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APIAN THEOLOGY OF ADAM GOTTLLOB SCHIRACH

MELITTO-TEOLOGIA ADAMA GOTTLLOBA SCHIRACHA

ABSTRACT:

Adam Gottlob Schirach was an eighteenth-century pastor and apiarist from Upper Lusatia. As a cleric and a practicing scientist, he combined his theological and scientific interests in proving the existence and the attributes of God through the observations of the anatomy, physiology, skills, and social life of bees. Being primarily an ecclesiastic, he wanted to derive for these investigations spiritual lessons from people to become more devoted in their religious life.

Adam Gottlob Schirach był XVIII-wiecznym pastorem i pszczelarzem z Górnych Łużyc. Jako duchowny i praktykujący naukowiec łączył on swoje teologiczne i naukowe zainteresowania w udowodnieniu istnienia i atrybutów Boga poprzez obserwacje anatomii, fizjologii, umiejętności i życia społecznego pszczół. Będąc przede wszystkim duchownym, czerpał z tych badań lekcje natury religijnej, prowadzące ludzi do pogłębienia ich życia duchowego.

Adam Gottlob Schirach (1724–1773), a son of a pastor, entered in 1737 a high school (Fürstenschule St. Afra) in Meissen and after graduation in 1743, he entered the University of Leipzig. In 1746, he became a tutor in Budissin (Bautzen). In 1748, he was ordained and installed as a pastor in Kleinbautzen in Upper Lusatia (mainly in Saxony)¹.

After Schirach became a pastor, he also discovered the world of bees and became a consummate apiarist and through his writings he became a recognized authority throughout Europe: in the West where his work was translated into French and Italian², and in the East where his book was translated into Russian and Catherine II of Russia sent two men to Kleinbautzen to study Schirach's bee-

¹ *Kurzer Entwurf einer Oberlausitz-wendischen Kirchenhistorie*, Budißin: David Richter 1767, s. 174-176 and passim; J.G. Vogel, Vorbericht, in: A.G. Schirach, *Wald-Bienenzucht, nach ihren grossen Vortheilen, leichten Anlegung und Abwartung*, Breßlau: Wilhelm Gottlieb Korn 1774, s. ix-xxvi.

² A.G. Schirach, *Histoire naturelle de la reine des abeilles*, La Haye: Frederic Staatman 1771, Amsterdam: B. Vlam 1787; tenze, *Storia naturale della regina delle api coll'arte di formare gli sciami*, Brescia: Giammaria Rizzardì 1774.

keeping methods³. For his achievements in the field of apiculture, he was inducted as a member in numerous scientific societies, domestic and abroad⁴.

A competent practitioner as he was, Schirach was first and foremost an ecclesiastic, the position that he treated with utmost seriousness: “The duties of my office require that I primarily proclaim to my brethren his [God’s] ways, his works and his blessings of the kingdom of grace. (...) The Lord whom I serve calls my attention to missing no opportunity to show the way on which we as poor sinners, that we should find salvation and mercy through the love of our God and in the belief in the name of the Name of the Son of God” (xiii-xiv)⁵. A devoted apiarist and a spiritual shepherd, he wanted to combine the two passions as a way “to proclaim the glory of the praiseworthy Creator from this small, often despised, but wonderful bee” (xvii). Therefore, he wanted to join the very strong physico-theological movement and proposed a physico-theological handbook (dedication, [3]) through which he carved out a physico-theological subfield that he called melitto-theology or melisso-theology (xvii) and also api-theology⁶.

