



Artificial Intelligence and the Transformation of Religious Authority: Evidence from Nigeria's Digital Worship Economy

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Abstract

Artificial intelligence (AI) is reshaping how religious messages are produced, ranked and circulated, yet population-level evidence on its consequences for religious life in highly religious societies of the Global South remains scarce. This study examines how exposure to AI-generated and AI-curated religious content relates to trust in clergy, the perceived authenticity of religious messages and participation in online worship in Nigeria. Drawing on Weber's theory of authority, signalling theory and the economics of religion, it analyses 2024 data from a multi-stage stratified survey of adult Nigerians across the six geopolitical zones, using logistic and linear regression. Greater AI exposure is associated with higher odds of reduced trust in clergy (OR = 1.42, $p = 0.004$) and lower perceived authenticity of religious messages ($\beta = -0.28$, $p = 0.012$), but also with more time spent in online worship ($\beta = 0.31$, $p = 0.009$). AI thus expands access to religious goods while weakening the credibility signals on which clerical authority rests. The study recommends content-provenance tools for religious organisations, faith-based digital literacy programmes and clearer rules for labelling AI-generated religious content.

Keywords: *Artificial intelligence; Religious authority; Clergy trust; Digital worship; Nigeria*

1. Introduction

Nigeria is one of the most religious and religiously plural societies in the world. Christians, Muslims and adherents of indigenous traditions coexist across regions and social strata, and religion remains a central axis of identity, authority and social life. Analysing eleven nationally representative surveys, McKinnon shows that Christian identification peaked at about 69 per cent of adults in the early 1990s, that the Muslim share has grown steadily towards half of the adult population, and

that those identifying with traditional religion, another religion or none rarely exceed four per cent combined.¹ Religious belonging, in other words, structures political allegiance, social networks and everyday practice for almost every Nigerian adult.

Over the same period, artificial intelligence (AI) has become a powerful force in how knowledge, authority and influence are produced and distributed. Scholars of technology and religion identify three linked tendencies: AI reorganises the media ecology through which religious claims travel; AI systems embed moral and epistemic assumptions that can reframe religious discourse; and automated systems pose new regulatory challenges for freedom of religion or belief online.² Generative tools now produce sermons, devotional texts and answers to doctrinal questions, often in simplified forms that flatten the internal diversity of religious traditions.³ These dynamics suggest that AI could have both enabling and harmful consequences for religious life.

In Nigeria, the digital mediation of religion is already well established. Pentecostal and charismatic churches were early adopters of broadcast and video technologies,⁴ and today churches, mosques and independent preachers use social media, streaming platforms and messaging applications for worship, teaching, mobilisation and pastoral care. Recent studies show that young Pentecostals rely heavily on mass and social media in their religious lives,⁵ that the COVID-19 pandemic accelerated the emergence of “internet churches” in Lagos,⁶ and that digital platforms are reshaping who can claim religious authority, including along gender lines.⁷ This digital infrastructure is the channel through which AI-driven systems (recommendation engines, automated translation, synthetic audio and video, and targeted analytics) can now influence belief, ritual participation and religious authority.

Theory points to at least three mechanisms through which AI may harm religion. First, algorithmic amplification and personalisation can accelerate the spread of misinformation, heterodox teachings and forged religious content, undermining trust in established authorities.⁸ Second, automated content moderation can misclassify religious speech or silence minority religious expression, creating de facto restrictions on online worship and teaching.⁹ Third, automating pastoral and pedagogical

¹ Andrew McKinnon, “Christians, Muslims and Traditional Worshipers in Nigeria: Estimating the Relative Proportions from Eleven Nationally Representative Social Surveys,” *Review of Religious Research* 63, no. 2 (2021): 303–315, <https://doi.org/10.1007/s13644-021-00450-5>.

² Cameran Ashraf, “Exploring the Impacts of Artificial Intelligence on Freedom of Religion or Belief Online,” *International Journal of Human Rights* 26, no. 5 (2022): 757–791, <https://doi.org/10.1080/13642987.2021.1968376>; Brent Daniel Mittelstadt et al., “The Ethics of Algorithms: Mapping the Debate,” *Big Data & Society* 3, no. 2 (2016): 1–21, <https://doi.org/10.1177/2053951716679679>.

³ Ruth Tsuria and Yossi Tsuria, “Artificial Intelligence’s Understanding of Religion: Investigating the Moralistic Approaches Presented by Generative Artificial Intelligence Tools,” *Religions* 15, no. 3 (2024): 375, <https://doi.org/10.3390/rel15030375>.

⁴ Rosalind I. J. Hackett, “Charismatic/Pentecostal Appropriation of Media Technologies in Nigeria and Ghana,” *Journal of Religion in Africa* 28, no. 3 (1998): 258–277, <https://doi.org/10.2307/1581571>.

⁵ Oluwaseun O. Afolabi and Peter Ayoola Oderinde, “Exploring the Use of the Mass Media by Youths in Pentecostal Churches in Nigeria,” *Social Compass* (2024), <https://doi.org/10.1177/00377686241239578>.

⁶ Peter Ayoola Oderinde, “Disembodied Congregations: Covid-19 and the Rising Phenomenon of Internet Churches among Pentecostal Churches in Lagos, Nigeria,” *Religion & Development* 3, no. 3 (2024): 388–411, <https://doi.org/10.30965/27507955-20230009>.

⁷ Bukola L. Oloba and Anne M. Blankenship, “Gender Dynamics in Online Religious Leadership in Nigeria: Investigating How Digital Platforms Shape Communication, Authority, and Influence,” *Religions* 16, no. 1 (2025): 5, <https://doi.org/10.3390/rel16010005>.

