Studia Religiologica 49 (3) 2016, s. 219–230
doi:10.4467/20844077SR.16.015.5873
www.ejournals.eu/Studia-Religiologica

"Let Us Make ROBOT in Our Image, According to Our Likeness". An Examination of Robots in Several Science Fiction Films through the Christian Concept of the "Image of God"

Fryderyk Kwiatkowski
Instytut Filozofii
Uniwersytet Jagielloński

Abstract

The paper examines representations of robots in several films: *Bicentennial Man* (1999), *Star Trek: Nemesis* (2002) and *Chappie* (2015) in the light of the Christian concept of *imago Dei*. According to Victoria Nelson, in the last 50 years artificial intelligence in pop-culture works has frequently been presented as holiness. Her interpretation can be linked with the outcome of research of scholars, who revealed that the Euro-American view on technology is deeply rooted in Christian thought. The author's main line of argument is embedded in Noreen Herzfeld's observation, who demonstrated the striking similarities between the relational approach to research into artificial intelligence and the relational interpretation of the notion of *imago Dei* by Karl Barth. Herzfeld suggests that the robots in the examined films can be viewed through a relational approach to the concept of *imago Dei*, which entails a relational definition of intelligence.

Key words: science fiction, the image of God, *imago Dei*, transhumanism, post-secularism
Słowa kluczowe: *science-fiction*, obraz i podobieństwo boże, *imago Dei*, transhumanizm, post-sekularyzm

In this paper I would like to propose the hypothesis that the creation of robots in *Bicentennial Man* (1999, Chris Columbus), *Star Trek: Nemesis* (2002, Stuart Baird) and *Chappie* (2015, Neill Blomkamp) can be understood through the Christian concept of the image of God. I will argue that the representations of artificial intelligence in these science fiction works reveal many similarities with Karl Barth's interpretation of the notion of the image of God. Before I present an analysis of the films, I would like to outline my approach to artificial intelligence and give an overview of the broader context of the religious roots of the Euro-American view on technology.

Sacred technology

Artificial intelligence can be understood in two ways. The first model, which is frequently called "weak AI," refers to the process that leads to the same or better results than those of a human intelligence in a particular domain.[1] This is "the science of making machines do things which would require intelligence if done by men."[2] Weak AI is a non-sentient computer intelligence which lacks consciousness and is designed to perform specific tasks. A good example of this is a computer program which uses probabilities to make determinations. The most famous program of this kind was Deep Blue, which was capable of performing 200 million probabilities per second during a chess game. It defeated the chess master Garry Kasparov in 1997.

The second model of AI is defined as "strong AI" or "artificial general intelligence." Usually it circumscribes a hypothetical machine which could be self-aware and display humanlike cognitive abilities. This strong AI is most frequently represented and depicted in science fiction works in intelligent robots. In my analysis of *Bicentennial Man*, *Star Trek: Nemesis* and *Chappie* I shall therefore use the notion of AI in the sense of "strong AI."

From the days of the ancient Egyptian priests to the time of the early renaissance magi, the various forms of likeness of man – mummies, homunculi or golems – were largely viewed as religious technologies.[3] In antique cults the spiritualisation of matter, which was supposed to lead to unity between two levels of reality, was the main goal of many religions, especially in the first centuries. One way of unifying matter and spiritual realm was the creation of likenesses of man, e.g. dolls and statues which had movable limbs. They were conceived as items in which lifeless matter and transcendent soul forged a connection. People believed that dolls or mummies embodied a divine element – they perceived them as a materialisation of the soul.[4] According to this point of view, the relationship between gods and statues was much more profound than that between gods and humans.

This observation reveals that inorganic matter and humans were supposed to be bound by some mysterious connection with an outward reality. Through the ages the status of the artificial man has changed. During the Middle Ages and in the early modern period, humanoid machines were perceived in two ways. They were thought either to be sacred or to be a violation of the cosmic order.[5] Yet over the years the

[1] R.C. Bjork, *Artificial Intelligence and the Soul*, "Perspectives on Science and Christian Faith" 2008, 60, no. 2, p. 96.

