between consumer culture and religion, examined the halal production and trade in Malaysia.

New religious movements and their scientific discourses were highlighted in some publications (Rothstein 2009; Bjørnvig 2012; Bigliardi 2015, 2016). However, spirituality and its connections to Asian traditions as a current European trend remained relatively invisible. Asian religions were under consideration in one book (Keul 2015) and, in addition, in a study on Indian spiritual movements (Froystad 2011), in which again, the target of the anthropological research was a remote society instead of the Nordic context. Another phenomenon in current religiosity, nonbelievers, was discussed in some articles (Mahlamäki 2012; Järnefelt et al. 2015).

Other social issues in need of reinterpretations in current Western societies were quite absent among the articles. Only two studies discussed gender issues. Mahlamäki (2012) argues that more research should be conducted on the varieties and forms of lived gender differences within religion and nonreligiosity. Ilkka Pyysiäinen (2002), for his part, draws

also attention to the ideological characteristics of all beliefs, religious or scientific. Stenmark (2005b) touches on feminist science in his article about the interfaces between neutral and partisan science.

Even though we found these cultural dimensions and social issues in the research on science and religion, we can still conclude that the studies bringing these up were relatively small in number. Also, the research does not concentrate on social and cultural issues; rather, these come in passing, and the research appears overall as culturally and societally blind rather than doing justice to the Nordic multicultural contemporary societies. We assume that multiculturalism will be increasingly interwoven with discussions on science and religion, but this is not yet, based on our material, the situation.

The Societal Aspects of the Debates on Science and Religion

Some of the research, rather than outright rejecting societal issues or mentioning them only in passing, discussed societal aspects of the debates on science and religion. There were comments, for instance, on the benefits that religion or theology could generate in global society, and how scientific and religious worldviews could be reconciled from the standpoint of cognitive sciences (Näreaho 2014). Antje Jackelén (2007), as a theologian, sees advantages in theology's expertise in hermeneutics, and Bjørn Grinde (2005), representing an atheist view, perceives religion and spirituality to hold potential if religious communities pay attention to more efficient ways to coexist and communicate with other worldviews.

Some of the research aims at building bridges between science and religion, and influencing the societal discussion of climate is a central goal in them. For instance, Stenmark (2005a, 37) perceives science as a process that religion still has an influence over. One platform to reflect the boundary appeared to be the global issues that both bring threats (like fundamentalism) and possibilities (like multiculturalism). Sanna Urvas and Olli-Pekka Vainio (2018) discuss Veli-Matti Kärkkäinen's works and his ecumenical theology, which builds on a dialogue with major religious traditions (Christianity, Judaism, Hinduism, Buddhism, and Islam) and various worldviews. In a similar way, Viggo Mortensen (2002) urges the dialogue both between different faiths and between intellectuals of different disciplines in the attempts to find humanistic values in the globalized world.

Some of the research highlights the role of ethics in discussions about science and religion. Ethical issues emerge in a topical way, for instance, through analysis of the role of faith communities in climate change issues (Bergmann 2009). Gunnar Skirbekk (2012), in turn, emphasizes the need for interdisciplinary study approaches and reflections on power relations when considering the solutions science can generate for modern societies.

Furthermore, the dialogue between science and religion is highlighted in studies on social stratification and the changing role of religion in the history of modern societies. Jukka Kortti (2018) investigates the role of the Finnish intelligentsia in the early twentieth century and Peter Scharff Smith (2004) studies the implementation of the modern penitentiary system, which drew on religion as a technology of the self.

This bulk of research brings out the Nordic context in some ways, and in some pieces of research it does perhaps form a background, but the societal aspects discussed are not strongly attached to Nordic societies. As such, this research could be done in any other context as well. However, it highlights certain issues of societal significance, such as ethics or the benefits of religion in society, while discussing science and religion. But mostly these issues are discussed globally, abstractly, and intellectually rather than as rooted in the everyday life of people in the Nordic societies. The societal aspects discussed are also fairly narrow in scope, given the breadth of influence that the spheres of life science and religion have on people's lives today, epitomized by new medical technologies.