⁸ David M. J. Lazer et al., “The Science of Fake News,” *Science* 359, no. 6380 (2018): 1094–1096, <https://doi.org/10.1126/science.aao2998>.

⁹ Robert Gorwa, Reuben Binns, and Christian Katzenbach, “Algorithmic Content Moderation: Technical and Political Challenges in the Automation of Platform Governance,” *Big Data & Society* 7, no. 1 (2020): 1–15, <https://doi.org/10.1177/2053951719897945>; Ashraf, “Impacts of Artificial Intelligence.”

roles may weaken the relational dimensions central to many traditions and shift authority towards technical systems and their designers.¹⁰

Despite growing global interest in AI and religion, rigorous population-level evidence from highly religious and digitally uneven societies such as Nigeria remains scarce. Most existing work is theoretical, legal or descriptive, or focuses on particular institutions and case studies; few studies use representative surveys to measure how encounters with AI-mediated religious content relate to religious attitudes and behaviour.¹¹ This gap matters because Nigeria's religious ecology, with high religiosity, strong clerical networks, regional diversity and a large, digitally active youth population, may produce effects that differ in kind and scale from those documented in Western settings.¹²

This study addresses that gap. It asks three questions: (1) Is exposure to AI-generated or AI-curated religious content associated with reduced trust in religious leaders? (2) Is such exposure associated with lower perceived authenticity of religious messages? (3) Is it associated with greater participation in online worship? To answer these questions, the study combines Weber's typology of authority with signalling theory and the economics of religion. It then tests the resulting hypotheses with regression analysis of a multi-stage stratified survey of adult Nigerians conducted in 2024. The study makes three contributions. Empirically, it provides survey-based evidence on AI and religion from a large African society. Theoretically, it interprets AI as a shock to the signalling environment in which religious authority is produced. Practically, it offers recommendations for religious organisations, regulators and platforms. The remainder of the paper reviews the literature and develops hypotheses (Section 2), describes the methodology (Section 3), presents the results (Section 4), discusses their implications (Section 5) and concludes (Section 6).

2. Literature Review and Theoretical Framework

2.1 Algorithmic Mediation and Religious Authority

The arrival of large-scale algorithmic systems in everyday media has prompted sustained work on how automated decision-making shapes epistemic environments and social authority. Algorithms are not neutral: they put into operation design choices that carry moral and social consequences, within wider socio-technical institutions.¹³ AI therefore acts as a mediator of attention, visibility and credibility, with the potential to change who speaks, what counts as legitimate evidence and which messages reach audiences.¹⁴ Where AI-driven ranking, recommendation or synthesis interacts with religious information, it may redistribute religious authority in ways that bypass traditional ecclesial and scholarly processes.

This concern connects to a classic sociological account of authority. Weber distinguished authority grounded in tradition, in the extraordinary personal qualities of a leader (charisma), and in rational-legal rules and offices.¹⁵ Clerical authority in Nigeria typically combines all three: the

¹⁰ Heidi Campbell, "Who's Got the Power? Religious Authority and the Internet," *Journal of Computer-Mediated Communication* 12, no. 3 (2007): 1043–1062, <https://doi.org/10.1111/j.1083-6101.2007.00362.x>; Tsuria and Tsuria, "Artificial Intelligence's Understanding of Religion."

¹¹ Ashraf, "Impacts of Artificial Intelligence"; Tsuria and Tsuria, "Artificial Intelligence's Understanding of Religion."

¹² McKinnon, "Christians, Muslims and Traditional Worshippers"; Afolabi and Oderinde, "Use of the Mass Media."

¹³ Mittelstadt et al., "Ethics of Algorithms."

¹⁴ Luciano Floridi et al., "AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations," *Minds and Machines* 28, no. 4 (2018): 689–707, <https://doi.org/10.1007/s11023-018-9482-5>.

¹⁵ Max Weber, *Economy and Society: An Outline of Interpretive Sociology*, ed. Guenther Roth and Claus Wittich (Berkeley: University of California Press, 1978), 215.

inherited legitimacy of denominations and Islamic scholarly lineages, the charisma of prominent pastors and preachers, and the institutional offices of churches, mosques and religious councils. Research on religion and the internet shows that digital media do not simply erode such authority. Rather, they redistribute it among hierarchies, structures, ideologies and texts, opening space for new “digital” authorities while traditional leaders adapt.¹⁶ Nigerian evidence confirms this pattern: online platforms give new visibility to some actors, such as women leaders, while reproducing older hierarchies.¹⁷ Generative AI adds a new element, because it can imitate the very markers (voice, face, style and scriptural fluency) through which charismatic and traditional authority are recognised.

2.2 Synthetic Media, Misinformation and the Erosion of Trust

Closely linked to epistemic authority are concerns about misinformation and synthetic media. Online ecosystems amplify false information through virality, network homophily and automated accounts, often faster than corrections can spread.¹⁸ A recent interdisciplinary review confirms that misinformation research has grown rapidly but remains fragmented, with limited evidence from the Global South.¹⁹ Generative AI and deepfake technologies make the problem worse by lowering the cost of producing plausible forged audio, images and video. This creates not only more falsehood but also a “liar’s dividend”, in which genuine material can be dismissed as fake.²⁰ Experimental evidence shows that exposure to deepfakes does not always deceive viewers but does increase uncertainty, which in turn reduces trust in news found on social media.²¹

Applied to religion, these dynamics create specific threats. Fabricated sermons, falsely attributed pastoral statements and synthetic pronouncements by religious leaders can confuse adherents, damage institutional credibility and inflame inter-communal tensions where religious identity is politically salient. Even AI-generated religious content that is not deceptive may be judged inauthentic: Tsuria and Tsuria find that generative AI tools tend to give schematic, unsourced and morally generic answers to religious questions, which differ markedly from the situated guidance of a religious teacher.²²

2.3 Platform Governance and Automated Moderation

A further body of work concerns platform governance. Automated moderation tools are imperfect and culturally situated. They can misclassify figurative, doctrinal or tradition-specific religious language, and enforcement is often uneven across languages and regions.²³ Moderation typically operates as a hybrid human-machine system in which algorithmic triage determines what human moderators see; this structure can silence minority expression or redraw the boundaries

¹⁶ Campbell, “Who’s Got the Power?”

