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Religion and Emotions Towards Artificial Intelligence: Christians, Non-Christians and Non-Believers

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Abstract: The article aims to determine what is the relationship between someone's religious affiliation and their emotional reaction(s) in relation to artificial intelligence (AI). Religion is an important element of society's cultural mosaic, and it undoubtedly influences emotional reactions to AI. This constitutes a premise for examining how one's religion can influence attitudes toward AI. The research applied an ANOVA variation analysis comparing the emotional reactions of students toward AI depending on their declared religious belonging. This allowed the identification of different emotional responses, such as fear, sadness and anger, among Christian, non-Christian and non-religious participants. The analysis reveals that there are significant differences in the emotional reception of AI between followers of various religions and those declaring themselves as not religious with varied responses in the latter group. Christians display moderate emotions toward AI, with a slight predominance of positive reactions. Non-Christians express slightly more intense feelings, both positive and negative. Non-believers exhibit the greatest variety of emotions with

the greatest intensity. The results point to the need of taking religion into account in the process of designing and implementing AI. This may contribute to a greater acceptance of technology in religiously and culturally pluralistic societies.

Keywords: religiosity, religion, artificial intelligence, post-secularism, emotional response, ethical & moral AI design.

Introduction

In an era of rapid technological development, artificial intelligence (AI) is becoming ever more present in everyday life. AI is defined, among others, as the creation and development of non-biological systems capable of performing activities that previously required human intelligence (Gentili and Stano 2023). AI is not only found in many scientific disciplines, yet has quickly become a broad scientific discipline of its own combining computer science, statistics, operations research, mathematics, social sciences, philosophy, and humanities.

In the coming years, AI will become increasingly present in various aspects of our lives, where human understanding and interaction have so far seemed irreplaceable. In medicine, AI in the form of advanced analytical tools not only supports but in many cases surpasses the capabilities of human diagnosticians and therapists (Younis et al. 2024). In engineering, the application of AI aids in making design decisions (Tadeja et al. 2021). In journalism, AI algorithms are increasingly supporting the creation of media content (Amponsah and Atianashie 2024). At the same time, AI raises ethical concerns. For example, in psychotherapy, its use presents challenges related to trust and responsibility (Lodha 2024). Additionally, humanoid robots used in caregiving generate new ethical dilemmas regarding their role as caregivers and companions (Wosk 2024).

Scholars, such as Geraci (2020) notice that the emergence of technological innovations evokes deep changes in society, which can lead to a need to reinterpret or adjust traditional religious doctrines. On the one hand, it is said that living in a "thickening" world has forced us to look for innovative ways of dealing with the limitations of human

rationality by rejecting religion and traditional humanistic values. According to supporters of such a "conflict" approach, this leads, among others, to "negating God, then values, and finally man himself [...] which in turn has created a space that can now be easily exploited by artificial intelligence" (Jabłoński 2023, 170).

On the other hand, innovation and religion do not have to be in conflict. As stated, religiosity can be a source of strength and inspiration, also in the context of striving for innovation and development (Zarzycka and Tychmanowicz 2015; Zarzycka 2017). Religion and spirituality can still offer an ethical framework for innovation, so to be led by "a particularly gifted individual who combines the rationality typical of *homo oeconomicus* with the motivation and spiritual freedom characteristic of *homo creator*" (Fel, Wódka, and Zdun 2019, 19).

When looking at human experiences the relationship between religion and technology can involve various emotions. This is a result of the difficulty in reconciling the transcendental message of the spiritual worldview with the material nature of technological advancement (Geraci 2008) which can lead to potential clashes between the domain of the religious and that of the technological. Using advanced technologies from a religious perspective brings up questions on the ethics of such practices, as well as evokes fears concerning the blurring of boundaries between the human and the artificial. "The displacement of the human factor by artificial intelligence gives rise to a change in thinking about institutions and social life" (Hułas 2023, 30).

Such unresolved complex dynamics between religion and AI technology reveal the need to research and discuss their mutual interactions.

The article aims at presenting results from research concerning the relationship between one's declared religious affiliation and one's emotional response to AI. This research strove to determine how belonging to a religion or the lack of thereof correlates with emotions such as curiosity, fear, or joy in relation to AI. In other words, it attempts to respond to the question of whether declared religious belonging or not identifying with a religion can influence emotional responses to AI. In particular, our goal was to study the different relations between Christian and non-Christian religions, as well as non-believers.

