The Congregational Commons

Laura Dick¹ and Ruth Meinzen-Dick²

Paper Prepared for 13th Biennial Conference of International Association for Study of the Commons 10-14 January 2011 Hyderabad, India

¹ University of Mary Washington, 1701 College Ave, Fredericksburg, VA 22401.

² International Food Policy Research Institute, 2033 K St NW, Washington DC 20006.

The Congregational Commons

Laura Dick and Ruth Meinzen-Dick

ABSTRACT: Most studies of the commons have focused on economic rationality as the motivation for contributions. Yet religious organizations (churches, synagogues, temples) are also shared resources that have many of the same characteristics and challenges as other commons. But unlike other commons, they explicitly appeal to non-economic motivations to mobilize resources, and do not follow many of the design principles for long enduring common property institutions. This paper develops an approach for investigating the religious commons, testing the applicability of the Institutional Analysis and Development (IAD) framework, and identifying other factors that influence contributions to the creation and maintenance of the religious commons. This approach is tested in a study of churches and synagogues in the Saint Louis area, based on key informant interviews with clergy and congregation members, using analysis of structures, rules and discourse. Findings from this study can broaden our understanding of the motivations for individuals to contribute to other forms of commons as well.

KEYWORDS: churches, commons, contributions, motivations, stewardship, United States

INTRODUCTION

Throughout the world, people come together to build and maintain sacred spaces, select leaders, and carry out a wide range of activities together. There are marked parallels between such religious congregations and irrigation systems or other natural resource commons. Over the past two decades there has been a burgeoning literature examining the management of common pool natural resources such as water, forests, rangelands, or fisheries. This literature has provided valuable understanding of what motivates people to contribute and to work together for a common good, as well as of incentives for "free riding"—not contributing but expecting others to contribute. Bringing together studies of different types of resources has provided greater insights than would have been generated by each group working on their own. More recently, the analysis of "commons" has been broadened to include a range of other shared resources, ranging from the tangible (such as roads) to the intangible (radio spectrum, or knowledge):

Increasing numbers of people are interested in a more general sense of commons and with shared resources usually outside of market or government systems. The new commons literature focuses on collective action, voluntary associations, and collaboration. ... there is a growing emphasis on questions of governance, participatory processes, and trust; and there is a groundswell of interest in shared values and moral responsibility (Hess 2008:37).

Yet there has been very little study of churches, synagogues, and temples as commons. In this paper we take a first step toward addressing this gap, examining the insights which the study of the commons might bring to understanding the behavior of religious

congregations, and conversely, identifying how study of religious groups might contribute to our understanding of other commons.

There are structural similarities between religious and natural resource commons in the need to mobilize a range of resources and deploy them toward shared goals of the group (which, in turn, requires some form of governance process to determine what those shared goals are). But there are also fundamental differences, both in the systems themselves and the studies of these systems, that need to be recognized. Perhaps because the outcome of most natural resource management is relatively tangible, most studies of the commons have focused on economic rationality as the motivation for contributions, whereas religious organizations explicitly appeal to non-economic motivations.

The focus of our paper is on religious congregations in the Judeo-Christian tradition in the United States, although this analysis could be extended to other types of religions. Although there are many aspects of congregational behavior that could be investigated, our focus is on resource mobilization, especially what motivates people to contribute to the congregation. This leads us into considering various aspects of the structure and functioning of the congregations, both formal rules and rules-in-use. We combine conceptual analysis of how religious congregations do (or do not) follow patterns found in the natural resource commons with primary and secondary empirical evidence: interviews with a sample of congregations in the metropolitan area of St. Louis, MO, USA, and large-scale surveys of religious giving in the United States.

Our analysis begins with an examination of two streams of literature: studies of the natural resource commons and studies in the religious economics literature. The subsequent section describes the methods used in our study of St. Louis congregations. We then apply the Institutional Analysis and Development (IAD) framework to the congregational commons, showing how conceptually the framework could apply, combined with evidence from the primary and secondary studies. The broad structural analysis through the IAD lens is followed by a more specific testing of whether congregational commons follow the "design principles" for effective commons management identified by Ostrom (1990, as modified by Cox et al, forthcoming). The concluding section examines the areas in which studies of religious congregations as commons can contribute to our overall understanding of motivations for individuals to contribute to shared resources.

