ARTICLE

Making Sense about Churches' Engagement with Technology: A Post-pandemic Reflection on Digital Ministry

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Abstract

The COVID-19 pandemic marked a pivotal moment for religious congregations, compelling them to navigate profound technological, theological and social disruptions. This article employs sensemaking theory to explore how congregational leaders interpreted and adapted to the challenges of digital ministry. Sensemaking theory offers a framework for understanding how people make sense and meaning out of complex situations, like to global COVID-19 pandemic. The article investigates church leaders' experiences as documented by the Tech in Churches During COVID-19 project, a three-year study of how Indiana churches utilized and integrated technology to sustain community and worship amidst the pandemic. Findings highlight shifts in leaders' attitudes toward technology, from seeing it as a peripheral tool pre-pandemic to an essential component of ministry afterwards. The study also reveals generational differences in technology adoption and decision-making, reflecting diverse approaches to maintaining theological and communal identities in a digital context. Despite technology offering unique opportunities for outreach and inclusivity, concerns about the sustainability, burnout and authenticity in tech ministry persist. This research calls for further exploration of equitable technological integration, intergenerational collaboration, and the relationship between faith and digital tools in post-pandemic reality.

Keywords: Congregations, Church, Covid-19, Pandemic, Sensemaking, Technology

1. Introduction

The COVID-19 pandemic was a critical moment for religious congregations, disrupting established liturgical patterns and practices and forcing rapid technological adaptation upon them. For many religious leaders, the pandemic presented unprecedented challenges, requiring many congregations to reevaluate their roles, strategies and methods of engaging their community. Technology became an essential tool,

enabling connection online at a time of social isolation. This shift raised questions about the nature of worship, community, and identity in a digital age. This study uses sensemaking theory as a lens for understanding how and why religious leaders approached technology in distinct ways during and after the COVID-19 pandemic. Derived from social and organizational psychology, this theory explains how individuals and groups interpret information and make sense of their experiences. It helps explain how individuals seek to logically make sense of new and challenging situations, especially when previous experience are not adequate resources to deal with present circumstances. We argue that religious leaders, tasked with maintaining continuity, engaged in a process of sensemaking in their technology decision-making related to ministry practices. Applying sensemaking theory helps to highlight issues congregations and leaders need to consider when seeking to prepare for future ecclesial disruptions.

Approaching churches' technological decision-making around the pandemic as a form of sensemaking highlights several issues leaders were forced to navigate. Pastors were thrust into a new cultural space, a technological environment where social and spiritual interactions became primarily mediated experiences. By engaging with sensemaking theory, this article explores three key research questions:

- How did congregational leaders "make sense" of the necessity of using technology during the pandemic?
- How do congregational leaders continue to "make sense" and justify using technology in their religious ministry/work?
- What questions and issues does technological and ministry sensemaking raise for the further study and support of congregational engagement with technology?

The article answers these questions by applying sensemaking theory to identify the rationale and responses behind church leaders' decisions about which tools and platforms to use, as well as to frame new patterns of practice. By drawing on data presented in Campbell, Osteen and Sparks 2023, this article uses sensemaking theory as a lens to help explain church leaders' technological decision-making processes in Indiana and describe the rapid response required of them to new technologies.

2. Studying the COVID-19 Pandemic, Congregations and Technology Engagement

While there is an extensive literature on the theological and practical use of technology in church congregations and worship settings, dating back to the early 2000s (e.g. Hipps, 2005; Soukup, 2008; Hutchings, 2017), this article specifically focuses on research regarding technology use and choices made during the COVID-19 pandemic.

This period significantly disrupted religious worship, prompting many scholars to investigate congregational adaptation to technology and the implications of their choices in more nuanced ways.

One scholarly concern was the implications of rapid digital adoption on religious communities, especially the impact on their buildings and relationships. Many scholars focused on the ways churches' experiences in virtual spaces influenced congregational understanding of what it means to be a faith community. For instance, Dein and Watts (2023) explored how online services reshaped interactions between congregants, creating tension between those who saw digital accessibility as positive and those who showed concerns about the perceived lack of "authentic" fellowship offered. Similarly, Makhutla (2021) emphasized that while social media, particularly Facebook, aided in maintaining congregational connections, some of these same churches voiced concerns about the long-term impact of livestreaming worship on their community relationship.

