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Do Thor and Odin Have Bodies? Superperception and Divine Intervention among the Old Norse Gods

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Abstract: In Old Norse mythology, gods like Freyja, Odin, and Thor are usually characterized as human-like creatures: they walk and ride animals, eat, grow old, and even die. Was there more to conceptions of Old Norse gods than those anthropomorphic representations? This article presents evidence that the gods of early Scandinavia were sometimes thought of as superperceiving and able to act in ways that defied the limitations of a physical body. It engages with and challenges theological correctness, a prominent theory in the Cognitive Science of Religion, to elucidate the sources of Old Norse religion and the cognitive and contextual foundations of the representations of gods encountered there. Following an examination of the mechanisms through which Old Norse gods' superperception and disembodied action were narrativized and rationalized, the article concludes with a discussion of the consequences of non-anthropomorphic representations of the gods for understanding Scandinavian worshippers' everyday religious life.

Keywords: Old Norse mythology; Old Norse religion; theological correctness; anthropomorphism; monitoring; Cognitive Science of Religion; Thor; Odin

1. Introduction

When I was very young, I was taught in school how I should wait to receive the Eucharist in church. I was told that I should bow my head and not look up because, if I did, I would see Jesus Christ hovering near the church's ceiling, watching and listening to my prayers, and that he would be angry if I caught sight of him. The next time I was in church I did sneak a look up and was frustrated when I saw nothing more than a few cobwebbed rafters. My memory of that class has blurred a little over time but nevertheless stuck with me, I think due to the contrasting images of the Christian god that it established: the anthropomorphic god that my teacher thought I would connect with, who disappointed me with his absence and who I had believed could be fooled by a quick upward glance; the god who could listen to prayers that were not being said out loud; and the god who was somehow present in the wafer of bread that was destined for my tongue.

That flexibility in the representation of godhood is something I have wondered at, too, when considering the resolutely anthropomorphic imagery that survives of the Old Norse religion, the group of pre-Christian traditions that existed in early Scandinavia and its diaspora. Was there more to Old Norse gods like Thor, Freyja, and Odin than those anthropomorphic representations? The study of Old Norse religion, for a long time oriented by philology, comparative mythology, and the legacy of national romanticism, as well as by the nature of the extant sources, has at times over-relied on mythological motifs for its understanding of day-to-day perceptions of the Old Norse gods (Nordberg 2012, pp. 123–24). While many good studies have attempted, though material culture, textual analysis, and linguistics, to step beyond this state of affairs (e.g., Brink 2007; Murphy 2018), in this article I take a more direct approach to the question of whether there were once non-anthropomorphic

representations of Old Norse gods.[1] In the course of this investigation, I will also discuss the significance of possible non-anthropomorphic representations for scholarly models of Old Norse religion and the very basic problem of separating myth from other aspects of religion. For reasons of space, I will limit myself to investigating conceptualizations of the Old Norse gods (known in Old Norse as *æsir* and *vanir*); incorporating other creatures, such as so-called "land-spirits", or impersonal forces like fate (sometimes represented in human-like form as a group of females (e.g., Larrington 2014, pp. 110, 148, 155; Snorri Sturluson 1995, p. 18; Bek-Pedersen 2013)) would, however, enrich my argument further, and they do figure into my wider project (on the correspondences between the various agents and phenomena of Old Norse religion, see Bek-Pedersen 2013; De Vries 1970; and Simek 1993).

From the outset, it should be acknowledged that non-anthropomorphic representations of the gods may never have existed or become a norm in Old Norse oral tradition without the technology of long-form writing to facilitate the spread and elaboration of such complex, less easily memorized concepts (Barrett 1998, p. 617; Tremlin 2005, p. 80; Taggart 2015). That is the simplest explanation for the paucity of non-anthropomorphic gods in the material that survives, though non-anthropomorphic representations of gods like Thor and Odin may have been prevented from enduring by other factors, such as the Christian environment in which sources on Old Norse religion were ultimately recorded (and in some cases composed) and in which images of non-people-like gods would have been heretical (see further Taggart, under peer review).

The basis of my attempts to overcome my source problems will be engaging with *theological correctness*.[2] A theory that emerged from experiments in the field of Cognitive Science of Religion (CSR) in the late nineties, theological correctness systematizes and attempts to explain the cross-cultural and historical indications that individuals can possess multiple representations of a single deity, featuring varying levels of anthropomorphism and irrespective of social or political influence (Barrett 1998; Barrett and Keil 1996; on the historical evidence for such a split, see Shtulman 2008, p. 1124). The theory will be criticized below over the original experiments' methodology and for how it stands up to real-world religious situations. Nevertheless, it is worth assessing and building on here, given its potential for enhancing knowledge of Old Norse religion and the cache it has in CSR, where it has been accepted with little correction among those employing it and conducting overviews of the discipline (e.g., Lawson 2017; McCauley 2017; Slone 2004; Tremlin 2005).

2. Theological Correctness

In 1996 and 1998, Justin Barrett, along with Frank Keil in the earlier year, published two articles that noted and attempted to resolve the apparent disconnect between two modes of representing deities. In the first, more complex, mode of representation, supernatural agents are held to be ontologically entirely different from humans: omnipotent, omnipresent, omniscient, non-material (Barrett 1998, pp. 611, 613; Barrett and Keil 1996, p. 220). The second mode anthropomorphizes the deities in question, presenting them as possessing emotions, as existing within a temporal and spatial framework, as limited in their ability to perceive or act upon the world, and so on (Barrett 1998, pp. 611–12; Barrett and Keil 1996, pp. 221–22).

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[1] The word *anthropomorphism*, referring to the assignment of human characteristics to non-human entities, will largely be used in this paper in the sense of having human-like bodies through which to interact with the world. The anthropomorphic quality of having mental states like desires and knowledge is set aside, except at certain points in this paper where I address that topic explicitly and will indicate that the term is being used more expansively.

[2] The label *theological correctness* has been quibbled with in the past (e.g., Purzycki and McNamara 2016, p. 158; Slone 2004). I will persist with *theological correctness* here as it does reflect the effect of authority on the transmission and uptake of religious representations and in view of the currency the label has achieved within CSR. Nonetheless, theological correctness may be better thought of as "social" correctness, as a spur to greater contemplation of it in relation to social relations and pressures. Barrett and Keil use *theological* to encapsulate complex god-concepts, with attributes like omniscience and omnipotence, that correspond with systematized and culturally sanctioned teachings. They disregard the intellectual themes, like exegesis, hermeneutics, soteriology, and theodicy, that are typically folded into the term. When *theological* is used in this article, it is in the same register as that of Barrett and Keil.

To investigate the existence of these two strands of religious representation, Barrett and Keil embarked on a series of studies in the United States and in northern India. These comprised a survey, to record how subjects described their gods when directly asked, and a story-processing exercise that examined the ways in which subjects refashioned narratives according to pre-existing conceptions of their gods. The latter asked readers to consider their gods participating in everyday situations, such as helping an injured child, while being careful not to imply that the gods were acting anthropomorphically. Subjects were then given yes/no questions about those scenarios or, in the final study of Barrett and Keil's 1996 article, asked to paraphrase the narratives (Barrett and Keil 1996, pp. 224, 244–45). Barrett and Keil found that participants from both countries generally professed traditional theological conceptions of their gods in the surveys but responded to questions about the stories using representations of agents that had properties like senses, were limited in their awareness of the world, performed tasks sequentially, and moved from place to place (Barrett 1998, pp. 615–16; Barrett and Keil 1996, pp. 228–33, 235–40; Pirutinsky et al. 2015; Chilcott and Paloutzian 2016). This is theological correctness: the tendency for worshippers to express one belief, which corresponds with authoritative or socially dominant representations, while also utilizing dramatically different or contradictory concepts.

Barrett and Keil link the production of parallel god concepts with cognitive processing demands. They reason that when the brain is not being stressed by factors like time constraints, worshippers are more able to produce cognitively taxing, complex, non-anthropomorphic concepts of gods; when the demand on cognition is increased, simpler god concepts are used (Barrett 1998, pp. 612, 616; Barrett and Keil 1996, pp. 241–43). Although Barrett and Keil were initially cautious about settling on this explanation (Barrett and Keil 1996, pp. 241–44), Barrett was more confident by 1998 (Barrett 1998, pp. 612, 616–17) and he began a 1999 article by demarcating his two streams of religious conceptualization and supplying this dual model of cognition as their origin (pp. 325–26). Later restatements of this research almost always either accept or expand on Barrett's explanation (e.g., Pirutinsky et al. 2015, p. 33; Slone 2004; Tremlin 2005, pp. 70–72),[3] but suggest an assortment of labels for the two modes of representation of gods (Tremlin 2005, p. 73). For the sake of simplicity and to avoid the semantic burden of terms like *natural*, *theological*, or *folk religious*, I will call the first set of ideas *reflective* and the second (i.e., more anthropomorphic) *automatic*.

Is It Correct?

The focus of this paper is not on theological correctness but whether non-anthropomorphic god concepts were used by adherents of pre-Christian traditions in Scandinavia. Nevertheless, because theological correctness is the prism through which I am examining that topic, the original experiments ought to be scrutinized in some depth. Much could be written about those experiments, not to mention those which follow in their wake (e.g., Barlev et al. 2016; Barlev et al. 2018; Pirutinsky et al. 2015; Shtulman 2008). As such, I will concentrate here on the points I see as most pertinent: potential problems with their methodology and the extent to which immediate and cultural contexts dictate a concept's automaticity.