[2] M. Minsky, *Semantic Information Processing*, Massachusetts Institute of Technology, Cambridge, MA 1968, p. V.

[3] V. Nelson, *Sekretne życie lalek*, trans. A. Kowalcze-Pawlik, Universitas, Kraków 2009, pp. 35–36.

[4] *Ibidem*, p. 38.

[5] E.G. Wilson, *The Melancholy Android*, SUNY Press 2006, p. 8. In science fiction works one can find many examples of artificial humans whose creation is based on such violation. Most frequently it is understood as a consequence of playing God or as an unexpected mistake of their makers, for instance in the literature classics *Frankenstein; or, The Modern Prometheus* (1818) by Mary Shelley, or *Golem* (1915) by Gustav Meyrink, or in films: *Blade Runner* (1982, Ridley Scott), the *Terminator* series (1984–2015), to name but a few.

spiritual meaning of the artificial likenesses of man has gradually diminished, especially as the scientific revolution of the 17th century took place and the ideas of the Enlightenment emerged and unfolded.

The contemporary endeavours of creating a simulacrum of the human being, namely a robot who could think by itself, learn on its own, establish relationships with people, act morally and feel emotions, are usually set within a materialistic and mechanistic paradigm of science. David F. Noble, however, claims that the attempts to design AI have religious roots. The idea of reducing the human thought process to quantitative aspects led to the idea of the mind being mechanical and replicable. Noble believes that the origin of this change was set within a religious background, stating that

> In Cartesian terms, the development of a thinking machine was aimed at rescuing the immortal mind from its mortal prison. It entailed the deliberate delineation and distillation of the processes of human thought for transfer to a more secure mechanical medium – a machine that would provide a more appropriately immortal mooring for the immortal mind. This new machine-based mind would lend to human thought permanent existence, not just in heaven but on earth as well.[6]

This approach is characteristic of US researchers, who try to create strong AI. It is crucial to underline that technology in Euro-American Christianity has been linked to the idea of God's Kingdom and perceived as a means for obtaining salvation.[7] Noble argues that Western civilisation has recognised a redemptive potential in various technologies for ages. In his view, medieval and modern Christians believed that the ultimate purpose of technology was to erect a paradise on Earth. Noble analysed narratives on manifold types of technologies from the 10th century up to the contemporary examples such as bioengineering, atomic weaponry, artificial intelligence or rocketry.[8] In his opinion, practical knowledge has been progressively bounded with the idea of salvation for several centuries. In Northern America this connection was reinforced when the first settlers landed in the New World.[9] Correspondingly to Noble, David E. Nye reckons that discourse on the axe, land use, farming, the mill and transportation was infiltrated with a soteriological hope about the possibility of establishing a second Eden in America.[10] Consequently, the attitude towards these technologies did not decline in popular science publications in the 20th century. According to Robert M. Geraci, the beliefs of renowned transhumanists such as Hans

---

[6] D. Noble, *The Religion of Technology: The Divinity of Man and the Spirit of Invention*, Penguin Books, New York 1999, p. 148.

[7] J.H. Brooke, *Visions of Perfectibility*, "Journal of Evolution & Technology" 2005, 14, no. 2, p. 3.

[8] D. Noble, *op.cit.*

[9] The connection between progress and providence was also established by the seventeenth-century English Protestants, especially by Francis Bacon. In Bacon's view, the development of science should bring the human dominion on Earth which was lost after the first sin, see F. Bacon, *Novum Organum*, book II, aphorism 52, cited by C. Webster, *The Great Instauration: Science, Medicine, and Reform, 1626–1660*, Duckworth, London 1976, p. 325.

[10] D.E. Nye, *America as Second Creation: Technology and Narratives of New Beginnings*, MIT Press 2003.

