



Rituals of Contagion in Closed Religious Communities: A Case Study of Amish and Mennonite Communities in the USA During the Beginning of the COVID-19 Pandemic

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Abstract

At the onset of the COVID-19 pandemic, government and medical guidelines emphasized social distancing to limit exposure. These guidelines significantly impacted closed religious communities, particularly those opposed to modern technologies, such as Amish and Mennonite communities. How did these religious communities respond to COVID-19 policies in the USA? We draw data from Ohio and Pennsylvania scribe entries published in an Amish/Mennonite correspondence newspaper. While some of these communities altered church rituals to comply with government directives, others maintained communal worship without disruption. Mennonite communities were more likely to conform to guidelines.

Keywords COVID-19 · Public health mandates · Religious rituals · Closed religious communities · United States

Introduction

Religious groups draw people together, sustaining a sense of community during a crisis. A mature body of sociological research demonstrates that ongoing meaningful interactions bond members to their community (Collins, 2014; Kanter, 1972; Stark & Finke, 2000). Government policies and medical guidelines that interfere with in-person interaction, such as the directives to maintain “social distance” and isolation, affect these community bonds.

The World Health Organization and the US Center for Disease Control and Prevention encouraged citizens to limit contact with non-household members. Where

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that was impossible or impractical, they recommended that everyone maintain at least six feet of space between non-household members. Experts proclaimed that these strategies were the best tactics for limiting the transmission of COVID-19 at the beginning of the pandemic (CDC, 2020b). However, these strategies also prevented people from gathering in collective worship, which is for many religious people an essential element of their spiritual life. As Ecklund (2020) notes, “COVID-19 complicates the usual response of religious organizations in times of crisis because the prescription for protecting against the disease requires physical isolation from organizations whose main purpose is to gather.”

While some religious groups complied with the mandates, others resisted the government COVID-19 decrees. In particular, many US religiously conservative groups (e.g., evangelical Protestants and Christian nationalists) objected to government interference with their faith (Ali et al., 2020; Baker et al., 2020; Duran et al., 2020; Perry et al., 2020a, 2020b; Pew Research Center, 2020; Stein, 2021). Pointing to puzzling inconsistencies (such as bars and restaurants facing fewer restrictions than churches), these resisters argued that COVID policies infringed on their right to worship (Ali et al., 2020; Baker et al., 2020; Duran et al., 2020; Perry et al., 2020a, 2020b; Pew Research Center, 2020; Stein, 2021).

Researchers found that religious conservatives and devoutly religious people and places with higher numbers of them were less likely to wear masks, social distance, or comply with stay-at-home orders (Adler Jr et al., 2021; Corcoran et al., 2022; Gonzalez et al., 2021; Hill et al., 2020, 2021; Perry et al., 2020a; Pew Research Center, 2020; Scheitle & Corcoran, 2021; Schnabel & Schieman, 2022). Surveys fielded in March and June 2020 indicated that white evangelical Protestants in the USA were among the least likely to comply with these policies and the most likely to support the restrictions’ termination (Pew Research Center, 2020). Christian nationalists (i.e., those who ascribe to a politically infused conservative religious ideology) were particularly resistant to COVID-19 mandates viewing them as contrary to economic prosperity and liberty (Perry et al., 2020a, 2020b). This resistance was likely also rooted in cultural distrust of medicine, the government, and science (Armer & Radina, 2006; Baker et al., 2020; Galanter, 1999; Gastañaduy et al., 2016; Glassman, 2018; Gonzalez et al., 2021; Hill et al., 2020, 2021; Miller & Karkazis, 2013; Offit, 2015; Stein et al., 2022; Thompson & Kisjes, 2016; Whitehead & Perry, 2020).

In response to these restrictions, some congregations simply ignored the guidelines (Baker et al., 2020; Perry & Grubbs, 2022). Others canceled services. Many adapted, some through hybrid services (e.g., online and in-person) (Almog, 2020; Baker et al., 2020; Church of England, 2020; Gjelten, 2020; Hartford Institute for Religion Research, 2021; Lange, 2020). Most of the research on religion, behavior, and pandemic policy, focuses on US evangelical Protestants and Christian nationalists. Fewer studies examine how pandemic policies affect closed religious communities (CRCs)¹—religious communities that limit interactions between members and

¹ CRCs exist on a continuum from more to less closed. Examples of CRCs include the Amish, Orthodox Jews, Jehovah’s Witnesses, and Fundamentalist Latter-Day Saints (FLDS).

non-members (Carmody et al., 2021; Stein et al., 2021; Weinberger-Litman et al., 2020; Zyskind et al., 2021).