¹⁷ Oloba and Blankenship, “Gender Dynamics.”

¹⁸ Lazer et al., “Science of Fake News.”

¹⁹ Elena Broda and Jesper Strömback, “Misinformation, Disinformation, and Fake News: Lessons from an Interdisciplinary, Systematic Literature Review,” *Annals of the International Communication Association* 48, no. 2 (2024): 139–166, <https://doi.org/10.1080/23808985.2024.2323736>.

²⁰ Robert Chesney and Danielle Keats Citron, “Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security,” *California Law Review* 107, no. 6 (2019): 1753–1820, <https://doi.org/10.2139/ssrn.3213954>.

²¹ Cristian Vaccari and Andrew Chadwick, “Deepfakes and Disinformation: Exploring the Impact of Synthetic Political Video on Deception, Uncertainty, and Trust in News,” *Social Media + Society* 6, no. 1 (2020): 1–13, <https://doi.org/10.1177/2056305120903408>.

²² Tsuria and Tsuria, “Artificial Intelligence’s Understanding of Religion.”

²³ Gorwa, Binns, and Katzenbach, “Algorithmic Content Moderation.”

of acceptable discourse in ways that reproduce existing power asymmetries.²⁴ Ashraf argues that such systems pose distinctive risks to freedom of religion or belief online.²⁵ In a plural society such as Nigeria, where religious vocabulary varies across Hausa, Yoruba, Igbo, Nigerian Pidgin and many other languages, the risk of misfiring moderation is considerable.

2.4 Relational Substitution and Enabling Effects

Theorists have also flagged the relational consequences of automating tasks that were previously human. Generative systems now draft sermons, produce devotional content and can serve as conversational agents for pastoral support. Such tools can widen access to religious materials, but they may also shift normative authority from embodied leaders to opaque technical systems and change congregational expectations about expertise and care.²⁶ Many traditions value face-to-face ritual and pastoral relationships as central to moral formation and communal solidarity, so repeated substitution by AI may weaken social bonds in ways that are hard to observe without empirical measurement.

A balanced account must nevertheless recognise that digital mediation does not uniformly damage religiosity. Digital platforms can widen access to religious content, amplify marginalised voices and enable new practices that complement embodied worship. During the COVID-19 pandemic, internet-based religious participation helped sustain religious life under severe constraints,²⁷ and in Lagos it gave rise to new forms of congregational life.²⁸ The analytical task is therefore to identify the conditions under which AI-mediated religion strengthens inclusion and those under which it undermines institutional trust and embodied practice.

2.5 Theoretical Framework and Hypotheses

This study integrates the sociological account of authority with two economic perspectives. The first is signalling theory. In markets where quality cannot be observed directly, buyers rely on signals, and when low-quality goods cannot be distinguished from high-quality ones, average trust in the whole market falls. This is Akerlof's "lemons" problem.²⁹ Signals remain informative only when they are costly or difficult to fake.³⁰ Religious authority depends heavily on such signals: ordination, years of study, an authentic voice and presence, and a recognisable style of preaching. The economics of religion similarly treats costly and observable commitments as devices that sustain trust and deter free-riding in religious groups.³¹ Generative AI sharply reduces the cost of imitating these signals. As the share of synthetic or manipulated religious messages rises, rational adherents should discount

²⁴ Shagun Jhaver et al., "Human-Machine Collaboration for Content Regulation: The Case of Reddit Automoderator," *ACM Transactions on Computer-Human Interaction* 26, no. 5 (2019): 1–35, <https://doi.org/10.1145/3338243>.

²⁵ Ashraf, "Impacts of Artificial Intelligence."

²⁶ Tsuria and Tsuria, "Artificial Intelligence's Understanding of Religion"; Floridi et al., "AI4People."

²⁷ Benedikt Kretzler, Hans-Helmut König, and André Hajek, "Utilization of Internet for Religious Purposes and Psychosocial Outcomes during the COVID-19 Pandemic," *Archives of Gerontology and Geriatrics* 108 (2023): 104900, <https://doi.org/10.1016/j.archger.2022.104900>.

²⁸ Oderinde, "Disembodied Congregations."

²⁹ George A. Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84, no. 3 (1970): 488–500, <https://doi.org/10.2307/1879431>.

³⁰ Michael Spence, "Job Market Signaling," *Quarterly Journal of Economics* 87, no. 3 (1973): 355–374, <https://doi.org/10.2307/1882010>.

³¹ Laurence R. Iannaccone, "Sacrifice and Stigma: Reducing Free-Riding in Cults, Communes, and Other Collectives," *Journal of Political Economy* 100, no. 2 (1992): 271–291, <https://doi.org/10.1086/261818>.

all messages arriving through digital channels, including authentic ones, and their trust in the clergy who use those channels should fall. These predictions yield the first two hypotheses:

H1: Greater exposure to AI-generated or AI-curated religious content is associated with a higher likelihood of reduced trust in clergy.