Moravec and Ray Kurzweil stem from Christian thought.[11] These ideas, such as the immortalisation of the human mind by transferring it into the computer or a robot, resemble a specific form of Christian philosophy, particularly the concept of raising God's Kingdom on Earth.

Can artificial intelligence be the image of God?

In the light of the context described above, the idea of artificial man might be viewed as a divine promise of immortality. It is an entity which is closer to God, albeit one made in the likeness of man. For this reason we could perceive intelligent robots as dolls, mummies or golems which brought ancient people closer to the Divine. Correspondingly, according to many authors, e.g. Victoria Nelson or Geraci, science fiction works frequently illustrate robots as entities which represent transcendence.[12] Therefore I would like to set the analysed films within the context of American views on technology, which, according to Noble, Nye and Geraci, are embedded in the Christian worldview.[13]

To entrench my approach I shall base my inquiry of *Bicentennial Man*, *Star Trek: Nemesis* and *Chappie* on the suggestions made by Noreen L. Herzfeld.[14] She argues that by comparing the history of research development on AI and the history of theological interpretations of the Christian concept of the image of God one can notice striking similarities.

In this article I will be referring only to the third comparison made by Herzfeld, namely between the relational approach in AI research and the relational interpretation of the notion of *imago Dei.* I opt for a relational theoretic framework to describe the films because in my opinion it fits them best. Before I depict the analysis of the works I shall briefly describe the relational approach to the research in AI and the relational interpretation of the concept of the image of God made by Karl Barth.

---

[11] R.M. Geraci, *Spiritual Robots: Religion and Our Scientific View of the Natural World*, "Theology and Science" 2006, 9, no. 3, p. 230. It must be noted, however, that in this case the Protestant option predominates because a similar interpretation cannot be derived from the works of thinkers who represent other Christian creeds. It is also worth noting that my interpretation of films through Barth's concept supports the above observation. See also the works of Christian transhumanists, for example Frank J. Tipler, James McLean Ledford or Micah Redding.

[12] See V. Nelson, *op.cit.*, pp. 280–281, 289–290, 293; R.M. Geraci, *Robots and the Sacred in Science and Science Fiction: Theological Implications of Artificial Intelligence*, "Zygon" 2007, 42, no. 4, pp. 966–967.

[13] Markus Lipowicz depicts a very interesting polemic with the application of the notion of "transcendence" to the works of transhumanists, and suggests using "transgression" instead, M. Lipowicz, *Od transcendencji człowieka do transgresji człowieczeństwa. Próba filozoficzno-socjologicznej konceptualizacji transhumanizmu*, "Ethos" 2015, 111, no. 3, pp. 57–80.

[14] N. Herzfeld, *Creating in Our Own Image: Artificial Intelligence and the Image of God*, "Zygon" 2002, 37, no. 2, pp. 303–316.

Table 1

APPROACHES TO DEVELOPING AI	INTERPRETATIONS OF THE IMAGE OF GOD
classic/symbolic approach to AI (thinking process can be described by a physical symbol system)	**substantive interpretation** (ability to reason which was understood as quality exists apart from its manifestations)
functional approach to AI (success is measured in practical terms, programmed for specific tasks)	**functional interpretation** (the human function of exercising dominion over the Earth)
relational approach to AI (intelligence is described as an ability to carry on conversation, being constantly developed)	**relational interpretation** (the human being is a "counterpart" to God and, as a result, to other human beings)

The relational approach to research on artificial intelligence

One of the most widely accepted tests for examining whether a machine exhibits intelligent behaviour is the Turing Test,[15] which posits intelligence as a relational phenomenon. This test checks the machine's capability of interacting with a human being in a natural conversation. In the Turing test an evaluator interacts with another human being and with a machine without knowing the identity of the speakers. The interrogator communicates with his partners only through a terminal equipped with a keyboard. He must distinguish the human being from the machine only on the basis of a text messages by using the terminal. If the evaluator cannot determine which interlocutor is the machine and which is the human, the machine is recognised to possess intelligence. The Turing Test merely examines the ability of a machine to produce human-like replies, not the level of their encyclopaedic knowledge. Alan Turing considered that the "mind" of a machine should be designed like the mind of a child. He argues that through proper education it might evolve and be similar to an adult one.