CRCs are especially vulnerable to infectious disease outbreaks due in part to ideological hostility toward outside authority, regular within-group interaction, and echo chamber effects from closed communication networks. Behavior within these congregations can exert an outsized influence on public health emergencies (Ali et al., 2020; Arciuolo et al., 2013; Gastañaduy et al., 2016; Thompson & Kisjes, 2016). This dynamic is particularly dangerous at the onset of novel disease outbreaks where isolation and social distance are the only effective means for slowing transmission. Numerous vaccine-preventable diseases have spread through CRCs, including measles, polio, and rubella (Arciuolo et al., 2013; Gastañaduy et al., 2016; Thompson & Kisjes, 2016; Zyskind et al., 2021). COVID-19 outbreaks have also been reported in CRCs (Ali et al., 2020; Carmody et al., 2021; Weinberger-Litman et al., 2020). The CDC indicates that “understanding the dynamics of close-knit communities is crucial to reducing SARS-CoV-2 transmission” (Ali et al., 2020, p. 1).

Broadband communication technologies played a crucial role in the slate of proposed strategies for facilitating social distance during the pandemic’s early months. Some scholars pointed to the need to study how congregations and their members have used technology for religious purposes during the pandemic and how inequities in high-speed internet capacity may affect some congregations’ ability to do so (Baker et al., 2020; Ecklund, 2020). But these calls for more research did not consider how certain religious beliefs and sacred convictions prohibit the use of technologies deemed profane. Some CRCs, such as ultra-Orthodox Jews and the Amish, restrict communication/media technologies (e.g., cell phones, internet, computers, radios, and televisions) as a communal sacrament (Hostetler, 1993; Kraybill, 2001; Neriya-Ben Shahar, 2019; Nolt, 2016). While the CDC and WHO recommended that churches and other religious communities worship “remotely” (e.g., mediated by an internet or telephone connection) (CDC, 2020d; World Health Organization, 2020), for CRCs that eschew the internet, telephone, and other modern communication technologies, “remote worship” is impossible.

Moreover, CRCs that restrict communication/media technologies (CMT) also have no way to counter misinformed “echo chamber” effects. These communities lack access to outside information, including medical guidance. Technological prohibitions within CRCs raise important questions for scholars of religion and health. How did CRCs that restrict technology respond to the COVID-19 policies, mandates, and recommendations? How did the pandemic affect their religious practice?

This study advances research on religion and compliance with COVID-19 health mandates by examining CRCs that restrict technology to determine whether and how they complied with COVID-19 directives during the pandemic’s beginning. We use the Amish and Mennonite CRCs, communities that limit modern technologies on sacred grounds, as a case study to examine these questions. These communities rely upon face-to-face social interaction and do not generally practice preventative health care, which puts them at high risk for infectious disease outbreaks (Thompson & Kisjes, 2016).

We content-analyzed entries from *The Budget*, an internationally circulated Amish and Mennonite correspondence newspaper, between mid-March and April of

2020 from all Ohio and Pennsylvania communities, home to the two largest Amish populations in the world. The newspaper publishes regular dispatches from scribes in Amish and Mennonite communities that provide updates on the authors' communities. While some communities did alter their church practices, we find that church services went on as usual for many.

The Case: The Amish and Mennonites

Anabaptist groups, including the Amish and Mennonites, separated from mainstream Protestants in sixteenth-century Europe due to differences in core beliefs. Anabaptists believed the church and the state should operate as separate entities; the church free from state power. Additionally, the name of Anabaptists, or re-baptizers, reflects the belief in adult baptism. These groups believe individuals should consciously choose to join the church when they are of an age and capacity to do so. After suffering much persecution in Europe, Amish groups migrated to the USA. Mennonite groups dispersed and settled around the world. Some groups emigrated to the USA (Kraybill, 2001; Loewen & Nolt, 2010; Nolt, 2016; Scott, 1996).

Amish and Mennonite groups are distinct, with many variations within each group.² Even so, Anabaptist groups share specific core values. These core values not only serve to unite people within the Amish and Mennonite communities but also distinguish boundaries between the CRCs and broader society. Sectarian characteristics emphasize differences that separate Anabaptist groups from the dominant culture, including behavior, dress, and social rituals. Anabaptists prioritize following God's law while emphasizing the separation of church and state. Sunday church services are recognized as a sacrament and communal worship as a sacred duty within Anabaptist communities, centralizing the role of religious beliefs (Kraybill et al., 2013). Amish and Mennonite people generally obey state and national laws but vary in the extent to which they will refuse directives that conflict with their understanding of God's higher law (Hostetler, 1993; Yoder, 2003). For example, some conservative Amish groups refuse to use reflective tape on their buggies based on theological grounds, despite state laws mandating such things for safety (Anderson, 2014; Yoder, 2003). Amish and Mennonite groups follow Biblical teachings while emphasizing the importance of living their faith through daily actions. Members of Amish and Mennonite groups build and maintain bonds within the church, organized as a spiritual and social community. The bonds translate into a strong community where members rely on one another for support (Hostetler, 1993; Kraybill, 2001; Nolt, 2016).