1. Literature Review

Literature reveals that in the context of rapid technological changes and the use of AI, individuals express different emotions toward innovation. This may be due to religious or, more broadly, cultural differences (Gray et al. 2023). For example, with their collectivist approach to society and greater emphasis on harmony within groups, Eastern cultures may foster acceptance and implementation of new technologies more quickly, because they are seen as a way to improve social well-being. As a consequence, Eastern societies show high levels of trust in the implementation of technological innovations (Aoki 2020). Shared social norms, such as focus on economic growth, acceptance of competition and promotion of performance incentives are key drivers of innovation in East Asian countries. In turn, Western cultures are usually more individualistic and may be characterized by a more diverse approach to new technologies (Igarashi et al. 2008).

Religions are often a significant source of values and beliefs and underlie the cultural diversity of individual societies (Fel and Michaluk 2023). Consequently and as empirical research shows, they can shape attitudes toward modern technologies (Kozak and Fel 2024) and thus emotional attitudes toward AI in various cultures can be better understood by looking at the connection between culture and religion in a given context (Seo-Young 2018).

One piece of research conducted in the Netherlands analyzed press articles on AI published in Dutch newspapers between 2000 and 2018. It was found that popular and national newspapers were quite critical of AI and portrayed it in a negative way. In turn, religious periodicals, both Protestant and Catholic, described AI positively, adopting an optimistic view of this type of technology (Vergeer 2020).

Another study was conducted in 2021, on the acceptance of the use of AI in Christian education in Vietnam. Results showed reluctance to use AI in religious teaching mainly among Christian respondents, especially church workers. The primary reason for such reluctance was the fact that in religious teachings many people looked for spiritual and emotional comfort, which AI was unable to provide (Tran and Nguyen 2021).

In 2022, Ho et al. (2022) conducted research among the so-called *Generation Z* regarding their perception on AI being capable of recognizing human emotions. It focused on the reaction of people from different religious backgrounds – Muslims, Christians, and Buddhists. Muslims and Christians were found to be more sensitive than Buddhists to AI collecting data about their emotions without their knowledge. In other words, Muslims and Christians were more likely to express concern or were more careful toward AI analyzing their emotions without the individual's direct consent or awareness of the process as compared to Buddhists who seemed to be less concerned about this aspect.

In a study conducted by Ikari and others (2023) collecting responses from USA and Japan (N=4049), they compared approaches to AI robots, focusing, among others, on the influence of one's declared religion on individuals' responses. It was found that in the USA, where Judaic-Christian religions dominate, attitudes toward modern technologies are less positive than in Japan, dominated by Eastern religions.

Finally, Karataş and Cutright's (2023) research conducted on a sample of 2462 followers of various religions found that just thinking about God can lead to a greater openness to suggestions and advice generated by AI bots. A positive relationship was found between considering God as an important part of one's life and a greater tendency to accept and implement recommendations issued by AI systems. In other words, belief in God is linked to people being more open to technology and its possibilities, especially when they consider AI-generated advice or guidance.

In addition to empirical social research aimed at establishing the relationship between religion and emotions toward AI, experiments were also carried out using robots in the field of religion. Although until recently work in the religious sector, were characteristics such as authenticity and trust are important, was considered not to be affected by the automation process (Frey and Osborne 2013), some religions have decided to introduce AI robots to carry out religious actions.

In Eastern countries, some buddhist communities introduced robots imitating Buddhist monks conducting funeral rites (Gould and Walters 2020) and giving sermons in a Buddhist temple (Jackson et al. 2023). At the Longquan Monastery in Beijing, since 2015, a robot named Xi'n'er

has been serving Buddhist followers by reciting *sutras* in English and Chinese. Its creators believe that AI and Buddhism can work in harmony (Nieuważny et al. 2020). Based on the results of an experiment conducted on almost 500 students with various religious affiliations, MacDorman and Entezari (2015), found a higher incidence of anxiety toward humanoid AI robots among followers of Judaism and Christianity than among followers of other religions or non-religious people.

Although today Eastern religions are more open to introducing AI robots into the religious sphere than the historically dominant Western religions, Western Christianity has also experimented with attempts to use AI in the religious sphere. A robot that read religious texts was introduced within a German Protestant church (Saragih 2023). Another example is the SanTO humanoid robot, which was created to support prayer practices in a Catholic Church. It has the shape of a 40-centimeter figure resembling a saint and responds to voice and touch. SanTO offers a limited range of features, such as reciting homilies, Bible verses, and prayers (Trovato et al. 2019). However, experiments carried out in historically dominant Western religions have been controversial and sparked intense discussions regarding the application of new AI-based technologies in the religious space, concerning fears such as the dehumanization of spiritual practices or the diminishing role of religious leaders (Yam et al. 2023).