The most obvious issue with the Barrett and Keil studies is that they never eliminate the possibility that automatic representations are a product of individuals' cultural contexts, and one of their experiments actually promotes this deduction. In that experiment, Barrett and Keil compare the conceptualization of the Abrahamic god with those of Superman and of supernatural

[3] Dual-process and dual-system models of cognition are popular in various branches of the cognitive sciences. These often-competing models do not figure enough into this article's arguments to be explored in detail here, suffice to say that they can align well with the schema of conceptualizing gods outlined by Barrett and Keil and have a substantial basis in empirical evidence (Evans and Stanovich 2013; Pirutinsky et al. 2015; Tremlin 2005), though findings are sometimes inconsistent and some researchers have disputed the basic dichotomy such models imply between subconsciousness and intentionality (e.g., Keren and Schul 2009; Melnikoff and Bargh 2018a; Melnikoff and Bargh 2018b; Newstead 2000; Pennycook et al. 2018).

agents that have been created for the experiment and are described for participants directly before the story comprehension tasks begin (Barrett and Keil 1996, pp. 233–37). All of these agents were anthropomorphized by subjects, suggesting that a bias in that direction does exist, but the novel supernatural agents were the entities most easily represented without anthropomorphism. According to Barrett and Keil, these results imply that the bias can be nearly erased with priming (Barrett and Keil 1996, p. 237), which may be true—the Abrahamic god only significantly differed from Superman and a control group when participants were primed to think about the deity in non-anthropomorphic terms beforehand, so immediate context does have some impression on worshippers' representations (Barrett and Keil 1996, p. 236).[4] An alternative (and not mutually exclusive) way of looking at these results would be to note that the experiment's participants have not had a lifetime of identifying the novel agents as agents and, hence, to consider the bias toward anthropomorphizing the Abrahamic and Hindu gods as a product of environment as well as cognition (Barrett and Keil 1996, p. 237; Chilcott and Paloutzian 2016; Shtulman 2008).

A bias toward anthropomorphization may be fundamental to human cognition, which, after all, is developed from an early age through interactions with the world to view agents as, e.g., constrained by physics and possessing psychologies (Barrett 1998, p. 610; Barrett and Keil 1996, p. 242; Hodge and Sousa 2018; Shtulman 2008; Shtulman and Lindeman 2016; Barrett 1998, p. 609). Barrett and Keil also point out that children appear to develop concrete, rather than abstract, notions of gods first (Barrett and Keil 1996, p. 244; Barrett 1998, pp. 611–12; for a more nuanced discussion of this process, see Shtulman 2008 and Shtulman and Lindeman 2016, pp. 647–48), perhaps as a result of being taught these notions first or only being cognitively developed enough to manage them (Shtulman 2008, p. 1134). In this context, the results of Barrett and Keil's comparison between the Abrahamic god, Superman, and novel supernatural agents should not be surprising. Even automatic responses to agents—in general, but especially to particular supernatural agents—are likely learned.

Priming played a role in the concept that Barrett and Keil's participants produced, and the investigators' own actions bear this out. Worried that participants were being primed with reflective concepts, they altered the order of the experiments' tasks, moving the story task to a fixed place before the questionnaire.[5] Their decision implies that priming could be a factor in the other direction as well, with the placing of the story task first reducing the likelihood of a consistent set of reflective concepts being reported. The literary context (regardless, in this case, if it is an oral or written exercise) and especially the involvement of other agents in the narratives may also have prompted participants to use anthropomorphic representations of deities. While Barrett and Keil do demonstrate that the use of anthropomorphic concepts is not purely a literary device (Barrett and Keil 1996, p. 223), the notion of a god intervening in a narrative reality with definite temporal and spatial qualities could motivate representations of the gods that are bounded in those ways. Certainly, humans grow up learning to treat agents, even supernatural agents, in narrative contexts as anthropomorphic (Barlev et al. 2016, p. 4; Barrett and Keil 1996, pp. 241–42; Shtulman 2008; Tremlin 2005, pp. 75–76).

Because some of Barrett and Keil's studies allowed their participants to work at their own pace and re-read the narratives while paraphrasing or answering questions about them (Barrett 1998, 614; Barrett and Keil 1996, pp. 236–40), the anthropomorphism is most likely not a memory error but the product

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[4] The term *priming* signifies exposure to a stimulus that influences subsequent behaviour.

[5] Besides changes in the methodology (in the order of experiments and from a listening to a reading exercise (Barrett and Keil 1996, p. 225)), other minor issues might have affected Barrett and Keil's results. They allude themselves to the smallness of their groups of participants (Barrett and Keil 1996, p. 240; **?**, p. 618 [n. 8B5-religions-559208), and they exacerbate this by breaking the groups down into sub-groups of as small as 7 people. Furthermore, Barrett and Keil's college students in the United States are homogenous in terms of their average age of 20 but express a range of religious affiliations (1996, p. 225); Barrett's 1998 group was more consistent in its religious affiliations (largely Hindu, though alongside three Muslims) but the ages range from 9 to 55 years old and so does their level of educational attainment (p. 614). Like is not being compared with like and the *ceteris paribus* assumption on which the experiments are constructed is undermined. Moreover, age and educational attainment may impact the generation, transmission, and use of religious concepts (e.g., Gregory and Barrett 2009; Casler and Kelemen 2008; Barrett 1998, p. 616).

of subjects remoulding the story.[6] Equally, allowing participants to complete the exercises at their leisure in this way undermines Barrett and Keil's argument that participants could not have used more cognitively cumbersome concepts like omniscience and omnipresence due to the cognitive pressure induced by time constraints. Barlev et al. (2016) address this point by looking at response times to statements that, for them, variously agreed and disagreed with reflective and automatic positions, such as "God can hear what I say out loud". However, in that study, participants were accurate only when a time limit was actively imposed; when they were pressurized to answer but no time limit was set, cognitive pressure was apparently not increased, which ultimately supports my conclusions regarding the levels of cognitive pressure in Barrett and Keil's experiments. Moreover, in real-world situations like conversations, time-limits are not being actively imposed and the conditions are very different from those of the experiments, which focus on recreating or recounting narratives. Cognitive pressure, engendered by a factor like time constraints, therefore could have played a part, but other considerations are also germane to this discussion. Given this, along with the degree to which context may influence the likelihood an individual produces one form of representation or the other, the possibility should be kept in mind during the below analysis of Old Norse material that other cognitive models besides the dual-process one preferred by Barrett and Keil might better explain their results, especially models that are based on the dynamic engagement of different psychological processes.

From a philological perspective on Old Norse religion, one dominated by mythological representations of deities (as observed in the introduction), the results of the survey portion of Barrett and Keil's experiments are worth inspecting in isolation. Barrett and Keil encountered a great deal of variety in the theological positions that were stated with some participants using quite anthropomorphic representations even there (Barrett 1998, p. 615; Barrett and Keil 1996, pp. 228–29). In the survey taken for Barrett's article from 1998, for instance, ten participants out of fifty showed anthropomorphism as a strong tendency, while three of the items surveyed did not have significantly more non-anthropomorphic answers than anthropomorphic (Barrett 1998, p. 615). Benjamin Grant Purzycki found similar results when quizzing Christians and ethnic Tyvans on the information that supernatural agents may have access to (Purzycki 2013). The consensus in Tyvan respondents' reflective statements in this area was very weak (Purzycki 2013, pp. 170, 175). Christian responses were less varied but still not as uniform as might be expected: Purzycki shows statistically significant general trends in the conceptualization of the Christian god (Purzycki 2013, p. 169), but with many practically significant deviations. Not everyone in the study's American Christian context follows the theologically correct conception of their god. On the basis of the Tyvan responses, Purzycki wonders if considerable variation in conceptualizations of omniscience might exist in most traditions (Purzycki 2013, p. 177), and this may be extended to reflective concepts in Old Norse society as well as to Christian America.

3. Gods' Bodies

In the context of theological correctness and its problems, I will now examine the presence of anthropomorphic and non-anthropomorphic representations in Old Norse religion. After that will follow an investigation of the ways in which Old Norse religion corresponds with Barrett and Keil's theory (or clashes with it) and the consequences for the study of that religion.

First, a brief note is necessary on the nature of the sources for the following. Any inquiry into Old Norse religion must acknowledge that its sources offer only a fragmentary and sometimes misleading picture of northern pre-Christian traditions. Recorded and at least partly composed by Christians, a great deal of material regarding religious behaviours, imagery, and philosophy has unquestionably been lost, particularly for any stage before the last era of Old Norse religion. Some of the materials may reflect a Christian understanding more than a pre-Christian one, including important texts like Snorri Sturluson's *Edda* (Snorri Sturluson 1995) and some of the anonymous

[6] One set of experiments was designed as a recall exercise (Barrett and Keil 1996, pp. 224–34).

mythological poetry (Larrington 2014), which both persistently anthropomorphize deities. That tendency could arguably even be linked to the euhemerizing impulse that was common in medieval Icelandic literature (Simek 1993, pp. 75–76). My goal with this article is not to critique the merits of these sources—full studies of these issues have been conducted elsewhere (e.g., Clunies Ross 1994; De Vries 1970; McKinnell 1994; Sundqvist 2016)—and, in any case, there is not the space available to communicate the individual philological and social contexts of each text (although I have included some comments along those lines below to orientate more general readers). Nevertheless, the issues are alleviated to a degree by comparing the testimony that survives from after the conversion with contemporary textual accounts (such as from runes and a type of poetry known as skaldic poetry), material culture, and iconography. Details and organizing principles from Christian works like Snorri's *Edda* can be verified, rejected, or made plausible by consulting poetic, material, and visual evidence that, as far as we know, pre-dates extensive Christianization (e.g., Bragi Boddason 2017; McKinnell et al. 2004; Þjóðólfr ór Hvini 2017; on the necessity of this approach, see further Clunies Ross 1994, pp. 15–20; McKinnell 1994, pp. 13–20). The materials below have therefore been drawn from both pre- and post-Christian sources. Where similar characteristics appear in several of these sources, it is worthwhile negotiating models of religion that take those features into account without making absolute claims to truth.

