

# ADAM DROZDEK

Duquesne University, USA | Department of Mathematics and Computer Science ORCID 0000-0001-8639-2727

# Peter Ahlwardt's Theology of Thunder

# PETERA AHLWARDTA TEOLOGIA PIORUNÓW

## Streszczenie

Peter Ahlwardt, osiemnastowieczny profesor Uniwersytetu w Greifswaldzie, znany jest przede wszystkim jako autor książki Bronto-teologia, w której przedstawił swoją teologię piorunów, należącą do bardzo silnego w jego czasach ruchu fizyko-teologii. Niniejszy artykuł sytuuje tę bardzo wąską część fizyko-teologii w kontekście filozofii i teologii Ahlwardta. W swojej epistemologii Ahlwardt podkreślił potrzebę rozumowania w zrozumieniu i docenieniu objawienia, z drugiej strony wymagał również, aby rozum był oświetlany przez Ducha Świętego, stwierdzając tym samym, że objawienie jest ostatecznym autorytetem. Ahlwardt odrzucił ideę wrodzonej koncepcji Boga, dlatego jedyną drogą otwartą na poznanie Boga jest metoda a posteriori stosowana do boskiego stworzenia. Ahlwardt oparł swój dowód na istnienie Boga na samoświadomości. Stworzenie istnieje, aby pokazać nieskończone doskonałości Boga, a ludzie jako racjonalne istoty powinni badać przyrodę, aby ujrzeć te doskonałości i poznać Boską wolę. Podobnie jak inni fizyko-teolodzy Ahlwardt chciał poprzez swoje badania piorunów i błyskawic wykazać, że są one manifestacjami boskich atrybutów. Powołując się na doskonałość i jedność atrybutów Boga, Ahlwardt argumentował, że te zjawiska atmosferyczne są w równym stopniu przejawami Bożego gniewu, jak i Jego miłości, oraz sprawiają, że ludzie dostrzegają wielkość Bożej chwały i zmuszają ich do myślenia o doskonałości Boga.

Słowa kluczowe: Ahlwardt, fizyko-teologia, grzmot, błyskawica, atrybuty Boga

# Introduction

Peter Ahlwardt (1710–1791) was an adjunct and then a professor of philosophy at the University of Greifswald.<sup>1</sup> He may be remembered today primarily for his *Bronto-theology*, although he very likely would consider as his greatest achievement his massive 5000-page long work, *Thorough investigations of the Augsburg Confession*, in which he investigated Christ, the Holy Spirit, and the Church through the lens of Lutheran theology.

The end of the 17th century and the 18th century were the highpoint of the development of physico-theology that offered the proof of the existence of God from the orderliness of the world and drew conclusions about God's attributes from the observations of the makeup of creation and from natural laws. Studies have been often of a general nature trying to encompass a wide scope of the natural world, but many authors concentrated on a particular aspect of nature drawing from it some theological conclusions. Ahlwardt's study, *Bronto-theology*, belongs to the latter category in that he investigated thunder-theology, the manifestation of God's presence and attributes through thunder and lightning ( $\beta \rho ov \tau \dot{\eta}$  – thunder). Ahlwardt's interest in the thunder was awakened by an experience in his hometown; however, this atmospheric phenomenon was a subject of many sermons and treatises before him. Ahlwardt did it on a much larger scale than any of his predecessors in a broad epistemological and theological context. First, the pronouncements made by some of his predecessors about the religious significance of thunder and lightning are presented.

# 1. Opinions on thunder and lightning

A Protestant reformer, Johannes Brentz/Brenz, said in his sermon, *On thunder, hail, and any bad weather*,<sup>2</sup> that God recently visited people with hail and frost to let them know that He rules over the world ([4]). Some say that this hail was caused by a witch and a demon, but this is paganism and superstition ([5]). Naturalists say that hail is caused by wet vapors raised by the sun and cooled down in the air to become rain or hail ([7]); however, God at creation determined such an order. The Scripture says that God causes hail as a punishment for sins ([8]). Through

For some information about his life, see: J.Ch Strodtmann, Geschichte des Herrn Peter Ahlwardt, in: Beyträge zur Historie der Gelahrtheit, worinnen die Geschichte der Gelehrten unserer Zeiten beschrieben warden, Hamburg 1750, vol. 5, pp. 63–94 (an annotated bibliography of his works up to 1750 is included); F. Schlichtegroll, Nekrolog auf das Jahr 1791, Gotha 1792, vol. 1, pp. 367–375; E. Lange, Peter Ahlwardt und sein philosophischer Katechismus, "Mitteilungen der Gesellschaft für Deutsche Erziehungs- und Schulgeschichte" 10 (1900), pp. 174–182.

<sup>&</sup>lt;sup>2</sup> J. Brentz, *Vom Donner, Hagel, und allem Ungewitter*, 1565; there is no pagination.

hail, God tests the faith of believers and punishes the godless so that they repent their sins ([13]). When people see bad weather coming, they should run to church to pray to reverse God's wrath ([14]). God can also send thunder ([15]). Through thunder and hail people should recognize their sins and evil, turn to God, and repent ([18]).

A Lutheran pastor, David Bramer, preached in his repentance sermon, On thun*der, lightning, hail, stormwinds, and seriously bad weather,*<sup>3</sup> that lightning is caused by great heat in summer. Naturalists say vapors rise from the ground through the sun's warming, are enclosed in a cloud ([20]), which is moved around by other clouds, squashed by them, and finally enkindled. Such clouds can turn into hail when they become colder and then drops turn into hail when falling to the ground ([21]). This is also the work of God who shows His omnipotence and His wrath to frighten the unbelievers and, for consolation, to remind believers about the future help and salvation ([22], [33–34]). Some ascribe thunder to magic and to the devil, and many Christians believe in this madness ([27]). True, wizards can do some of it by the permission of God and the help of the devil who is the prince of air ([28]). Through thunders, God shows His majesty ([34]) so that people should fear and love Him ([35]); they are used as punishment for sins and as a call for repentance ([38]); also, as a test, so that the believers can see how much they can trust God ([51]); and they serve as a sign of the coming last days ([53]). Believers should rejoice that they hear the voice of the Father, that He lives and gives signs that He will soon come ([56]). Bramer also provided the true means against bad weather: genuine repentance ([71]) and sincere prayer to God ([73]). Christians should realize that bad weather comes from the loving Father who cares for His children ([78]). They should also know that God can reinstate what was lost and damaged ([86]). As to believers being struck by lightning, every person has a determined time to live ([88]). We never are certain about our life, bad weather or not ([89]), and God may want to take believers to Himself in bad weather ([91]).