A review of the literature reveals differences between followers of Eastern and Western religions in their approach to modern technologies. For example, in Buddhism, we can observe a positive perception of AI and openness in using this technology for religious practices. In turn, in the historically dominant Judeo-Christian Western religions, there is greater scepticism toward applying AI in the religious sphere. Despite these differences, both the West and the East have attempted to apply this modern technology to help with religious practices. They are objects of scientific exploration and discussions on the topic of the future of such links. Historically dominant religions can, therefore, determine the perception and level of accepting AI technologies (Hinsdale and Okey 2021). Moreover, religions can play an important role in influencing emotions, bias, prejudice, or acceptance of AI (Trotta, Iannotti, and Rähme 2024).

2. The Postsecular Theory

These issues fit into the broader framework of the theory of postsecularism, according to which modernity and the associated social modernization need not be considered hostile to religion (Mariański 2024), and religious beliefs and practices continue to shape the worldview and values of individuals, even in societies dominated by science and technology. "Religious traditions have a special power to articulate moral intuitions" (Habermas 2008, 131).

Postsecularism assumes that science and religion represent different but complementary ways of understanding reality, each of which can contribute to enriching social discourse. Religion, with its deep roots in ethics and emphasis on human dignity and community, still plays an important role in shaping social attitudes and public life (Hułas 2015). Postsecularism recognizes the place of religion in public debate and democratic discourse. In the context of AI, this suggests that religious beliefs, which inform an individual's ethical and spiritual values, may also shape their attitudes toward AI technologies (Campbell and Evolvi 2020). In conclusion, the theory of postsecularism can be used as a theoretical framework to explain the correlation between religion and an individual's attitude toward AI as well as the differences, among others, in emotional responses to AI among followers of different religions or non-believers.

Hypotheses

In light of the above, the following principal hypotheses and sub-hypotheses were formulated:

H in General:

Religious affiliation influences the emotional response to AI.

The doctrine of an individual religion can shape the value systems of its followers and the culture of the societies in which it historically dominates. As a consequence, it may influence the individual and social perceptions its followers have of AI.

Sub-hypotheses

H1

Followers of non-Christian religions show higher levels of trust in AI than followers of Christian religions.

In Eastern religions, such as Buddhism, there is greater openness to integrating new technologies into everyday life and religious practices. In this context, attitudes toward AI may be characterized by higher trust rates among followers of Eastern religions. In Western religions, dominated by the Judeo-Christian tradition, limited trust in AI may prevail, while considering, among others, potential ethical risks associated with this technology.

H2

Non-believers show lower levels of curiosity toward AI than followers of Christian and non-Christian religions.

Curiosity can be fuelled by a search for meaning and understanding of the world, which is often associated with having religious beliefs. Believers try to understand the place of new technologies in the context of their beliefs and thus may be more curious about AI (Zusman, Cheniaux, and Freitas 2007). People who are not bound by any religion and do not seek answers in their belief systems may not experience such intense motivation to explore new technologies, which may result in lower rates of curiosity toward AI.

H3

Christians show lower levels of negative emotions toward AI (including fear, sadness, anger, disgust) than non-Christians or non-believers.

Christian beliefs largely involve hope and optimism (Ciarrocchi and Deneke 2006), which may influence the way believers perceive new technologies, including AI. A vision of the world in which technology serves the common good can reduce negative emotions, such as a sense of sadness related to potential threats or negative aspects of AI (Jackelén

2021). Non-Christians, drawing from other interpretative contexts, may show higher levels of negative emotions.

3. Methods

The study was conducted through quantitative sociological research at the turn of 2023 and 2024 on a representative sample of students from the UK (N=1010) and Poland (N=1088).

In the UK, data collection was carried out by the Savanta Research Panel. Representativeness was ensured by establishing representative quotas based on HESA population data (HESA 2023), which include, among others, gender, year of studies and university group,. This allowed the achievement of stable bases for each demographic group, which is crucial for the reliability of results.