H2: Greater exposure to AI-generated or AI-curated religious content is associated with lower perceived authenticity of religious messages.

The second perspective is the religious-economies approach, which treats religious participation as the consumption and co-production of religious goods subject to costs of time, travel and information.³² Recommendation algorithms, automated translation and streaming infrastructure lower these costs, making it cheaper to find, sample and consume religious content at any time and place. This perspective predicts that AI exposure will be associated with more online religious activity, even if trust in particular authorities declines:

H3: Greater exposure to AI-generated or AI-curated religious content is associated with greater participation in online worship.

Trust in clergy also forms part of the social capital (the networks and norms of reciprocity and trustworthiness) that sustains collective religious life.³³ Declines in clerical trust therefore matter not only for individual belief but also for congregations' ability to coordinate members, mobilise voluntary contributions and provide community services.

The three perspectives complement one another. Weber explains *what* is at stake: the legitimacy of traditional and charismatic religious leaders. Signalling theory explains *how* AI threatens that legitimacy: by making the markers of authority cheap to imitate. The religious-economies approach explains *why* participation can rise even as trust falls: AI lowers the cost of consuming religious goods while lowering confidence in their source. Figure 1 summarises the resulting framework. The framework predicts a dual pattern, rather than a uniformly negative one, and so offers a more precise test than the question of whether AI is simply "good" or "bad" for religion.

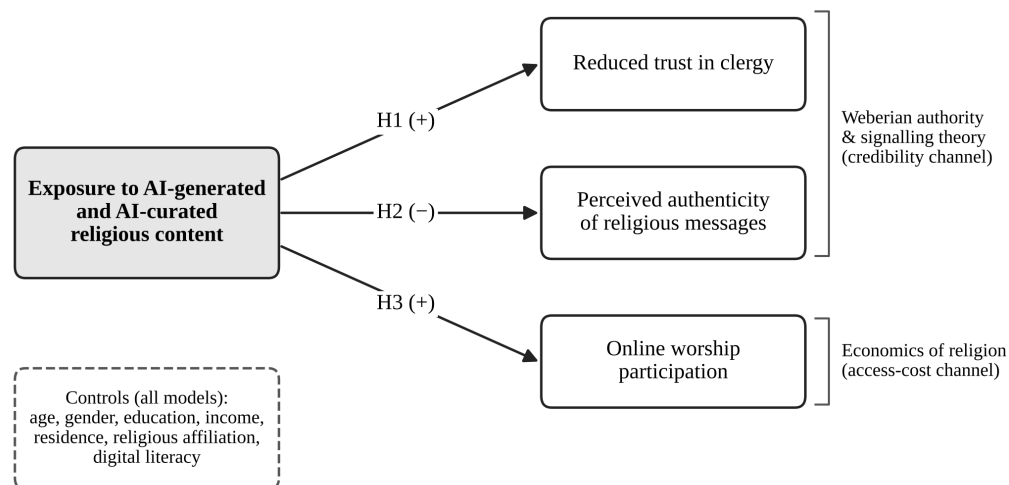


Figure 1. Conceptual framework of the study

Source: Author's construction.

³² Laurence R. Iannaccone, "Introduction to the Economics of Religion," *Journal of Economic Literature* 36, no. 3 (1998): 1465–1495.

³³ Robert D. Putnam, *Bowling Alone: The Collapse and Revival of American Community* (New York: Simon & Schuster, 2000), 19.

3. Methodology

3.1 Research Design, Population and Sampling

The study used a quantitative cross-sectional survey design. A survey is appropriate because it allows standardised data on beliefs, practices and experiences to be collected across diverse demographic groups and permits statistical estimation of associations between exposure to AI-mediated content and religious outcomes.³⁴ The target population comprised adult Nigerians aged 18 years and above in the six geopolitical zones. Given the heterogeneity of Nigeria's religious and digital landscape, the study used multi-stage stratified random sampling. States were first stratified by geopolitical zone; local government areas (LGAs) were then randomly selected within each zone; enumeration areas were selected systematically within LGAs; and households were randomly sampled within enumeration areas, with one eligible adult interviewed per household. Fieldwork took place between June and August 2024.

The minimum sample size was calculated using Cochran's formula for large populations:³⁵

$$n_0 = \frac{Z^2 p (1 - p)}{e^2} \quad (1)$$

where Z is the standard normal value for the chosen confidence level (1.96 at 95 per cent), p is the expected proportion of the population exposed to AI-mediated religious content (set at 0.5 to maximise variance), and e is the margin of error (0.05). Substituting these values gives:

$$n_0 = \frac{(1.96)^2 \times 0.5 \times (1 - 0.5)}{(0.05)^2} \approx 384 \quad (2)$$

To improve precision for regional and sub-group comparisons, the target sample was increased to 1,200 respondents, allocated to zones in proportion to population size. After data cleaning, [320] valid responses were retained for analysis, a response rate of [26.67] per cent.

3.2 Instrument and Measures

Data were collected with a structured questionnaire developed from prior studies of AI and digital religion. The questionnaire had four sections. The first recorded demographic characteristics: age, gender, education, income, urban or rural residence and religious affiliation. The second measured exposure to AI-generated or AI-curated religious materials through items on how often respondents encountered algorithmically recommended sermons, AI-generated religious texts or images, and synthetic religious audio or video. Each item was measured on a five-point frequency scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = very often). The item scores were averaged to construct an AI exposure index, with higher scores indicating more frequent exposure to AI-mediated religious content.