RELIGIOUS ECONOMICS LITERATURE MEETS THE COMMONS

In looking at the religious commons, we draw from several discrete bodies of literature that each shed light on some part of the fundamental question we address here. The general literature on the commons offers many insights, but these have focused on management of natural resources. The more recent expansion of commons scholarship has included many less tangible resources. In "mapping the new commons", Hess (2008) identifies spiritual/sacred commons as a potential subset of the cultural commons, but even in 2010, there were no entries on "religious commons" in the Digital Library of the Commons, and the two entries on sacred commons dealt with sacred groves or forests, with the articles referring to the natural resources. Baland and Platteau (1996) refer to the role of religion in creating common norms that reduce the

transaction costs of managing natural resource commons. Wade (1988) points to the role of south Indian temples in reinforcing the management of irrigation commons, such as by having fines for breaking irrigation rules paid into the temple festival fund, which reduces tensions over paying fines. In their study of canal irrigation in India, Meinzen-Dick et al. (2002) found that areas with a temple were significantly more likely to have collective organization for water management, which they ascribe not only to the role of temples in creating solidarity, but also to the experience gained in working together to support a temple. However, these studies do not deal with the religious institutions themselves, and what makes them work (or not).

There is another body of literature often characterized as pertaining to "religious" economics," which deals with a variety of issues surrounding churches and money. Much of this literature (e.g. Hoge et al. 1998; Smith et al. 2008) is written for churches, to help them identify factors that increase (or limit) financial contributions. Hoge et al. (1996) also wrote a more scholarly analysis from their large-scale survey of 125 congregations in each of five main denominations and individuals in those congregations, as well as a Gallup telephone poll of 1,000 individuals and twelve congregations studied in-depth. Iannacone (1997) has written more formal economic analyses of contributions to churches using rational choice models, aimed at economics audiences. Smith et al. (2008) compiled data from several sources, including their own Tithing Experiment Study and 77 personal interviews with clergy. They use several elements of commons theory (such as fear of free-riding and the lack of sanctions) in explaining the low levels of religious giving, but without giving a full theoretical explanation. This field or religious economics, while providing much insightful analysis of the ways churches function in an economic sense, suffers from a lack of a cohesive framework in which to conceptualize a congregation, instead merely testing lists of hypotheses. Dean Hoge, considered the father of religious economics, notes that most research on religious giving is "exploratory in nature, not guided by any theoretical models" (Hoge and Griffin 1992). This hodgepodge approach makes it difficult to come away with a broad understanding of the complex motivations of religious giving.

A further problem with the religious economics literature is that the more formal of these texts tend to treat congregations as a club good, to which we take issue. Club goods, sometimes referred to as toll goods, are characterized by being excludable (it is possible to exclude those who have not contributed from benefitting) and nonrivalrous (what one person takes does not reduce what is available to others. By contrast, common pool resources are characterized by being difficult to exclude, but having rivalry (also referred to as subtractability—see Ostrom, Gardner, and Walker 1994:6-7). We define a congregation as a common pool resource rather than a club good because, whereas club goods are excludable but nonrivalrous, most churches explicitly state their openness to all—low excludability. As to rivalry, congregational resources are subject to crowding, for at a certain point a building cannot contain any more worshippers or a pastor cannot minister to any more individuals. Thus, the rival and non-excludable nature of congregations means they are more accurately classified as commons than club goods.

One of the most useful developments in the economics of religion is the establishment of religious behavior within the rational-choice model rather than as an

exception to it (lannacone 1998). This significant acknowledgement allows us to use and adapt traditional commons theory to describe and understand the congregation as a religious commons. Often, economists looking at financial giving in congregations redefine the self to include the family or even the congregation, as a way to do away with the apparent lack of self-interest motivating religious donations. Although this redefinition may allow analysts to reconcile these otherwise perplexing transactions with assumptions of "rational, self-maximizing behavior", this extension of the self only partially explains the central issue of why people give (Smith et al. 2008; Hoge et al. 1996). Taking the position that religious contributions are rational decisions in and of themselves, we are able to use commons scholarship to more fully explore these complex motivations without oversimplifying.