While they share core values, Amish and Mennonite groups differ in significant ways. Many Amish congregations are constrained by geographical boundaries, as

² The distinction between Amish and Mennonite groups is often blurred, as there are Amish-Mennonite groups stemming from the Amish tradition that use automobiles and meet in communal buildings for church services. These groups generally have fewer restrictions on technology as compared to traditional Amish groups. There are also groups of conservative Mennonites from the Mennonite tradition that use horses and buggies as the primary mode of transportation and use communal buildings for church services.

the primary means of transportation in Amish communities is horses and buggies. Approximately 20–40 families constitute an Amish congregation, and all congregations in a broader area form a settlement. The geographical closeness ensures Amish families can travel to members' homes within the same community by horses and buggies in a reasonable time frame. Mennonites are not constrained by geographical boundaries, as most Mennonite groups accept the automobile as the standard mode of transportation (Hurst & McConnell, 2010; Kraybill, 2010).

In addition to different modes of transportation, technology usage varies across and within Amish and Mennonite groups. For example, many Amish people do not have access to a home telephone. Some Amish groups might use a shared community telephone outside the home for communication purposes, while the most conservative Amish groups generally rely on non-Amish neighbors if they need to make a telephone call (Kraybill, 2001; Scott & Pellman, 1999). In contrast, many Mennonite groups have no restrictions on home telephones. The prevalence of cell phones provides greater access to communication technology; however, many Amish churches limit cell phone usage to work-related issues (Ems, 2014). These guidelines encourage Amish people to keep cell phones out of the home.

In-person collective rituals are a cornerstone of the Anabaptist faith. Amish services are full-day events held in members' homes. A typical Sunday includes worship, which lasts approximately three hours, followed by a meal and youth gathering. Church members spend the remainder of the afternoon visiting one another. People will often attend the services of other congregations on "off" Sundays when the home congregation does not hold church (Hostetler, 1993; Kraybill, 2001; Nolt, 2016).

Most Mennonite church services are shorter than Amish services, including Sunday School meetings, and take place in a communal building. Mennonite churches often emphasize social time before or after the service. Though welcome, visitors are not as common in the Mennonite service, as there is no "off" Sunday. Mennonite congregations vary in size, ranging from 75 to 200 members, depending on affiliation (Christian Light Publications, 2020; Miller, 2019).

The size of Amish church gatherings, with 20 to 40 families crowding into a home for worship and the post-service meal, creates opportunities for viral outbreaks once one member becomes infected (Thompson & Kisjes, 2016). For example, during the summer of 2014, a measles outbreak ravaged one of the largest Amish communities in the USA, spreading primarily through church contacts (Gastañaduy et al., 2016). Amish and Mennonite groups prioritize religious rituals, as these meetings represent a core value within the community. They are reluctant to disrupt their spiritual practices, even when confronted with viral contagion. Their priority on community fellowship has pronounced implications during the COVID pandemic. Likewise, patterns of (non)compliance to CDC guidelines among the Amish and Mennonites provide insight into the relationship between religious values and secular public health mandates.

Data and Method

We collected data from *The Budget*, an international Amish/Mennonite correspondence newspaper that focuses on US communities and currently has a circulation of around 18,500 (Stein et al., 2021). *The Budget* is “an important institution, serving as the major means of communication among Amish settlements” (Hostetler, 1993, p. 377). *The Budget*, published weekly, includes dispatches from scribes—writers who live in Amish/Mennonite communities³ across the US and world. Scribe letters typically follow a general pattern, including a report on the weather, church news, community news items—births, deaths, member health information, visiting practices, and a narrative section including any other topic of interest (Adkins, 2009; Galindo, 1994). While some scribes submit an entry every week, many write every other week or once a month (Stein et al., 2019).

Most writers report on one congregation, but some cover two or more from their area. Amish intentionally keep their communities small to facilitate Sunday worship in homes. Consequently, when congregations grow too large, they split to maintain a manageable number of families (Stein et al., 2020). The scribes who report on more than one congregation are likely reporting on congregations that have split. Alternatively, some writers report on neighboring congregations that do not have a scribe to represent their congregation. We use “community” to refer to any congregation covered by the writer.

We read and content-analyzed all Ohio and Pennsylvania scribe entries published between March 18th and May 6th, 2020. We coded eight editions of *The Budget*—March 18, and 25, April 1, 8, 15, 22, and 29, and May 6th. Scribe letters typically report the previous week’s events, which means the March 18th–May 6th editions reflect the period from mid-March through the end of April. Ohio and Pennsylvania house the two largest Amish populations in the world and roughly 44% of all Amish congregations in the USA (Young Center for Anabaptist & Pietist Studies, 2020). It is important to note that *The Budget* started publishing CDC recommendations on COVID-19 in the March 11th edition, exposing readers to the guidance.