A second research theme was concerns about the "digital divide", illuminating disparities in many congregations regarding technology access and skills among congregants. Village and Francis (2020) explored the social fragility of rural churches, showing that limited resources hindered their ability to adopt digital solutions. Kühle and Larsen (2023) expanded on this theme, examining how inequities in internet access exacerbated challenges for smaller, rural congregations, forcing many to rely on minimal solutions such as recorded services uploaded to social media. I also (Campbell 2023) argued that the move to online worship revealed to many congregations for the first time that they were impacted by the digital divide, due to a lack of resources and expertise, which complicated their digital transition. These findings align with broader analyses of digital inequalities (Connolly, Costa-Font & Srivastava 2025), which explored systemic barriers to technology adoption during the pandemic across various sectors.

Third, scholars raised questions about the cultural and theological implications of digital gatherings and how they altered, or even threatened, established aspects of liturgical worship. While the theological challenges posed by digital worship to established ecclesiological models have been explored for more than a decade (e.g. Campbell and Garner 2016; Berger 2018; Kurlberg and Phillips 2020), scholarly attention increased during the COVID-19 pandemic. For example, Edelman et al. (2021) found that while digital rituals created inclusivity for individuals with disabilities or in remote locations, they often left participants feeling disconnected from sacred spaces and personal interactions integral in worship. Francis and Village (2022) explored how Anglo-Catholic and Evangelical clergy within the Church of England

differed in their acceptance of digital tools, reflecting broader tensions between tradition and innovation. This suggests scholars must reflect on online worship calls for the rethinking of the nature of traditional missional and ecclesiological practices (Kurlberg and Phillips 2020).

Fourth and finally, sustainability and burnout in tech ministry emerged as a pressing concern. Benton and Girdley (2023) emphasized that both clergy and volunteers faced significant fatigue, exacerbated by the dual demands of doing digital and in-person ministry during the pandemic. Griffin's research (2021) reported many pastors contemplated transitioning to secular careers due to the pressures of ministry during the pandemic, highlighting the need for clergy training in managing conflict during times of high stress. Researchers have also highlighted concerns about the sustainability of digital ministry post-pandemic, especially as pastors and volunteers reported burnout (Johnston et al. 2022).

This literature underscores that the pandemic was a pivotal moment of both technology growth and stress for clergy and congregations. Collectively, these studies highlight the need to approach the COVID-19 pandemic as a unique period of forced transformation for faith communities who had to make dynamic changes to established systems and practices, often before they could fully reflect on the implications of those choices. To better understand what occurred, we offer sensemaking theory as a framework for analyzing how church leaders navigated technological adoption and negotiated the impact of their choices.

3. Sensemaking Theory as a Tool for Studying Churches' Response to Technology

This article argues that church leaders' responses to technology during the pandemic can be better understood through the lens of "sensemaking theory." Sensemaking theory originated within organizational psychology as an approach to studying how individuals and groups interpret and respond to ambiguous or complex situations. Karl Weick, a pioneer in this theory, defines sensemaking as the process of "retrospective interpretation" where individuals and organizations construct meaning from past experiences to make sense of the present and guide future actions. Central to this theory is the idea that individuals do not passively absorb information, but instead actively create narratives to explain what they encounter in their environment (Weick 1995). According to Weick, sensemaking is driven by a need to situate oneself in new social contexts and understand one's place and role in the emerging space of change.

Sensemaking occurs when organizations face disruption or uncertainty – moments when old structures or ways of operating no longer work, which aptly describes the situation in which most religious leaders found themselves at the onset of the pandemic. People use their social interactions and existing knowledge to interpret the situation, derive meaning and make decisions. Weick's framework emphasizes that the environment itself is "enacted", meaning that people do not simply react to the environment but shape it through their actions and decisions. This notion that individuals and groups seek to create a sensible, understandable environment is critical in understanding how organizations adapt in times of crisis (Maitlis and Christianson 2014).