Pastor Marcus Scultetus said in his sermon, *A Christian reminiscence on whether, in which it is shown whence thunder, lightning, and bad weather come*,<sup>4</sup> that there are physical reasons for lightning ([25]), but they are insufficient ([25]). Bad weather is due to God alone, not to the devil ([27]); God is its efficient cause ([28]). Aristotle, the wisest among pagans, said that nature and God do nothing in vain, and so, God shows His power through the lightning ([30]). People should

<sup>&</sup>lt;sup>3</sup> D. Bramerus, *Vom Donner, Blitz, Hagel, Sturmwinden, und andern grossen Ungewittern*, Erffurdt 1577; there is no pagination.

<sup>&</sup>lt;sup>4</sup> M. Scultetus, *Christliche Erinnerung von Wettern darinnen angezeiget wird woher Donner, Blitz und Ungewitter kommen*, Wittemberg 1603; there is no pagination.

trust that God will strike their enemies with lightning ([35]). Also, bad weather is the sign of God's wrath because of people's sins ([37]). Moreover, bad weather is a prelude to the last days ([46], [88]). And thus, people cause bad weather through their sins ([51]) and repentance is a means of avoiding such a weather ([59]).

In a rather short sermon, *A Christian report on the best defensive means during strong thunderstorms*,<sup>5</sup> preached by pastor Jacob Grosse, on the occasion of a recent thunderstorm in his city, we read that such a big storm is not just a work of nature, but also the wondrous work of God. Aristotle and Cardano said that vapors rise form the sea and humid places warmed up by the sun and become enkindled by this motion and become lightning and thunder. Seneca spoke about big storms as the work of God ([7]). True, God does it so that we recognize His majesty; thunder is His voice and God thunders against people's sins ([10]). A thunderstorm is a heavenly penance preacher urging people to true repentance ([14]). Prayer and true repentance are the best protection from it ([15]).

A Lutheran theologian, Bonifacius Stöltzlin, wrote in his very popular 400--page Little spiritual book on thunder and weather<sup>6</sup> that God, not just nature, causes weather (8). Lightning was created so that people would fear God and tremble before His majesty (13), but it also purifies air and shutters clouds resulting in rain that fertilizes earth (16). A thunderstorm is God's exposition of the first article of the Christian faith: I believe in God the Father Almighty (54), the sign that there is God in heaven who sees and knows what is taking place on earth (56). When it thunders, people should also remember the last days which will come with devouring fire (69). Thunder is fire, fire of all fires, as Cardano calls it (207), striking from clouds like an arrow from a bow which is enkindled by God (208). A beam/ flash is enkindled floating matter which comes out with great power from a cloud (211), a flash which is shut by God from the stronghold of His heaven, a sign of God's wrath (212). Thunder is not from the devil, but from God; thus, even death does not separate anyone from God's love and when the body dies, the spirit is not lost (219-220). Quick death is a good thing; thus, God makes a sudden claim on the life of those whom He loves (223); however, the sinful should be afraid of such a death (224). People should thank God for everything, in particular, when dangerous weather does not cause any damage and a well-deserved vengeance did not fall upon them (267). When weather does cause damage, witches are deemed responsible (290); others complain about the severity of God not thinking about

<sup>&</sup>lt;sup>5</sup> J. Grosse, *Christlicher Bericht von den besten Schutzmitteln in starcken, blitzenden Donnerwettern*, Hamburg 1646; there is no pagination.

<sup>6</sup> B. Stöltzlin, Geistliches Donner- und Wetter-Büchlein, Tobias Wagner 1692<sup>8</sup> [1650].

their own sins for which they deserved punishment (291). God can easily restore all damages (295). Most of the book consists of numerous prayers and hymns, many of them versified.

In his sermon, *A recollection of a serious bad weather*, pastor Ludolff Holtmann stated that lightning, thunder, and hail are expressions of God's wrath against people's sin so that they repent (7); they are repentance sermons in which God expresses His wrath calling for repentance (16). People should give thanks for all gifts of God: He gave people their land and if there is not much yield, their disobedience is the cause. However, there is no punishment when Christ is followed (27–28).

A famous Puritan minister, Cotton Mather, said in his 1694 sermon, thunder is the voice of God (4).<sup>7</sup> Although "the Thunder is a Natural production, and by the Common Laws of Matter and Motion it is produced," the result of clouds clashing and breaking causing a sound and sulfurous vapors in these clouds are ignited to become lightnings (5, 18–19), as stated by Mather who was also a naturalist. However, God, as the Author of natural laws, is the First Mover (5, 31), the ultimate cause of the thunder even if He allows the witch and the devil to be an intermediate cause; this explains the fact that churches are a frequent target of the thunder since "the Daemons have a peculiar spite at Houses that are set apart for the peculiar Service of God" (15). However, Christians "need not fear that he will do us any Hurt by any of His Works" (6), a remarkable statement considering that Mather had just been informed that lightning had struck his house. However, if a Christian is struck by lightning, then through it, God simply says, "Come up hither!" (6). The thunder proclaims God's power and fury (8), and punishes those who are particularly sinful (13); it makes people look at their own sinfulness (12), calls them to make peace with Him (11, 32), and to remember the upcoming day of judgment (10). The answer to the thunder should be prayer, just as much as thunder was sometimes an answer to prayers (22). Thunder instills fear, but filial fear should be distinguished from slavish fear (24–25). "The Voice of the Almighty in the Thunder, is, Admire the Goodness of God, and love such a God!" as a gratitude for deliverance from enemies (31-32).