3.1. Anthropomorphism

Evidence for anthropomorphic representations of Old Norse gods is abundant in the sources that remain. In literary accounts, both those dated from before and after Christianization, the Old Norse gods are mundane in many ways: they walk or use animals for transport (e.g., Larrington 2014, pp. 38, 58, 76; Snorri Sturluson 1995, pp. 13, 18, 49–50; Þjóðólfr ór Hvini 2017, stt. 14–15); possess senses (e.g., Larrington 2014, pp. 4, 7, 27, 58; Snorri Sturluson 1995, pp. 25, 39, 50); communicate through speech (e.g., Larrington 2014, passim; Snorri Sturluson 1995, passim); eat and drink (e.g., Larrington 2014, pp. 49, 51, 74, 96; Snorri Sturluson 1995, pp. 39, 41–44, 77; Þjóðólfr ór Hvini 2017, st. 2); can grow old and even die, whether during an eschatological battle or before (e.g., Larrington 2014, pp. 8, 10–11, 45; Snorri Sturluson 1995, pp. 49, 54, 56; Þjóðólfr ór Hvini 2017, st. 10). When performing the most remarkable feats, the gods often do so through distinctly embodied means, creating the world from the body-matter of a dead enemy and performing magic like resurrection using tools like runic magic (e.g., Larrington 2014, pp. 34, 54; Snorri Sturluson 1995, pp. 11–13; Kure 2003; Taggart 2013). Odin's primary quality in the extant Old Norse myths is wisdom (McKinnell 1994, pp. 98–99, 102; Schjødt 2013, p. 12), yet the god is not presented as omniscient; rather, Odin is constantly searching for knowledge, especially to avoid the end of the world (McKinnell 1994, pp. 102, 114). Typically he gains this knowledge through consultation with others (e.g., Larrington 2014, pp. 4–12, 32, 37–46, 235–37) or through tools, such as his ravens Huginn and Muninn and the chair Hliðskjálf (Larrington 2014, pp. 48, 51; Snorri Sturluson 1995, pp. 13, 20, 31, 33, 51). The gods are no less physically delimited when portrayed on objects like stones or bracteates (e.g., Altuna 2008; Bunge 2019; Ledberg 2008; McKinnell et al. 2004, pp. 122–23; Wicker 2015); they may even be depicted on some items with symbols approximating to modern-day speech bubbles (McKinnell et al. 2004, pp. 81–83). Many texts likewise report the presence of idols (e.g., Adam of Bremen 2002, pp. 207–8; Ibn Fadlan 2012, pp. 47–48; Kormákr Ǫgmundarson 2017, st. 5; Smiley 2001c, pp. 133–34; Sundqvist 2016), with such anthropomorphic images being as central to worship as the crucifix is in many Christian traditions.[7]

[7] The performative role of Old Norse idols is a fascinating topic that would occupy too much space on its own to delve into here. However, idols co-exist in many cultures with discourses incorporating omniscient and omnipotent gods, often straddling uncertainly between symbolizing and manifesting deities (Boyer 2001, pp. 85–86), and the same may be true for early Scandinavia.

Many more anthropomorphic features could be collected from the portrayals of Old Norse gods in ethnography, narrative, poetry, and archaeology. Nonetheless, this short accounting should illustrate how easily such evidence is encountered in the sources that survive.

3.2. Non-Anthropomorphism

Two broad categories of evidence will be put forward as examples of conceptualizations of Old Norse gods that are not anthropomorphic: divine monitoring and divine action. The first category examines an assumption and/or conception that Old Norse gods were able to see other agents' actions without being physically proximate to them (Barrett 2004); the second considers places in which Old Norse gods are conceived as intervening or assumed to have intervened in the world without physical action.

I will only present here as many instances from these categories, in as much depth, as is necessary to facilitate the discussion of my research questions that follows. Further examples could be adduced, and readers interested in further material related to Old Norse gods' supposed superperception should consult another of my articles, "Did a little birdie really tell Odin?" (Taggart, under peer review).

3.2.1. Monitoring

While there are a number of mythological apparatuses by which the Old Norse gods get knowledge of the wider world, such as Odin's chair Hliðskjálf (sometimes probably a watchtower or other elevated place (Simek 1993, p. 152)), these do not involve the gods watching directly but instead act as proxies or tools to enable superperception (Raffield et al. 2017; Taggart). A limited number of passages in the thoroughly anthropomorphic environment of myth do attribute superperception to gods without such intermediaries, however (alongside other agents like giants, the dead, seeresses, and spirits, who also employ superknowledge or superperception (Taggart, under peer review)).

The plainest of these myths concerns Heimdallr, whose abilities befit his role as watchman of the gods: "[h]e can see, by night just as well as by day, a distance of a hundred leagues. He can also hear grass growing on the earth and wool on sheep and everything that sounds louder than that" (Snorri Sturluson 1995, p. 25; similarly e.g., Larrington 2014, pp. 50, 89). The limits of his senses are never otherwise so clearly delineated by a text, though he is depicted watching over various distant locations (e.g., Larrington 2014, pp. 10 and maybe 50, though the Old Norse is ambiguous; Snorri Sturluson 1995, p. 54). Odin, likewise, possesses a form of mystical vision in one poem, *Grímnismál*, that is introduced as a form of sight in stanza 4 (Larrington 2014, p. 49) and Thor can be called upon from a great distance away by those in danger and suddenly appear (Snorri Sturluson 1995, pp. 35–36, 77–78; Taggart 2018, pp. 81–82).

None of these tropes can be securely attributed to pre-Christian authorship, but have varying claims to reflecting pre-Christian belief (McKinnell 1994, pp. 13–15). Less complicated as sources of evidence and more easily attributed to worshippers of Old Norse gods are texts that refer to direct communication between gods and humans. Most transparent are prayer-like formulations, petitions aimed at gods and ritual actions. Definite prayers are unknown in the extant sources on Old Norse religion, though poetry in the second person addressing Thor does exist (Bragi Boddason 2017, st. 3; Vetrliði Sumarliðason 2017; Þorbjǫrn dísarskáld 2017, st. 2) and, while its actual content is very anthropomorphic, attests to an assumption of superperception by its composers. Writings to gods in the Germanic runic alphabets carved into media like stones and fibulae also signal non-anthropomorphism in pre-Christian conceptualization in Scandinavia and in other Germanic-speaking societies, and may ask for blessings for particular objects or assistance in areas like healing (e.g., McKinnell et al. 2004, pp. 50, 118–21, 127). Many such objects hide their runes from a casual viewer, in places like on the back of the object (e.g., McKinnell et al. 2004, pp. 46–49, 88), without impacting on the supposed ability of a deity or deities to access the message. Younger descriptions of gods like Odin's wife Frigg and Thor hearing and answering such poetry or prayers can

also be encountered (e.g., Smiley 2001b, pp. 12–14; Finch 1965, p. 2), though may, again, be Christian reconstructions of how pre-Christians perceived their gods interacting with humanity.

Of the many testimonies to rituals in northern religious traditions, the most useful here are those that seem to have been performed outside the environs of sacred places (Sundqvist 2016). Among the best of these are a funeral in eastern Europe that, according to a Muslim traveller called Ahmad Ibn Fadlan, is allegedly being watched by a god (Ibn Fadlan 2012, p. 54), sacrifices performed with the intent of improving the weather (Dudo of St Quentin 1998, pp. 15–16), and numerous occasions of Icelandic settlers asking agents like Thor and the dead to guide them from the sea to suitable places to make their homes (see further below).

The gods are often anthropomorphic in literary situations. The same may be true of the content of messages to gods, whether in the prayer-like poetry addressed to Thor or a runic inscription. Yet the expectations made of those gods exceed the limitations implied by that anthropomorphism, requiring that a deity will be aware of an inscription, a request for intercession, or a sacrifice, in the North or some land far from there, and even though a human observer might not witness the god's presence on the path beside the inscription, on the shoulder of the praying individual, or on the sea alongside a ship. Some anthropomorphizing may be occurring even in the instances listed here—Odin, for example, does *see* that geography in *Grímnismál*—but few of them offer much proof that the mechanisms of divine superperception were being conceived at all. It may simply have been assumed that such godly acts were possible without reflecting upon how they were achieved.

3.2.2. Action

This second set of evidences concentrates on reports of divine intervention by the Old Norse gods.[8] A fuller study of this material, looking at it in terms of ritual and causal opacity (Whitehouse 2017, pp. 48–50) and/or magical action (Boyer and Bergstrom 2008, pp. 121–22), is desirable but not possible in the space available for this article. Instead, my focus here is on indications and recollections of situations in which intervention was sought from or imagined being undertaken by Old Norse gods but the mechanisms of that intervention were obfuscated or not represented. The uses and omissions of anthropomorphism in such cases respond in intriguing ways to this article's research questions and the framework put forward by Barrett and Keil.

For some descriptions of divine intervention, the mechanisms have been drawn well. Aetiology, for example, directly relates a supernatural agent's action to a physical reaction, such as when Thor creates the tides by drinking too much water from the sea (Snorri Sturluson 1995, p. 45) or a giant in the form of an eagle creates the wind by flapping its wings (Larrington 2014, p. 43). In the Canterbury Charm, likely first written down *c.* AD 1000, Thor seemingly aids against blood poisoning by physically fighting off the ogre-like being identified with that infection (Hall 2009; McKinnell et al. 2004, p. 127). However, even with these examples, and particularly that of the Canterbury Charm, some mystery remains over the means by which supernatural intervention is occurring. In what way does the negative agent cause the illness? Where does its tussle with Thor take place? The charm refers to a *sárþvari* "wound-stick" [i.e., weapon] that causes the illness (McKinnell et al. 2004, p. 127), though the periphrastic nature of the construction "wound-stick" signals already that this may be metaphorical (Hall 2007, pp. 96–118; Hall 2009). Whatever the extent to which these aspects of the illness were represented or ignored, some anthropomorphization is certainly present in the charm.

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[8] Old Norse gods are on rare occasions rendered through terms denoting their power. Often these words are a reflection of physical strength (Taggart 2018, pp. 47–48, 53), but *almáttki* "almighty" (Jakob Benediktsson 1968, chp. H 268) and *rammaukin* "intensified in power" (Einarr skálaglamm Helgason 2012, st. 31; Jónas Kristjánsson and Vésteinn Ólason 2014, p. 466) hint at an understanding of the Old Norse gods that approaches omniscience. The former word may not have been applied to an Old Norse god at all, however, and may be a product of Christian antiquarianism, used under Christian influence, or denote a Christian god incorporated into a Nordic pantheon (Taggart 2018, pp. 35–36).