Over time, scholars have expanded the application of sensemaking theory to the fields of Communication, Information Science, and Human-Computer Interactions to study the social and interactive aspects of how individuals create shared meanings through communication. Instead of viewing sensemaking only as a retroactive practice, scholars have utilized it to explore dynamic meaning-making practices, examining how individuals conceptualize information seeking and use in active learning situations (Savolainen 1993; Ancona 2011). However, whether applied to active or past situations, sensemaking theory is fundamentally about studying how people create a plausible narrative about an event or social interaction to constrict a shared understanding of a situation that can be communicated to others (Sandberg and Tsoukas 2015).

Both Deborah Ancona from Information Science and Karl Weick from Organizational Studies have contributed to the development of sensemaking theory. While they highlight different characteristics of the theory, they overlap in three areas. This includes (1) seeing sensemaking as both an individual and communal enactment, (2) drawing together experience and perspective to construct a shared meaning or mental map, and (3) actively creating a plausible conceptual environment to contextualize the current situation and aid in both instrumental functioning and comprehending times of change. We argue that enacting sensemaking strategies was crucial for many groups, including religious organizations, during the COVID-19 pandemic. It provides a way to understand and explain how religious communities, especially congregations, interpreted and responded to the many external disruptions and forced changes they faced regarding technology adoption. For instance, when churches were forced to close their doors during the pandemic, leaders quickly turned to digital platforms to maintain community and continuity in worship. This rapid shift can be understood as an example of sensemaking in action, as church leaders extracted cues from their environment, such as the need to keep worshippers connected and the limitations of in-person gatherings, and enacted new

solutions. Many churches relied on platforms like Zoom and Facebook to continue worship, but this digital transition was not without its challenges. Church leaders had to reinterpret what it meant to gather and worship communally. By conceptually constructing new spaces for spiritual engagement leaders attempted to create meaning in a time of uncertainty.

Moreover, the role of identity construction in religious sensemaking cannot be overstated. Religious groups, deeply tied to collective identity and shared values, often interpret and navigate change through theological frameworks. As Sandberg and Tsoukas (2015) highlight, sensemaking in organizations is not just about finding plausible solutions but also about maintaining consistency with existing identities. In this way, the transition to digital worship was not merely a technical decision, but a redefinition of religious practices that required building links to theological and communal values.

In this article, we employ sensemaking theory as a means to reflect on and explain how religious leaders and congregations respond to change, particularly during the COVID-19 crisis. The theory's emphasis on identity, social interaction, and collaborative interpretation helps to explain not only how religious leaders and congregants navigated ambiguity and uncertainty during the pandemic but also how religious congregations continue to reflect on and make technology decisions in ways that maintain their community and theological identities in the digital age of post-pandemic reality.

4. Technological Decision-Making in the Tech in Churches Project

This article centres around the findings of the Tech in Churches During the COVID-19 Pandemic project (see https://www.techinchurches.org/). This three-year research study took place between 2020 and 2023, seeking to understand how Indiana churches integrated digital technology during the COVID-19 pandemic and its broader implications for congregational life. Funded by the Lilly Endowment and in partnership with the Center for Congregations' "Connect Through Tech" (CTT) grant programme, this study tracked the impact the move towards online worship made on 2,700 religious congregations in Indiana in the USA. Each received a technology grant of up to $5,000 to help them purchase equipment, Wi-Fi, or platform subscriptions, enabling them to transition from traditional in-person worship to online worship in early 2020. The project sought to investigate the practical, social and theological choices made by these congregations and their leadership. Central questions included how churches utilized grant funds, how technology shaped pastors'

and congregants' perceptions of ministry and community, and what challenges and opportunities arose from the adoption of digital tools.

The research was conducted in three stages to address its objectives comprehensively. The first stage focused on how church leaders navigated decisions about technology during the pandemic's early days. The second explored how churches perceived and articulated the relationship between faith and technology. The final stage examined the long-term impacts of these technological changes on pastors, congregations and church practices. Data collection methods included qualitative analysis of notes and transcripts from "Tech Talk Sessions" involving 478 church leaders, a discourse analysis of the grant application and reports submitted by grant recipients, and a survey of 246 leaders in congregations involved in this project. The transcripts of the Tech Talk sessions, grant applications, and final grant reports were provided to the research team by the Center for Congregations, which initially collected this information. These were treated as anonymized secondary texts, which were thematically analysed. Survey data was collected directly by the research team. The survey instrument, data collection and informed consent process were all reviewed and approved by the Institutional Review Board at Texas A&M University, where this research took place. The study produced three major reports and five "Tech Trend" papers, which collectively documented findings from 2020 to 2023.