An evangelical theologian, Georg Nitsch, in his sermon, *The burning wrath* of God,<sup>8</sup> preached on the occasion of his church being struck by lightning and burnt in 1705, said that through people's sins they turned against God and thus He became their enemy. They should repent (13–14). God can exercise patience for a long time. When no change is forthcoming (15), the judgment comes (16).

8 G. Nitsch, Der angebrandte Zorn Gottes, Wolffenbuttel 1706.

<sup>7 [</sup>C. Mather], Brontologia sacra: the voice of the glorious God in the thunder, London 1695.

People's heart should be filled with fear of God's judgment (18). God should be honored (21), trusted (23), and obeyed (25). God lets Himself known through fire and water that are the two means of His wrath (30–31). God does not punish without warning. How many times has He warned us (49)? People don't want to believe that God punishes them whereby they don't have to admit that they break His commandments (53). They ascribe destruction caused by lightning only to natural causes. However, everything originates from God (54). God struck the local church with fire (63); is it, Nitsch asked rhetorically, because of our violation of the third commandment? "No other day is the subject to submission to sin than [the day] on which we should have our rest in God and serve from all our heart and all our soul the Creator of the heaven and earth" (64); we deserved this punishment for the great number of our sins (87). You, God, spoke softly to us; then you spoke with thunder. Our evil is at fault (88).

On the occasion of the memorial service for three women struck by the lightning, pastor Johann Seyffert preached a sermon, The three firm grounds of consolation,9 stating that naturalists say that lightning is caused by enkindled sulfuric vapors with saltpeter which rise into air through the heat of the sun, and thunder is caused by enkindled saltpeter which gives no flame (4). But there is also thunder in winter, since God is the maker of weather (5) and has the complete control over it (10). God frightens people and punishes them with lightning, but it also purifies air and makes soil more fertile (6). God gives to thunder the power of His word so that everything would happen for His glory and for our edification (9). Thunder is the voice of God with which he condemns the godless but also calls upon the pious and promises them ineffable grace in the kingdom of His eternal splendor and so He called to Himself the three women from this world like from Sodom (13). The women were pious and to the pious, death is something good; it does not harm them (14–15). God hears prayers of the pious; thunder wakes people up to repentance and is a bell for prayer (17). May these three women be preachers of repentance (25). Their death should not be treated as a sign of punishment but as the sign of grace (40).

In his *Brontologia theologico-historica: a simple doctrine and truthful account about thunder, lightning and firings*, Andreas Rhyzelius,<sup>10</sup> later a doctor of theology and a bishop in Linköping, in Sweden, briefly mentioned natural causes of thunder coming from the thick and condensed clouds above us which result in the summer

<sup>9</sup> J.P. Seyffert, Drey kräfftige Trost-Gründe, Leipzig 1717.

<sup>10</sup> A.O. Rhyzelius, Brontologia theologico-historica, thet år enfaldig låra och sanferdig berettelse, om åske-dunder, blixt och skott, Stockholm 1721.

from fumes and vapors rising from mountains, hills, steams, valleys, lakes, and seas ascending into air. Thunders are the dry rumble between clouds breaking through as horrible bangs and crashes (14–15). Thunder is not an accidentally happening phenomenon (38). Since God is the ultimate cause of thunder, thunderbolts struck at times and places determined by God's will (35) for important reasons (38), instilling the fear of God being one of them (26). Through nothing can the power and glory of God be better seen than through thunder (20). Thunder is an expression of God's power (36). Thunder can be invoked but also averted by prayer (49). There are practical benefits from a thunderstorm: the purification of the air, and bringing rain to the parched earth to make it fertile (44). Most of this rather slim book is the presentation of dozens of lightning accounts since the year 1000 until the author's times rounded with a few prayers.

The reading of these accounts is almost benumbingly repetitious. The same motifs appear in most of them; even the phrasing is similar considering that almost the same Biblical references are made. The natural explanation is acknowledged, but in the context of sermons it is found secondary; God's rule over nature is preeminent and thunder is considered the voice of God expressing different things to different people, His glory to believers, His wrath to sinners. What does Ahlwardt have to offer in comparison with the statements made already many times?

One thing he did offer is the theological context. For many physico-theologians of these times, their focus was rather narrow by trying to show God's existence and God's attributes using natural phenomena. Ahlwardt presented a broad image of theology and his thunderous theology became only its small fragment. It appears that his focus was on natural theology, on arriving at theological results by human rational means. He did not want to sideline the revelation andhe did not want reason to be treated as completely unreliable as tainted by sins and, as such, prone to constant failure. Reason was a heavenly gift and, as such, its full potential should be used also in the matter of acquiring some knowledge about God, partial as it may be. As Ahlwardt caustically remarked, many people denigrate reason and yet they become angry when they are called unreasonable (GB 15p).<sup>11</sup> More theologically phrased, God has perfect, infinite reason and it is pleasing to God when people try to imitate Him, in respect to reason in particular (16).

# 2. The power of reason

According to Ahlwardt, the human soul has the power to know, to desire or not desire, and to have pleasant or unpleasant feelings. Intellect (Verstand) consists of sensation, memory, and reason (VK 80). Intellect is the power to know things, to desire good and not desire bad, i.e., to will them or not (3), and the power of pleasant and unpleasant feeling in the moral sense. Pleasure is followed by the willingness to have the good; we desire what intellect recognizes as good (4). We know things from experience or from reasoning from concepts (10). Intellect is not infallible and thus it should be improved by scholarly (gelehrte) knowledge rather than by common (gemeine) knowledge to lead to the praise of God and advance our happiness (11). Intellect must use rules derived from the nature of intellect and of truth (27). Intellect can be mistaken in application of rules, so there must also be rules of their application (30).

A thought is a change of the intellect of which we are aware (VK 37). We do not always think. The ground of thought is in a passion (38): "no thought could arise in our understanding unless an object itself has determined it through a passion" (39) caused by animal spirits. This passion is a sensation which is inner or outer, the latter being divided into five senses (40–41). A set of unmediated concepts (derived directly from things) is an experience or observation (51).