Before Schirach

According to Schirach, many wrote about the upkeep of bees, but not about the glory of God and the edification of people bees provide. Some wrote about the glory of God from the book of nature, but this was about the entire nature or about its part⁷, and, presumably, not about bees in particular. Also, no one led people from the makeup of bees to the admiration of God and such an admiration should be the only occupation of rational creatures on earth⁸. However, bees have been eulogized for centuries for their various qualities and many physico-theologians included some discussion of bees as the manifestation of God’s power and

³ J.G. Vogel, [a dedication to Catherine II], in: A.G. Schirach, *Wald-Bienenzucht*, p. [2]; C.A. Jentsch, *Geschichte der Lausitzer Prediger-Gesellschaft zu Leipzig und Verzeichniss aller ihrer Mitglieder vom Jahre 1716-1860*, Budissin: Schmalzer und Pech 1867, p. 14; Адам Готлоб Ширах, Саксонский содержатель пчел, Санктпетербург: [В Типографии Морскаго шляхетнаго кадетскаго корпуса] 1775.

⁴ Original apiarist observations and experiments of Schirach, particularly in creating new apian colonies, are presented in B. Nawka, *Adam Gottlob Schirach, der Berggünder der Oberlausitzischen Bienengesellschaft von 1766*, Lëtöpis 13 (1970), s. 90-91; R.G. Mazzolini, *Adam Gottlob Schirach’s experiments on bees*, in: J.D. North, J.J. Roche (eds.), *The light of nature*, Dordrecht: Martinus Nijhoff 1985, s. 77-78.

⁵ Numbers in parentheses are page numbers in A.G. Schirach, *Melitto-theologia: Die Verherrlichung des glorwürdigen Schöpfers aus der wundervollen Biene*, Dresden: Waltherische Hof-Buchdruckerei 1767.

⁶ Μέλισσα (Attic: μέλιττα) – a bee; in Latin: *apis*. A.G. Schirach, *Die mit Natur und Kunst verknüpfte neuerfundene Oberlausitzische Bienen-Vermehrung*, Budißin: David Richter 1761, s. 23; A.G. Schirach, *Ausführliche Erläuterung der unschätzbahren Kunst, junge Bienenschwärme*, Budißin: Johann Carl Drachstedt 1770, s. 6.

⁷ A.G. Schirach, *Die mit Natur*, s. 26-27; tenze, *Ausführliche Erläuterung*, s. 9-10.

⁸ Tenze, *Ausführliche Erläuterung*, s. 6.

wisdom⁹. Derham admired how bees “work their deep hexagonal Cells, the only proper Figure that the best Mathematician could chuse for such a Combination of Houses”¹⁰; architectural prowess of bees was admired at length by Lesser in his theology of insects¹¹, and Pluche in his massive physico-theological *Spectacle of nature* presented admiringly in two chapters the performance of bees¹².

As to works devoted to apian theology, two decades before Schirach’s work, there was Zorn’s project of a melisso-theological book published in a journal¹³, which may have escaped Schirach’s attention. According to this outline, Zorn wanted to cover the following topics: the advantages bees have over other insects: by their makeup and character: wisdom, art, diligence, harmlessness, cleanliness, order, housekeeping, the preparation of new colonies, usefulness, social life. Their names in Hebrew, Greek, Latin, and German. On their Creator and how God’s attributes are manifested in them: wisdom, power, and goodness. The wonderful makeup of their bodies including their outer senses: vision, smell, taste, hearing, and touch; and inner senses: memory, imagination, differentiation, loyalty, violent anger against enemies, communication, the queen’s ability to distinguish eggs. Different kinds of bees. Their lives, their growth, their food. The description of the beehive. The care for bees, their illnesses, their enemies. The poisonous stings and the ways of healing after being stung. The usefulness of bees in moral matters, in political matters, in economic matters, and in medicine. The use of bees in religion by Christians and by pagans. Bee-related proverbs and literature. Many of these topics are covered by Schirach, but the scope of the coverage proposed by Zorn is much more ambitious than the coverage found in Schirach, and judging by Zorn’s two-volume work on avian theology¹⁴, it was within his ability to deliver if his life had not cut short.