The research revealed several key insights. In the first report, findings highlighted the immense pressure on pastors, who often became de facto technology coordinators, taking on additional responsibilities without shedding existing ones. Churches aimed to recreate a digitally mediated "Sunday morning feeling" but faced challenges such as volunteer burnout and difficulties engaging elderly members in the online transition (Campbell and Osteen 2021). Despite these struggles, the shift opened new opportunities for outreach and engagement, allowing churches to connect with geographically distant individuals and previously unreached groups. The second report explored how pastors used CTT grant funds to rapidly build online worship capabilities (Campbell, Daly, Osteen and Wallace 2023). Technology was often described as a "needed blessing", enabling churches to sustain their mission and reach new audiences. The report also noted that small and rural churches, which received the majority of grants, often depended on these funds to overcome significant technological barriers. By the third report, the study shifted focus to the post-pandemic era, examining how churches' attitudes and practices toward technology had evolved. Many congregations reported increased acceptance of digital tools, though differences in adaptation emerged based on church size and the age of leaders (Campbell, Osteen and Sparks 2023). While technology helped churches

innovate and sustain their missions during the pandemic, the shift also raised questions about the nature of authentic community in a digital space.

Overall, the project emphasized the transformative potential of technology for churches, as well as its capacity to foster innovation and the challenges it poses to traditional conceptions of worship and community. By documenting these experiences, the research contributes valuable insights into how faith communities navigate the interplay between digital tools and religious practice. In this article, we focus on the findings from the final report of this research project and what it reveals about how church leaders made sense of the numerous decisions, changes, and new skills they had to adopt during the pandemic.

5. Making Sense of Technology Engagement During COVID-19

Campbell, Osteen and Sparks 2023 provides insights into how Indiana church leaders navigated integrating technology over three years during the COVID-19 pandemic. In the following two sections, we highlight specific practical and conceptual shifts made by church leaders and congregations in their use and thinking about technology. All quotes and information shared in the remainder of this article were taken from this report and/or the research data collection related to the survey findings. In this section, we address the first research question of how congregational leaders made sense of the necessity of using technology during the pandemic.

5.1 Pandemic and Technology as Agents of Forced Change

In this study, leaders highlighted technology as a factor leading to significant changes in their congregation. However, it is important to note that the prime cause for technology adoption was not the technology itself, but rather the pandemic crisis that brought these initial disruptions. Technology, instead, was a solution adopted by many churches to solve the problem of the forced closure of congregations. Some leaders and congregations seemed to initially blame technology for challenges encountered during moves to digital worship. This was because for most churches, adoption of digital technology was not a gradual process, but a sudden necessity. However, this blame-shifting could be seen as a coping mechanism for the stress that adopting technology caused. As one pastor from Greencastle, Indiana, summed it up succinctly: "COVID made us start using technology. We did not have a choice." Anxiety about technology could also be tied to the fact that most congregations in this study were not technology outsiders; pre-pandemic, only 25% of churches in the study reported using digital media in their services. However, by December 2021, 71% of the studied churches had embraced live streaming and other online tools.

Churches with smaller congregations, especially those in rural areas, often faced more struggles with technology, as they reported they often lacked even basic technology resources (lack of computer or Wi-Fi in the church) and so experienced a steeper learning curve. This highlights that technology was often, at least initially, viewed in a critical light by some as a way to draw attention away from the continued instability and uncertainty caused by the impact of the COVID-19 pandemic.

5.2 Technology Applauded as Ministry Game-Changer

Despite the concerns and stress that technology caused for congregational leaders, many reported that it also presented unprecedented opportunities for expanding their community and ministry into new local and global contexts. Many congregations leveraged Facebook, with usage skyrocketing from "a little" (30%) pre-pandemic to "a lot" (63%) post-pandemic. One church shared that uploading recorded services to Facebook became a critical method of communication.