Several scientists draw radical consequences from Turing's suggestions, maintaining that intelligence should be grasped as a social phenomenon. Cristiano Castelfranchi[16] believes that intelligence develops as a means for solving social issues. Les Gasser echoes this assumption. He states that the antecedent research in AI was misaligned, since computer scientists did not take into account the social aspect of knowledge:

> In attempting to create machines with some degree of intelligent behavior, AI researchers model, theorize about, predict, and emulate the activities of people. Because people are quite apparently social actors, and also because knowledgeable machines will increasingly be embedded in

[15] Created by Alan Turing (1912–1954), a British computer scientist, mathematician and cryptanalyst.

[16] C. Castelfranchi, *Modelling social action for AI agents*, "Artificial Intelligenc" 1998, 103, no. 1–2, p. 158.

> organizations comprising people and other machines, AI research needs to consider the social aspects of knowledge and action.[17]

As Gasser reports, machines will be working with people and other intelligent machines more frequently.[18] Concepts, strategies, theories, etc. can be created only due to people who interact with other individuals and are able to establish personal relationships. Therefore it is no surprise that according to Castelfranchi intelligence gains its meaning only when it is based on social activity. In my view, if we accept the relational view of AI then we must also take moral issues into account. If we consider a successfully created AI robot which could think and act for itself, then it is crucial to inquire whether it could establish profound relationships with people and understand the meaning of moral acts and behaviour. At this point we could forge a connection with the relational interpretation of the concept of the image of God. As we shall see, the relational definition of the notion of the image of God entails the relational definition of intelligence.

Karl Barth's relational interpretation of the concept of the image of God

Throughout the history of religion, theology and philosphical thought, there have been various notions and interpetations of the concept of the image of God. I will base my account on one of the most influential, composed by Karl Barth. His interpretation is anti-essentialist, since he perceives the image of God not as a specific quality or skill but as a condition of the existence of a human being, which is defined by a relationship to God and to other individuals.

He predicates his view on two quotations from Genesis: "Let us make humankind in our image" (1:26 NRSV) and "male and female he created them (1:27)." In Barth's view, the first portion appeals to the Trinity and should not be associated with celestial beings. He divides it into the "I" part, who can generate a Divine Call, and the "Thou," who is able to respond.[19] The relationship established between "I" and "Thou" constitutes a basis for making a human being. Hence it is in our nature to build relationships with others, which he describes as a condition of "being in encounter." Two different types of being in encounter can be delineated: an affinity between humans and between God and humans.

What, then, are Barth's criteria for delimiting the state of being in encounter?

1. One must perceive another as an individual and as a fellow. This is one's ability

[17] L. Gasser, *Social Conceptions of Knowledge and Action: DAI Foundations and Open Systems Semantics*, "Artificial Intelligence" 1991, 47, no. 1–3, pp. 107–108.

[18] *Ibidem*, pp. 107–108.

[19] Barth, in analysing the notion of Trinity, particularly indicates the affinity between the Father and Son. The Spirit is not necessarily important in his interpretation.

to look into the eye of the other.[20] For Barth this means a two-sided openness which results in mutual insight.