We identified religious affiliation based on the location of church services mentioned in the entries. Most Amish congregations hold Sunday church in members’ homes, and scribes report the site in their dispatch (e.g., “church was at Elmer Yoder’s last week”). In contrast, many Mennonites use dedicated church buildings, and Mennonite scribes usually provide their church’s name in their entries’ header. Groups classified as Mennonite in our study include groups that meet in a communal building for church services. This classification contains groups not traditionally defined as Mennonite, such as Beachy Amish–Mennonite groups. The classification

³ Most Budget scribes are from Amish communities. Mennonite scribes who contribute to *The Budget* are primarily from conservative groups (Nolt, 2008). Of note, many Mennonite groups in the US (and worldwide), including conservative groups, do not contribute to *The Budget*.

also includes horse and buggy Mennonites who use a meetinghouse for church services (Kraybill & Hurd, 2006).⁴

We counted the number of entries reporting in-person Sunday church to measure non-compliance with social distancing and isolation guidelines. In-person Sunday church violates the CDC's guidelines to avoid or limit contact with non-household members and avoid large gatherings. We coded whether Sunday church occurred, was canceled, or altered due to COVID-19. Specifically, we classified these alterations into broader themes. It is important to note that some communities tried different strategies as the pandemic progressed, so themes and subcategories are *not mutually exclusive*. Some scribes accounted for multiple weeks, reporting that their church met in person some weeks and canceled church other weeks. On "off" Sundays, those without services, Amish writers often list community members who attended church elsewhere as visitors. We classified these reports as indicating in-person Sunday church activity as any in-person rituals can spread the virus within the community. We also collected data on the number of times visitors (i.e., not community members) were mentioned as having attended in-person services.

Of the 1,503 entries we coded, 78% (1178) mentioned Sunday church, whether in-person, canceled, or remote. Since Sunday church is our analytic focus, we excluded entries not mentioning Sunday church. Of these 1178 entries, we estimate the percentage that reported each category and subcategory. We provide excerpts from entries to illustrate these (sub)categories and have replaced names of people and congregations with initials.

Because the number of entries varies by the community (i.e., communities that submit more entries have a greater influence on the results), we also report the percentage of communities falling into each of these (sub)categories to capture the extensiveness of these (sub)categories (Krueger, 1997). If we classified any entries tied to a particular community in a (sub)category, we counted that community as reporting that (sub)category. This allows for all communities to have an equal influence on the results. It is important to note that while most communities comprise one congregation, some have two or more affiliated congregations, and the same scribe reports on them all. There are 334 communities in our sample. Our university's Institutional Review Board determined that this study does not meet the definition of human subjects research.

Findings

We present results for two units of analysis—entries and communities. Using entries allows us to capture the number of times in-person Sunday services were held or canceled, reflecting the prevalence of (non)compliance with social distancing guidelines. However, some communities practiced more (non)compliance than others. Since there is variation in the number of entries submitted, some communities have

⁴ Because there is variation within Amish and Mennonite affiliations, it is possible that some Amish congregations may be coded as Mennonite and some Mennonite congregations may be coded as Amish. However, overall, we expect this classification scheme to accurately code most congregations.

a greater influence on the results when entries are used as the unit of analysis. Thus, we also report results with communities as the unit of analysis, which represents the percentage of communities that reported a given (sub)category at least once, that is, the prevalence of the (sub)categories across communities (Krueger, 1997).

Business as Usual

Tables 1 and 2 present the prevalence of *Budget* entries and communities in the study period that mention Sunday church (either in person or in a modified form). Sixty-five percent of entries reported in-person Sunday church, and 94 percent of all communities had at least one entry that reported in-person Sunday church. Thus, nearly all religious communities in our sample held Sunday church at least once in-person during mid-March and April. Of entries mentioning in-person Sunday church, approximately 97 percent exclusively offered it in-person, with only 3 percent offering it in-person with a remote option. The prevalence of in-person Sunday church varies by religious affiliation, with 73 percent of Amish entries reporting in-person Sunday church compared to roughly 40 percent of Mennonite entries.

Church visitors—people who visit a community to which they do not belong—are an important part of Sunday church among the Amish and Mennonites. Of the entries that mentioned in-person Sunday church, roughly 61 percent mentioned visitors, corresponding to approximately 82 percent of communities identifying visitors in at least one of their entries. More Amish entries reported visitors (65%) than Mennonite entries (38%). Scribes will often note out-of-state visitors as well, “We had a large crowd at church yesterday. Visitors were J. and D. G. from Minerva, L. and R. M. and family from Tazewell, W. and R. A. G. from Guys Mills, PA, J. and C. S. from Holmes County [...]” (OH, Mennonite, 3/18). Not only did members of different households within the same communities gather for in-person Sunday church, but people from other communities also attended church (some crossing state lines).