The third section measured perceptions of AI's influence on religion. *Reduced trust in clergy* was coded 1 if the respondent reported that their trust in religious leaders had declined and 0 otherwise. *Perceived authenticity* was a multi-item scale (1 = very low; 5 = very high) capturing how far respondents regarded religious content encountered online as genuine. The fourth section measured religious practice, including *online worship participation* in hours per week, along with digital literacy.

³⁴ Alan Bryman, *Social Research Methods*, 5th ed. (Oxford: Oxford University Press, 2016).

³⁵ William G. Cochran, *Sampling Techniques*, 3rd ed. (New York: John Wiley & Sons, 1977), 75.

The instrument was pre-tested with a pilot sample of 50 respondents who were excluded from the main survey. Internal consistency was assessed using Cronbach's alpha, with $\alpha \geq 0.70$ treated as acceptable;³⁶ the multi-item scales returned values of $\alpha = 0.82$ for AI exposure and $\alpha = 0.85$ for perceived authenticity.

3.3 Data Analysis

Descriptive statistics were used to summarise exposure patterns, perceptions and outcomes. Hypotheses were tested with three regression models in which AI exposure was the main explanatory variable. Because reduced trust in clergy is binary, Model 1 was estimated by logistic regression:

$$\ln\left(\frac{P(Y_i = 1)}{1 - P(Y_i = 1)}\right) = \beta_0 + \beta_1 \text{AIExp}_i + \sum_{k=2}^K \beta_k X_{ki} \quad (3)$$

Perceived authenticity (Model 2) and online worship participation (Model 3) are continuous and were estimated by ordinary least squares:

$$Y_i = \beta_0 + \beta_1 \text{AIExp}_i + \sum_{k=2}^K \beta_k X_{ki} + \varepsilon_i \quad (4)$$

In equations (3) and (4), Y_i is the outcome for respondent i , AIExp_i is the AI exposure index, X_{ki} are control variables (age, gender, education, income, urban or rural residence, religious affiliation and digital literacy), the β terms are parameters to be estimated, and ε_i is the error term. Odds ratios are reported for the logistic model. Model fit is assessed with pseudo- R^2 for the logistic model and adjusted R^2 for the linear models. Analyses were conducted in IBM SPSS Statistics, Version 25.0.

3.4 Ethical Considerations

Participation was voluntary, and informed consent was obtained from all respondents before the interview. Anonymity was guaranteed, and data on religious affiliation and belief, which are sensitive, were stored securely and analysed only in aggregate. The study received ethical approval from local government areas committee.

4. Results

4.1 Descriptive Statistics

Table 1 summarises the key variables. Mean AI exposure was 3.20 (SD = 1.10), indicating that encounters with AI-generated or AI-curated religious content were common among respondents. Some 38 per cent of respondents reported that their trust in clergy had declined. Mean perceived authenticity of religious content encountered online was 2.90 (SD = 0.80), slightly below the scale midpoint, suggesting widespread uncertainty about whether such content is genuine. Respondents reported an average of 4.10 hours per week (SD = 2.30) of online worship participation, confirming that digital channels are now a substantial part of religious practice.

³⁶ Mohsen Tavakol and Reg Dennick, "Making Sense of Cronbach's Alpha," *International Journal of Medical Education* 2 (2011): 53–55, <https://doi.org/10.5116/ijme.4dfb.8dfd>.

Table 1. Descriptive statistics of key variables

Variable	Measurement	Mean	SD
AI exposure	Frequency index (1–5)	3.20	1.10
Reduced trust in clergy	Binary (1 = reduced trust)	0.38	0.49
Perceived authenticity	Scale (1–5)	2.90	0.80
Online worship participation	Hours per week	4.10	2.30

Note: N = [320]. Source: Author's survey data (2024).

4.2 Regression Results

Table 2 reports the regression estimates. In Model 1, AI exposure is positively and significantly associated with reduced trust in clergy ($\beta = 0.35$, $p = 0.004$). The odds ratio of 1.42 means that each one-point increase in the AI exposure index is associated with 42 per cent higher odds of reporting reduced trust, holding the control variables constant. In Model 2, AI exposure is negatively and significantly associated with perceived authenticity ($\beta = -0.28$, $p = 0.012$): respondents who encounter AI-mediated religious content more often regard online religious messages as less genuine. In Model 3, AI exposure is positively and significantly associated with online worship participation ($\beta = 0.31$, $p = 0.009$).

Table 2. Regression estimates of the association between AI exposure and religious outcomes

	Model 1	Model 2	Model 3
Dependent variable	Reduced trust in clergy	Perceived authenticity	Online worship (hours/week)
Estimator	Logistic	OLS	OLS
AI exposure (β)	0.35**	-0.28*	0.31**
Standard error	[0.138]	[0.090]	[0.075]
p-value	0.004	0.012	0.009
Odds ratio	1.42	—	—
Control variables	Yes	Yes	Yes
N	[320]	[320]	[320]
Pseudo-R ² / Adjusted R ²	[0.18]	[0.24]	[0.19]

Note: ** $p < 0.01$; * $p < 0.05$. Controls: age, gender, education, income, urban/rural residence, religious affiliation and digital literacy. Source: Author's estimation from survey data (2024).

4.3 Hypothesis Testing

The results support all three hypotheses. H1 is supported: higher AI exposure is associated with significantly greater odds of reduced trust in clergy (OR = 1.42, $p = 0.004$). H2 is supported: higher AI exposure is associated with significantly lower perceived authenticity of religious messages ($\beta = -0.28$, $p = 0.012$). H3 is supported: higher AI exposure is associated with significantly more time spent in online worship ($\beta = 0.31$, $p = 0.009$). Taken together, the findings point to a dual pattern in which AI exposure is linked to weaker trust and authenticity but stronger digital participation.