Vatn's (2009) contributions to the understanding of rationality within an institutional framework also aid us in our discussion of religious contributions. He argues that people are not only motivated by narrowly-defined self-interests: they are sometimes oriented towards their individual interests, sometimes toward the interests of a group to which they belong, and sometimes toward the interests of others. Institutions allow individuals to mediate between individual-, group-, and other-oriented rationality, which he terms "I," "us," and "them" centered. As religious institutions, congregations stress other- and group-oriented rationality, which will condition the emphasis that members—and even visitors—place on group- and other- rationality as opposed to individual orientation, which makes their financial contributions more explicable. Vatn's work and other recent developments in institutional economics, while not explicitly applied to religious situations, have clear implications for this study.

In this paper we use the Institutional Analysis and Design (IAD) framework that Ostrom (1990; 2005) and others have used as the basis for analysis of the commons, and extend this to analysis of religious congregations, drawing on our own study and the literature from religious economics. The IAD framework (Figure 1) begins by identifying key contextual factors that represent the conditions that people face, which shapes the initial opportunity set of the possible actions (although the actions themselves can affect the context, in the next round, as indicated by the feedback loops). Analyses of the commons have focused on three sets of contextual factors: characteristics of the resource; characteristics of the community (usually implying community of resource users); and rules in use. These factors, in turn, affect the action arena, which is composed of actors and action situations. Interactions in the action arena lead to patterns of interaction. The focus here is on the rules and norms of the object of analysis and how they lead to regularized behavior. These activities (whether collective or individual) will lead to certain outcomes, which can shape the initial conditions and the action arena for the future.

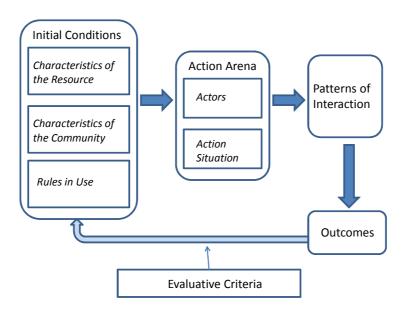


Figure 1: Institutional Analysis and Design framework

Source: Adapted from Ostrom (1990)

Applying the IAD framework to comparative analysis of case studies of management of common pool natural resources, Ostrom (1990) identified eight "design principles" for effective commons management. Cox et al. (forthcoming) conducted a meta-analysis of 96 case studies in the Digital Library of the Commons that used the design principles, to test their applicability, and found broad support for the original design principles, but suggests some modification to clarify when an original design principle included multiple aspects. The modified principles suggested by Cox et al. (forthcoming) include:

- 1A. *User boundaries*: Clear boundaries between legitimate users and nonusers are present.
- 1B. Resource boundaries: Clear boundaries that separate the appropriated common-pool resource from their environmental phenomena are present.
- 2A. Congruence with local conditions: Appropriation and provision rules are congruent with local social and environmental conditions.
- 2B. Appropriation and provision: Appropriation rules are congruent to provision rules; the distribution of costs is proportional to the distribution of benefits.
- 3. *Collective-choice arrangements*: Most individuals affected by the operational rules can participate in modifying the operational rules.

- 4A. *Monitoring Users:* Monitors who are accountable to the users monitor the appropriation and provision levels of the users.
- 4B. *Monitoring the Resource:* Monitors who are accountable to the users monitor the condition of the resource.
- 5. Graduated sanctions: Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and the context of the offense) by other appropriators, by officials accountable to these appropriators, or both.
- 6. Conflict-resolution mechanisms: Appropriators and their officials have rapid access to low-cost local arenas to resolve conflicts among appropriators or between appropriators and officials.
- 7. *Minimal recognition of rights to organize*: The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.
- 8. *Nested enterprises*: Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.

In this paper, we test these design principles and the IAD framework in the religious commons. This application allows us to explore the non-economic motivations of contributors to a commons, going beyond rational-choice models to more fully address and understand the complexities of commons management.