Although the difference between intellect and reason is occasionally blurred, Ahlwardt wanted to understand intellect as the faculty of knowledge in general and reason as the faculty of distinct knowledge and of seeing the connection of things and grasping their grounds (VG 4; VK 12, 81–82); this connection of things includes representation, judgment, and deriving conclusions (GB 5p). Reason is

<sup>&</sup>lt;sup>11</sup> The following references to Ahlwardt's books will be used: BE – Betrachtungen über die Erndte, Stralsund-Greifswalde-Leipzig 1747. BT – Bronto-Theologie: vernunftliche und theologische Betrachtungen über den Blitz und Donner, wodurch der Mensch zur wahren Erkenntnis Gottes und seiner Vollkommenheiten, wie auch zu einem tugendhaften Leben und Wandel geführet werden kan, Greifswalde-Leipzig 1745. EP – Einleitung in die Philosophie, Greifswald-Leipzig 1752. VK – Vernünfftige und gründliche Gedancken von den Kräfften des menschlichen Verstandes und deren richtigem Gebrauch in Erkenntnis der Wahrheit, Greiffswald-Leipzig 1741. VG – Vernünfftige und gründliche Gedancken von Gott und dem wahrhafften Gottes-dienst, Greiffswald-Leipzig 1742. GB – P. Ahlwardt, Gründliche Betrachtungen über die Augspurgische Confession, und die damit verknüpfte Göttliche Wahrheiten, Greiffswald-Leipzig 1742–1751. Reference 1.23 means, part 1, page 23; reference 1.23p means part 1, page 23 of the preface which has a separate pagination.

the power of clear representation and other powers in the soul are grounded in it, whereby reason becomes the nature of the soul (EP 192).

Revealed religion must also be recognized by reason. The revelation does say about the necessity of reason: Rom. 12:1, 7, 1 P. 3:5, 1 J. 4:1 (VG 5). Reason must be used to clearly see the revealed truths since the truth requires the interconnection of concepts, which is known by reason (GB 19p). Seeing connections between truths also requires the use of reason. The more these truths are investigated, the more they will be followed (21p). Reason should scrutinize concepts, compare them, and compare revealed and rational truths (38p) because revealed truths must be in agreement with one another and also with the truths of reason (40p). People should not only understand the word of revelation but should also be convinced by it (37p), convinced through rational means since blind faith is not enough (45p). This means that since knowledge is the representation of things in our intellect of which we are aware (GB 5.422), there must be full explicit knowledge before faith (424) and knowledge is a necessary part of faith. To the essence of faith belongs "the grasping and taking the merits of Jesus and the divine promises of grace," but only what is known can be grasped, when one knows that Jesus is the Savior (396). How could our trust be put in Him without this knowledge? (397). What we do not know that does not incite our desire (398). "Rather, God requires an investigation of the laws given by him. He demands from his rational creatures a right conviction of what they should and should not do. And his commands are made in such a way that no reason even when using the sharpest means can overturn them, but rather it must most emphatically strengthen them" (1.46p). In this way, "all knowledge is a means of honoring God and of assuring our happiness" (VK 43).

In all this, as much as the power of reason can be extolled, it has to be enhanced, enhanced by the grace of God; in particular, reason is needed to determine the proper meaning of words read in the Scripture, but this reason is the faculty in addition to the grace God works out in the human soul, whereby people can with certainty apply the found rules and see the proper meaning of words (GB 29p). "There is surely in people another faculty than merely the reason sent/given to them by God in addition to the illumination worked out in them by the Holy Spirit and by the power of the revealed word by which the illuminated reason can then learn, investigate, prove, and see something. This reason in an illuminated person is thus what discovers the inner makeup of the true divine revelation and investigates the outward grounds and characteristics by which one should prove the truth of the same" (25p). And so, the reason must be illuminated by the power of the Word of God, illuminated by revelation (41; 6.909, 969), by the Holy Spirit (7.1572), and thus people should seek the Holy Spirit in the Word (4.91).

In practical terms, this calls for preaching the Word and preachers bring the Word to people (6.894). Illuminating grace is passed to people through them (895), but this is not absolutely necessary for an illumination. God can use a dream, a vision, or other means (897; cf. 2.12), although there is not much of a need now for such means since we have the revealed Word (6.902).

There is a touch of circularity here: the revelation must not contradict reason, but this reason must be illuminated by the revelation. A partial escape from this circularity would be the ascription of some innate truths to natural reason and Ahlwardt was leaning in this direction by pointing to the principle of noncontradiction, the nothing comes from nothing principle (VK 90), and the principle of sufficient reason (91). Truth is necessary and unchangeable and eternal and cannot be forced (93-94) and these principles appear to be such kind of truths (they are the first truths that people immediately recognize (EP 25–26)). If reason does not have them inscribed in the mind, it at least has an ability to recognize them as such inviolable truths and then it could apply them in its scrutiny of the Scripture to assure that there must be no contradiction in revealed truths (GB 31p). Be it as it may, the revelation is the final authority, and thus, for instance, "When we are convinced of the truth of our Christian religion by the certainty of the resurrection, so we certainly have no reason to allow ourselves to be misled by the apparent objections which reason sometimes arouses against some teachings of our Christian faith. Enough: we know that the whole teaching of Christ is divine and pure truth; enough: heaven and earth will pass away, but the Word of God will never pass away. Much less do we have any reason to hold the Word of the living God suspect, when our carnal reason still cannot grasp and comprehend everything, and even wants to see it as something contradicting and foolish" (3.1408; 4.120 note, 214; 6.873, 991).

#### 3. God and His attributes

According to Ahlwardt, God is a being that exists of itself (VG 11). He referred to the classical statement about God as *ens a se*, the statement which goes back at least to Augustine, for whom *ens a se* was the Father, *ens ab alio*, the Son, and *ens ab utroque*, the Holy Spirit (*De haeresibus* 87).<sup>12</sup> This is for Ahlwardt a fundamental premise; however, he did not really convincingly establish by reason alone without faith that this is an indubitable truth.