2. The condition of being in encounter can be observed through verbal communication and attentive hearing of one another. The act of true speech and listening expresses a willingness for genuine self-revealing and reciprocal understanding.[21]
3. Barth states that mutual assistance to one another is an example of a more advanced stage of being in encounter.[22] He depicts a similar thought to Immanuel Kant's second formulation of the categorical imperative. The former describes an openness as a preliminary state for reciprocal expression which cannot be an end, but is a means for obtaining something greater, a relationship in which one is free to help.[23] In this point Barth delineates one's ability to answer another's call, namely to be at another's disposal, and *vice versa*.[24]
4. The Swiss theologian states that all the previous stages must be done by each side with gladness in order to express a condition of being in encounter.[25] According to Barth, one has the free choice to fulfil the previous steps either reluctantly or gladly. Nevertheless, by actualising them with gladness one acknowledges one's humanity consciously.[26]

In my view, Barth's criteria entail a relational approach towards the understanding of intelligence in research on AI. In order to establish close relationships with each other, we must acquire the ability to develop our intelligence in social – i.e. relational – terms.

Science fiction robots as the image of God

Andrew in *Bicentennial Man* (1999), Data in *Star Trek: Nemesis* (2002) and the robot in *Chappie* (2015) fulfil all of the criteria elaborated by Barth. The creatures presented in these films – Andrew, Data and Chappie – are depicted as entities who are "in encounter" with people who are close to them. They treat their friends with mutual respect, are eager to stay open to them and share their personal opinions (1). The robots are self-aware of their actions and clearly reveal information about their thoughts, feelings, goals and dreams (2).

Barth writes that the relationship is based on the ability to help others. In *Bicentennial Man* the main character is Andrew – a robot designed for housekeeping – who was bought by Richard Martin for his family. The film made by Chris Columbus,

[20] K. Barth, *Church Dogmatics III/2. The Doctrine of Creation*, G.W. Bromiley, T.F. Torrance, T. and T. Clark (eds.), Edinburgh 1960, p. 250.

[21] *Ibidem*, p. 259.

[22] *Ibidem*, p. 261.

[23] *Ibidem*, p. 260.

[24] *Ibidem*, p. 261.

[25] *Ibidem*, p. 265.

[26] *Ibidem*, pp. 266–267.

based on Isaac Asimov's novella,[27] displays how the robot gradually gains humanity in the eyes of his fellows and finally society. The primal glimpse of Andrew's humanity was distinguished by his creative abilities. To Richard's astonishment, the robot sculpted a horse figurine out of wood without basing it on any particular model. Andrew's master finds out that the robot is unique of his kind, since the CEO of the company which produced Andrew has not noticed similar behaviour in other machines. In the aftermath, Richard encourages Andrew to self-develop and educate. The latter eventually receives freedom from his master, after giving the impression of being self-determined and capable of understanding the idea of freedom. Nevertheless, Andrew still wants to serve the family with whom he has been living (3), not because of the feeling that he ought to but because he is willing to (4). After many years, he falls in love with Portia, his master's granddaughter. Andrew decides to turn his mechanical system into a biological one. He introduces blood into his artificial veins, thereby allowing him to age. Andrew begins to grow old because he wants to die alongside his love.

Star Trek: Nemesis presents the story of the crew of the USS Enterprise-E, who set off to the planet Romulus on a diplomatic mission arranged by the Federation. A *coup d'état* has occurred, resulting in Shinzon coming to power. When the crew, with Captain Jean-Luc Picard on board, reach their destination, it turns out that Shinzon is a clone of Picard who had been designed to infiltrate the Federation, but his secret mission was eventually abandoned. It appears that Shinzon wants to destroy the Federation in a military conflict, so the crew of Enterprise tries to stop him. One of the officers on the Enterprise, Data, is a robot. Like Andrew in *Bicentennial Man*, he serves his fellows, not because he is programmed to but because he is eager to help his companions (3, 4). He fulfils all the tasks which Captain Picard gives to him. Moreover, in the final confrontation between the crew of the Enterprise and the Shinzon, Data sacrifices himself in order to rescue Picard, who has gone on a suicidal mission.