It is also interesting that in his *Melitto-theologia*, Schirach many times referred to the work of Walpurger, *Great God in the small scripturally and rationally presented in the way suitable to His majesty in the noble creature of bees with the preliminary treatise about insects*, in which the second half of the book is about bees viewed primarily through the theological lens¹⁵. In his view, bees are the noblest among insects because of their industry, frugality, harmony, peacemaking, the love and respect for the authority. He discussed etymology, anatomy, but not their inner organs, also the architectural skills of bees, their social life, and their mental traits. In all this, he wanted to show “how the investigation of this noble insect can lead

⁹ J.P. Glock, *Die Symbolik der Bienen*, Heidelberg: Theodor Groos 1891.

¹⁰ W. Derham, *Physico-theology*, London: W. Innys 1713, s. 233.

¹¹ F.Ch. Lesser, *Insecto-theologia*, Leipzig: Großische Handlung 1758 [1738], s. 194-209.

¹² N.-A. Pluche, *Le spectacle de la nature*, Paris: Freres Estienne 1732, vol. 1, s. 140-192.

¹³ J.H. Zorn’s an den Editorem der fortgesetzten nützlichen Anmerkungen darinnen er einen Entwurf seiner Melisso-Theologie liefert, *Fortgesetzte nützliche Anmerkungen* 18 (1744), s. 463-503.

¹⁴ J.H. Zorn, *Petinotheologie*, Pappenheim: Christian Rau 1742, vol. 1; Schwabach: Johann Jacob Enderes 1743, vol. 2.

¹⁵ J.G. Walpurger, *Der Grosse Gott im Kleinen, auf eine seiner Majestät anständige Weise, an dem edlen Geschöpfe der Bienen, nebst einer Präliminar-Abhandlung von dem Ungeziefer überhaupt, Schrift- und Vernunftmäßig vorgestellt*, Chemnitz: Johann Christian Stöbel 1762.

to the glorification of God who created it for humans for their best”¹⁶. The depth of the coverage in Walpurger is more modest than in Schirach who also admitted that Walpurger’s book is “a good beginning” that speaks about the glory of God when presenting bees (xxiii). Although Walpurger knew the topic second-hand and relied entirely on published sources, Schirach was more interested in the religious side of Walpurger’s presentation and followed “the great Walpurger” (140) in that respect fairly closely.

Melitto-theology

Schirach saw the finger of God in all aspects of the apian reality: the anatomy of the bee, its physiology, social life, building skills, etc. and the investigation of the apian world he considered to be an avenue leading to God, His power, wisdom, and goodness.

Schirach described in detail the apian anatomy. For example, when discussing sensory organs of bees, he provided a description of the antennae. Antennae (Fühlhörner) “stand more down than up on the head. They are composed of various horn-like parts, and are jointed from one end to the other; they can join together, which is often seen; the lower part of each horn is an elongated and shiny red button. We find on this antenna 10 such buttons and a spindle” (58). A famous entomologist “Reaumur doesn’t make anything special of those antennae; but to me they seem to be of great use. First of all, to feel, because bees feel and test with them the moisture, but then also to protect their eyes. What the eyelashes are to us, the antennae are to them” (59). In a somewhat disconnected manner Schirach observed that human sensory feeling is sometimes deceived and humans should beware of it and yet they should bring themselves through the sensory feeling to the knowledge of God. “God is spirit, and we should learn to feel him” (61). However, this feeling would be evoked not by God’s essence, but by His works and blessings that can be grasped and felt with human hands (62). He also described in some detail the eyes of bees that are network-like vaults with many hundreds of angular little mirrors (63). The complexity of the eye clearly indicated for Schirach that it is a work of God: “O, glorify such an incomprehensible wisdom! Speak about his deeds! Beware of offending this powerful and wise Lord through your sins,” since the one who made the eye, sees what humans do. People should be grateful to God who endowed them with eyes so that they can see His works (67).

The grandeur of God can be also seen in the language of bees¹⁷. Bees sing and speak; they have for it appropriate organs (72). Their various sounds are not made

¹⁶ Tamže, s. 270.