Actually, Ahlwardt himself used the phrase *ens a se* in his Latin pamphlets, *Dissertatio metaphysica de immutabilitate Dei ex absoluta ejus necessitate asserta*, Gryphiswaldiae 1747, pp. 7, 12, 23, 24; *Theses philosophicae* [Greifswald 1750], p. 13.

The concept of God is not innate; no concept is, since only faculties are inborn. When Paul spoke in Rom. 2:15 about conscience, it was the conscience existing only when there was the recognition of God as the lawgiver (VG 24). Descartes was wrong about his innatism since the idea of a perfect being is acquired by abstraction (25). Some authors prove God's existence *a priori*, but the existence cannot be derived from a concept (26), although Ahlwardt came very close to doing the same with the concept of the *ens a se*. The proof of the existence of God from the universal agreement is not good enough, either, since such an agreement can be caused by the corrupted state of humanity or by upbringing; moreover, the reliance on such an argument may lead to the acceptance of polytheism (29). The only way open is *a posteriori* from God's creation (31). This appears to be a point at which a physico-theologian would turn to nature to derive the existence of God from its makeup and orderliness. However, in a Cartesian twist, Ahlwardt turned to himself, to his own self.

The first thing that humans notice about themselves is that they are self-conscious (VG 31); thus, they know something: "I am aware of myself, thus I know something, thus I think," so I exists and thus I am a thinking being, a spirit (32).<sup>13</sup> It would be foolish to require another faculty to convince us that we are conscious and that we think (GB 2.16). The idea of the certainty of one's own existence because of one's self-awareness is taken from Wolff.

All thoughts make the self (Ichheit) of mine, so I am an I with thoughts, so I am a spirit. My thoughts change, so I am changeable (VG 34). An inner sensation and our changeability tell us that we do not come from ourselves. We come from a Creator (36) since no thing can come from itself (38, 43); we come from God who is the being necessarily existing of itself, who is eternal (40), unchangeable, infinite (41), and He is one (44), in which train of thought Ahlwardt largely followed Wolff.<sup>14</sup> We cannot think about any other being in the presence of the being of itself (*ens a se*), so there is no opposite of it, so it is necessary (62); it is what it is, Jehovah (63). A being of itself must not be limited, thus it must have everything, and thus it is infinite (64). This being possesses all perfections since it surpasses any limits (65–66). We should distinguish between what is against reason and what is above it, what cannot be explained with natural powers of reason (GB 2.32). Therefore, human limited intellect cannot have the full concept of God

<sup>&</sup>lt;sup>13</sup> The awareness of oneself and of other things is a defining feature of the soul according to Ch. Wolff, Vernünfftige Gedancken von Gott, der Welt, und der Seele des Menschen, Frankfurt-Leipzig 17335, p. 107.

<sup>14</sup> Ch. Wolff, *Vernünfftige Gedancken von Gott, der Welt...*, pp. 574–576, 583–584 and the rest of ch. 6.

and in eternity, in the blessed state after the end of the world, people will grow in the knowledge of God, but since they still will be finite beings, this knowledge will never be complete (VG 68; GB 8.1324, 1326). Incidentally, the damned will have no knowledge of God as the highest good (GB 8.1422). The lack of such knowledge of God is the true unhappiness and the greatest displeasure associated with infernal torment (1423–1424).

God is eternal (VG 69), immeasurable in respect to all attributes (70), omnipresent (71), outside time (76). There cannot be two different infinite beings A and B; if they were different, one attribute would belong to A and not to B and thus B would not be infinite (78), so there is only one God (44, 80). An infinite thing cannot be made out of infinite parts, so it must be simple, not composed of parts (82). God has the highest intellect (86) and this divine intellect is the source of all possible thoughts. Truths are thoughts, so all truths are possibilities (89) and divine intellect is the only source of truths (90). In His eternal presence, God knows the future, He knows the consequences of free, unnecessary actions (84). Wisdom is the perfection of intellect as to the means of reaching good goals (97). God acts according to goals that are required by wisdom, and, of course, God is perfectly wise. However, these goals have to be understood as taking place concurrently and from eternity (100). Also, when speaking about God's action, a human way of phrasing it is used: "it takes place only in human manner and should not be understood in the proper sense," literally, since God does not act (85).

Will is an inclination toward good and toward a rejection of evil (101). Where there is intellect, there must also be will (102). God's will is the only source of all that is good. The intellect and will are necessary in God (106); thus, His will cannot be considered free. However, in a hair-spitting disqualifier, Ahlwardt stated that this does not mean that God is forced to act in a particular way, but He acts according to the divine, unconditional necessity, and at the same time it also can be said that His essence forces God (107).<sup>15</sup> This position may have been inspired by Spinoza (see his *Ethics*, proposition 33) even though Ahlwardt very clearly

<sup>&</sup>lt;sup>15</sup> Since God wants the best and actualizes the best gladly, "who would want to say that he is forced to what he does gladly?" asked rhetorically Ch. Wolff, *Vernünfftige Gedancken von Gott, der Welt...*, p. 608.

distanced himself from Spinozism (VG 14–15).<sup>16</sup> However, the position that God always acts by necessity and has no freedom met with an immediate and strenuous pushback.<sup>17</sup>

God's will has an inclination to the greatest good, i.e., to Himself. An inclination to something is called love (VG 113). God loves Himself and His creation (114). Since God has perfect knowledge and is perfect goodness, He did not have to investigate various possible worlds and weigh the value of one against another; God even did not imagine nor surely created other worlds (127). He created this world by necessity, the best possible world. However, human freedom intervened, the freedom in the fallen humankind that not always has the best interest of the world in its heart. This freedom opens various possibilities for the succession of the world (die Folge der Welt) which seems to mean, different future histories (128–129). Since so many different successions are possible, the succession that actually takes place is accidental. God knows all these possibilities (130). There are thus no different possible worlds; there are only different sequences of changes/ events of the one best world created by necessity (131).