The importance of Sunday church is evident amongst the Amish and Mennonites, as nearly all communities reporting into *The Budget* continued church after the shutdown. One Amish scribe announced that sickness in the host household led the community to relocate, but not cancel, Sunday church: “Church was planned to be at M.’s, but was changed due to sickness. (Amish, OH, 3/25). In some instances, the cancellation of services led to more visitors in communities still meeting regularly: “Visitors today were P. M.s of Somerset, who came since their church was canceled because of Pennsylvania’s quarantine concerning the COVID-19” (PA, Mennonite, 3/25). An Amish scribe in PA wrote, “In the present situation we were thankful for the privilege and blessing of weekend meetings. N. G. and C. S., both from Ohio, were our speakers” (3/25). Visitors were present, and the speakers traveled from out of state.

While some people continued attending Sunday church outside their communities, others were cautious. In OH, a Mennonite scribe notes, “Our church attendance was smaller, with folks taking precautions to avoid getting sick” (3/18). A Mennonite writer in PA clarified that their communities exercised precaution, “Yes, we had church yesterday. The news message was put on the church line not to attend if you

Table 1 Percent of entries mentioning in-person church and alterations (Frequency)

	Overall		Amish		Mennonite	
	% (Freq)	% within a category (Freq)	% within a category (Freq)	% within a category (Freq)	% (Freq)	% within a category (Freq)
1. In-person Church	65.53 (772)	96.76 (747)	72.77 (668)	99.70 (666)	39.62 (103)	78.64 (81)
a. Only in-person	3.11 (24)		.3 (2)			21.36 (22)
b. In-person and technology option	61.01 (471)		64.67 (432)			37.86 (39)
c. Visitors at the services	12.82 (99)		8.98 (60)			37.86 (39)
2. Alterations to in-person Church						
a. No meal	47.47 (47)			71.67 (43)		10.26 (4)
b. Households sit together	17.17 (17)			21.67 (13)		10.26 (4)
c. Divided into small groups	19.19 (19)			13.33 (8)		28.21 (11)
d. No physical contact	23.23 (23)			33.33 (20)		7.69 (3)
e. Other social dist	15.15 (15)			21.67 (13)		5.13 (2)
f. Small group in-person and remote	18.18 (18)			1.67 (1)		43.49 (17)
Total entries	1178	772	99	668	60	260
					103	39

Categories are not mutually exclusive

Table 2 Percent of communities mentioning in-person church and alterations (Frequency)

	Overall		Amish		Mennonite	
	% (Freq)	% within a category (Freq)	% (Freq)	% within a category (Freq)	% (Freq)	% within a category (Freq)
1. In-person Church	94.31 (315)	98.73 (311)	95.92 (259)	100 (259)	87.5 (56)	92.86 (52)
a. Only in-person		6.67 (21)		.77 (2)		33.93 (19)
b. In-person and technology option		81.59 (257)		86.87 (225)		57.14 (32)
c. Visitors at the services		15.79 (83)		20.85 (54)		51.79 (29)
2. Alterations to in-person Church						
a. No meal		55.42 (46)		77.78 (42)		13.79 (4)
b. Households sit together		20.48 (17)		24.07 (13)		13.79 (4)
c. Divided into small groups		15.66 (13)		9.26 (5)		27.59 (8)
d. No physical contact		27.71 (23)		37.04 (20)		10.34 (3)
e. Other social dist		18.07 (15)		24.07 (13)		6.89 (2)
f. Small group in-person, remote		20.48 (17)		1.85 (1)		55.17 (16)
Total communities	334	315	83	270	259	56
						29

Categories are not mutually exclusive

had any cough or cold" (3/25). The church line, also referred to as a conference line, is a telephone service where people have a pass code or pin number to call in and listen to a presentation (live or prerecorded). In this case, the church line allowed people to call in and listen to the live church service. Some scribes noticed illness affecting their church attendance: "Church on Sun. was at S. M.s. [...] Lots of people were home sick and others were coughing. Some had fever in church, not realizing how sick they were before they went. Lots of little children sick [...] (PA, Amish, 3/25). While the scribes recognized the impact of sickness on attendance, there was no mention of canceling church or restricting travel.

Alterations to In-Person Church

Thirteen percent of entries mentioning in-person Sunday church indicated altering church in some manner. Of communities describing in-person Sunday church, 16 percent reported adjusting church in at least one of their entries. Of the entries mentioning alterations, roughly 47 percent said they canceled the traditional post-church meal. This alteration was more common in Amish communities.

Churches also deployed a variety of social distancing strategies. Seventeen percent of entries indicating alterations to Sunday church reported only allowing members of the same household to sit together. An Amish scribe in OH writes, "Last Sun. West district did gather in a big shop for services, sitting families together and using the 6' method" (4/22). County health departments distributed social distancing guidelines to Amish communities, as noted by an Amish scribe in OH, "E. H., bishop in South district, got a letter from the health department saying that it's okay to have church services with regulations such as families seated together and no noon meals" (4/22). Dividing the congregation into smaller meeting groups was one of the more prevalent strategies for social distancing. A Mennonite scribe in PA wrote, "Our congregation divided into 4 groups for church again. We met at R. R.'s, B. S.' C. E.'s and the Church. [...] A few of our families do not want to have church via of the conference line, so the Ministry felt they could meet our needs best this way (4/29).