In turn, in Poland, sampling was done through the Respondent-Driven Sampling (RDS) method, based on the snowball sampling technique and with appropriate statistical corrections to ensure representativeness (Kozak and Fel 2024). To ensure data reflected the diversity of the student environment in Poland, sample sizes were determined by considering the proportion of students within various fields of study sing the ISCED-F 2013 classification from the Polish Central Statistical Office (GUS 2023). Thanks to these methods, to the data effectively captured the specificity and diversity of students' attitudes toward the examined issue, providing a solid basis for analysis and conclusions.

Students were chosen as the focus of the project because of the specifics of this social group. Age and education level makes them open and willing to use technological innovations, whilst having extensive knowledge on the topic. Moreover, they are the future social elite in which will be running the various spheres of life: the social and economic sectors, as well as state administrations (Zdun 2016). Below are the characteristics of the social and demographic sample. 31.7% of men and 64.3% of women took part in the research. Five people declared a different gender (0.2%) and 3.7% refused to answer this question. The average age of the students was 22.85 (SD=7.7). Every third respondent studied social

sciences (34.8%) and every fifth studied humanities (21.1%). Detailed data is presented in Table No. 1.

Table 1. Social-demographic characteristics

Specification	Specification	PL		UK		General	
		N	%	N	%	N	%
Age	up to 22	626	57.5	833	82.5	1459	69.5
	23–27	289	26.6	125	12.4	414	19.7
	28+	173	15.9	52	5.1	225	10.7
Gender	Male	340	31.3	326	32.3	666	31.7
	Female	677	62.2	673	66.6	1350	64.3
	I identify in another way	0	0.0	5	0.5	5	0.2
	Prefer not to say	71	6.5	6	0.6	77	3.7
Field of Studies	Humanities	143	13.6	272	29.6	415	21.1
	STEM	212	20.1	148	16.1	360	18.3
	Medicine and health	144	13.7	199	21.7	343	17.4
	Agriculture	23	2.2	44	4.8	67	3.4
	Social Sciences	456	43.3	230	25.1	686	34.8
	Other	75	7.1	25	2.7	100	5.1

One in three students (30.5%) did not identify with any religion. The majority (56.3%) declared belonging to a Christian religion, while almost one in eight respondent (13.2%) identified with a non-Christian religion. Detailed data is presented in table no. 2.

Table 2. Religious affiliation

Specification	PL		UK		Total	
	N	%	N	%	N	%
No religion	220	20.2	420	41.6	640	30.5
Roman Catholic	711	65.4	138	13.6	849	40.5
Greck Catholic	8	0.7	35	3.5	43	2.0
Protestant (including Anglicanism)	52	4.8	158	15.6	210	10.0
Orthodox	37	3.4	42	4.2	79	3.8
Jehovah's Witness	18	1.7	20	2.0	38	1.8
Muslim	11	1.0	156	15.4	167	8.0
Other (e.g. Hindu; Sikh; Buddhist; Reptilians; Satanist; "Own Religion")	31	2.8	41	4.1	72	3.4
Total	*1088*	*100.0*	*1010*	*100.0*	*2098*	*100.0*
$x^2 = 654.384$; df = 7; C = 0.485; p = 0.000						

Statistical analysis was done following the procedures of IBM SPSS v. 29.0.2, including recording the religious affiliation variable and creating three categories of non-religious affiliation. Christianity was understood to include Catholic, Orthodox and Protestant, including Anglican, denominations. The second group described respondents who did not declare any religious affiliation. The third group comprised of followers of other religions.

The study used a specially constructed set to measure emotional reactions to AI. This set, included a series of questions about various emotions that may have been triggered in respondents in relation to AI: curiosity, fear, sadness, anger, trust, disgust, or joy. Respondents rated their emotions on a scale from 1 to 5, where 1 meant "definitely not" and 5 "definitely yes". Respondents could choose one ordinal level for each emotion. A similar tool for investigating emotional reactions to new technologies was successfully used to study attitudes toward new technologies in 2023 on a representative sample of adult Poles (Soler et

al. 2023). In our study, this tool allowed us to determine how respondents who declared belonging to various religions and denominations, or those who declared no belonging to a religion react emotionally to the growing presence of AI in everyday life.