5. Discussion

5.1 AI as a Shock to Religious Signalling

The negative associations between AI exposure and both clerical trust and perceived authenticity are consistent with the signalling framework. Generative AI and deepfake technologies make plausible forgeries cheap to produce, raising the probability that any given digital religious message is synthetic or manipulated.³⁷ When signal reliability falls, rational receivers discount all signals arriving through the affected channel, which is the logic of Akerlof's lemons market.³⁸ In the religious field, this discounting appears as lower perceived authenticity and greater scepticism towards digitally mediated clerical communication. The result also fits experimental evidence that synthetic media increase uncertainty and so reduce trust, even when viewers are not directly deceived.³⁹ In Weberian terms, AI erodes the distinctiveness of the markers through which charismatic and traditional authority are recognised: when a preacher's voice, face and style can be convincingly reproduced, the costliness that made those markers credible signals disappears.

These findings are consistent with Ashraf's warning that AI poses risks to religious freedom and institutional authority online⁴⁰ and with Tsuria and Tsuria's evidence that generative tools produce schematic religious outputs that users may perceive as inauthentic.⁴¹ At the same time, the reduction in trust should not be read as secularisation. Online religious engagement rose among more exposed respondents even as their confidence in the authenticity and trustworthiness of religious messages fell. This is consistent with research showing that digital media redistribute rather than abolish religious authority.⁴²

Several features of the Nigerian context may make these effects especially consequential. First, a great deal of religious content in Nigeria circulates through closed messaging groups in which sermons, prayers, prophecies and audio clips are forwarded from person to person, often without a visible source. In such networks, the provenance of a message is difficult to verify and the credibility of the forwarding contact substitutes for the credibility of the original speaker, conditions under which synthetic content can spread easily. Second, in many Pentecostal, charismatic and popular Islamic settings, authority rests heavily on personal charisma, prophetic utterance and claims of spiritual power, which are mediated by the leader's voice and image.⁴³ These are exactly the attributes that voice cloning and video synthesis can reproduce. Third, because religious identity is closely tied to political mobilisation and regional identity in Nigeria,⁴⁴ a fabricated statement attributed to a prominent cleric could have consequences far beyond the congregation, including heightened inter-religious tension. The erosion of trust documented here should therefore be understood as a public concern and not only a matter for individual religious organisations.

5.2 Expanding Access: The Enabling Channel

The positive association between AI exposure and online worship participation shows that AI also works as an enabling technology. This finding is consistent with pandemic-era research showing

³⁷ Chesney and Citron, "Deep Fakes."

³⁸ Akerlof, "Market for 'Lemons.'"

³⁹ Vaccari and Chadwick, "Deepfakes and Disinformation."

⁴⁰ Ashraf, "Impacts of Artificial Intelligence."

⁴¹ Tsuria and Tsuria, "Artificial Intelligence's Understanding of Religion."

⁴² Campbell, "Who's Got the Power?"; Oloba and Blankenship, "Gender Dynamics."

⁴³ Hackett, "Charismatic/Pentecostal Appropriation."

⁴⁴ McKinnon, "Christians, Muslims and Traditional Worshipers."

that internet-based religious participation helped sustain religious practice under constraint⁴⁵ and with evidence of the rapid institutionalisation of internet churches among Nigerian Pentecostals.⁴⁶ From a religious-economies perspective, recommendation systems, automated translation and on-demand streaming lower the time and information costs of consuming religious goods, and lower costs are associated with higher consumption.⁴⁷

The two channels are not contradictory. AI can make religious content more abundant and accessible while making any individual message less credible. The result is a religious marketplace in which participation increases but becomes more fragmented, more sceptical and less anchored in relationships with particular clergy.

5.3 Implications for the Religious Marketplace

The economic implications of this dual pattern are considerable. Clerical credibility is an asset that sustains donations, commitment and loyalty, and it has the characteristics of both a private and a public good. Its erosion functions like a depletion of social capital: it raises the costs of congregational coordination and lowers the expected returns from contributing to collective religious goods, which may reduce voluntary giving.⁴⁸ When credibility falls, congregations have an incentive to invest in costly verification, branding and offline interaction to rebuild trust, a form of costly signalling. Such investments use scarce resources. Larger, well-resourced ministries can absorb them more easily than small congregations, so falling signal quality may concentrate the online religious market around a few large organisations, with consequences for religious pluralism. This prediction is consistent with models of platform markets in which scale and network effects favour large incumbents.⁴⁹ Greater online participation may also intensify competition for attention among ministries, making adherents' giving more responsive to perceived quality and convenience and therefore less tied to any single congregation.

5.4 Policy and Practical Implications

The findings suggest interventions on both the supply side and the demand side. On the supply side, religious organisations and platforms can raise the signal-to-noise ratio of digital religious communication through content-provenance tools such as verified official channels, embedded provenance metadata and cryptographic signatures for authorised sermons and statements. Such measures restore the costliness of faking an authoritative message. On the demand side, there is strong evidence that prompting people to consider accuracy reduces their sharing of misinformation,⁵⁰ and that susceptibility to false content reflects inattention more than motivated reasoning.⁵¹ Faith-based digital literacy programmes delivered through churches, mosques and religious schools could therefore strengthen adherents' resilience to synthetic religious content at low cost. Regulators can

⁴⁵ Kretzler, König, and Hajek, "Utilization of Internet."

⁴⁶ Oderinde, "Disembodied Congregations"; Afolabi and Oderinde, "Use of the Mass Media."