Twenty-three percent of the alteration entries referenced prohibitions against social contact, specifically no handshaking or Christian greeting (i.e., holy kiss). Social contact limitations were more common among Amish communities in our sample. Even though these churches restricted social contact, they did not ban visitors, as documented by an OH Amish scribe, "L. M. church was at B. M.s. Visitors were J. M.s and lots of young folks. [...] There was no food served and no handshakes. Quite a few were missing" (4/8). Fifteen entries mentioned other forms of "social distancing."

Finally, another prominent form of social distancing was only allowing a small number of people in the congregation, whereas everyone else participated remotely. Eighteen percent of the alteration entries mentioned this: "Our Church continues to share services via Zoom and call in. Eight to ten gather at the church while the rest of us listen in from home" (OH, Mennonite, 4/22). At least one of the scribes reported having their elderly members attend Church in person, yet, they are among

the most at risk of severe COVID-19 complications (CDC, 2020c). Overall, more commonly reported among Mennonite communities than Amish, this form of social distancing allowed limited numbers to enjoy in-person church.

Cancelations/Postponements

While many communities continued having in-person church, others canceled for some time. Table 3 presents the prevalence of entries and communities that canceled in-person services and those using adaptive technology. Forty-one percent of entries reported canceled in-person church, corresponding to 66 percent of communities with at least one entry mentioning canceled in-person church. Of those, only 37.5 percent of entries and 31 percent of communities mentioned remote church.

Cancelation varied by religious affiliation, with 33 percent of Amish entries reporting canceling in-person church compared to 68 percent of Mennonite entries. They also differ in whether they offered technology to replace the canceled in-person service, with Mennonites being much more likely to do so (79% versus 14% of entries). An Amish scribe in OH notes, “The coronavirus flu is probably the main talk worldwide. A decision was made by the Ohio Steering Committee, the Health Department, and bishops to cancel our church services the next few Sundays” (3/25).

Many scribes noted the impact of cancelations on their community. A Mennonite scribe in OH writes, “I do believe we were designed for community and to have face to face conversations. I miss my church family and my extended family and look forward to a time when we can interact freely” (4/8). Several scribes indicate the importance of fellowship. An Amish writer in OH notes, “No church news, since it’s been 4 weeks since we’ve last had church, since the coronavirus has been around. We definitely do miss not having our church services, and the fellowship with our other church people” (4/22). Another Amish scribe writes, “We skipped a few weeks of writing, since we did not have any church news to report. We just hope and pray that we can have church service again soon. We really miss the worship and fellowship together” (OH, 4/29).

Church Using Technology

While the above alterations to in-person Sunday church are generally evident across Amish and Mennonite communities, Mennonite communities were more willing to use adaptive technology. Approximately 17 percent of entries mentioned using technology, and 21 percent of communities had at least one entry describing technological adaptations for church, whether in addition to in-person services or in place of them. Of the entries mentioning technology, 87 percent reported that members connected to a conference line/telephone. One OH Amish scribe noted, “The past few Sundays we had the privilege of listening to some very inspiring sermons via conference calls. In these trying times we adapt to circumstances the best we can. Let’s

Table 3 Percent of entries and communities mentioning canceled in-person church and technology (Frequency)

Entries		Amish				Mennonite			
Overall	% of entries (Freq)	% of entries within a category (Freq)	% of entries (Freq)	% of entries within a category (Freq)	Overall	% of entries (Freq)	% of entries (Freq)	% of entries within a category (Freq)	
1. Canceled in-person Church	41.17 (485)		33.44 (307)		68.46 (178)		21.34 (38)		
a. No church offered	62.47 (303)		86.32 (265)		78.65 (140)				
b. Technology only	37.52 (182)		13.68 (42)						
2. Technology*	16.81 (198)		4.79 (44)		59.23 (154)				
a. Conference line	87.37 (173)		100 (44)		83.77 (129)				
b. Video streaming	13.13 (26)		0.00		16.88 (26)				
c. Drive-in	2.02 (4)		0.00		2.60 (4)				
Total entries	1178		918		260				
Communities									
Overall	% of communities (Freq)	% of communities within a category (Freq)	% of communities (Freq)	% of communities within a category (Freq)	Overall	% of communities (Freq)	% of communities (Freq)	% of communities within a category (Freq)	
1. Canceled in-person Church	66.17 (221)		60.37 (163)		90.62 (58)		50 (29)		
a. No church offered	84.62 (187)		96.93 (158)		87.93 (51)				
b. Canceled in-person Church and technology	30.77 (68)		10.43 (17)						
2. Technology*	20.95 (70)		6.3 (17)		82.81 (53)		92.45 (49)		
a. Conference line	94.28 (66)		100 (17)		22.64 (12)				
b. Video streaming	17.14 (12)		0		5.66 (3)				
c. Drive-in	4.29 (3)		0						

Table 3 (continued)

<i>Communities</i>					
Overall	Amish		Mennonite		
	% of communities (Freq)	% of communities within a category (Freq)	% of communities (Freq)	% of communities within a category (Freq)	% of communities (Freq)
Total communities	334	270	64	64	64

Categories are not mutually exclusive

*Includes technology used with in-person services as well

continue to work together in this and also be respectful of the guidelines set in place, even if it means canceling church services, etc.” (4/22).