#### 4. Bronto-theology

God's wisdom is visible in His creation (VG 116) and creation exists in order to show God's infinite perfections. Rational creatures should represent it as the glory of God (117). Therefore, to recognize God's perfection, also rational creatures

- 16 Even today, Ahlwardt is accused of being an adherent of Spinoza, which is unjustified. The essence of Spinozism is in the pantheistic monism and there is no trace of it in Ahlwardt's writings. However, he argued that an atheist may lead a virtuous life and he gave Spinoza (although hardly an atheist) as an example of such a life even stating that when reading on Spinoza's life, he wished that all Christians behaved the way Spinoza did, P. Ahlwardt, *Philosophisches Sendschreiben*, Leipzig [self-published] 1750, p. 36. One unflattering rebuttal stated that Spinoza's virtuous life can be summarized by saying that alone, he sweated out his blasphemous books between four walls. He could be shamed by pagans who in their way feared God, An anonymous "friend of Ahlwardt," *Gelegentliche Untersuchung der Frage: Ob ein Atheist ein tugendsames Leben führen könne, oder nicht*?, Greifswald 1750, p. 18.
- 17 Ahlwardt published first his views on this subject under a pseudonym, A. Libertus, Vernünfftige Gedancken von der natürlichen Freyheit sowohl überhaupt, als auch in sofern selbige Gott und den Menschen zugeeignet werden müsse, Leipzig 1740. The views expressed here were criticized by J. A.A. Stock, Philosophisches Geheimniß, Frankfurt-Leipzig 1742; J.M. Heinze, Philosophisches Sendschreiben über eines ungenannten Verfassers, vernünftige Gedanken von der natürlichen Freyheit, "Belustingungen des Verstandes und des Witzes" 1742, pp. 430–452; J.G. Virinus [D. Sparmann], Gründ- und deutlicher Begriff von der Natürlichen Freyheit, in sofern selbige sowohl Gott, als auch dem Menschen zugeschrieben werden kan, Frankfurt-Leipzig 1749, pt. 2. Rather curiously, Ahlwardt himself distanced himself from his own pamphlet, and stated that God necessarily has liberty and liberty to the maximum extent possible, P. Ahlwardt, Libertatem vindicatam, summoque numini adsertam, Gryphiswaldiae 1741, pp. 20–21.

were created, including humans (119). "God put us in the situation that through our reason we can know him and admire his attributes in his creation and derive them from it; thus, he rightfully requires from us that we actually do it, that we use the powers allotted to us and investigate the creation to truly know what he created" (BT 218–219). God necessarily wants to receive glory (VG 138) and "the will of God must be known by reason from the investigation of the world and its infinite properties" (144). Moreover, perfect happiness can only be in God (131) and thus just the eternal self-interest would indicate that the better people know the world, the better they see God and His attributes, whereby the investigation of nature has also an eschatological dimension.

Rational investigation could only go so far and the empirical, experiential investigation of nature is also needed to palpably appreciate God's presence. This general realization along with the 1741 experience of the tower of St. Nicholas church being struck by a lightning in his hometown, and examples of Derham, Lesser, and others led Ahlwardt to devote a fair size book to a very small aspect of the physical world, namely thunder and lightning, in the work using then the customary baroque title, *Bronto-theology: rational and theological investigations of lightning and thunder, whereby man can be led to the true knowledge of God and of his perfections as well as to a virtuous life and change (1745).<sup>18</sup>* 

Although the goal of the investigation is theological and moral, Ahlwardt believed the physical aspect of the investigated phenomena should be presented as thoroughly as possible. And so, Ahlwardt explained that summer lightning (Wetterleuchten) is a visible flame in air of no particular form that quickly disappears (BT 8); it occurs when some sulfurous particles are raised from the ground up into the air by the warmth of the sun and get enkindled (15–16). On the other hand, lightning, thunder, and flash are inseparable (22). In the case of the summer lightning, only a few sulfuric particles are enkindled leading to a small expansion of air which does not cause an audible sound (110).

The fire of lightning is just regular fire made of sulfuric particles (BT 49). Because of their small weight, the smallest particles of fire attach themselves to and permeate other bodies and detach from them small parts (55). These fire particles pass from a hot body to a body with lower temperature as everyone knows from experience (57). Particles of fire carry in air other particles like, for instance, sparks which are particles of iron coming from a hot rod. And so, particles of sulfur are carried upward in air by fire caused by sun rays, which shows that the sun

<sup>18</sup> Ahlwardt gave an early exposition of the problem in his pamphlet, *Fulgur cum tonitru in genere, ut et in specie ex turri templi Nicolaitani ortum*, Gryphiswaldiae 1741. His *Bronto-theologie* got some traction since it had a second edition in 1747 and a Dutch translation came out in 1750.

and its rays are real fire (59). The true cause of this rising is the fact that the small particles of earth are rising because they become attached to fiery particles (62). The second cause is the fact that the air surrounding such small fiery particles is heated by their warmth; this warmed air rises and is replaced by colder air, thereby pushing upward the fiery vapors. The third cause: more and more vapors from the earth pass into the air, thereby pushing upwards sulfuric vapors already in the air; however, over time, because the heat decreases, the vapors must also decrease and eventually stop. Also, all vapors become eventually cold and they stop rising and remain hanging in the air because of the minute size of their particles; after all, we cannot see individual particles of vapor and particles of air can support the particles of vapor which are "almost like nothing" (63–67).

When two bodies are rubbed against one another, they warm up, which shows that there are particles of fire even in the coldest bodies (BT 71). Thunders occur most often on hot days (76). Before thunder, a lot of sulfuric vapor rises from the ground, which can be smelled (77). Winds can bring cold air (78), sulfuric particles form sparks which gather together in the cold air and form a flame, a lightning (79). What we see is lightning arising between clouds and it is an optical illusion that the lightning tears a cloud apart (87). There is nothing contradictory in saying that the lightning arises in a cloud, breaks out, and then manifests itself as a flame (88). This flame expands the air which moves quickly causing a flash (92). The sound depends on the elasticity of the air. The speed of expansion of the air explains the sound (96). The expansion of air causes pressure in the ear which we hear as a sound (97, 104), which is thunder (108). Since not all particles can be enkindled at the same time, we have a rolling thunder (113). The difference between the time of lightning and thunder allows us to determine the distance of the thunder and the time can be measured by a person's heart beat (122).

