

# Investigating Design for Global Techno-Spiritual Practices

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## ABSTRACT

My research fills a gap in our knowledge by exploring how to design technology that supports techno-spiritual practices. To do this, I have conducted interviews with Christian church pastors and laity to uncover their existing technology practices and to identify design opportunities. These formative studies motivated an online and offline intervention called *ChurchShare*, an application developed to support laity participation in megachurch worship services and to create new opportunities for social fellowship among parishioners. I will conduct a real world evaluation in three culturally distinct worship settings. This research is expected to yield theoretical contributions and generate useful guidelines for designing new technologies.

## 1. INTRODUCTION AND BACKGROUND

As the CSCW/HCI communities continue to study contexts outside the western, corporate world, designers must learn to develop ICTs (information and communication technology) that support a broader range of human activities. These can include exploring, wondering, loving, and worshipping. In my research, I examine how technology can support a subset of these activities; those related to religious aspects of life, or *techno-spiritual practices* [1].

Prior research examining *techno-spiritual practice* is largely descriptive and offers few insights into how to appropriately design technologies for religious use. Thus, my research focuses on designing and evaluating an ICT that supports a religious activity currently undergoing dramatic change because of ICTs — Christian megachurch worship.

Megachurches are growing in popularity around the world, and are defining worship practices smaller churches follow. Given their large numbers and ample financial resources, megachurches have been able to adopt and use expensive ICTs for various faith-related purposes. Megachurches have significant websites used to recruit new members, share information, and archive sermons. During worship, megachurches use sophisticated audio-visual equipment, presentation software, and cameras that record and broadcast services around the world [2].

As settings for interaction, megachurches present an environment with complex and sometimes contradictory design requirements. On the one hand, they are aggressively adopting ICTs to remain relevant to their congregations' younger members. On the other hand, megachurches remain sacred settings where communal worship of a higher power is most important. This tension between wanting to entertain, while simultaneously focusing

laities' attention on worship, presents several design opportunities and challenges.

Yet, despite ICT's significant effects on megachurches, we know little about how to design appropriate technologies for them. Thus, my proposed research begins to fill this gap in our knowledge by exploring how to design ICTs for megachurch worship services, and more broadly for techno-spiritual practices. I do this by conducting rigorous formative studies with megachurch pastors and laity. Findings from these studies led me to an online and offline intervention called *ChurchShare*, an ICT that supports laity participation in megachurch worship services and creates new opportunities for social fellowship among parishioners.

Research conducted in the United States primarily informed ChurchShare's development; however, I draw from knowledge gained from fieldwork examining techno-spiritual practices in Nairobi, Kenya [3] and São Paulo, Brazil, when evaluating the application. Specifically, I will deploy ChurchShare in three culturally distinct worship settings. The first will be a megachurch comprised of primarily American-born Christian laity; the second and third deployments will take place in Christian churches comprised of Kenyans and Brazilians living in the metro-Atlanta area. I am conducting these deployments to understand how religious individuals and groups adopt ChurchShare; and to gain insights into how adoption patterns may differ for cultural reasons.

This research contributes to the field of CSCW by:

- *Bringing knowledge about ICT-based religious practices into CSCW/HCI discourse.* Within CSCW/HCI, there remains an underlying assumption that computers support largely secular activities. For billions of people around the world, religious practice is a core component of their social and cultural identity. Thus, religion provides an excellent entry-point for broadly understanding ICT's global impact.
- *Providing knowledge of how religious practices motivate ICT adoption and rejection.* Religious groups can affect the adoption and rejection of a technology. Thus, understanding how ICTs are used in religious activities increases the possibilities for designing systems that are aware of, and responsive to, these motivations.
- *Providing knowledge about the larger social issues involved when deploying an application designed for religious use.* My research will serve as one of the first case studies documenting how religious communities negotiate the introduction of an ICT designed to support their religious practices.