In an overall cross-sectional study of attitudes toward AI, participants showed moderate levels of various emotions. Curiosity reached a value of 3.3, indicating relatively high interest in AI, while the fear index was slightly lower (2.8). Emotions such as sadness, anger, trust and disgust were rated at a similar level with an average of 2.3, which may suggest that participants did not feel particularly overwhelmed by the negative aspects of AI, but at the same time did not display a strong belief in its safety or perceived benefits. Joy scored a slightly higher average (2.5), indicating that participating students have moderately positive attitudes toward AI. The standard deviation for all emotions ranged from 1.2 to 1.3, which would indicate a moderate discrepancy in the strength of emotions in respondents' answers.

To determine the relationship between religion and emotions toward AI, the study used variance analysis (ANOVA). By using the Kolmogorov-Smirnov test for normality of distribution, the null hypothesis about the normality of the data distribution was rejected. P-values for each emotions tested curiosity, fear, sadness, anger, trust, disgust, and joy and amounted to less than 0.001, well below the standard significance threshold of 0.05 used in social sciences. Therefore, variables pertaining to distributions of emotion statistically differ significantly from the normal distribution.

Nevertheless, the central limit theorem needs to be considered when working with a large research sample (N = 2098). This can be done using ANOVA, because this method can tolerate some deviations from distribution normality even with large samples (Wieczorkowska and Wierzbiński 2011; Bedyńska and Cypriańska 2013).

Further analysis through the Levene test revealed that there were no statistically significant differences in the variances between the groups for emotions, pointing to a homogeneity of variances and thus a realisation of one of ANOVA's key assumptions.

The next step involved analysing variance to perform a comparison of means between groups. The One-Way ANOVA analysis revealed statistical

significance for emotions such as sadness (F=10.297, p<0.001), anger (F=13.483, p<0.001), trust (F=7.188, p<0.001), disgust (F=11.208, p<0.001) and joy (F=8.007, p<0.001), pointing to noteworthy differences between groups of various religions in emotional reactions to AI. Statistically significant differences were also found in the curiosity variable (F=3.201, p=0.041), yet interpreting these results is more difficult due to the p-value being close to the alpha level. No significant differences were found for fear (F=0.134, p=0.875), which suggests comparable reactions to AI regardless of one's declared religion. The above analysis indicates that religious beliefs may influence emotional responses to AI, which allowed for the application of a *post hoc* test.

4. Results

The *post hoc* test was done using the Tukey HSD test, as it is more accurate in testing a large number of comparisons, thus making it easier to detect a significant difference between the means (Bedyńska and Cypriańska 2013). Table 3 outlines the results of the *post hoc* test.

Table 3. *Post hoc* comparisons of emotional responses to AI across different levels of religiosity

Emotions	**Categories of Religiosity**		**MD***	**SE****	**p**	**95% Confidence Interval**	
						Lower	**Upper**
Curiosity	None	Christian	-0.113	0.061	0.157	-0.26	0.03
		Non-Christian	0.067	0.090	0.737	-0.14	0.28
	Christian	None	0.113	0.061	0.157	-0.03	0.26
		Non-Christian	0.180	0.083	0.080	-0.02	0.38
	Non-Christian	None	-0.067	0.090	0.737	-0.28	0.14
		Christian	-0.180	0.083	0.080	-0.38	0.02

Table 3. *Post hoc* comparisons of emotional responses... (Continued)

Emotions	Categories of Religiosity		MD*	SE**	p	95% Confidence Interval	
						Lower	Upper
Sadness	None	Christian	0.120	0.063	0.137	-0.03	0.27
		Non-Christian	-0.262	0.092	0.012	-0.48	-0.05
	Christian	None	-0.120	0.063	0.137	-0.27	0.03
		Non-Christian	-0.382	0.085	<0.001	-0.58	-0.18
	Non-Christian	None	0.262	0.092	0.012	0.05	0.48
		Christian	0.382	0.085	<0.001	0.18	0.58
Anger	None	Christian	0.106	0.063	0.213	-0.04	0.26
		Non-Christian	-0.340	0.093	<0.001	-0.56	-0.12
	Christian	None	-0.106	0.063	0.213	-0.26	0.04
		Non-Christian	-0.447	0.086	<0.001	-0.65	-0.24
	Non-Christian	None	0.340	0.093	<0.001	0.12	0.56
		Christian	0.447	0.086	<0.001	0.24	0.65
Trust	None	Christian	-0.102	0.058	0.185	-0.24	0.03
		Non-Christian	-0.324	0.085	<0.001	-0.52	-0.12
	Christian	None	0.102	0.058	0.185	-0.03	0.24
		Non-Christian	-0.222	0.079	0.015	-0.41	-0.04
	Non-Christian	None	0.324	0.085	<0.001	0.12	0.52
		Christian	0.222	0.079	0.015	0.04	0.41