Many of the rituals mentioned in the section on superperception likely omit anything comparable to the anthropomorphizing narrative of the process by which Thor cures blood poisoning. Iceland's settlers reportedly asked agents like Thor for guidance to homes on the island, an act that implicitly anthropomorphizes the god, who must have a human-like mind to understand the request. Yet the means by which guidance is purportedly given confound anthropomorphization. When one settler, known as Thorolf Mostur-Beard, casts his high-seat's pillars (one carved with an image of Thor) over the side of his ship, he trusts that the god will manoeuvre the pillars toward a suitable site for settling on Iceland without representing how Thor controls the movement of the objects through the water (Hermann and Edwards 1972, p. 45; Smiley 2001c, p. 133). Another settler called Crow-Hreidar rejects the custom of throwing objects like the pillars overboard and simply trusts that he can ask Thor for direction and the god will bring him to his destination—Crow-Hreidar is ultimately persuaded that Thor had been leading the ship itself, pointing the prow towards the area on which he should settle (Hermann and Edwards 1972, p. 90; Wellendorf 2010). Thor's giant hand has not descended from the sky to push along Crow-Hreidar's boat, nor is the god envisaged swimming in the water behind Thorolf's pillars.

No sources that can be dated to pre-Christian times exist to corroborate the Christian records of these settlers' practices. Indeed their pre-Christian character has been much debated (Christian parallels, of varying similitude and with greater and lesser claims to have been known on Iceland, can be adduced), though the import of the pillars, at least, seems likely and such rituals would have served pragmatic, symbolic purposes, in relation to land rights, as well as religious ones (Clunies Ross 1998, pp. 138–54; Sundqvist 2016, pp. 231–35; Wellendorf 2010). Yet the basic underlying notion that a supernatural power could guide, in some unknown way, an adherent is corroborated by other forms of sources and action. Neither, for example, when the gods are conceived guiding a ruler in pre-Christian poetry (e.g., Einarr skálaglamm Helgason 2012, stt. 8, 14, 31; Eyjólfr dáðaskáld 2012, stt. 2, 9) or inspiring a poet (Clunies Ross 2005, pp. 83–84, 93–96) are the mechanics of precisely how the ruler or poet receives their knowledge or direction clear. Even when an image appears to explain the intervention, as with the mead of poetry, a common formulation of poetic inspiration in Old Norse literature (Clunies Ross 2005, pp. 91–92), the means by which a poet imbibed that liquid and regurgitated poetry as a result are not spelled out and the mead itself is often metaphorical (Orton 2007, p. 286). While a god's intercession is recognized, the means by which it is achieved are not.

The same is transparently true for many of the recorded offerings made to Old Norse gods for mercantile success, fertility, or military victory. Ibn Fadlan (2012, pp. 47–48) provides a revealing specimen of this behaviour from eastern Europe. He observes merchants prostrating themselves in front of and leaving gifts for a large wooden idol and asking for favourable trade conditions in return; should a merchant not meet with success, he reappears with further gifts and eventually turns to smaller idols arrayed around the larger one, representing the central god's family, appealing to them to intercede on his behalf with the central god. If success is found, the merchant again leaves gifts, the heads of sheep or cows; when these are eaten after nightfall by dogs, this is taken as a sign that the god of the idol is pleased with his supplicant. The last, obliquely mocking detail of this narrative, presents an anthropomorphic comprehension of the Old Norse gods amongst their worshippers, attributing to them digestion; otherwise the narrative ascribes them a human-like theory of mind, with desires and wants and a changeable level of interest in human action (cf. Taggart, under peer review), and, of course, the idols themselves reflect an anthropomorphic interpretation of the gods' form. Yet notwithstanding all this anthropomorphization, an unambiguous representation is not transmitted of how the god actually intervenes in the world to deliver mercantile success. The mechanics of human, ritual action in this process are plain, but those of divine intervention are mysterious. They may not have been preserved, but equally they may not have been represented by those making the submissions to the idols. Despite that, efficacy is expected from the god; he can intrude in the world at will, and whether he does or not is a matter of whim, not ability. Other accounts of offerings and sacrifices leave a similar impression to that of the merchants and their idols: a libation might be poured to a

god to curry his or her favour (e.g., Adam of Bremen 2002, pp. 207–208; Snorri Sturluson 2011, p. 98; Sundqvist 2016, pp. 356–59), but the exact means by which the god intervenes as a result is rarely made known.

Turning to Germanic runes, the material that survives advances two perspectives on their function in religion and/or magic (a role that is ultimately a minor one in the corpus of surviving runes (García Losquiño 2015, pp. 143–76)). The first perspective has already been noted above: in mythology, gods achieve many of their aims through the intermediary of magical runes. The second perspective is that of real-world rune usage. A god like Odin or another agent might use runes for purposes like (but not limited to) blunting an enemy's weapons, healing, quieting the wind, or childbirth (e.g., Larrington 2014, pp. 33–35, 163–65); some of these literary runes, such as among those listed by a valkyrie called Sigrdrifa, are empowered by supernatural agents, including gods (e.g., Larrington 2014, pp. 163–64; Birkett 2017, pp. 124–26). Where it is the gods who are using runes, although they achieve their divine goals through embodied action, the way in which the runes carry out this action is typically unclear; the non-anthropomorphic element of divine intervention is displaced to a third party as a form of explanation of how the gods affect the world. In some cases, rune-carving must be accompanied by other deeds like shaving the runes off, a speech act, or other ritual acts, like depositing a leek in alcohol, to produce the desired effect (e.g., Smiley 2001a, pp. 82, 142–43; Larrington 2014, pp. 163–64; Birkett 2017, pp. 121–43), but while this enumeration of human doings spells out the ritualistic actions involved (though possibly only from the standpoint of a Christian antiquarian), it does not further clarify how the runes themselves were supposed to source their power or enact their purpose in these literary environments. Regardless, these texts do normally envision anthropomorphic gods.[9]

In the real world, gods could be invoked through runic inscriptions for aid and protection, and many depictions survive of this practice, some of which were cited in the last section on superperception. An inscription may simply be the god's or gods' name(s) (e.g., McKinnell et al. 2004, pp. 48–49) or a word meaning "god" in general (e.g., McKinnell et al. 2004, pp. 128–29). Others are more elaborate, describing the aid that is needed, against pain, for example (e.g., McKinnell et al. 2004, pp. 50–51), or simply that help is required (e.g., Daubney 2015). While a few inscriptions portray the method of the gods' help, as with Thor fighting blood poisoning, the majority of cases do not preserve evidence of the mechanisms of divine aid. The object on which the carving is made may not provide clues either, often being functionally and intellectually unrelated to the purpose of the carving. Divine names, the act of scratching out runes, perhaps the person doing the scratching and/or the timing of an associated ritual seem to have been attributed a sense of power in themselves to explain the perceived efficacy of the runes (MacLeod and Mees 2006, pp. 81–82; Taggart 2018, pp. 164–73).

Apotropaism, pursued through runes or the carving or wearing of symbols metonymic of gods, is worth focusing on specifically, given the directness of the impact that it expects a god's actions to have on the physical world. Few early northern objects or sets of symbols can definitively be said to have had an apotropaic purpose—such objects rarely state their purpose—but a likely purpose of, for example, the many miniature Thor's hammers is as amulets to ward off evil or harm (Taggart 2018, pp. 173–84), and the same is true of a number of those runic inscriptions labelled with gods' names or other terms that may allude to protection (e.g., McKinnell et al. 2004, pp. 33–34, 47–50, 53, 60–63; Moltke 1985, pp. 364–65). In literature, a hero might be made unassailable by a god's runes (e.g., Larrington 2014, p. 34) or magically prepared clothing (e.g., Smiley 2001d). Most famously, perhaps, the god Baldr is made almost invulnerable by his mother Frigg, who secures solemn oaths from the world's dangers—fire, water, metal, diseases, animals, and so on—that they will not harm him (Snorri Sturluson 1995, p. 48). However, the presumption with apotropaic objects and runes must often have been that protection

[9] For an in-depth analysis of the presentation of runes in literature and the dangers of extrapolating from runes' literary usage to historical practice, see Birkett 2017, pp. 121–43.

would be achieved from a symbol or object without physical aid, unless it was perceived as performed by an invisible god, and perhaps the most likely set of mechanisms for this would have been an improvement in an individual's luck. A number of runic inscriptions already request luck or calamity for someone (e.g., McKinnell et al. 2004, pp. 83, 101–2, 171; MacLeod and Mees 2006), and luck itself can be referred to as *gæfa*, *gipta*, words that derive from *gipt*, literally meaning "gift", suggesting a perception that luck was granted by a higher power (Sommer 2007). Luck as the perceived main mechanic of divine intervention is also known from other societies (e.g., Purzycki 2010), and of course amulets and other apotropaic tokens potentially create the cognitive conditions for an improvement in performance that could be observed as increased luck (Damisch et al. 2010; Yeung et al. 2017). Luck, as in many of the above cases, does not imply an anthropomorphic intervention by a deity. Again, the mechanisms of intervention are indeterminate, but gods are probably conceived of as acting in the world of their worshippers without physical bodies being a component of those representations.

4. Discussion

4.1. The Acts of Gods

> [C]ertain phenomena, which we, from comparative perspectives, should expect to be part of the pagan religion, are not mentioned in any of the so-called "reliable" sources … [T]his means that *argumenta ex silentio* should be used with great care: if comparative investigations, or sources within Old Norse religion themselves, suggest the existence of a certain phenomenon, it is not reasonable to reject it just because it is not expressly stated in any "reliable" source. (Schjødt 2013, pp. 8–9)

As I stated above, the caveat that our sources for Old Norse religion do not necessarily accurately reflect that religion as it was expressed and practiced, even in its last stages, is a necessary one for all studies like this one. This study should come with its own, further caveat: even if the early worshippers of Old Norse gods were somehow alive and able to respond to questionnaires like those used by Barrett and Keil—and assuming that the above evidence does add up to a convincing argument—they might not have recognized divine superperception and disembodied intervention. Not even Barrett's or Purzycki's Christians acknowledged those concepts entirely consistently, in spite of coming from communities in which the authoritative stance is to attach omniscience and omnipotence to their god. Adherents of Old Norse gods may therefore have undertaken religious acts and created mythological motifs like Odin's chair Hliðskjálf based on the assumption that their gods were able to hear, see, and help them wherever they were and whatever they were doing, but without that assumption being explicitly and coherently codified and on a widespread enough basis to make it into a surviving source. In the context of these two factors, of the nature of the sources and of the human mind, it is unreasonable to reject the suggestions of non-anthropomorphism out of hand; moreover, some of the examples above, such as Thor's sudden appearances when called upon, seem intentional enough to recommend that non-anthropomorphism should not only be not rejected but taken as a serious proposition. Modern scholars are forced to extrapolate from the material that persists towards clarification and insight, to puzzle out contradictions, work with probabilities and likelihoods, and to realize where there are cracks in our knowledge that might easily go unnoticed. Superperception might be one such crack; the disembodied action of Old Norse gods another.