⁴⁷ Iannaccone, "Economics of Religion."

⁴⁸ Putnam, *Bowling Alone*, 19; Iannaccone, "Sacrifice and Stigma."

⁴⁹ Jean-Charles Rochet and Jean Tirole, "Platform Competition in Two-Sided Markets," *Journal of the European Economic Association* 1, no. 4 (2003): 990–1029, <https://doi.org/10.1162/154247603322493212>.

⁵⁰ Gordon Pennycook et al., "Shifting Attention to Accuracy Can Reduce Misinformation Online," *Nature* 592, no. 7855 (2021): 590–595, <https://doi.org/10.1038/s41586-021-03344-2>.

⁵¹ Gordon Pennycook and David G. Rand, "The Psychology of Fake News," *Trends in Cognitive Sciences* 25, no. 5 (2021): 388–402, <https://doi.org/10.1016/j.tics.2021.02.007>.

build on existing instruments, notably the Cybercrimes (Prohibition, Prevention, etc.) Act 2015 and the Nigeria Data Protection Act 2023, to develop guidance on labelling AI-generated content and sanctioning malicious impersonation of religious leaders. Any such regulation must be designed carefully so that it protects, rather than restricts, legitimate religious expression online.

5.5 Limitations

Several limitations qualify these conclusions. First, the data are cross-sectional, so the estimated relationships are associations rather than causal effects. Reverse causality is plausible: individuals who already distrust clergy may seek out alternative online content and therefore report higher AI exposure. Second, AI exposure is self-reported, and respondents may not always recognise AI-generated content, which introduces measurement error; because exposure and outcomes were reported by the same respondents, common-method bias cannot be excluded. Third, the study does not report subgroup estimates by age, urban or rural residence, gender or religious tradition, so it cannot establish which groups are most affected. Future research should use panel designs, experiments or instrumental-variable strategies that exploit exogenous variation in AI exposure,⁵² and should compare Christian, Muslim and traditional communities as well as generations and regions.

6. Conclusion

This study examined how exposure to AI-mediated religious content relates to religious authority and practice in Nigeria. The survey evidence shows that AI has a dual impact. Greater AI exposure is associated with higher odds of reduced trust in clergy and with lower perceived authenticity of religious messages, consistent with the view that synthetic and algorithmically curated content adds noise to religious communication and weakens the signals on which clerical authority depends. At the same time, greater AI exposure is associated with more participation in online worship, reflecting AI's capacity to lower the cost of access to religious goods.

These findings carry three recommendations. First, religious organisations should adopt strategies of authenticity reinforcement. These include verified channels and provenance technologies that distinguish genuine clerical communication from synthetic imitation, together with renewed investment in offline interaction and embodied ritual that rebuild credibility through human presence. Second, government agencies, religious councils and civil society organisations should collaborate to integrate AI and media literacy into both secular and religious education, with particular attention to digitally active young people. Third, regulators and technology platforms should develop clear frameworks for labelling AI-generated religious content and sanctioning malicious uses such as deepfaked sermons or fabricated prophecies, while safeguarding freedom of religious expression.

AI presents a paradox for religion in Nigeria: it widens access to religious life while weakening the trust on which religious authority rests. How this tension resolves will depend on the choices of religious leaders, policymakers and digital platforms. If these risks are addressed, AI can support inclusive religious engagement; if they are neglected, its harmful effects may outweigh its benefits and weaken both spiritual and social cohesion in one of the world's most religious societies.

⁵² Joshua D. Angrist and Jörn-Steffen Pischke, *Mostly Harmless Econometrics: An Empiricist's Companion* (Princeton: Princeton University Press, 2009).

References

- Afolabi, Oluwaseun O., and Peter Ayoola Oderinde. "Exploring the Use of the Mass Media by Youths in Pentecostal Churches in Nigeria." *Social Compass* (2024). <https://doi.org/10.1177/00377686241239578>.
- Akerlof, George A. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *Quarterly Journal of Economics* 84, no. 3 (1970): 488–500. <https://doi.org/10.2307/1879431>.
- Angrist, Joshua D., and Jörn-Steffen Pischke. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton: Princeton University Press, 2009.
- Ashraf, Cameran. "Exploring the Impacts of Artificial Intelligence on Freedom of Religion or Belief Online." *International Journal of Human Rights* 26, no. 5 (2022): 757–791. <https://doi.org/10.1080/13642987.2021.1968376>.
- Broda, Elena, and Jesper Strömbäck. "Misinformation, Disinformation, and Fake News: Lessons from an Interdisciplinary, Systematic Literature Review." *Annals of the International Communication Association* 48, no. 2 (2024): 139–166. <https://doi.org/10.1080/23808985.2024.2323736>.
- Bryman, Alan. *Social Research Methods*. 5th ed. Oxford: Oxford University Press, 2016.
- Campbell, Heidi. "Who's Got the Power? Religious Authority and the Internet." *Journal of Computer-Mediated Communication* 12, no. 3 (2007): 1043–1062. <https://doi.org/10.1111/j.1083-6101.2007.00362.x>.
- Chesney, Robert, and Danielle Keats Citron. "Deep Fakes: A Looming Challenge for Privacy, Democracy, and National Security." *California Law Review* 107, no. 6 (2019): 1753–1820. <https://doi.org/10.2139/ssrn.3213954>.
- Cochran, William G. *Sampling Techniques*. 3rd ed. New York: John Wiley & Sons, 1977.
- Federal Republic of Nigeria. *Cybercrimes (Prohibition, Prevention, etc.) Act, 2015*. Abuja: Federal Government of Nigeria, 2015.
- Federal Republic of Nigeria. *Nigeria Data Protection Act, 2023*. Abuja: Federal Government of Nigeria, 2023.
- Floridi, Luciano, Josh Cowls, Monica Beltrametti, Raja Chatila, Patrice Chazerand, Virginia Dignum, Christoph Luetge, et al. "AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations." *Minds and Machines* 28, no. 4 (2018): 689–707. <https://doi.org/10.1007/s11023-018-9482-5>.
- Gorwa, Robert, Reuben Binns, and Christian Katzenbach. "Algorithmic Content Moderation: Technical and Political Challenges in the Automation of Platform Governance." *Big Data & Society* 7, no. 1 (2020): 1–15. <https://doi.org/10.1177/2053951719897945>.
- Hackett, Rosalind I. J. "Charismatic/Pentecostal Appropriation of Media Technologies in Nigeria and Ghana." *Journal of Religion in Africa* 28, no. 3 (1998): 258–277. <https://doi.org/10.2307/1581571>.
- Iannaccone, Laurence R. "Sacrifice and Stigma: Reducing Free-Riding in Cults, Communes, and Other Collectives." *Journal of Political Economy* 100, no. 2 (1992): 271–291. <https://doi.org/10.1086/261818>.
- Iannaccone, Laurence R. "Introduction to the Economics of Religion." *Journal of Economic Literature* 36, no. 3 (1998): 1465–1495.