Table 3. *Post hoc* comparisons of emotional responses... (Continued)

Emotions	Categories of Religiosity		MD*	SE**	p	95% Confidence Interval	
						Lower	Upper
Disgust	None	Christian	0.159	0.064	0.034	0.01	0.31
		Non-Christian	-0.236	0.094	0.033	-0.46	-0.02
	Christian	None	-0.159	0.064	0.034	-0.31	-0.01
		Non-Christian	-0.395	0.087	<0.001	-0.60	-0.19
	Non-Christian	None	0.236	0.094	0.033	0.02	0.46
		Christian	0.395	0.087	<0.001	0.19	0.60
Joy	None	Christian	-0.154	0.061	0.029	-0.30	-0.01
		Non-Christian	-0.346	0.089	<0.001	-0.55	-0.14
	Christian	None	0.154	0.061	0.029	0.01	0.30
		Non-Christian	-0.191	0.082	0.053	-0.38	0.00
	Non-Christian	None	0.346	0.089	<0.001	0.14	0.55
		Christian	0.191	0.082	0.053	0.00	0.38

* Mean Difference
** Standard Deviation

In results pertaining to the sadness variable, significant emotional differences emerged between non-Christians and Christians and between non-Christians and people with no religious affiliation, suggesting that non-Christians may feel sadder in the context of AI technology.

Test results for the anger variable showed significant differences in levels of experiencing this emotion between different religious groups. People who did not identify with any religion expressed less anger toward AI than religious non-Christians. The biggest gap was between Christians

and religious non-Christians, with the latter selecting anger more often than the former category, and thus making religious non-Christians the group that most often felt anger toward AI.

Significant statistical differences between religious groups were found in feeling trust toward AI. Non-religious people showed significantly less trust in AI in comparison to participants who had a religion. Christians were the ones with highest levels of trust in AI, suggesting that non-Christians may generally have lower levels of trust in AI.

People who did not identify with any religion displayed significantly lower levels of disgust compared to Christians ($p < 0.05$). Additionally, meaningful differences in levels of disgust toward AI were found between non-Christians and Christians, which may indicate greater detachment or skepticism of non-Christians toward AI.

Those who did not identify with any religion experienced statistically significantly more joy toward AI than Christians and non-Christians. Non-Christians also experienced statistically significantly more joy than Christians (MD = 0.191, $p = 0.053$), although the p-value for this result borders with the conventional threshold for statistical significance. These results indicate that both non-religious people and non-Christians experience higher levels of joy towards AI compared to Christians.

5. Discussion

The results of the study "Students' attitudes toward AI" reference directly to the formulated hypothesis and sub-hyphotheses regarding the relationship between religion and emotional responses to AI.

General hypothesis

Religious affiliation influences the emotional response to AI.

The results of the Tukey HSD test indicate that religious affiliation differentiates the emotional response to AI. This is confirmed by the significant statistical differences that have been observed between different religious groups in relation to emotions such as sadness, anger,

trust, disgust and joy. Religious doctrines are therefore correlated with how followers of different religions react emotionally to AI.

H1

Followers of non-Christian religions show higher levels of trust in AI than followers of Christian religions.

This hypothesis is confirmed by the results, because non-Christians showed a higher level of trust in AI than Christians.

H2

Non-believers show lower levels of curiosity toward AI than believers.

This hypothesis is not confirmed by the results, as there were no significant differences in the curiosity variable levels among religious groups.

H3

Christians show lower levels of negative emotions toward AI (including fear, sadness, anger, disgust) than non-Christians or non-believers.

This hypothesis is confirmed by the results, as Christians showed lower levels of anger and disgust than non-Christians. In the case of sadness, results are less clear: non-Christians felt more sadness than Christians, but it is difficult to assess whether Christians felt less sadness than people without a religion.

Comparison of own research results with the literature

The results of our research, suggesting that non-Christians showed a higher level of trust in AI in comparison to Christians are consonant with findings from some previous research, according to which there is greater openness to new technologies among non-Christian religions, especially major Eastern religions (Aoki 2020; Gray et al. 2023). Moreover, a study of media reporting in the Netherlands found portrayals of AI in religious media were more positive than in secular media (Vergeer 2020). This conclusion supports our own, whereby levels of negative emotions

toward AI (including sadness) were found to be generally lower among Christians.