Old Norse religion is full of ideas that might hold up poorly on closer inspection in the view of a modern mind. These can be colossal notions, almost impossible to wrestle a brain around when encountered in the flow of prose or poetry, a case in point being Iord, who is simultaneously the substance of the earth and a living, breathing goddess and/or giantess (e.g., Snorri Sturluson 1995, pp. 13–14, 168). The paradoxes of such intellectual positions may have generated an exegesis that could not have endured until today, given the conditions of orality and religious change mentioned in the introduction to this article. Some of this mythical thinking may have been metaphorical, at least for some of these texts' audiences and composers: as symbolic as the idea of a god washing away sins with his blood

can be for Christians (e.g., Staff and Bill Keesee n.d.; McKinnell et al. 2004, pp. 148–49) might be that of the Thor's hammer that was never seen fighting against illness by those invoking it.

However, we have no reason to believe that the mechanisms of intervention were not usually taken at face value, where they were stated, no matter how anthropomorphic they were or were not, and even where the envisaged intervention was essentially a mimesis of divine actions, such as with the Old High German Second Merseburg charm, a medical incantation that narrates the healing of the god Balder's foal (Braune 1921, p. 85; Murdoch 1988; MacLeod and Mees 2006, p. 154).[10] This is likely true even where, to us, the causal structures linking human input, divine action, and desired outcome are unclear (a disjunction that has been long been noted (e.g., Firth 1966) and which may be made possible by the combination of superficially unrelated cognitive and social dynamics in creating and sustaining religious behaviours (e.g., Schjoedt et al. 2013)). When, for example, high-seat pillars thrown overboard take on divine characteristics, it seems that, where the gods themselves are not being conceptualized in anthropomorphic form, another physical, worldly phenomenon is utilized to link human and divine actions and agency instead. The dichotomy between the literary presentation of runes and some of their uses in real life further bears out this point. Runes are implicated in literature in the narrative explanation for the superhuman acts that Odin, at least, is depicted undertaking. In contrast, the gods can be the source of real-world runes' power or the means by which an inscription's entreaty is carried out (a role the gods can also take when non-divine agents like Sigrdrifa use runes in literature). The urge to locate the gods as the source of aid in these instances—unless they are unavailable for narrative reasons—corroborates Adena Schachner and Minju Kim's proposition that the involvement of an agent or agents is the default explanation for order-providing structures and actions in the environment, a default that is overridden where other causal mechanisms can be inferred and are more appropriate (2018). When the runes were the concrete reality, gods were used, and vice versa when the gods were represented in tangible terms—even if, in cases like Thor's battle against blood poisoning, some inscriptions do articulate a more involved and anthropomorphic process. Even there, an additional distinction could be drawn between instances in which the runes themselves were viewed as an active agent in influencing reality and those in which they reported, rather than stimulated, that influence, i.e., the runes in question may have been perceived as describing the process of Thor's healing rather than having a part in bringing about healing themselves. The epistemology of divine deed and monitoring is nevertheless always at least partly concealed, thereby surmounting the non-natural character of those ascribed properties of gods. Generally, the need for explanation is obviated by displacement to an obscuring mechanism, concealing the uncertain causal structures between action and expected effect in the world.

I do not write this to patronize Old Norse worshippers. In the twenty-first century, we treat science, medicine, and religion in much the same way, accepting a different range of unseen mechanics to explain results in those domains. How many people understand the mechanism of action of paracetamol? Even among pharmacologists, how the medication works is unclear (Ghanem et al. 2016), yet we continue to take it, knowing that it will be helpful in treating fever and pain, based on experience and the information conveyed to us by social authorities (on the role of factors like these in successful information learning, see e.g., Jiménez and Mesoudi 2019; Legare and Nielsen 2015). Knowledge of the mechanisms involved is not necessarily a major influence on the credence given to actions carried out in spheres like medicine or religious traditions; in the latter, factors like the repeatability of a ritual or presence of iconography can also have a greater effect on perceptions of efficacy (see e.g., Legare and Souza 2012). Moreover, just as with luck above, early charms or talismans may have seemed effective, particularly in areas like medicine, due to the psychological component of healing and accompanying medical acts such as the use of physical agents in haemostasis (Murdoch 1988, pp. 361–62; Wager and Atlas 2015). The causal chain invoked for acts of Old Norse divine intervention might be as obscuring as it is

[10] In Old Norse and Modern English, *Balder* is typically rendered as *Baldr*, as it was earlier in this article.

elucidating, but that chain only needs to be fully composed enough to justify the possibility of that divine intervention and the repetition of whatever human actions are undertaken to elicit it.

The question of whether superperception and disembodied action actually entail non-anthropomorphic representations of gods can be debated further. In some cases, even when the gods are supposed to be aware of the world or acting on some level that is hazily situated between the metaphysical and the physical, the gods are attributed physical bodies and intervene in reality through them. In others, where mechanisms are more vaguely conceived of and perhaps were not relevant at all, anthropomorphism is not a concern. However, it is not necessarily non-anthropomorphic gods that are being conceptualized; more accurately, these are conceptions of gods that are not anthropomorphic, i.e., in which a physical body is not a relevant concern and therefore not part of the representation of intervention rather than a specifically disembodied god.

A split might nevertheless be delineated between *explanans*—the god with his hammer fighting illness, the runes that resurrect, the chair Hliðskjálf on which Odin sits to gain knowledge, or the Christ floating in the air above my bowed childhood head—and the phenomena that are to be explicated, i.e., superperception and disembodied intervention. Anthropomorphic or not, these *explanans* look to me to be narratives of process laid on top of these conceptions of gods in which anthropomorphization is not represented, in a way that echoes Barrett and Keil's delineation between reflective and automatic concepts but does not map precisely onto that schema (discussed further below; see also Schachner and Kim 2018, p. 34). More precisely, these *explanans* appear to have arisen as narratives that exist within, contribute to, and are guided by their cognitive, cultural, and literary ecosystem. Within that ecosystem, superperception and disembodied action are not always relevant and as such do not always underpin representations of gods. The Old Norse gods can be held back by their physical bodies, Thor being unable to cross a river (Larrington 2014, pp. 65–73) and Baldr being killed by a spear (Snorri Sturluson 1995, pp. 48–49). When superperception and disembodied action are relevant, they are rationalized and elaborated into motifs appropriate to the ecosystem in which they are to be found. In their article on supernatural monitoring in Old Norse religion, some of the proofs Raffield et al. (2017) offer for a lack of superperception may themselves be articulations of this process, such as the chair Hliðskjálf or Odin's ravens. As noted above, Odin's principal mythic occupation is searching for knowledge, especially to avoid the end of the world. Accordingly, he cannot be rendered as innately omniscient or the central plank of the god's presentation and the dominant narrative arc of the extant mythology would be undermined. Odin's fallibility is central to the performance of the god's superperception and feeds into the tone and themes of many of the myths that relate to him. The high-seat and birds are striking images, developed from common markers of prestige; the latter is a motif deeply associated with battle and poetry, two of Odin's other most prominent associations (Simek 1993, pp. 240–46). So too the only clear, surviving examples of Thor's superperception concern the god's main literary role of defender (Taggart 2018, pp. 80–83), the extant mythic situation in which superperception is most relevant to the god. Even Thor's healing activities are visualized in a mode in keeping with the god's mythical characterization; Thor's quickness to violence is vital to the literary portrayal from which the god's methodology for healing blood poisoning would seem to follow on. To heal Balder's foal, on the Old High German Second Merseburg charm, Odin (in concert with other gods) simply performs magic, which may be representative of how Odin, at least, theoretically interacted with the world more generally (Braune 1921, p. 85; see also Woden in the Old English *Nine Herbs Charm* (Gordon 1954, p. 93)).[11]

[11] It would be useful to further analyse the explanatory motifs for superperception and disembodied intervention in light of recent attempts to construct a framework for understanding magical reasoning. Some violations of intuitions of physics, psychology, and biology (of the sort that might be categorized as magic) are deemed on a widespread basis to require more effort than others; for example, conjuring an animal into existence is repeatedly reported as more difficult than changing one's colour, and this effect that may be intuitive or related to real-world knowledge, especially to the explanatory structures provided by cultural authority figures (McCoy and Ullman 2019; Shtulman and Morgan 2017). The likelihood that a certain

Defining *mythology* is a thankless task. Mythologies are a coming together of so many impulses and cultural artefacts that isolating one monolithic concept that holds true for every use of the term across societies, texts, and images seems futile (Segal 2015). One thing *mythology* can (but need not) be is a working out of ideas and impulses central to religious life, even if that working out is informed by or set beside other elements from the ecology of the myths, such as the passing on of numinous knowledge or a drive to entertain. Perhaps that is what is seen in the narratives of process elaborated out of superperception and disembodied intervention. Not every society may maintain popular statements of theology related to superperception and disembodied intervention but that does not mean that superperception and disembodied action were not expected of their gods and constructed into other shapes. Sometimes this process of construction may be as ostensibly intentional as the episodes in which Thor suddenly appears when called upon, but motifs like Odin's chair Hliðskjálf may be less purposely fashioned from a sentiment of being watched. The contingent link between mythology and other aspects of a religious tradition has another consequence: while a myth can be a useful guide to religious behaviours, it can equally well stem from separate cognitive systems and social, cultural, and physical inputs. Consequently, apparent contradictions within the cultural sphere of religion may not stand out as such to worshippers of Old Norse god. Communications with gods that presuppose a lack of anthropomorphism, such as the poems that directly address a god like Thor, can centre on a very material manifestation of those deities.[12] And, of course, despite their salience in explaining non-natural concepts such as a god's disembodied action, mythological representations of process might otherwise not be relevant in everyday life; when no *explanans* is necessary, such as when a rune is written on the back of a broach to Thor or an idol of Odin is being entreated for aid in a domain like war or trading, the mythological semantics of a god may not be utilized at all (Schjødt 2013, pp. 12–14).