- Jhaver, Shagun, Iris Birman, Eric Gilbert, and Amy Bruckman. "Human-Machine Collaboration for Content Regulation: The Case of Reddit Automoderator." *ACM Transactions on Computer-Human Interaction* 26, no. 5 (2019): 1–35. <https://doi.org/10.1145/3338243>.
- Kretzler, Benedikt, Hans-Helmut König, and André Hajek. "Utilization of Internet for Religious Purposes and Psychosocial Outcomes during the COVID-19 Pandemic." *Archives of Gerontology and Geriatrics* 108 (2023): 104900. <https://doi.org/10.1016/j.archger.2022.104900>.
- Lazer, David M. J., Matthew A. Baum, Yochai Benkler, Adam J. Berinsky, Kelly M. Greenhill, Filippo Menczer, Miriam J. Metzger, et al. "The Science of Fake News." *Science* 359, no. 6380 (2018): 1094–1096. <https://doi.org/10.1126/science.aao2998>.
- McKinnon, Andrew. "Christians, Muslims and Traditional Worshipers in Nigeria: Estimating the Relative Proportions from Eleven Nationally Representative Social Surveys." *Review of Religious Research* 63, no. 2 (2021): 303–315. <https://doi.org/10.1007/s13644-021-00450-5>.
- Mittelstadt, Brent Daniel, Patrick Allo, Mariarosaria Taddeo, Sandra Wachter, and Luciano Floridi. "The Ethics of Algorithms: Mapping the Debate." *Big Data & Society* 3, no. 2 (2016): 1–21. <https://doi.org/10.1177/2053951716679679>.
- Oderinde, Peter Ayoola. "Disembodied Congregations: Covid-19 and the Rising Phenomenon of Internet Churches among Pentecostal Churches in Lagos, Nigeria." *Religion & Development* 3, no. 3 (2024): 388–411. <https://doi.org/10.30965/27507955-20230009>.
- Oloba, Bukola L., and Anne M. Blankenship. "Gender Dynamics in Online Religious Leadership in Nigeria: Investigating How Digital Platforms Shape Communication, Authority, and Influence." *Religions* 16, no. 1 (2025): 5. <https://doi.org/10.3390/rel16010005>.
- Pennycook, Gordon, Ziv Epstein, Mohsen Mosleh, Antonio A. Arechar, Dean Eckles, and David G. Rand. "Shifting Attention to Accuracy Can Reduce Misinformation Online." *Nature* 592, no. 7855 (2021): 590–595. <https://doi.org/10.1038/s41586-021-03344-2>.
- Pennycook, Gordon, and David G. Rand. "The Psychology of Fake News." *Trends in Cognitive Sciences* 25, no. 5 (2021): 388–402. <https://doi.org/10.1016/j.tics.2021.02.007>.
- Putnam, Robert D. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster, 2000.
- Rochet, Jean-Charles, and Jean Tirole. "Platform Competition in Two-Sided Markets." *Journal of the European Economic Association* 1, no. 4 (2003): 990–1029. <https://doi.org/10.1162/154247603322493212>.
- Spence, Michael. "Job Market Signaling." *Quarterly Journal of Economics* 87, no. 3 (1973): 355–374. <https://doi.org/10.2307/1882010>.
- Tavakol, Mohsen, and Reg Dennick. "Making Sense of Cronbach's Alpha." *International Journal of Medical Education* 2 (2011): 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>.
- Tsuria, Ruth, and Yossi Tsuria. "Artificial Intelligence's Understanding of Religion: Investigating the Moralistic Approaches Presented by Generative Artificial Intelligence Tools." *Religions* 15, no. 3 (2024): 375. <https://doi.org/10.3390/rel15030375>.
- Vaccari, Cristian, and Andrew Chadwick. "Deepfakes and Disinformation: Exploring the Impact of Synthetic Political Video on Deception, Uncertainty, and Trust in News." *Social Media + Society* 6, no. 1 (2020): 1–13. <https://doi.org/10.1177/2056305120903408>.
- Weber, Max. *Economy and Society: An Outline of Interpretive Sociology*. Edited by Guenther Roth and Claus Wittich. Berkeley: University of California Press, 1978.