Livestreaming services became a game-changer for many churches, opening their service to a broader online audience and ways to connect with previous members. This enables them to see online church services as a form of outreach, rather than a member-focused gathering. Many pastors reported that technology enhanced accessibility for members in ways they had not previously considered. Online services now offer people access to live transcription and the ability to control the volume of music and preaching. This contributed to some leaders shifting their view about online services from being a temporary stop-gap solution to a potential for expanded ministry. A church in Fort Wayne, Indiana, with a congregation of 75, shared that "Live Streaming is allowing us to reach those we otherwise would not be able to." These shifts were not merely about maintaining connections during the pandemic; they also enabled churches to expand their ministries in ways previously unimaginable, reaching shut-ins, elderly members and geographically distant individuals. What technology disrupted was established systems, practices and expectations of what a church gathering is. What technology offered was an innovative glimpse into what the church could look like.

5.3 Congregations Stretched As Technology Decision-Making By-Passes Established Processes

The technological decision-making processes religious leaders had to undergo during the pandemic challenged previous church systems and protocols. Leaders commented that pre-pandemic, congregational decision-making processes were often structured, lengthy affairs. It often involved multiple stages of information gathering, introduction of change to a select group, discussion and debate, proposal evaluation, and members' feedback. It could also raise issues of practicality and

resources alongside considerations about church tradition (such as liturgy, theological praxis). One pastor reported having to make immediate decisions about technology within the first few weeks of the pandemic, which disrupted this normal process and increased anxiety for leaders and members. In order to ease these tensions, pastors often presented technology as a temporary or practical measure to members or church leadership, a pragmatic solution to an immediate problem. This helped alleviate or subvert some congregational concerns, as long-term use was not part of the decision-making conversation. Another pastor is focused on the instrumental nature of what technology allows them to do, to mitigate debates about the potential impact of technology choices. Others, however, found themselves having to follow pre-established decision-making protocols, which often slowed down the implementation of tech solutions and seemed to increase rather than lessen anxiety about technology. Technology implementation also created anxiety because few churches in this study used technology in their services, and only 3% of churches pre-pandemic considered it an integral part of their ministry. However, based on the 2023 survey during the post-pandemic period, this number had increased to 17%, reflecting a profound shift in attitudes.

Church leaders, however, learned that framing technology as a pragmatic decision made under pressure often impacted their congregations and budgets, leading to the purchase of tools based on immediacy and necessity. Some leaders expressed regret for buying more than they needed, in terms of numbers or device capacity, or purchasing platform subscriptions they did not need, or acquiring second-hand items that were not system-compatible. They reported that these purchases might have been avoided if they had even briefly considered a long-term technology strategy or undertaken a more thorough review process.

5.4   Technology Choices Influenced By Generational Associations

By far, the most common technology adopted by churches in this study to stream services was Facebook. Its usage skyrocketed amongst congregations from being used "a little" (30%) pre-pandemic, to "a lot" (63%) post-pandemic. Many churches reported that uploading recorded services to Facebook and creating a congregational Facebook page became a critical method of communication between leaders and members during the pandemic. This study showed that a preference for using Facebook is not surprising, as leadership dynamics and generational affiliation seemed to correlate with technology decisions directly. The age of church leaders directly shaped technology platforms chosen by congregations, as the primary age range for pastors in the study was 50-70. The study found younger leaders favoured platforms like Instagram and Twitter for church communication and livestreaming, while older leaders heavily relied on Facebook. For example, 83% of leaders aged

60–70 used Facebook extensively compared to 58% of those aged 20–30. Notably, this generational difference in social media platform preference – adults over 50 primarily use Facebook while youth under 30 use Instagram most – mirrors research findings in other studies correlating digital media preference to specific age groups (Pew Research Center 2024). Leaders reported that when considering what technology their church should adopt during the pandemic, they often went with what was familiar or most comfortable to them and other church leaders. Selecting a digital platform that was familiar or already used by the church seemed to alleviate some stress around technology choices for both members and leaders. It also highlights the importance of paying attention to generational differences in technology use and familiarity when making technology decisions that serve the whole congregation. Such consideration may also help mitigate congregations' stress related to change and technology.

6. Making Sense of Continued Technology Engagement in Post-Pandemic Churches

This study also highlights that conversations about technology decision-making are not yet done for churches, even though the COVID-19 crisis is over. This section addresses the second research question of how church leaders continue to make sense of their use of technology post-pandemic. Specifically, this study found that leaders still require negotiation and justification of technology adoption and use with their congregations in two areas.