Lightning is powerful fire that can melt metals (BT 125), bring a lot of destruction to buildings, it can kill people (142), blind them (138), make them deaf (139), and it can frighten them to death (141). This fire can heat up blood which would expand the veins; delicate veins may burst (144), whereby blood ceases to circulate. The sulfuric vapor of lightning can suffocate a person (145). Any positive outcomes? Following long tradition, Ahlwardt said that lightning purifies air (155) and often brings rain (156), which is good for plants (157). If we banned lightning from the world, our health would suffer because of impure air; moreover, most people would wallow in sin unafraid of lightning (262).

So much for naturalistic explanations, which are largely elaborations of descriptions provided by Aristotle (*Meteorology* 2.9). In all this, we should realize that nature has been created by God along with the laws by which thunder and lightning occur, and thus, God is the cause of these atmospheric phenomena (BT 30); however, He is a distant/remote (entfernete) or indirect cause, and thus, the often quoted Scriptures about God striking the earth with thunder should not be understood in a way of making God its direct cause (31). God created natural laws and "it is contrary to his infinite wisdom and perfection to constantly create new things and introduce changes in the world through his immediate action. The power of God only maintains the once created things and forces in the world and allows them to constantly act and introduce certain changes" (32). However, we should not say that God thunders or burns a house, but we should learn why something happens according to the course of nature which was wisely set up (35).

Pagans considered thunders to be made by gods, and some thought they were themselves gods (BT 169). However, "every thunder cries out to people: there is a God" (183). Lightning should awake in people the desire to know who God is (186), to make them see the greatness of His splendor, to make them think about God's perfections. This is simply human duty (187). "Great God! you are wise and your wisdom is inexhaustible; your works, lightning and thunder, are powerful and sufficient to convince [us]. How small and puny, yes, like nothing, is the wisdom of all people, oh, sublime God! in comparison with your inaccessible wisdom about which these witnesses of yours bring to the daylight an undeniable proof" (198); this wisdom is not just about lightning, but about the complicated mechanism of its appearance. Lightning wakes people up from their slumber of sin, directs them to the change of their life (201), and punishes evil to bring people to a virtuous life (202). Only a very small number of lightnings do any serious damage. People should be thankful that lightning did not strike them or their possessions (203). All lightnings are witnesses of God's justice (206) and it is foolish to think about the most perfect and holy Being that it can be otherwise (209). Also, in His wisdom, God takes to Himself His children through lightning, cf. Lk. 13:4-5 (213).

Lightning and thunder, as all creation, are created for the glory of God (BT 226). "They do not shout only: Here is God, here is God; but their voice goes even further. They shout at the same time: Here is the only true God, who possesses infinity, God, the only one who is wise, good, holy, righteous and all-powerful, the God who not only made us but also the whole world and who always rules through his eternal care. Here is the exalted, the affable but also the fearsome God. Surely, this voice of thunder and lightning is a voice of the eternal truth to which even the vilest evildoer has no reason whatsoever to object" (227)

Lightning proclaims God's perfections and thereby draws people to the reverence for God and to the love for God (BT 244). This love grows with the level of the recognition of God's perfections (245). Ahlwardt rather unlikely wanted to say that

the more people are exposed to thunderstorms the closer that would be brought to God, but that thunders are not the only element of nature in which God's perfection can be found; thus, the investigation of nature should not be limited to the investigation of stormy weather. After all, the entire world is a mirror of the infinite perfections of God (223; GB 1.248). However, the fearsomeness of thunder has a part in bringing people closer to God as well. The right fear of God is inseparable from the love for God. If true fear is missing, then there is also no love. Thus, the lightning leads people to the true love of God (BT 253). The punishment will be seen as the sign of the God's love who wants a sinner to abandon sin. This differentiates the filial fear of God from slavish fear (254, 391, 393): filial fear fears what it loves; slavish fear loves what it fears (VG 163). In this differentiation Ahlwardt followed Mather. People have to be convinced that God prepared everything perfectly for their good (BT 265). "Every lightning and every thunderbolt lead us to the disposition that we should pray and sigh to God" (273), but this must be a prayer with a full trust and satisfaction, trusting that what is unpleasant is for people's good (277). Wise and virtuous life is the only way to avoid God's punishment and can face lightning with confidence and with "joyous disposition" (283). Such a trust, however, should not lead to recklessness and common sense should not be abandoned. After all, "he tempts God who demands something from God without using and applying the means" with which the problem can be avoided (346). It would be equally foolish to jump from a tower and pray to God that the health of the jumper be intact (347). And thus, people should avoid places where a lightning can strike (293), avoid places rich with sulfur: close to volcanos, with frequent earthquakes, rich with ore, battlefields with plenty of buried bodies of people and animals (296). Avoid high mountains and high buildings since they are struck most frequently, probably because sulfuric vapors accumulate there and self-ignite. Also, these places are much closer to lightnings (298). And yet, those who have to take watch on high buildings must do it because of their duty to the fatherland (300). Trees, particularly oaks, are struck by lightning, so people should stay away from them (302). Clothing should be washed, since its stench includes many sulfuric particles, so it is a duty to have clothing washed in the time of lightning (314). Sweat contains sulfuric particles from the body, so, nothing should be done during lightning that causes plenty of sweating (315–316). Fear kills, thus, fear which grows during lightning should be restrained (321). Also, a person is safer in sleep than when being awake (335). Various superstitious means against lightning are applied, some plants, animals (337) by ascribing them some mysterious powers (338), but people should reject the use of such false means (339).

Practical measures have to be undertaken before any storm comes, measures undertaken by individuals, but also by authorities. And thus, the authorities should require graveyards not to be close to churches, but outside city limits, towers and steeples not to be too high, and stinking places, such as tanneries, should be banned (BT 370–371).