Neill Blomkamp's movie tells the story of a robot called Chappie who has been developed by Deon Wilson. It is not akin to other automatons, which are widely used in the police force, but is a true example of artificial intelligence that mimics human behaviour. In spite of the fact that Deon's boss did not allow him to test his invention on a police robot, he secretly installs his prototype software AI into the body of a damaged robot. Chappie's mind is designed just like Turing would suggest, namely like that of a child. Therefore, when he is "turned on" by his creator Deon, he acts like a child, although his learning skills are considerably greater than those of a human. Chappie, similarly to Andrew in Chris Columbus's film or Data in *Star Trek: Nemesis*, assists the people who he meets first (3, 4), particularly Ninja, Yolandi and Deon. And, like Data, he makes a decision to save the man with whom he established a close relationship, in spite of the danger and the possibility of losing his own life. Chappie transfers the consciousness of his maker, who is terribly injured, into the

[27] Its title was *The Bicentennial Man* (1976).

body of a robot. However, it appears that there is only one robot left to do that, and Chappie could die any minute because his battery is very low.[28]

The films to which I have been referring, reveal, of course, that people who endeavour to create robots look for the answer to the question of what it means to be a human being. To sum up, if we accept that contemporary American discourse on technology is placed within Christian thought or to some extent blossomed out of Christian thought, then popular representations of robots in science fiction works could be understood through the concept of the image of God. Andrew, Data and Chappie fulfil all the criteria suggested by Karl Barth. The comparison between the relational approach to strong AI and the relational approach to the concept of the "image of God" shares many similar features in terms of the philosophical definition of a person.[29] If my assumptions and conclusions are correct, then the characteristic of intelligence in the relational approach to AI brings us closer to the relational definition of the image of God. In my opinion, several works of popular culture, e.g. *Bicentennial Man*, *Star Trek: Nemesis* and *Chappie*, support this observation.

According to Egil Asprem and Kennet Granholm, "One of the major contributions of the study of religion and popular culture is that it provides perspectives on how religiosity can function outside traditional institutional settings."[30] It should be stressed, however, that their observation is embedded in post-secular thought. The concept of the post-secular is a broad term which has been understood differently depending on the scholar's approach.[31] Some sociologists of religion have observed that one of the characteristics of the post-secular is that

---

[28] According to Ila Delio, the relational approach to the image of God highlights that the condition of staying in a relationship is indissolubly bounded with an ability to love, which should be perceived as an inward quality of being a person. She claims that a "person who expresses compassionate, self-giving love, expresses God-likeness because the ability to give oneself to another reflects being an image of God", see I. Delio, *Artificial Intelligence and Christian Salvation*, "New Theology Review" 2003, 16, no. 4, p. 48. Afterwards Delio rhetorically asks if "a robot can freely destroy itself out of love for another so that the other may have life?", see *Ibidem*, p. 48. If we think about Data then we should answer positively. As in the case of Andrew, we could also agree that he decides to die because of love, but the reason why he does so is different, since he cannot save Portia. Chappie, just like Data, chooses to rescue his best friend in the first place, although he could potentially die. Fortunately Deon, when his consciousness has been successfully transferred into a robot, finds another free mechanical body to save Chappie.

[29] See for example D.C. Dennett, *Conditions of Personhood*, [in:] *The Identities of Persons*, A.O. Rorty (ed.), University of California Press, Berkeley 1976, pp. 175–196.

[30] E. Asprem and K. Granholm, *Introduction*, [in:] *Contemporary Esotericism*, E. Asprem, K. Granholm (eds.), Routledge, London and New York 2013, p. 10.

[31] It is not my intention here to describe how this concept can be perceived, see for example: J. Habermas, *Religion in the Public Sphere*, "European Journal of Philosophy" 2006, 14, no. 1, pp. 1–25; J. Habermas, *Notes on a Post Secularist Society*, "NPQ: New Perspectives Quarterly" 2008, 25, no. 4, pp. 16–29; K. Knott, *Cutting through the Postsecular City: A Spatial Interrogation*, [in:] *Exploring the Postsecular: The Religious, the Political and the Urban*, C. Jedan, A.L. Molendijk, J. Beaumont (eds.), Brill, Leiden 2010, pp. 19–38; V. Barker, *After the Death of God: Postsecularity?*, "Journal of Religious History" 2009, 33, no. 1, pp. 82–95; G. McLennan, *Spaces of Postsecularism*, [in:] *Exploring the Postsecular: The Religious, the Political and the Urban*, *op.cit.*, pp. 41–62; B. Martin, *Contrasting Modernities: "Postsecular" Europe and Enspirited Latin America*, [in:] *Exploring the Postsecular: The Religious, the Political and the Urban*, *op.cit.*, pp. 63–89.