6.1 The Digital Divide is Still Present, Impacting Many Congregations

Despite churches adding new digital resources to their ministry toolboxes, many leaders realized they are still behind the digital curve. Leaders reported making progress in learning about and using digital media. However, the "digital divide" remains a significant concern, particularly for smaller and rural congregations. The study found larger churches had a tech advantage, in terms of resources and pre-existing infrastructure, with 59% of those with over 500 attendees already utilizing technology before the pandemic. In contrast, only 22% of smaller churches with under 100 members had done so. This disparity meant that smaller congregations had to make more drastic adjustments during the initial stages of the pandemic, with 63% implementing technology for the first time. Many relied on basic tools like recording and uploading videos, as shared by a church in West Lafayette, Indiana, which used Facebook for weekly sermon discussions. These smaller churches often struggled with funding and expertise, and the CTT grants played a crucial role in bridging this gap. However, challenges persist, as many congregations still lack the resources

to integrate digital tools into their ministries fully. The resistance and technological hesitancy exposed underlying theological concerns related to digital justice, as limited access impacted congregations' ability to connect. The study suggests that embracing digital tools could foster inclusivity and bridge generational divides in religious communities, reinforcing the need to shift how churches perceive and integrate digital media into worship.

6.2 Long-term Congregational Technology Integration Requires Continued Evaluation and Learning

As many churches continue to incorporate facets of technology into their worship, pastors face ongoing concerns about balancing technology use with traditional forms of ministry. Burnout among leaders is a recurring theme, as the demands of managing both in-person and digital platforms take a toll on them. A Kokomo church noted the importance of congregational support during their pastoral transition and the pandemic, which helped them navigate these challenges. For many, livestreaming remains central, not only for worship but also for expanding discipleship initiatives. A church in Marion, Indiana, shared that they used grant-funded equipment to create a curriculum for their discipleship pathway, illustrating how technology can be leveraged for long-term ministry goals. However, leaders continue to wrestle with questions about fostering authentic community in a hybrid model. While many respondents expressed optimism about technology's role, they acknowledged that it cannot fully replace the interpersonal connections that define congregational life.

7. Technological and Cultural Sensemaking in Post-Pandemic Churches

This section examines how sensemaking influences church leaders' decisions regarding technology for their congregations in 2023 and beyond. Specifically, we highlight two ways in which the construction of specific narratives, emerging from leaders and congregational use of technology, framed post-pandemic views of digital media in ministry and worship.

7.1 Congregational Shifts in Views of Technology

A key category in the study is the shift in attitudes towards technology before and after the pandemic. Pre-pandemic, many church leaders viewed technology as a peripheral tool rather than an essential part of their ministry. However, the pandemic forced many churches to adapt to online worship formats, and post-pandemic church leaders rapidly showed a much more positive or neutral attitude towards technology. This shift could be analysed using the concept of "enacted environments" from sensemaking theory. Sensemaking theory posits that organizations

enact their environments, meaning that the actions taken by church leaders, such as implementing live streaming and social media outreach, were not just responses to the pandemic but also a way of constructing new digital environments for their ministries. For instance, the transition from negative to neutral or positive attitudes towards technology, especially the increased use of platforms like Facebook, can be analyzed as a process of identity construction and sensemaking where church leaders sought to adapt their theological and community identities to a new digital context. By applying sensemaking theory as an interpretive lens, researchers can explore how church leaders, facing forced changes, constructed new narratives around digital technology, ultimately shaping the direction of technological use in the post-pandemic period.

7.2 Generational Differences in Technological Decision-Making

A second way the use of sensemaking impacted congregations' views of technology was seen in notable generational differences in response to technology within churches. According to the study, younger leaders (under 40 years old) tended to embrace social media platforms like Instagram and Twitter. In comparison, older leaders (in their 60s and 70s) leaned more towards using Facebook for communication and outreach. This provides a rich context for applying sensemaking theory's focus on the social aspects of decision-making, where generational identity plays a crucial role in interpreting and responding to the crisis.