¹⁷ In *Melitto-theologia*, Schirach republished his article on the subject, *Physikalische und moralische Betrachtungen über der Bienen Sprache und Gesang, Abhandlungen und Erfahrungen der Oekonomischen Bienengesellschaft in Oberlausitz*, Dresden: Waltherische Hof-Buchhandlung 1788, s. 77-84.

with their wings (74). As one author stated, animals need various things and as they live in groups, they have to communicate their needs (77). Singing is their language and “they sing about the power, goodness and wisdom of my and their Creator; they fulfil the words that exactly state in the sacred physics: animals and all cattle, the worms and birds should glorify the name of the Lord, Ps. 148:10. Why shouldn’t it be understood literally?” In that respect, as to the singing to God, people should learn from bees (78).

In Schirach’s view, the apian life not only always points to the creative power of God, but it should also teach people moral lessons. After all, for Schirach, an ecclesiastic, the improvement of the spiritual life of his flock was more important than the admiration of what God could do in nature. And thus, on this note, having described the apian flying mechanism, Schirach said, “Soul! If you want to be happy, you have to fly. Bees have four wings, two big and two small; this should be your faith, your love, your prayer, and your devotion. The flight of bees is quick: so, you should [quickly] fly to Jesus” (91).

The bee undergoes an intricate and wonderful process of transformations: growing from an egg, through the stage of a larva, then a pupa to the grown bee (178). For Schirach, there is a religious lesson in this: the transformation that the bee undergoes is “an image of our resurrection.” In this process, we can see “God’s benevolent foresight for such small animals” whereby the trust of Christians in God can be strengthened (184).

The apian anatomy bears the stamp of God in all respects. The harmonious organization of bee’s inner, but also outer, organs shows “an infinite intellect and most perfect knowledge of an eternal Being who organized all these things that way. These small insects and this beautiful eurythmy of their small parts preach about the wisdom and their Creator. They also proclaim his unbounded goodness” (112-113), the goodness directed to the bees, but also to humans who can use the fruits of the apian labor. The makeup and the activity of bees are the manifestation of the power, wisdom, and goodness of God (xvii); recognizing this, people should be led to the worship of God and to the humble recognition of the human standing before Him (xix). In fact, many things about bees are still unknown, which is “a proof of an unending wisdom of our glorious Creator and Builder” (192).

The recognition of the acumen of bees should also lead people to God. Bees manifest “by their geometrical knowledge that they exactly follow some mathematical rules” (29) and an unfathomable wisdom of God is manifested by the fact that He endowed bees with an ability so that, “without learning mathematics, they can build such beautiful edifices” (35), “for how else could they make the equally angled hexagonal cells in the dark so precisely,” that no mathematician could replicate on such a large scale (59)? Moreover, bees are able to erect a different construction for queens: “A special cell or queen cup is built for her. Such palaces are established, as many as the same should be borne from them; 4, 6, also probably 20, at once in a stock. They are placed partly in the middle of the wax comb over other hexagonal cells, partly and generally on the edges of the wax comb. They

are not hexagonal, but round and elongated, much like an acorn. Its walls are very thick and the outside is pitted. It is much heavier, longer and wider than a regular cell” (186).

Although very briefly, Schirach touched upon the problem of theodicy. In particular, he addressed the complaint of those who say that some divine deficiency can be found in the fact that humans were created without a flying ability. Schirach’s explanation: if people could fly, this would be dangerous for them. Also, that would disturb social peace (94): a lot of evil would be unpunished because people could quickly fly away from the place of their misdeeds (95).

Another complaint comes particularly from those who were stung by a bee. Schirach expressed the view that through the sting God’s goodness is manifested since the sting was not designed to be against humans, but against the enemies of bees so that they can with their stings protect the beehive – for the good of humans (107), since “all is here for our needs and for our use” (113), here, on earth, that is.