Empirical Studies on Science and Religion in the Nordic Context

It appeared that we could find a very small number of empirical studies on science and religion in the Nordic countries. There was one study on organ donation by Muslim immigrants in Sweden (Krupic, Sayed-Noor, and Fatahi 2017). In addition, Hilde Frøkedal et al. (2017) explore, in their study combining qualitative and quantitative methods, the national existential group practice run by mental healthcare chaplains in Norway. Outside the medical scope, Tor Arne Lillevol (2016) examines family-based sheep farms as part of the knowledge exchange between local religious culture and the wider industrial business environment. Yet the priority here is not religion or science, but rather the distinctive innovation climate in a Læstadian community.

Despite the scarcity of research on lived interface, we found three educational studies which examine social contexts where the boundary between science and religion is negotiated in practice. A Danish study investigates academic practices in public universities (Schepelern Johansen 2011). It discusses how the distinction between religion and science was produced in daily academic practices at two departments for the study of religion at universities in Denmark. Birgitte Schepelern Johansen concentrates on how students of history and sociology of religion are taught the conceptualization of religion and science. In addition, Lena Hansson and Andreas Redfors (2006, 2007) examine how upper secondary students combine religious worldviews with the views on the universe and its origin in their classes. This study shows that such views can differ and yet exist alongside each other.

These studies are clearly attached to the Nordic societies and they highlight several societal dimensions related to science and religion. However, they are very few in number and some of them are more attached to health and the local innovation environment rather than science and religion as such. The three educational studies summarized above begin to pinpoint how boundary constructions take place in different educational institutions, but there is clearly a need to explore the broad variety of institutions where boundaries between science and religion are negotiated and molded.

PROSPECTS OF SOCIAL SCIENTIFIC RESEARCH ON SCIENCE AND RELIGION IN NORDIC COUNTRIES

Based on our analysis of the seventy-seven articles, book chapters, and books, we conclude that social scientific research on science and religion seems to be scarce in the Nordic context. The reviewed research on science and religion does reflect societal discussions. It does bring out certain cultural dimensions and social issues while discussing science and religion, but not specifically in the Nordic context. It also highlights societal aspects of the debates on science and religion, such as ethics and climate change, but these are not necessarily tied to the Nordic societies and discussions but rather are global.

We found very little empirical and social scientific research on science and religion and very little research that would take local Nordic specificities into account. As is typically the case in philosophical research, most of the studies are focused on universalist first principles and very few take stock of institutional and social landscapes (for more on the scope of philosophy of religion and the sciences, see Visala and Vainio 2018). Based on this, we can conclude that in the Nordic context there could be room for social scientific research conscious of the Nordic environment, a culture that is traditionally Lutheran yet becoming more and more multicultural. We propose that social scientists could study the science–religion interface in different organizations and from the point of view of people in diverse life situations and occupations such as researchers, medical doctors, nurses, teachers, lawyers, and pastors.

It seems that educational research has already recognized this need and there are some studies where religion provides a context, but these do not necessarily include science. More interdisciplinary interaction between social scientists and educational researchers would be needed to study how students understand the boundary between science and religion and how teachers act in conflict situations involving debates about science and religion. This would be needed to understand more deeply the ways in which people live with their religious affiliations in schools, universities, and other educational institutions.

Another potential emerging area of collaboration for social research is cognitive science, which is relatively well studied in the Nordic context. We did note from our research material a fairly large amount of research that dealt mostly with the relation between cognition and religion or between the field of the cognitive sciences and other disciplines. The perspectives of cognitive science embraced such themes as naturalness of religion (Addis 2012) and the role of intuition compared to explicit religion (Pyysiäinen 2002; Järnefelt et al. 2015). There might be room for creatively combining social science and cognitive science to study science and religion that would be rooted in the everyday life of people in the Nordic context as well as beyond.

We may also, again tentatively, point to an implicit “secular” backdrop to research on science and religion in the Nordic countries. That is, most studies assume that the secular is an “empty” space onto which “religion” is grafted and that science is one of the flashpoints where the graft takes hold. However, there is very little socially or historically contextualized examination into the structure of the “secular,” or on how it coproduces the “religious,” such as is now emerging in critical studies on secularism (e.g., Asad 2003; Fitzgerald 2015). Moreover, the studies typically ignore how this coproduction is located in the institutionalized landscape of these countries. Unpacking that genealogy in the Nordic context remains an important task to be undertaken when probing the discursive constructions and interface of science and religion.