These generational differences were not simply about technological competence, but also about how different age groups constructed their identity about technology. For example, older leaders who may have initially resisted adopting digital tools could have gradually come to see technology as a necessary part of maintaining their religious mission. This change can be understood as a process of sensemaking in which these leaders redefined their role within their congregations and adapted their practices to ensure continuity of worship and community. The study finds that church leaders aged 60+ were more likely to use Facebook as their primary platform, supporting this interpretation, as it reflects the leaders' process of incorporating technology in ways that aligned with their personal and communal identities. Sensemaking theory helps to explain the generational identity differences that influenced not just technology adoption but also how leaders made sense of their evolving role within the church community and how these decisions impacted the congregation's engagement with digital platforms. This strategy highlights the dynamic, ongoing nature of sensemaking, where each generational group actively negotiates their responses to the pandemic's disruptions.

8. Lessons Learned by Leaders on Navigating Times of Change

By returning to the three areas highlighted in the literature review on key traits of sensemaking – individual and communal enactment, construction of an experience of shared meaning making, and situating the event in a new environment where functional and conceptual resources exist – we can see how church leaders enacted the process of sensemaking. We also suggest it points to a process leaders can enact to prepare for future times of unexpected change.

When churches were faced with the sudden disruption of in-person services, this required both leaders and their congregations to engage in personal and corporate sensemaking. This required leaders to recognize the urgency of responding to the situation thrust upon them, and realize a technology-driven ministry was their best, and often only, solution. A pastor from Greencastle, Indiana, stated, "When COVID made us [start using technology]," highlighting the reactive nature of this decision (Campbell et al., 2023). Church leaders had to adapt quickly, often learning on the fly, with pastors shouldering the burden of setting up and operating new systems, which added a new layer of responsibility to their roles. However, this was more than a pragmatic decision, and leaders had to recognize that technology adoption and adaptation brought with it liturgical, ecclesiological and theological challenges. This meant leaders had to present and "sell" the idea of digital worship to congregations, who had mixed pragmatic and theological concerns. Evidence from this study suggests that pastors who engage leadership teams and/or congregational members in discussion and buy-in about technology adoption before it is implemented find greater long-term acceptance of digital ministry. Also, for those in technologically hesitant or resistant congregations, framing the technology transition not as a choice, but as a necessity, or the only solution to social-distancing restrictions, seemed to help leaders and members accept a move to online worship. This shows the importance of corporate sensemaking in the initial adoption of a digital ministry solution and the need for communal engagement in naming and implementing change solutions.

The next trait of sensemaking highlighted is creating a space and attaching meaning to the new experience in ways that connect with the already established identity of the group. This demonstrates how leaders have transitioned in their views and framing of digital media over time. In this study, we observed congregational leaders shifting, often subtly, from a pragmatic framing of technology to a more missional focus. While many leaders presented technology as the only viable option to continue services at the onset of the pandemic, by late 2020 to early 2021, many leaders in this study began to stress the realized opportunities online worship offered.

Leaders justified the continued use of technology by emphasizing how it offered expanded reach to new audiences and even new opportunities for established church members with different limitations. One leader from Richmond, Indiana, proudly shared, "People appreciated the livestreams", especially those who had to continue social distancing due to health issues (Campbell et al., 2023). Leaders noticeably adapted their narratives to highlight the positive aspects of online worship, like allowing former or long-distance members to reconnect with the church or offering an accessibility alternative for older members who had challenges accessing areas of the physical church building. By highlighting how technology served to enhance the church community and ministry, it presented digital tools as strategic assets for their old members and new online visitors. Many pastors describe online worship as allowing them to reflect on their faith community and how it could function. Seeing and describing the church "enhanced" or "reimagined" by technology presents an image of Church 2.0 or a Digital Church that could offer new forms of church outreach, better maintain social connections, and engage with a broader, more diverse audience.

Finally, by presenting digital worship as a new experience, but one that extended their established goals and mission, played an important role in congregational buy-in to technology. Leaders noted that once members were able to get over their initial fears about technology and adjust to the technological learning curve, seeing digital worship as extending what they had already been doing helped the congregations become more comfortable with this new way of doing church. This also proved important as leaders began to justify continued technology use post-pandemic, emphasizing its ability to reach broader audiences and support new forms of community engagement. Sensemaking helped congregations reframe new practices as part of their evolving identity in response to external change. While the context in which the worship service was new, leaders sought to conceptually stress the ways the services had often not been changed. Instead, they remained connected to their historical and liturgical tradition. Highlighting the area in which congregational worship remained constant was an important part of the leaders' sensemaking process. Leaders also encourage congregations to see technology as a tool to empower them to adapt practices for a specific moment and challenge, rather than as a replacement. This helped congregations not only accept the digital tools but also begin to see them as a new but potentially integral part of church ministry in the twenty-first century.