A larger problem was the plagues of snails that harmed agriculture. Some ascribed them to the result of a blind accident; however, such people are simply unwilling to recognize “the outstretched arm of the Lord for the vengeance over the land”. Sometimes people think about the wisdom, omnipotence, and goodness of God, but not about His justice (26). The Lord of nature sends dry or rainy weather (40), and a particular weather can foster the explosive growth of snails¹⁸. Since, as Schirach repeatedly stated, God (or nature or God and nature) does nothing in vain (26, 175)¹⁹, the plagues should be seen as sent by God, presumably, as a punishment for the sins of people and as a call to repentance. In any event, “There is no evil on earth / That does not become something good” (20).

Animal soul

Theological work as it was, *Melitto-theologia* included a discussion of the animal soul, the problem very widely discussed in the 17th and 18th centuries. Schirach was repulsed by the Cartesian idea of animals being mere machines. It was too much in the behavior in animals that simply could not be explained by mere mechanical movements. This also included the bees.

Schirach took some cues from Walpurger²⁰. He believed that bees must have souls (24) that think and since thinking cannot be of corporeal nature, so it is with their souls which, curiously, Schirach proved thus: “I have killed many bees in my life, but I could not ever snatch (erhaschen) any bee-soul” (35). The soul of an animal is in the blood (Lev. 17:11, Deut. 12:13). Blood does not have to be red.

¹⁸ A.G. Schirach, *Natürliche Geschichte der Erd- Feld- oder Ackerschnecken*, Leipzig: Christian Gottlob Hilscher 1772, s. 25-26, 40.

¹⁹ Tenze, *Ausführliche Erläuterung*, s. 111; tenze, *Bayerischer Bienen-Meister, oder deutliche Anleitung zur Bienen-Wartung*, München Johann Nepomuck Fritz 1770, s. 64.

²⁰ J.G. Walpurger, *Der Grosse Gott im Kleinen*, s. 101-103.

The animal soul is not the spirit endowed with intellect, reason, and free will the way the human soul is (26). Bees have senses; they can distinguish between white and red clover and draw the nectar only from the former (27). They make choices indicating that “they understand physics and logic”; this looks like having an intellect and reason, although such a view would once be considered heretical (28). Human souls are destined for eternity, animal souls are mortal. Animal souls have only sensory ideas and can judge only about corporeal matters (29). They have the power of imagination and memory (30). Bees can fly for miles in the search of honey and know their way to return back to the beehive (31). A young bee can look for honey after three or four days (35). How can it do it without being taught? (36).

In humans, according to Schirach, the soul likely resides in the brain and so it is in a bee (36), and he made no effort to reconcile this statement with the just made claim that the soul of the bee resides in the blood. The soul was before 1000 years in an egg preformed before the body become alive and dies with the body (38). Schirach apparently subscribed to the theory of *emboîtement* that assumed that the seeds of animal progeny were encased, like in a box/*boît*, in the seeds of their parents and that also included their souls. In particular, “the future bees... resided in imperceptible smallness in the first [bees]” with the predetermined way of their future development; this is a masterpiece which is beyond human understanding: “O! Incomprehensible, o! God of power, / Lord, is your name and great are your works” (23). So, for Schirach as an ecclesiastic, it was important to stress that although animal souls are incorporeal, they have not on the same cognitive level as human souls and they are also not immortal and, at the same time, he ascribed the sophistication of the apian behavior to something greater than a mere mechanism. In this way, senses become servants of the animal soul: the soul senses, not the sensory organs (42)²¹.