Overall, based on our analysis of this limited data set, we argue that there seems to be a need to expand the scope of the study of science and religion in the Nordic context. This expansion could, in our view, be done by bringing in social science perspectives and approaches to the study of science and religion.

The strong philosophical-theological-historical focus of Nordic studies on the topic calls for self-reflection, in which social scientists could offer valuable tools. For instance, bibliometric research on the development of philosophical, historical, and theological traditions of science and religion could analyze themes of study and their development over time. There may be some specificities in the work of Nordic researchers that could be compared with global trends and emphases of research. Bibliometric research could also map the main topics and thinkers that have been studied, or be focused on networks of Nordic researchers within Nordic countries and beyond. Alongside bibliometric research, researcher interviews could give valuable information about what themes on science and religion have been relevant to studies in the Nordic context and why. Through these approaches, we could begin to understand the need for discussing science and religion in the Nordic context and the societal relevance and orientation of the research.

In relation to this, the gender of philosophers and thinkers that are studied, the people whose discussions have been seen as valuable, and the themes that have been regarded as philosophically or theologically relevant shape the discursive arena and include and exclude certain voices in the debate. It is striking that feminist philosophers were not particularly present in the debates. Thus, there is more sociological work to be done on what forms the research on science and religion has taken and what interests have shaped their background.

Stronger sociological theoretical contributions would be important in the expansion of the research scope. In the Nordic articles, we could identify some traces of sociological theoretical perspectives, such as reference to Michel Foucault's concept "technologies of the self." Some more theoretical discussions could be brought from general sociology. Also, it is surprising that the sociology of science or science and technology studies did not come up as either theoretical or empirical perspectives in the Nordic science–religion articles. However, as Gülker (2019) points out, this situation prevails also in the global research on science and religion. Thus, perspectives such as actor network theory, epistemic communities, and postcolonial research, which have enriched understanding about the social worlds of various actors in different fields and different geographical locations, could also be fruitful for the study of science and religion. Some STS perspectives, like the concept of "boundary work" (Gieryn 1999), have already been successfully used in studies on science and religion (Ecklund 2010), but not in the Nordic context.

The question based on STS theoretical perspectives could be formulated in the following way: do scientists, while they think and do science, simultaneously think of religion or engage in various types of "transcendences" (Gülker 2019)? The question is related to the identities and self-understanding of academics, which point toward higher education studies on academic identities and identity work (Henkel 2000), which could be fruitfully used in the studies of science and religion. Overall, STS could enrich what is meant by both "science" and "religion." Science is not only the natural sciences, even though most articles in our Nordic data set suggest so. However, in our data set we found some seeds of issues relevant for health sciences and medicine as well as issues meaningful for environmental studies. In empirical studies we found education emerging, which means that social science could itself become an interesting object of study in the future.

There is great potential especially for qualitative, for instance, ethnographic social research on science and religion in studies of religious plurality in the Nordic context. Through this type of research, the focus of studies could be on the individual transgressing science and religious boundaries and his or her multiple intersecting social worlds and cultural identifications such as gender, race, ethnicity, or sexual orientation. The

concept of “vernacular religion” or “religion as it is lived” (Primiano 1995, 44) could offer fruitful starting points for such research on science and religion. The central question in this type of research would be how people negotiate and “survive” when living near or at the science–religion boundary. There would be potential in this type of research to analyze how the boundary between science and religion is actually lived and acted in Nordic societies in a multitude of organizations and societal subgroups as well as at the individual level, emphasizing the actual lived interface on science and religion. In research drawing from the ethnographic tradition, there could be a much broader set of institutions than that in the Nordic research on science and religion we found in our data set. For instance, schools, universities, health clinics, courts, and parliaments could be focused on. There would also be a need to find specific, potentially growing population groups such as migrants, minority religions, and new spiritualities for the scope of science and religion studies to be broadened.

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