4.2. A Return to Theological Correctness

The material of Old Norse religion throws up various challenges for Barrett and Keil's theological correctness. Beginning with the core of that theory, the tendency for worshippers to replicate socially authoritative positions in religious declarations while also using contradictory representations, the theologically correct standpoint in Old Norse society likely diverged from that of Barrett and Keil's Hindu and Christian subjects. Worshippers of Old Norse gods would probably have tended to report that their deities were anthropomorphic, even if they did make occasional exceptions and especially for superperception (such as the awareness Thor needs to be an effective protector or Heimdallr as a watchman).[13] Underpinning this, however, were conceptions of the gods as superperceiving and capable of disembodied action that would be categorized as automatic in a schema of religious representation inspired by Barrett and Keil, even though those conceptions have much in common with the omniscience and omnipotence that Barrett and Keil would categorize as reflective.

This leads me, firstly, to reconsider the types of representation that Barrett and Keil would categorize as automatic and reflective, and secondly the basis of their theory in a dual-process model

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motif is created to explain superperception and disembodied intervention may therefore increase or decrease according to the intuitions they violate. However, this is difficult to explore in depth on the basis of the extant Old Norse evidence.

[12] Though some anthropomorphic properties may, however, conflict more markedly than others with a deity's supposed non-anthropomorphism, holding beliefs being more compatible than a limited godly attention span, for instance (Shtulman and Lindeman 2016, p. 648).

[13] The idea that there was a theologically correct Old Norse standpoint is debatable: no centrally authorized canon existed for Old Norse religion, and religious concepts and texts could always be added to, even if such additions might not always have been accepted or communicated further (see McKinnell 1994 and, for parallels in younger Old Icelandic literature, O'Connor 2005). Yet paradigms of stories, characterizations, and conceptualizations did persist across the geographically widespread area populated by worshippers of gods like Freyja and Odin, passed on by authorities of various degrees of influence, including poets and political and religious leaders; consensuses more localized in space and time would have existed to an even greater degree (Clunies Ross 2005; Sundqvist 2016). That the same story elements can be found etched as images onto stones in the east of modern-day Sweden and preserved in the ink of much later Icelandic manuscripts (Altuna 2008; Bunge 2019; Larrington 2014; Snorri Sturluson 1995) attests to the presence of systems of thought that could change but were nevertheless widely influential.

of cognition. If a split in representations is to be made on the basis of Old Norse culture, it would not follow that set out by Barrett and Keil, of anthropomorphic/automatic representations on one side and non-anthropomorphic/reflective ones on the other. Rather the automatic representations, if they can be termed representations, assume something like omniscience and omnipotence; the reflective representations are more limited in the power they attribute to the supernatural agents. Moreover, what might fall into the *automatic* and *reflective* categories is situational, depending on the degree to which a narrative explanation is required by the purposes of the representation and the level of focus on gods' particular actions. Barrett styles theology as an act of overcoming intuitive ideas, proposing that this violation requires slower processing (e.g., Barrett 1999, p. 331). In addition, he may be correct that some properties of a religious agent are simpler to process than others, but it seems that which properties are simplest and most relevant will change with the circumstances of the person doing the representation. As such, rather than basing theological correctness in a dual-process model of religion (even in the less binary model of representation Barrett proposes in his last article on theological correctness (Barrett 1999, p. 326)), a more useful heuristic may be that the distinct, apparently automatic and reflective, representations of gods are the result of the dynamic interaction of many different psychological processes rather than two separate systems (Keren and Schul 2009, pp. 546–47).

One such grouping of processes should be Theory of Mind (ToM), which is responsible for the attribution of mental states like intentions and knowledges to other natural and non-natural agents, such as animals or gods (Barrett et al. 2001; Wellman 2018). The notion that gods know anything at all is based in ToM, though non-natural agents like gods are often accredited with a much broader access to knowledge than humans (Knight 2008; Richert et al. 2017; Taggart; Wigger et al. 2013). It seems that, thanks to ToM, that gods know more than we do is an automatic position taken up by humans. On top of that are assembled the more reflective positions, whether of full access to information (i.e., omniscience) or of anthropomorphic gods accessing information through tools like magic chairs, both positions which entail input from further cognitive systems and will therefore be slower to generate (similarly, Purzycki 2013, [especially pp. 166 [n. 2], 176]). It is more automatic in some situations to believe that an Old Norse god is listening than to attribute a physical body into the representation, and something similar seems to be in operation regarding disembodied intervention.

ToM is in itself inherently anthropomorphic, as it attributes a person-like mind to a supernatural agent (or at least the aspects of a person-like mind, such as a certain desire, that are relevant to how the agent is being represented (Hodge and Sousa 2018, p. 313)). Yet it does not require that agent to be explicitly embodied in a shape familiar from Barrett and Keil's expectations of automatic representations of gods. Indeed, anthropomorphism is the result of many psychological systems not just one, with the result that some anthropomorphic qualities (in particularly psychological properties) are cross-culturally more readily attributed to non-human entities (Shtulman and Lindeman 2016; Shtulman 2008).

Despite the issues discussed here and above, theological correctness remains a useful framework in which to catalogue and study the diversity of ideas that can be present in a religious tradition, especially in relation to their spread and preservation through cognitive and social dynamics. It might be improved, however, by concentrating less on a dual-process model of cognition or a specific dichotomy between automatic and reflective types of representation and more on how representations can feed into and interfere with one another and the multiple ecologies, cognitive and contextual, that shape conceptualization.

5. Conclusions

Given the empirical evidence that survives, the possibility remains that Old Norse worshippers would have directly reported beliefs in superperceiving gods, able to intervene in the world without the use of a physical body, but this cannot be confirmed. A few sources do make that suggestion, most transparently those concerning Thor's and Heimdallr's superperception. Perhaps the confidence of settlers of Iceland like Crow-Hreidar that Old Norse gods would direct them to good sites are

the most persuasive indications that those gods were not limited by human-like bodies in their interactions with the world in the view of their worshippers. In addition, irrespective of how much superperception and disembodied action were expressly acknowledged, Old Norse worshippers did act in ways that presumed those possibilities, leaving runes to gods and wearing amulets symbolic of them. There is no reason why these disembodied conceptions of Old Norse gods cannot have existed alongside anthropomorphic representations of the same god, and even been combined, such as in the offering of a poem or prayer with anthropomorphic content to a god. Moreover, while narratives of reasoning did exist for gods' interactions with the world, such *explanans* were not always necessary or anthropomorphizing. A god could. The *how* of that was only sometimes relevant.

For modern scholars, the value of this distinction, and of recognizing the capacity for early inhabitants of the North to harbour multiple apparently contradictory representations of their gods, should be questioned—these aspects of the ontology of the gods could be so submerged that they did not impact materially in worshippers' practice and discourse. What does this argument for superperceiving and disembodied gods explain about Old Norse traditions? Even if every part of Barrett's theory of theological correctness cannot be sustained, his papers on this topic are, nevertheless, full of valuable remarks about religion and the utility of CSR to its study. In the last of these articles, he considers what a bias toward anthropomorphization means for understanding religion and concludes that it shows that researchers need to go beyond attested views to "observe how religious concepts are used to shape action, generate predictions, and undergird explanations", and that to do otherwise risks underestimating or oversimplifying religion (Barrett 1999, pp. 332–33). For Barrett, the key point is that scholars should not assume that reflective god concepts are the entirety of religious conceptualization; for scholars of Old Norse religion, I would argue that the reverse is true. We should not presume that anthropomorphism was the only mode of representation in the everyday of Old Norse religion and nor should we dismiss the potential for representations like Odin's chair to have their roots in conceptions of the gods that were not anthropomorphic. Noting the potential for worshippers to hold multiple representations of their gods should be useful for reconstructing Old Norse traditions, and in particular for building beyond literary accounts and archaeology towards a better appreciation of religion in action. It further uncovers the ways in which different religious behaviours, impulses, and representations can be related but need not be, and how myth can be separated from or entangled with and empowered by other aspects of religion. Through the viewpoint introduced by Barrett and Keil's theological correctness, we can better comprehend the mythology and the contexts in it was composed.

The application of theological correctness to Old Norse material has also demonstrated how Barrett and Keil's theory might be improved, especially with regard to the psychological framework of the dual-process model of cognition. Further, from a pan-religious perspective, the above arguments emphasize the degree to which features might be shared across religions. The manifestation of Odin's superperception in his chair and an Abrahamic god's in his omniscience do not look so dissimilar when they are contextualized within their cultural ecologies and seen from the angle of their cognitive foundations.

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References

Adam of Bremen. 2002. *History of the Archbishops of Hamburg-Bremen*, 2nd ed. Translated by Francis J. Tschan. New York: Columbia University Press.

Altuna. 2008. *Fornsök*. Available online: http://kulturarvsdata.se/raa/fmi/html/10020200420001 (accessed on 19 February 2019).

Barlev, Michael, Spencer Mermelstein, and German Tamsin C. 2016. Core Intuitions About Persons Coexist and Interfere with Acquired Christian Beliefs About God. *Cognitive Science* 41: 425–54. [CrossRef] [PubMed]

Barlev, Michael, Spencer Mermelstein, and German Tamsin C. 2018. Representational coexistence in the God concept: Core knowledge intuitions of God as a person are not revised by Christian theology despite lifelong experience. *Psychonomic Bulletin & Review* 25: 2330–38.