However, lower levels of anger and disgust toward AI among Christians resulting from our data sit in contrast with other studies, which suggest that Muslims and Christians are more likely to perceive potential threats related to the unconscious monitoring of their emotions by AI systems (Ho et al. 2022). This difference further emphasises the complexity of emotional responses to AI and its multidimensionality, given that a feeling of fear toward new technology might not necessarily correlate with a direct expression of negative emotions, i.e. anger or disgust in our study.

When it comes to evidence of higher levels of enthusiasm in relation to AI among non-Christians, our findings reinforce conclusions from similar studies in Eastern countries, which conclude that they are more open to integrating AI in religious practices (Gould and Walters 2020; Nieuważny et al. 2020; Jackson et al. 2023). In Western countries, on the other hand, although experimental integration of AI into religious practices has been observed, there is a stronger concern that AI will replace the human aspect in matters of spirituality (Trovato et al. 2019; Cheong 2021; Saragih 2023). Our research observed similar reactions, namely lower levels of joy among Christians in relation to AI as compared to non-Christians.

In summary, the results of our research are consistent with the literature and undoubtedly show the influence of religion on emotional reactions to AI (Hinsdale and Okey 2021).

In light of our research results, Christians, non-Christians, and people with no religious affiliation express different emotions toward AI. This may reflect the diverse and dynamic nature of contemporary society in which, despite the role of religion being redefined and renegotiated, the phenomenon of religion itself cannot be treated marginally (Lafont 2020). According to Janusz Mariański, "without taking religion into account, it will not be possible to fully understand social and cultural changes in the globalizing world" (2010, 15). Post-secularism is a theory that presupposes the overall presence of religion in contemporary societies (Robinson 2023). Religion is still visible and active in the public space, being an important factor in shaping reality, including developing AI technology.

Taking into account the above characterization of the emotional component in attitudes toward AI, Christians can be called "moderate optimists". This group is characterized by an average level of neutral emotions with a slight predominance of positive feelings over negative ones. Non-Christians, on the other hand, can be described as "optimistically open." This manifests itself in greater trust and joy in relation to AI and suggests openness and a tendency to search, although there negative emotions are also present. Non-believers display a much wider range of emotions, probably because of their wide range of attitudes because of lack of religion and leads to calling them "ambivalent seekers". The figure below allows us to visualise the dominant emotional tendencies among Christians, non-Christians and non-believers (Figure 1).

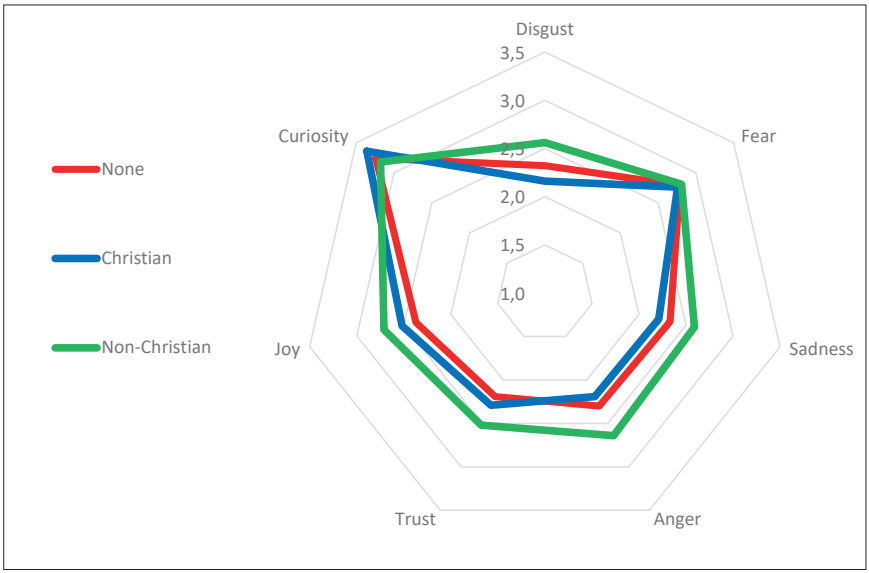

Figure 1. Means (M) of emotional responses to Artificial Intelligence, where ratings range from 0 (no emotional response) to 4 (strong emotional response)

As mentioned, in our study, Christians declaring affiliation with historically dominant religions in Western societies demonstrated

a lower number of strong negative reactions, which may suggest that they are more accepting of a possible harmonious coexistence with new technologies, and they remain optimistic about their potential use.