When a disaster strikes, aftermeasures should be undertaken as well, in the Christian spirit. Best attempts should be made to reanimate anyone struck by lightning (BT 359). People can be helped by empathy, by rescuing their possessions, and by sharing with those in need (364–365). However, in all of it, "a Christian should be assured by faith that God in his wisdom lets the best come to him. He should be glad even in the midst of the greatest woes and in [the face of] the loss of his life, and should look with courage at the face of the greatest danger with the greatest confidence that finally everything must serve, according to the wisest arrangement and foresight of our God, his true spirituality" (348).

On balance, there was not much that Ahlwardt could add to the field of thunder-theology, the theme used in many sermons before him. The natural explanation of weather phenomena (thunder and hail, in particular) was done very briefly and then moral lessons were quickly drawn from it, which were usually in the spirit of doom and gloom.

Ahlwardt provided very detailed explanations in the traditional vein (vapors, sulfur, clouds, etc.) widely recognized before Franklin's experiments which were to be known in a few short years followed by the wide use of the lightning rod.<sup>19</sup> Before coming to moral lessons, Ahlwardt wanted to make a close connection between thunderstorms and God. God was the Creator of all nature, and since God does nothing in vain (BE 110), thus, there must have been a reason for allowing various destructive phenomena to occur in nature. God's wrath comes to mind first and Ahlwardt's predecessors dwelled particularly on this aspect of these phenomena. For Ahlwardt, in a larger theological context, God is perfect and all His attributes are perfect and perfectly interconnected to the point that it may be said that there is only one attribute which is split by the weak human mind into multiple attributes: because of our imperfection, we have to represent God's attributes as parts which one leads to another (VK 58). And thus, Ahlwardt saw justice as inseparable from mercy: justice without mercy would be injustice and mercy without justice would be blind and unwise love (GB 1.269), both being different manifestations

<sup>19</sup> B. Franklin, Experiments and observations on electricity, London 1751; F. Schock, Donnerstrahl und Eisenstangen: Die Debatte über den Blitzableiter in den Journalen der Gelehrtenrepublik, "Aufklärung" 26 (2014), pp. 67–99.

of the same perfect God. Also, love is inseparable from wrath (BT 253).<sup>20</sup> A passing reference to that effect was made by Bramer and Mather, but for Ahlwardt this was derived from a larger theological framework. In this, Ahlwardt very likely meant this statement to be limited to God alone. God is pleased when people imitate Him (VG 160; GB 16p; EP 249), so, should a loving father express parental fear toward his children or a loving husband express a spousal fear toward his wife? For humans, it appears to be a dissonance between fear and love, but for the perfect God it should not. And, theologically, Ahlwardt could call upon people to love God more in the face of a lightning, although the sentiments of the people affected by the damaging effects of a thunderstorm may not align with him on it.

Ahlwardt's reference to the love of God was made rather unconvincingly in his undelivered sermon on the occasion of a cattle-pest unknown to veterinarians; the blame was put squarely on the locals who were punished by the loss of their cattle from which they should otherwise have their food according to God's great love and goodness (BE 284). God wants the best for humans even through the means of plagues and punishment (288). He wants to turn away sinners from the way of evil (290). If the infinite compassion and patience does not lead people to repentance, so should his wrath and punishment (293). By His nature, God must punish the sinners who disrespect Him, thereby bringing vengeance upon themselves (295). God wants to strengthen their faith and ground them more in His love (317), while exercising their patience; it is fatherly upbringing (318). How many times did people care more about their cattle than about God? (324).

Choosing thunder as a topic of his physico-theological investigation was, theologically, a tall order when trying to argue that this phenomenon is an expression of God's mercy and love. It could be said, that other physico-theologians had it easier when exploring the omnipresence of harmony and beauty in animate and inanimate nature as, for instance, Derham, Pluche, or Nieuwentijt had done, or looking at the intricate makeup of particular aspects of nature such as plants (von Rohr), snails (Lesser), bees (Zorn), fish (Malm), and many others. It can be said that it is relatively easy to speak about thunder as an expression of God's grace and love. This is where a larger theological context helps: since all these attributes are really one, then thunder must be at the same time an expression of all these attributes. It can be said that whereas God's wrath can be read from the thunderous weather, His love has to be read into it. Pure physico-theological argument – going from the

<sup>20</sup> Cf. the statement of Clement of Alexandria that God's anger is full of love to man, *The Instructor* 1.8, the last sentence; in God, "that which punishes is the same as that which forgives and redresses," F. de Salignac Fénelon, *De l'existence et des attributs de Dieu*, Paris 1861, p. 170.

makeup of the world to the knowledge of God – suffices to go from thunder to the divine wrath. Theological argument – whether based on natural reason or on revelation – is needed to go from the divine love to thunder so that the latter could be seen as an expression of the former. This is where a broad theological context was critical and Ahlwardt has woven his thunder-theology into it rather well.

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#### PETER AHLWARDT'S THEOLOGY OF THUNDER

#### Summary

Peter Ahlwardt, an eighteenth-century professor at the University in Greifswald, is primarily remembered as the author of the *Bronto-theology*, in which he presented his thunder-theology – an idea which belongs to a very strong physico-theology movement at that time. This article situates this very small portion of physico-theology in the context of Ahlwardt's philosophy and theology. In his epistemology, Ahlwardt stressed the need for reason in understanding and appreciating revelation. Conversely, he also required that reason should be illuminated by the Holy Spirit, thereby stating that the revelation is the final authority. Ahlwardt rejected the idea

of an inborn concept of God – thus, the only way open to the knowledge of God is *a posteriori* from God's creation. Ahlwardt proved the existence of God from self-awareness. Creation exists to show God's infinite perfections, and humans, as rational creatures, should investigate nature to see these perfections and learn about the will of God. Like other physico-theologians, Ahlwardt used his investigation of thunder and lightning to show that they are manifestations of God's attributes. Relying on the perfection and the unity of God's attributes, Ahlwardt argued that these investigated atmospheric phenomena are as much the manifestations of God's wrath as of His love; they make people see the greatness of God's splendour and make them think about God's perfections.

Keywords: Ahlwardt, physico-theology, thunder, lightning, God's attributes

## Nota autorska

Adam Drozdek - Associate Professor at Duquesne University; e-mail: drozdek@duq.edu.