Barrett, Justin L. 1998. Cognitive Constraints on Hindu Concepts of the Divine. *Journal for the Scientific Study of Religion* 37: 608–19. [CrossRef]

Barrett, Justin L. 1999. Theological Correctness: Cognitive Constraint and the Study of Religion. *Method & Theory in the Study of Religion* 11: 325–39.

Barrett, Justin L. 2004. *Why Would Anyone Believe in God?* New York: AltaMira Press.

Barrett, Justin L., and Frank C. Keil. 1996. Conceptualizing a Nonnatural Entity: Anthropomorphism in God Concepts. *Cognitive Psychology* 31: 219–47. [CrossRef]

Barrett, Justin L., Rebekah A. Richert, and Amanda Driesenga. 2001. God's Beliefs versus Mother's: The Development of Nonhuman Agent Concepts. *Child Development* 72: 50–65. [CrossRef]

Bek-Pedersen, Karen. 2013. *The Norns in Old Norse Mythology*. Edinburgh: Dunedin.

Birkett, Tom. 2017. *Reading the Runes in Old English and Old Norse Poetry*. Abingdon: Routledge.

Boyer, Pascal. 2001. *Religion Explained: The Human Instincts That Fashion Gods, Spirits and Ancestors*. London: Basic.

Boyer, Pascal, and Brian Bergstrom. 2008. Evolutionary Perspectives on Religion. *Annual Review of Anthropology* 37: 111–30. [CrossRef]

Bragi Boddason. 2017. Fragments. In *Poetry from Treatises on Poetics: Skaldic Poetry of the Scandinavian Middle Ages 3*. Edited by Margaret Clunies Ross. Volume edited by Kari Ellen Gade with Edith Marold. Turnhout: Brepols, pp. 53–63.

Braune, Wilhelm. 1921. *Althochdeutsches Lesebuch*, 8th ed. Niemeyer: Halle.

Brink, Stefan. 2007. How Uniform Was the Old Norse Religion? In *Learning and Understanding in the Old Norse World: Essays in Honour of Margaret Clunies Ross*. Edited by Judy Quinn, Kate Heslop and Tarrin Wills. Turnhout: Brepols, pp. 105–36.

Bunge. 2019. *Fornsök*. Available online: http://kulturarvsdata.se/raa/fmi/html/10090300770001 (accessed on 19 February 2011).

Casler, Krista, and Deborah Kelemen. 2008. Developmental Continuity in Teleo-Functional Explanation: Reasoning about Nature among Romanian Romani Adults. *Journal of Cognition and Development* 9: 340–62. [CrossRef]

Chilcott, Travis, and Raymond F. Paloutzian. 2016. Relations between Gauḍīya Vaiṣṇava Devotional Practices and Implicit and Explicit Anthropomorphic Reasoning about Kṛṣṇa. *Journal of Cognition and Culture* 16: 107–21. [CrossRef]

Clunies Ross, Margaret. 1994. *Prolonged Echoes: Old Norse Myths in Medieval Northern Society; Volume One: The Myths*. Odense: Odense University Press.

Clunies Ross, Margaret. 1998. *Prolonged Echoes: Old Norse Myths in Medieval Northern Society; Volume Two: The Reception of Norse Myths in Medieval Iceland*. Odense: Odense University Press.

Clunies Ross, Margaret. 2005. *A History of Old Norse Poetry and Poetics*. Cambridge: D.S. Brewer.

Damisch, Lysann, Barbara Stoberock, and Thomas Mussweiler. 2010. Keep Your Fingers Crossed! How Superstition Improves Performance. *Psychological Science* 21: 1014–20. [CrossRef]

Daubney, Adam. 2015. LIN-D92A22: Early Medieval Spindle Whorl. Portable Antiquities Scheme. Available online: https://fnds.org.uk/database/artefacts/record/id/409249 (accessed on 4 March 2019).

De Vries, Jan. 1970. *Altgermanische Religionsgeschichte*, 3rd ed. Berlin: Walter de Gruyter.

Dudo of St Quentin. 1998. *History of the Normans*. Translated by Eric Christiansen. Woodbridge: Boydell Press.

Einarr skálaglamm Helgason. 2012. Vellekla. In *Poetry from the Kings' Sagas 1: From Mythical Times to c. 1035. Skaldic Poetry of the Scandinavian Middle Ages 1*. Edited by Edith Marold. Volume edited by Diana Whaley. Turnhout: Brepols, pp. 280–329.

Evans, Jonathan St., and Keith Stanovich. 2013. Dual-Process Theories of Higher Cognition: Advancing the Debate. *Perspectives on Psychological Science* 8: 223–41. [CrossRef] [PubMed]

Eyjólfr dáðaskáld. 2012. Bandadrápa. In *Poetry from the Kings' Sagas 1: From Mythical Times to c. 1035. Skaldic Poetry of the Scandinavian Middle Ages 1*. Edited by Russell Poole. Volume edited by Diana Whaley. Turnhout: Brepols, pp. 454–68.

Finch, Ronald G., ed. 1965. *The Saga of the Volsungs*. London: Nelson.

Firth, Raymond. 1966. Twins, Birds and Vegetables: Problems of Identification in Primitive Religious Thought. *Man* 1: 1–17. [CrossRef]

García Losquiño, Irene. 2015. *The Early Runic Inscriptions: Their Western Features*. New York: Peter Lang.

Ghanem, Carolina I., María J. Pérez, José E. Manautou, and Aldo D. Mottino. 2016. Acetaminophen from liver to brain: New insights into drug pharmacological action and toxicity. *Pharmacological Research* 109: 119–31. [CrossRef] [PubMed]

Gordon, Robert K. 1954. *Anglo-Saxon Poetry*. London: M. Dent & Sons.

Gregory, Justin, and Justin L. Barrett. 2009. Epistemology and Counterintuitiveness: Role and Relationship in Epidemiology of Cultural Representations. *Journal of Cognition and Culture* 9: 289–314.

Hall, Alaric. 2007. *Elves in Anglo-Saxon England: Matters of Belief, Health, Gender and Identity*. Woodbridge: Boydell Press.

Hall, Alaric. 2009. «Þur sarriþu þursa trutin»: Monster-Fighting and Medicine in Early Medieval Scandinavia. *Asclepio* 61: 195–18. [CrossRef] [PubMed]

Pálsson Hermann, and Paul Edwards, transs. 1972, *The Book of Settlements: Landnámabók*. Winnipeg: University of Manitoba Press.

Hodge, K. Mitch, and Paulo Sousa. 2018. Dualism, Disembodiment and the Divine: Supernatural Agent Representations in CSR. In *Evolution, Cognition, and the History of Religion: A New Synthesis*. Edited by Anders Klostergaard Petersen, Ingvild Sælid Gilhus, Luther H. Martin, Jeppe Sinding Jensen and Jesper Sørensen. Leiden: Brill.

Ibn Fadlan, Ahmad. 2012. *Ibn Fadlan and the Land of Darkness: Arab Travellers in the Far North*. Translated by Paul Lunde, and Caroline Stone. London: Penguin Classics.

Jakob Benediktsson, ed. 1968. Landnámabók. In *Íslenzk fornrit, 1*. Reykjavík: Hið Íslenzka Fornritafélag.

Jiménez, Ángel V., and Alex Mesoudi. 2019. Prestige-biased social learning: Current evidence and outstanding questions. *Palgrave Communications* 5: 20. [CrossRef]

Jónas Kristjánsson, and Vésteinn Ólason. 2014. *Eddukvæði, 1*. Reykjavík: Hið Íslenzka Fornritafélag.

Keren, Gideon, and Yaacov Schul. 2009. Two is not always better than one: A critical evaluation of two-system theories. *Perspectives on Psychological Science* 4: 533–50. [CrossRef] [PubMed]

Knight, Nicola. 2008. Yukatek Maya Children's Attributions of Belief to Natural and Non-natural Entities. *Journal of Cognition and Culture* 8: 235–43. [CrossRef]

Kormákr Ǫgmundarson. 2017. Sigurðardrápa. In *Poetry from Treatises on Poetics. Skaldic Poetry of the Scandinavian Middle Ages 3*. Edited by Edith Marold. Volume edited by Kari Ellen Gade with Edith Marold. Turnhout: Brepols, pp. 272–86.

Kure, Henning. 2003. In the beginning was the Scream: Conceptual thought in the Old Norse myth of creation. In *Scandinavia and Christian Europe in the Middle Ages*. Edited by Rudolf Simek and Judith Meurer. Bonn: Universität Bonn, pp. 311–19.

Larrington Carolyne, trans. 2014, *The Poetic Edda*. Oxford: Oxford University Press.

Lawson, E. Thomas. 2017. The Cognitive Science of Religion and the Growth of Knowledge. In *Religion Explained? The Cognitive Science of Religion after Twenty-Five Years*. Edited by Luther H. Martin and Donald Wiebe. London: Bloomsbury.

Ledberg. 2008. *Fornsök*. Available online: http://kulturarvsdata.se/raa/fmi/html/10045900060001 (accessed on 19 February 2019).

Legare, Cristine H., and Mark Nielsen. 2015. Imitation and Innovation: The Dual Engines of Cultural Learning. *Trends in Cognitive Sciences* 19: 688–99. [CrossRef]

Legare, Cristine H., and André L Souza. 2012. Evaluating ritual efficacy: Evidence from the supernatural. *Cognition* 124: 1–15. [CrossRef]

MacLeod, Mindy, and Bernard Mees. 2006. *Runic Amulets and Magic Objects*. Woodbridge: Boydell Press.

McCauley, Robert N. 2017. Twenty-Five Years In: Landmark Empirical Findings in the Cognitive Science of Religion. In *Religion Explained? The Cognitive Science of Religion after Twenty-Five Years*. Edited by Donald Wiebe and Luther H. Martin. London: Bloomsbury.

McCoy, John, and Tomer Ullman. 2019. Judgments of effort for magical violations of intuitive physics. *PLOS ONE* 14: 5. [CrossRef] [PubMed]

McKinnell, John. 1994. *Both One and Many: Essays on Change and Variety in Late Norse Heathenism*. Roma: Il Calamo.

McKinnell, John, Rudolf Simek, and Klaus Düwel. 2004. *Runes, Magic and Religion. A Sourcebook*. Vienna: Fassbaender.