Roughly 13 percent of the entries mentioning technology described virtual church hosted on live streaming services such as Zoom or Facebook. Additionally, three entries mentioned drive-in Church. A Mennonite scribe described how, “The pulpit was brought outside, and you could just sit in your car. They had some connection via the car radio that you could hear the message.” (PA, 3/25).

Discussion

During the beginning of the pandemic, when social distancing and isolation were vital for saving lives, how did CRCs, particularly those that limit communication technologies, respond to the mandates? The current study examined this question in the context of the Amish and Mennonites. We found that Sunday church continued as usual for many communities, although some canceled church or adapted services. More Mennonite communities altered church than the Amish, which is consistent with the fact that they tend to allow more technology.

Religious rituals can amplify the spread of COVID-19 and become superspreader events (Majra et al., 2021). The CDC recommended cessation of in-person religious gatherings or substantial alteration following social distancing guidelines (CDC, 2020d). Some religiously conservative groups met the moratoria on worship with resistance. Numerous studies demonstrate a negative association between religious conservatism (or intense religiosity) and healthy pandemic behaviors (e.g., mask wearing, social distancing, and staying at home) (Adler Jr et al., 2021; Baker et al., 2020; Corcoran et al., 2022; Duran et al., 2020; Gonzalez et al., 2021; Hill et al., 2020, 2021; Perry et al., 2020a; Pew Research Center, 2020; Scheitle & Corcoran, 2021; Schnabel & Schieman, 2022; Stein, 2021).

Of course, religious resistance to public health mandates during pandemics is nothing new. Similar forms of resistance occurred in some congregations during the 1918 influenza pandemic (Marisam, 2007; Schoch-Spana, 2000). In both the 1918 influenza and COVID-19 pandemics, some congregations made headlines for violating mandates to close, alter, or restrict the size of their worship services (Galishoff, 1969; Green, 2020; Luscombe, 2020). What is new is the ability of some congregations to move their religious services online when faced with such mandates and the encouragement of governmental agencies to do so (CDC, 2020d). This solution makes such restrictions on gathering particularly burdensome for the Amish, and similar groups, who cannot shift to online services due to their sacramental limits on technology use.

The Amish and Mennonites believe in abiding by the government’s law when it does not conflict with God’s law (Hostetler, 1993; Yoder, 2003). In cases of conflict, they comply with what they believe is God’s will; however, they also believe it is God’s will to do no harm. We found that several churches canceled church services early in the pandemic based on advice from local health departments but returned to in-person church a few weeks later when the mandates had lifted. Thus, many churches complied when they believed the government mandated them to do so, but

not when the measures were mere recommendations. While research suggests that Christian nationalists were more likely to claim that COVID-19 social distancing guidelines violated their freedom to worship (Haynes, 2021; Perry et al., 2020b), a violation of rights was not prominent in the scribe letters. Instead, the Amish and Mennonite scribes emphasized the importance of personal interaction to maintain the spiritual and social bonds across community members. The sacred duty of communal worship in some Anabaptist communities superseded the government recommendations to limit social interaction.

In May 2020, the CDC reported an outbreak of COVID-19 in an Amish community in Ohio (Ali et al., 2020). The CDC's contact tracing identified six in-person religious and social events occurring in the two preceding weeks. Our data suggest that some Amish traveled out-of-town for church because state authorities prohibited church in their location. Such travel undoubtedly amplified the virus's spread by connecting geographically distant and otherwise separate communities. Studies have found that USA states that are more religious had, on average, higher mobility during the beginning of the pandemic and were influenced less by stay-at-home orders (Hill et al., 2020, 2021). Our findings advance this research by suggesting that, at least among the Amish, some people traveled out-of-town specifically to attend church services in locations where they weren't prohibited. More research is needed on how restrictions on religious gatherings in locales may facilitate travel to less restrictive locations and impact COVID-19 infection rates.