> religion is gaining increased public visibility across many Western democratic societies, leading to an increased general public awareness of religion and religious actors, it becomes of crucial importance to pay due attention to the ways in which the general character and locations of religion and religious life and practice on the whole have undergone significant transformations in late modern times.[32]

Although people in post-secular societies are more conscious of the presence of religion in the public sphere, manifold locations of religion can be located beyond its institutional forms. Therefore the understanding of Jürgen Habermas's concept of the "public sphere" must include not only religious institutions and political environment. Since the division between public and private is collapsing in post-secular societies, the "public sphere" should also contain popular culture and mass communication.[33] Texts of popular culture are distributed by the mass media and have become the key means through which religious imagination and practices are transferred along with popular culture genres.[34] There is no room here to discuss these topics in detail; however, I would like to remark that my examination of science fiction films enhances the above-mentioned suggestions. Moreover, the increasing interest between the study of religion and popular culture is also a signal of a growing awareness among scholars that popular culture comprises a vast space in which religion is reconceptualised. Religious concepts are a very useful tool for examining popular culture works in which there are no direct references to theological themes, like in *Bicentennial Man*, *Star Trek: Nemesis* or *Chappie*. In my opinion, studies of religion and popular culture have to be consciously subsumed under the post-secular paradigm, since religious ideas which can be viewed in works of popular culture exceed institutional forms of religion and are widely accessed by their consumers.[35]

Bibliography

Asprem E., and Granholm K., *Introduction*, [in:] *Contemporary Esotericism*, E. Asprem, K. Granholm (eds.), Routledge, London and New York 2013, pp. 1–25.

Barker V., *After the Death of God: Postsecularity?*, "Journal of Religious History" 2009, 33, no. 1, pp. 82–95.

Barth K., *Church Dogmatics III/2. The Doctrine of Creation*, G.W. Bromiley, T.F. Torrance, T. and T. Clark (eds.), Edinburgh 1960.

Bjork R.C., *Artificial Intelligence and the Soul*, "Perspectives on Science and Christian Faith" 2008, 60, no. 2, pp. 95–102.

---

[32] M. Moberg and K. Granholm, *The Concept of the Post- Secular and the Contemporary Nexus of Religion, Media, Popular Culture, and Consumer Culture*, [in:] *Post-Secular Society*, P. Nynäs, L. Mika, U. Terhi (eds.), Transaction Publishers, New Brunswick, NJ 2012, p. 97.

[33] K. Granholm and E. Asprem, *The Secular, the Post-Secular, and the Esoteric in the Public Sphere*, [in:] "Contemporary Esotericism", *op.cit.*, p. 324.

[34] S. Hjarvard, *The Mediatization of Religion. A theory of the Media as an Agent of Religious Change*, 2006, 13, http://oldintranet.oikosnet-europe.eu/Archives/Meetings/Annual_Conferences/Sigtuna_2006/Download/The mediatization of religion.pdf [accessed: 26 December 2015].

[35] I would like to thank Dr Markus Lipowicz from the Jesuit University Ignatianum in Krakow for a critical reading of the previous version of the following study and some editorial comments.

Brooke J.H., *Visions of Perfectibility*, "Journal of Evolution & Technology" 2005, 14, no. 2, pp. 1–12.

Castelfranchi C., *Modelling Social Action for AI Agents*, "Artificial Intelligence" 1998, 103, no. 1–2, pp. 157–182.