Melnikoff, David E., and John A. Bargh. 2018a. The Mythical Number Two. *Trends in Cognitive Sciences* 22: 280–93. [CrossRef] [PubMed]

Melnikoff, David E., and John A. Bargh. 2018b. The Insidious Number Two. *Trends in Cognitive Sciences* 22: 668–69. [CrossRef] [PubMed]

Moltke, Erik. 1985. *Runes and Their Origin: Denmark and Elsewhere*. Translated by Peter Foote. Copenhagen: National Museum of Denmark.

Murdoch, Brian. 1988. But did they work? Interpreting the Old High German "Merseburg Charms" in their medieval context. *Neuphilologische Mitteilungen* 89: 358–69.

Murphy, Luke John. 2018. Paganism at Home: Pre-Christian Private Praxis and Household Religion in the Iron-Age North. *Scripta Islandica* 69: 49–97.

Newstead, Stephen E. 2000. Are there two different kinds of thinking? *Behavioral and Brain Sciences* 23: 690–91. [CrossRef]

Nordberg, Andreas. 2012. Continuity, Change and Regional Variation in Old Norse Religion. In *More Than Mythology: Narratives, Ritual Practices and Regional Distribution in Pre-Christian Scandinavian Religions*. Edited by Catharina Raudvere and Jens Peter Schjødt. Lund: Nordic Academic Press, pp. 119–51.

O'Connor, Ralph. 2005. History or fiction? Truth-claims and defensive narrators in Icelandic romance-sagas. *Mediaeval Scandinavia* 15: 101–69.

Orton, Peter. 2007. Spouting Poetry: Cognitive Metaphor and Conceptual Blending in the Old Norse Myth of the Poetic Mead. In *Constructing Nations, Reconstructing Myth*. Edited by Andrew Wawn. Turnhout: Brepols, pp. 277–300.

Pennycook, Gordon, Wim De Neys, Jonathan St. Evans, Keith Stanovich, and Valerie A. Thompson. 2018. The Mythical Dual-Process Typology. *Trends in Cognitive Sciences* 22: 667–68. [CrossRef]

Pirutinsky, Steven, Jedidiah Siev, and David H. Rosmarin. 2015. Scrupulosity and implicit and explicit beliefs about God. *Journal of Obsessive-Compulsive and Related Disorders* 6: 33–38. [CrossRef]

Purzycki, Benjamin Grant. 2010. Spirit masters, ritual cairns, and the adaptive religious system in Tyva. *Sibirica* 9: 21–47. [CrossRef]

Purzycki, Benjamin Grant. 2013. The Minds of Gods: A Comparative Study of Supernatural Agency. *Cognition* 129: 163–79. [CrossRef] [PubMed]

Purzycki, Benjamin Grant, and Rita Anne McNamara. 2016. An Ecological Theory of Gods' Minds. In *Advances in Religion, Cognitive Science, and Experimental Philosophy*. Edited by Helen De Cruz and Ryan Nichols. London: Bloomsbury, pp. 143–67.

Raffield, Ben, Neil Price, and Mark Collard. 2017. Religious belief and cooperation: A view from Viking-Age Scandinavia. *Religion, Brain & Behavior* 9: 2–22. [CrossRef]

Richert, Rebekah A., Anondah R. Saide, Kirsten A. Lesage, and Nicholas J. Shaman. 2017. The role of religious context in children's differentiation between God's mind and human minds. *Religion Culture and Development* 35: 37–59. [CrossRef] [PubMed]

Schachner, Adena, and Minju Kim. 2018. Alternative causal explanations for order break the link between order and agents. *PsyArXiv*. [CrossRef]

Schjødt, Jens Peter. 2013. The Notions of Model, Discourse, and Semantic Center as Tools for the (Re)Construction of Old Norse Religion. *The Retrospective Methods Network Newsletter* 6: 6–15.

Schjoedt, Uffe, Jesper Sørensen, Kristoffer Laigaard Nielbo, Dimitris Xygalatas, Panagiotis Mitkidis, and Joseph Bulbulia. 2013. Cognitive resource depletion in religious interactions. *Religion Brain & Behavior* 3: 39–55.

Segal, Robert A. 2015. *Myth: A Very Short Introduction*. Oxford: Oxford University Press.

Shtulman, Andrew. 2008. Variation in the anthropomorphization of supernatural beings and its implications for cognitive theories of religion. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 34: 1123–38. [CrossRef] [PubMed]

Shtulman, Andrew, and Marjaana Lindeman. 2016. Attributes of God: Conceptual Foundations of a Foundational Belief. *Cognitive Science* 40: 635–70. [CrossRef]

Shtulman, Andrew, and Caitlin Morgan. 2017. The explanatory structure of unexplainable events: Causal constraints on magical reasoning. *Psychonomic Bulletin & Review* 24: 1573–85. [CrossRef]

Simek, Rudolf. 1993. *Dictionary of Northern Mythology*. Translated by Angela Hall. Cambridge: D.S. Brewer.

Slone, D. Jason. 2004. *Theological Incorrectness: Why Religious People Believe What They Shouldn't*. New York: Oxford University Press.

Smiley, Jane, ed. 2001a. Egil's Saga. In *The Sagas of Icelanders*. Bernard Scudder, trans. London: Penguin Classics.

Smiley, Jane, ed. 2001b. Eirik the Red's Saga. In *The Sagas of Icelanders*. Keneva Kunz, trans. London: Penguin Classics.

Smiley, Jane, ed. 2001c. The Saga of the People of Eyri. In *The Sagas of Icelanders*. Terry Gunnell, trans. London: Penguin Classics.

Smiley, Jane, ed. 2001d. The Saga of the Sworn Brothers. In *The Sagas of Icelanders*. Martin S. Regal, trans. London: Penguin Classics.

Snorri Sturluson. 1995. *Edda*. Translated by Anthony Faulkes. London: Everyman.

Snorri Sturluson. 2011. *Heimskringla: Volume 1*. Translated by Alison Finlay, and Anthony Faulkes. London: Viking Society for Northern Research.

Sommer, Bettina. 2007. The Norse Concept of Luck. *Scandinavian Studies* 79: 275–94.

Staff and Bill Keesee. n.d. Bible Verses about Washing as Metaphor. Bible Tools. Available online: https://www.bibletools.org/index.cfm/fuseaction/Topical.show/RTD/CGG/ID/2626/Washing-as-Metaphor.htm (accessed on 12 March 2019).

Sundqvist, Olof. 2016. *An Arena for Higher Powers: Ceremonial Buildings and Religious Strategies for Rulership in Late Iron Age Scandinavia*. Leiden: Brill.

Taggart, Declan. 2013. Fate and Cosmogony in Völuspá: Shaping History in a Moment. *Northern Studies* 44: 21–35.

Taggart, Declan. 2015. Understanding Diversity in Old Norse Religion Taking Þórr as a Case Study. Doctoral thesis, University of Aberdeen, Aberdeen, UK.

Taggart, Declan. 2018. *How Thor Lost His Thunder: The Changing Faces of an Old Norse God*. Abingdon: Routledge.

Taggart, Declan. Under peer review. Did a little birdie really tell Odin? Applying Theory of Mind to Old Norse Religion. *Journal of Cognition and Culture*.

Tremlin, Todd. 2005. Divergent Religion: A Dual-Process Model of Religious Thought, Behavior, and Morphology. In *Mind and Religion: Psychological and Cognitive Foundations of Religiosity*. Edited by Harvey Whitehouse and Robert N. McCauley. Walnut Creek: AltaMira Press, pp. 69–83.

Vetrliði Sumarliðason. 2017. Lausavísa. In *Poetry from Treatises on Poetics: Skaldic Poetry of the Scandinavian Middle Ages 3*. Edited by R. D. Fulk. Volume edited by Kari Ellen Gade with Edith Marold. Turnhout: Brepols, pp. 425–26.

Wager, Tor D., and Lauren Y. Atlas. 2015. The neuroscience of placebo effects: Connecting context, learning and health. *Nature Reviews Neuroscience* 16: 403–18. [CrossRef] [PubMed]

Wellendorf, Jonas. 2010. The Interplay of Pagan and Christian Traditions in Icelandic Settlement Myths. *The Journal of English and Germanic Philology* 109: 1–21. [CrossRef]

Wellman, Henry M. 2018. Theory of mind: The state of the art. *European Journal of Developmental Psychology* 15: 728–55. [CrossRef]

Whitehouse, Harvey. 2017. Twenty-Five Years of CSR: A Personal Retrospective. In *Religion Explained? The Cognitive Science of Religion after Twenty-Five Years*. Edited by Luther H. Martin and Donald Wiebe. London: Bloomsbury, pp. 43–55.

Wicker, Nancy L. 2015. Bracteate Inscriptions and Context Analysis in the Light of Alternatives to Hauck's Iconographic Interpretations. *Futhark* 5: 25–43.

Wigger, J. Bradley, Katrina Paxson, and Lacey Ryan. 2013. What Do Invisible Friends Know? Imaginary Companions, God, and Theory of Mind. *International Journal for the Psychology of Religion* 23: 2–14. [CrossRef]

Yeung, Victoria Wai-lan, Steve Loughnan, Yoshihisa Kashima, Vivian Chi, and Susanna Siu-sze Yeung. 2017. When My Object Becomes Me: The Mere Ownership of an Object Elevates Domain-Specific Self-Efficacy. *Applied Psychology* 66: 710–41. [CrossRef]

Þjóðólfr ór Hvini. 2017. Haustlǫng. In *Poetry from Treatises on Poetics: Skaldic Poetry of the Scandinavian Middle Ages 3*. Edited by Margaret Clunies Ross. Volume edited by Kari Ellen Gade with Edith Marold. Turnhout: Brepols, pp. 431–63.

Þorbjǫrn dísarskáld. 2017. Poem about Þórr. In *Poetry from Treatises on Poetics: Skaldic Poetry of the Scandinavian Middle Ages 3*. Edited by Margaret Clunies Ross. Volume edited by Kari Ellen Gade with Edith Marold. Turnhout: Brepols, pp. 470–72.



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