Sensemaking happened as leaders saw technology adoption as a communal negotiation, creating a new experience of church for people, as technology required a shift in worship practices. However, the also enable them to maintain their connections and

mission during this uncertain time not just to try and understand this new world, but as a way to process their mistakes and victories into teachable moments, enabling them to keep moving forward with the constant ebbs and flows of change brought on by the pandemic. Overall, these three aspects of sensemaking played a crucial role in helping leaders adapt to the technological and social changes brought on by the pandemic and responses to change. Churches, like other organizations, had to adopt new patterns of communication and collaboration to make this transition and establish new practices. As outlined by Maitlis and Christianson (2014), sensemaking is social, with decisions often being made collectively in response to external pressures. This is particularly important in religious organizations, where decision-making involves negotiation among clergy, leadership teams, and congregants. The collaborative nature of this process can be seen in how congregational leaders in the Tech in Churches project reported seeking input from their communities regarding if, when, and how to implement digital worship. Spadaro (2014), suggests the digital revolution requires church members and leaders to critically reflect on how they think about and practice Christianity, and may be an uncomfortable process for some. This points to a need for ongoing dialogue about how congregations can maintain the authenticity and integrity of religious practice in the face of forced technological adaptation and change.

9.   The Future Study of Congregational Technological Sensemaking around Digital Ministry

The findings from this research *point to several areas that require further study regarding the ongoing* and evolving relationship between churches and technology. This section addresses the study's third research question, about what issues the technological and ministry sensemaking process highlights for further study and support of congregational engagement with technology.

One issue for exploration is how churches can balance integrating digital tools with maintaining the communal and spiritual experiences central to congregational life. Many leaders noted a shift in their views of technology, from a peripheral tool pre-pandemic to an integral resource post-pandemic. Future research could explore the long-term theological and social implications of this change. Another important question concerns the sustainability of technological innovations. With many churches reporting burnout among staff and volunteers, how can congregations develop models for digital ministry that are both effective and sustainable? Furthermore, the findings highlight disparities in technological adoption across church sizes and demographics, suggesting more attention is needed to consider how smaller and rural congregations can overcome resource limitations and bridge the digital

divide. Finally, the generational differences in technology use among leaders suggest that investigating how intergenerational collaboration can shape future technology decisions in congregations is warranted.

Building on these questions, researchers and religious leaders concerned about the future of religious congregations' engagement with technology should delve deeper into the sociological and theological implications of technology use in churches. Themes such as how digital platforms redefine congregational understanding of what it means to be a faith community and how liturgical worship should (or should not) be modified to accommodate technological affordances warrant further study. This is particularly true as hybrid and online worship formats are becoming normalized in churches.

We also suggest researchers should further investigate how digital tools influence perceptions of religious authority and leadership, especially as congregants increasingly consume sermons and other content remotely. The role of social media in shaping congregational identity and outreach presents another avenue for exploration, particularly given its increased use during the pandemic. Moreover, future studies should examine the impact of digital technology on inclusivity within congregations, such as its role in engaging marginalized or elderly members. In addition many churches grappling with resource disparities, researchers should prioritize studies that explore strategies for equitable access to technology and training. This would ensure that congregations of all sizes can effectively integrate digital tools into their ministry. These investigations could provide vital insights for faith communities navigating the intersection of tradition and innovation in an increasingly digital world.

Finally, this research suggests that sensemaking theory offers scholars and theologians a valuable framework for understanding how church leaders navigate technological disruptions and frame their decision-making. It draws attention to narratives leaders may create to justify technology innovation, while stressing this engagement does not threaten their communal or theological identity. It also demonstrates that key characteristics of sensemaking offer religious leaders a template for preparing new processes of communal reflection and adaptation during moments of unplanned change.

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