Delio I., *Artificial Intelligence and Christian Salvation*, "New Theology Review" 2003, 16, no. 4, pp. 39–51.

Dennett D.C., *Conditions of Personhood*, [in:] *The Identities of Persons*, A.O. Rorty (ed.), University of California Press, Berkeley 1976, pp. 175–196.

Gasser L., *Social conceptions of knowledge and action: DAI foundations and open systems semantics*, "Artificial Intelligence" 1991, 47, no. 1–3, pp. 107–138.

Geraci R.M., *Spiritual Robots: Religion and Our Scientific View of the Natural World*, "Theology and Science" 2006, 9, no. 3, pp. 1–16.

———, *Robots and the Sacred in Science and Science Fiction: Theological Implications of Artificial Intelligence*, "Zygon" 2007, 42, no. 4, pp. 961–980.

Granholm K., and Asprem E., *The Secular, the Post-Secular, and the Esoteric in the Public Sphere*, [in:] *Contemporary Esotericism*, K.G. Egil Apsrem (ed.), Routledge, London and New York 2013, pp. 309–329.

Habermas J., *Religion in the Public Sphere*, "European Journal of Philosophy" 2006, 14, no. 1, pp. 1–25.

———, *Notes on a Post Secularist Society*, "NPQ: New Perspectives Quarterly" 2008, 25, no. 4, pp. 16–29.

Herzfeld N., *Creating in Our Own Image: Artificial Intelligence and the Image of God*, "Zygon" 2002, 37, no. 2, pp. 303–316.

Hjarvard S., *The Mediatization of Religion. A theory of the Media as an Agent of Religious Change*, 2006, http://oldintranet.oikosnet-europe.eu/Archives/Meetings/Annual_Conferences/Sigtuna_2006/Download/The mediatization of religion.pdf [accessed 26 December 2015].

Knott K., *Cutting Through the Postsecular City: A Spatial Interrogation*, [in:] *Exploring the Postsecular: The Religious, the Political and the Urban*, C. Jedan, A.L. Molendijk, J. Beaumont (eds.), Brill, Leiden 2010, pp. 19–38.

Lipowicz M., *Od transcendencji człowieka do transgresji człowieczeństwa. Próba filozoficzno-socjologicznej konceptualizacji transhumanizmu*, "Ethos" 2015, 111, no. 3, pp. 57–80.

Martin B., *Contrasting Modernities: "Postsecular" Europe and Enspirited Latin America*, [in:] *Exploring the Postsecular: The Religious, the Political and the Urban*, C. Jedan, A.L. Molendijk, J. Beaumont (eds.), Brill, Leiden 2010, pp. 63–89.

McLennan G., *Spaces of Postsecularism*, [in:] *Exploring the Postsecular: The Religious, the Political and the Urban*, C. Jedan, A.L. Molendijk, J. Beaumont (eds.), Brill, Leiden 2010, pp. 41–62.

Minsky M., *Semantic Information Processing*, Massachusetts Institute of Technology, Cambridge, MA 1968.

Moberg M., and Granholm K., *The Concept of the Post-Secular and the Contemporary Nexus of Religion, Media, Popular Culture, and Consumer Culture*, [in:] *Post-Secular Society*, P. Nynäs, L. Mika, U. Terhi (eds.), Transaction Publishers, New Brunswick, NJ 2012, pp. 95–127.

Nelson V., *Sekretne życie lalek*, transl. A. Kowalcze-Pawlik, Universitas, Kraków 2009.

Noble D., *The Religion of Technology: The Divinity of Man and the Spirit of Invention*, Penguin Books, New York 1999.

Nye D.E., *America as Second Creation: Technology and Narratives of New Beginnings*, MIT Press 2003.

Webster C., *The Great Instauration: Science, Medicine, and Reform, 1626–1660*, Duckworth, London 1976.

Wilson E.G., *The Melancholy Android*, SUNY Press 2006.