The above observations can be interpreted through the above-mentioned prism of postsecularism, which suggests that modern societies do not have to reject religion in the face of scientific and technological progress. This perspective as, described by Moniz (2023), highlights the potential for a dynamic interaction between religion and innovation, encouraging further research into the ways in which religious traditions may be contextualised in an era of emerging AI technologies.

The higher levels of trust and joy expressed toward AI by non-Christians, and thus also among representatives declaring affiliation with some historically dominant Eastern religions, may indicate an open approach. However, the simultaneous occurrence of negative emotions may indicate additional concerns or moral dilemmas related to AI. A deeper inspiration for implementing new technologies can be found in the humanistic content of the philosophies of Confucianism, Taoism and Buddhism. These combine the practical application of knowledge with action and are open to innovation (Zheng 2024).

The presence of negative emotions in this group, such as anger and disgust toward AI as established in our study, allows us to assume that these religious doctrines recommend some caution and reflection when adapting new technologies and also are more mindful of the ethical implications of their use. Such concerns and moral dilemmas related to AI may indicate that, alongside the greater acceptance of technology in non-Christian Eastern religions than in Christian Western religions, they are also the subject of deeper ethical and philosophical considerations in the former (Song 2023).

Although historically dominant Western religions today are characterized by so-called moderate anthropocentrism, which views humans as deeply connected to the natural world – a resident of the "common home" (Francis 2015) – their followers sometimes represent earlier approaches derived, among others, from the Judeo-Christian tradition. These approaches emphasized the unique value of human life

while simultaneously treating other elements of nature as resources for human use (Zdun and Fel 2020).

Also, in Eastern religions, individuals are usually perceived as an integral part of the cosmos, coexisting in harmony with the cosmic order and the laws of nature (Akaliyski 2023). In other words, Eastern religions typically promote harmony and coexistence between man and nature and openness to new technologies, whereas the approach of Western religions may be more diverse, taking into account both past and contemporary interpretations of their relationship with nature and technology. It should be noted that for the purposes of social research, a more simplified approach to religion and religious denominations is used compared to theological studies and religious contexts. In conclusion, the diverse approaches of Eastern and Western religions and religious denominations reveal differing perspectives on reality, nature, and spirituality, which subtly shape their responses to the challenges posed by modern technology, including AI.

People without a declared religious affiliation, although they welcome AI with optimism, also express disgust toward it, which may suggest a cautious attitude and the need for deeper reflection on the impact of technology on individual and social life. This fits into the idea of the postsecular era, in which even people without a religious denomination may seek deeper meaning and value in their relationship with technology (Han 2016). The influence of religion on AI reflects processes of negotiating meanings and values in contemporary, increasingly pluralistic and complex societies, where religious and cultural values continue to shape responses to new phenomena (Isański et al. 2023).

In the field of social sciences, there is more and more debate on a kind of "renaissance" of the phenomenon of religion (Kozak 2014). In present times, some sociologists express the view that religion is still a significant social force, although manifested in new, modernized forms (Berger 2007, 231). Religions not only shape the perception of new technologies, but can also serve as a framework for interpreting and assessing their ethical and social implications. Such complexity in the relationships between religion and AI highlights a need for further research.

The results of our study constitute a basis for identifying fields of future scientific research. First, there is a need for a deeper exploration of cultural interpretations of AI and their impact on the perception and acceptance of this technology. Second, it is advisable to examine the impact of individual religious doctrines on the perception of the design and implementation of AI technologies. These technologies will then respond better to the ethical requirements and expectations of followers of various religions, especially those dominant in particular societies. Third, it is important to try to identify ways in which different religious doctrines can contribute to creating a more sustainable "network society" (Castells 2000).

Ultimately, the research results emphasize that religion, even in a postsecular society, is not a relic, but its living and dynamic component that co-shapes both the individual and collective experiences of modernity (Wodka et al. 2022). Knowledge about the influence that religions and belief systems have on attitudes and emotions toward AI is important for future research at the intersection of religion and technological progress.

6. Limitations

This study focused on how religion influences emotional responses to AI. While the relationship between academic disciplines and attitudes toward AI is an interesting area for future exploration, it falls outside the scope of this research. Future studies could investigate how different fields of study shape perceptions and emotional reactions to AI technology.

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