Religious conservatism and intense religiosity have generally been a barrier to healthy pandemic behaviors in the USA (Adler Jr et al., 2021; Corcoran et al., 2022; Gonzalez et al., 2021; Hill et al., 2020, 2021; Perry et al., 2020a; Perry & Grubbs, 2022; Pew Research Center, 2020; Schnabel & Schieman, 2022). Yet some Amish and Mennonite congregations found ways to adapt to the COVID-19 health recommendations while maintaining their religious commitments. Adaptations that still allowed in-person services were better received and implemented among the Amish and Mennonites. Some ceased the communal meal following services, had only family sit together, prohibited physical contact, or had rotating small groups attend in person. These concessions were easier to accommodate as they still allowed them to hold to their sacrament of in-person fellowship. Yet, many communities did not alter church services in these ways. Examining what factors affect whether communities within the same religious affiliation voluntarily decide to enforce social distancing guidelines and implement them are fruitful avenues for future research.

For many religious communities, concerns over COVID-19 combined with government restrictions led to canceling in-person services and transitioning to remote services through technology (Oxholm et al., 2020; VanderWeele, 2020). Indeed, the CDC recommended this (CDC, 2020d), and many congregations complied. A 2021 nationally representative sample of US congregations found that 80% of congregations offered a hybrid option for religious services (i.e., both online and in-person), 5% of congregations had services solely online, and 15% had services exclusively meet in person (Hartford Institute for Religion Research, 2021). Ninety percent of evangelical Protestant congregations offered a hybrid option (Hartford Institute for Religion Research, 2021). Unfortunately, recommendations to shift to virtual services fail to consider religious

communities without the financial resources to do so and communities, like the Amish and Mennonites, whose religious beliefs prohibit or restrict it (Hostetler, 1993; Nolt, 2016).

It is thus not surprising that few Amish communities used technology to hold church. On the other hand, Mennonite communities, which are more open to technology, reported using it more often for services than the Amish. While the Amish and Mennonites share many beliefs and practices, including the centrality of face-to-face interaction to bond community members together, the difference in their beliefs regarding communication technologies profoundly affected how they altered church based on social distancing and isolation guidelines. The Amish groups without technology resumed face-to-face church when government restrictions were lifted, while Mennonites and Amish groups with access to technology had greater flexibility to stay remote. As such, traditional Amish groups had a greater risk of exposure to COVID-19. More research is needed on how they and other religious groups that restrict communication technologies have responded to the challenges of COVID-19 restrictions.

Study Limitations

There are several limitations to this study. We only have data on Amish and Mennonite communities from Ohio and Pennsylvania submitted to *The Budget*. Even so, nearly half of all US Amish congregations reside in those states, as do the two largest Amish settlements (Young Center for Anabaptist & Pietist Studies, 2020). Additionally, as *The Budget* is a prominent means of communication across settlements (Hostetler, 1993; Nolt, 2008), we expect that most communities submit entries, and those submitting represent typical Amish communities.

Since entries typically provide information on Sunday church and members who interacted at church, our data may undercount the number of times church was canceled as scribes may submit entries less frequently due to not having church. While there may be fewer entries per community, it is unlikely that a scribe would fail to submit an entry over two months. Additionally, some writers reported the number of weeks church was canceled in their community. Thus, the statistics we report on the prevalence of themes by communities (e.g., the percent of communities that reported canceling church) aid in correcting for undercounting canceled church when using the number of entries as the unit of analysis.

Although collecting data from *The Budget* entries come with limitations, it also has several advantages over other data collection methods. The Amish and conservative Mennonites are CRCs that limit communication technology. Data collection through surveys or interviews is difficult during normal times and nearly impossible during a pandemic when in-person data collection was dangerous. *The Budget* represents a unique source of information that allowed us to collect data safely and ethically on 334 Amish and Mennonite communities in OH and PA.

Conclusion

While research on US conservative religious groups' reactions to the pandemic indicates a general resistance to government mandates during the pandemic (Adler Jr et al., 2021; Corcoran et al., 2022; Perry et al., 2020a, 2020b; Pew Research Center, 2020), research on CRCs generally, and those with restrictive technology specifically, are less prevalent. The CDC identified that it is vital to understand CRCs to reduce the spread of COVID-19 (Ali et al., 2020).

This study is one of the first to examine how the COVID-19 pandemic and resulting social distancing mandates have affected CRCs that restrict technology due to their religious beliefs and how they respond. The data used in this study provide an unparalleled lens into the lives of the Amish and Mennonites during the COVID-19 pandemic. More research is needed on how members of these communities cope with the pandemic, given limited opportunities for interaction (DiGregorio et al., 2021) and how they adapt to the availability of a COVID-19 vaccine (Scott et al., 2021; Stein et al., 2022).

This study highlights how the broader religion and health literature must consider how religious restrictions on technology use affect the ability of certain religious groups to transfer their rituals to virtual formats, which may, in turn, affect the transmission of COVID-19 and other infectious diseases. It also impacts what intervention strategies are likely to be the most effective. Our findings suggest that interventions focusing on modifying in-person religious rituals to reduce transmission will be more likely to be implemented than interventions emphasizing virtual rituals.

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Data Availability Newspaper data is publicly available.

Declarations

Conflict of interest The authors have not disclosed any competing interests.

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