## 2. Formative Studies and ChurchShare

Findings from interviews conducted with church pastors [4], laity, and observational studies in 12 megachurches [5] motivated ChurchShare's development. I found that megachurch laity want to use ICTs to interact with other church members outside of Sunday services; however, megachurches' websites largely function as one-way communication tools that provide few opportunities for laity to actively create and share content with others. At the same time, introducing new media into worship has raised concerns regarding laity's participation. Pastors worry that new worship styles cause some laity to become passive spectators rather than active worshippers in Sunday services. Finally, laity described meeting new members as difficult in their ever-growing congregations.

In response to this, I designed ChurchShare, a photo-sharing site that promotes communal co-creation of worship media and encourages social fellowship in megachurches. Communal co-creation refers to a creative and spiritual process that encourages individuals to be involved in developing media used in church worship services. Social fellowship describes the relationships laity form with one another and is an integral part of communal church worship.

ChurchShare functions like other photo-sharing websites (e.g., flickr™) however; it differs from these sites in three ways. First, rather than being an independent website, ChurchShare will link to megachurches' existing sites. Second, users will only upload significant photographs from everyday life. These could include, but are not limited to, photographs documenting "God's presence" in nature. Finally, beyond sharing photos with other church members, the system will have an offline component. To facilitate greater laity involvement in worship services and to create new opportunities for laity to interact with one another, pictures will be downloaded from the site and projected 15 minutes prior to and 15 minutes following worship services.

## 3. Proposed Research

Beginning in fall 2008, I will answer the following design relevant questions about the effects ChurchShare has when deployed in three culturally distinct worship settings. Accompanying each question is my hypothesis and a brief explanation of how I plan to evaluate it.

### For what purposes will megachurch laity use ChurchShare?

H1: *I hypothesize that megachurch laity will adopt ChurchShare and that it will motivate new techno-spiritual practices.*

I will determine this by tracking when users begin using the site and how frequently they use it during multiple deployments. Qualitatively, I will examine the photographs posted by laity and their motivations for sharing them (or not) during worship services.

### What changes will occur among megachurch laity when ChurchShare is deployed?

H2: *ChurchShare will promote social fellowship among megachurch laity.*

I will determine this through a series of interviews with megachurch pastors and laity. Specifically, I will ask questions about whether or not ChurchShare prompted laity to interact with parishioners they did not know prior to the application's deployment. I will code participants' responses looking for

instances of them describing (or not) situations where they interacted with new members of their churches.

### What factors contribute to feelings of involvement in megachurch worship services?

H3: *Actively playing a role in developing media for church service will increase member's feelings of participation in church service.*

Again, I will determine this through a series of interviews with megachurch pastors and laity. Specifically, I will ask questions about their levels of church involvement before and after deploying ChurchShare. Then, I will code participants' responses, looking for instances of them describing (or not) how ChurchShare affected participation in church worship.

### What types of studies can evaluate techno-spiritual practices?

H4: *I hypothesize that deploying ChurchShare in megachurches that have different cultural profiles in the metro-Atlanta area will allow me to explore how adoption patterns differ for cultural reasons.*

I will deploy ChurchShare in unfamiliar contexts: diasporic churches. In addition to deploying it in a church I am culturally most familiar with, I will evaluate the application in churches with predominately Kenyan and Brazilian diasporic laity.

## 4. What I hope to gain from attending the CSCW Doctoral Colloquium (DC).

I hope to gain three things from attending the CSCW Doctoral Colloquium. First, I am at a point in my academic career where sharing my research with established and younger scholars is crucial. My formative research is complete and prior to deploying ChurchShare I would like feedback regarding my proposed study design. Second, I want to meet other students from around the country and world interested in CSCW. I want to learn more about their research and academic programs. The DC's intimate nature makes interacting with others easier than it is at larger conferences. Finally, I want to gain more visibility within the CSCW community prior to conducting a job search.

## REFERENCES

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