The theological aspect of Schirach’s discussion of animal souls is somewhat underwhelming. One of the strongest arguments of the immortality of the human soul was the fact that the soul was a simple entity; that is, it had no parts, and thus, the human soul could not fall apart into its components the way material bodies can. The animal soul, in Schirach’s view, is immaterial. Is it also simple? That would create a prospect of its immortality. Thus, a claim could be made that the animal soul is compound; if so, what would be its constitutive components, exactly? If it is a simple substance, then for every animal soul a direct divine intervention would be needed to annihilate it. Could such a soul be immortal? Maybe Schirach was concerned about overcrowding the afterlife with such souls, particularly, the souls of insects considering a prodigious multiplication level of insects.

²¹ See also A.G. Schirach, *Betrachtungen*, in: G.L.F. de Palteau, *Sächsischer Bienenvater*, Leipzig und Zittau: Adam Jacob Spiekermann 1766, s. 281-284.

Social life

Bees have very well-oiled social organization in the center of which is the queen-bee. Almost in rhapsodic terms Schirach described the queen as wise, merciful (132), modest (135), clean, frugal (136), and showing her love for her bees (134).

Worker-bees have no intellect nor will (150), but they are frugal, clean, watchful, cautious (164), and restrained (167). Their cleanliness is exemplary; “O! what bitter reproaches makes my conscience here, my frequent defilements of flesh and spirit! oh! I beg in repentance: wash me daily, my Savior, with your purifying blood of God, so that one day I could be counted among those who washed their clothes in it, Revelation 7:13-17, and thereby arrived to the multitude of many thousands of pure spirits” (172).

However, love is the main affection of worker-bees by which they are devoted and loyal to their mother and regent (154). “Happy is the image of the monarchy which is based on the two immutable foundational pillars, love and obedience”. Worker-bees are ready to sacrifice themselves protecting the queen and, in the prospect of hunger, they leave a stash of honey for the queen while they are themselves starving (155). May the republic of Saxony be always like the republic of bees, wistfully sighed Schirach about his land (140). Also, bees do not fight with one another; shame on people who do that! (159). The way worker-bees take care for the young bees is “a wonderful image of all care and wet-nursing of the church and of the state!” (183). In this, Schirach joined the many authors of his times who saw the bee society as a model to be replicated by humans²².

In all his apian endeavors conducted with great passion, Schirach saw himself as a pastor first and the scholar, researcher, and practitioner second. Regardless of how interesting and important the natural world is, it is but a reflection, and faint at that, of the power of God. Therefore, when writing about slugs, he stated that many readers are interested in physical aspects of their life; however, all our efforts to increase our knowledge of nature are useless if we do not see it as a stepping stone to the knowledge of God and His attributes²³. And this aspect is prevalent in his *Melitto-theologia*. He saw his work as part of the physico-theological literature, and physico-theology was as much interested in *theology*, that is, in deriving the existence of God and His attributes – as much as possible – from the investigation of nature, as in *spiritual* aspect, namely the learning practical, moral in particular, lessons from its theology with the eye directed toward the afterlife. In that respect,

²² As an example, consider a similar wish to model human society on the harmonious and patriotic society of bees that was expressed by Ch.Ch. Sturm, *Harmonie und Patriotismus der Bienen*, in his *Betrachtungen über die Werke Gottes im Reiche der Natur und der Vorsehung auf alle Tage des Jahres*, Tübingen: Wilh[elm] Heinr[ich] Schramm 1781 [1776], vol. 1, s. 505-507; cf. Unermüdeter Fleiß der Bienen, pp. 438-442. For the many examples of the literary and philosophical emulation of the apian society by humans, see L.A. Westen, “*Melitto-Logia*”, *the mythology of the bee in eighteenth-century German literature*, PhD diss., Urbana: University of Illinois 1952, ch. 3.

²³ A.G. Schirach, *Natürliche Geschichte*, s. 26.

Schirach's theology is rather thin, the existence of God was to him so obvious that it hardly required any proofs and only rather brief theological observations can be found in his work. However, the spiritual and eschatological aspects were very strongly present and Schirach tried to use every occasion, sometimes to excess, to derive a lesson for people to be followed to bring them closer to God and to the eternal salvation.

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