METHODS

This paper draws upon the extensive surveys and interviews conducted by Hoge et al. (1996) and Smith et al. (2008) as well as our own new empirical study of Christian and Jewish congregations in the St. Louis, Missouri, metropolitan area. We selected a purposive sample of congregations, stratified by denomination and community, to ensure variability on two key factors that are likely to affect congregations' resource mobilization and use. Denomination affects both the structure and beliefs of a congregation. Some, like Catholics and mainline Protestants, have hierarchical church structures, while others are more independent. Some denominations have more conservative theology than others, defined by Hoge et al. (1996) as an emphasis on "helping others to commit their lives to Christ" as the priority of church life, only accepting one interpretation of scripture as valid, and more emphasis on abstinences. Community reflects socioeconomic status, with different demographic dynamics, especially in the St. Louis area. We selected congregations in each area based on zip codes (one for Kirkwood, 3 zip codes covering each of the other areas). The four communities were:

 North St. Louis—largely African American (more than 90%) and poorer (between 20 and 50% of families below the poverty line) urban area. Approximately half of homes are rented, and slightly more than half (55%) of adults have a high school diploma or higher, with less than 10% holding a bachelor's degree or higher. The median household income ranges from \$10,000 to \$25,000 in the zip codes that we sampled as part of North St. Louis.

- South St. Louis—historically white working class area of St. Louis with an immigrant identity, this urban area features more heterogeneity than other areas. Whites make up between 40 and 70 percent of the population in the three zip codes used in the sampling frame, and African Americans an additional 20 to 55 percent. Approximately half the homes are rented, and between 60 and 80 percent of adults have completed high school. Only between 12 and 30 percent have gone on to complete a bachelor's degree or more advanced education. The median household income ranges from \$23,000 to \$30,000, and between 15 and 30 percent of families are below the poverty line.
- Kirkwood—one of the oldest suburbs, Kirkwood is the site of significant wealth but generally aging: 19 percent of the population is over 65. Largely (93%) white, with 5 percent African American, the area is highly educated, with 95% having completed high school and 55% holding at least a bachelor's degree. The median household income is \$60,670, and only 2.2% of families are below the poverty line.
- Chesterfield/Wildwood—a fast-growing suburban area with remaining areas of farm land, this area is relatively affluent. Demographically, the area is 93 percent white, and approximately 3 percent Asian. More than 80 percent of homes are owner-occupied, and less than ten percent of families speak a language other than English at home. Of adults, 95 percent have at least a high school diploma, and more than half have at least a bachelor's degree. The median household income ranges from \$72,000 per year to \$126,000 in the different zip codes in the area, and 2% of families fall below the poverty line³.

St. Louis Church Directory provided a listing of churches, by zip code, which became the sampling frame for these four communities. Within each community, we selected a sample of congregations, stratified by type of denomination, aiming for one Catholic church, two mainline Protestant denominations (such as Lutheran, Episcopal, Presbyterian, Methodist, Baptist, and Assembly of God), two nondenominational or small denominations, and one Jewish congregation. Further diversity was also considered in terms of size of congregation, because all of these factors could impact the motivations in giving of members of the congregation.

In choosing congregations for our study, we attempted to interview 20 congregations, distributed evenly through the categories (see below). This proved difficult, as many congregations were difficult to reach. We called over 50 congregations, but because of several factors, including summer schedules and a reluctance to talk about finances, we were only able to complete interviews with 12 congregations. The final sample distribution is given in Table 1.

³ Demographic data found at www.brainyzip.com.

Table 1: Sample distribution, by denomination and community

	North St. Louis	South St. Louis	Kirkwood	Wildwood/ Chesterfield	
Roman Catholic	0	0	1	1	
Mainline Protestant	1	2	1	2	
Nondenominational	0	0	1	2	
Other	0	0	0	1	
Total	1	2	3	6	

One potential methodological issue that arose relates to nonresponse and selection bias. We found it extremely difficult to reach many of our initial selection of congregations, as many of our initial random selection either were no longer in existence or would not respond to interview requests. Perhaps a snowball sample, using introductions from clergy of congregations we had already interviewed to select other congregations, would have prevented some of these issues in reaching congregations, although it would not have corrected the selection bias towards successful congregations. Failed congregations, those that no longer exist corporately, were extremely difficult to reach, as they no longer had leadership that we could contact. Thus, all the congregations we interviewed were successful in some respect. Understanding the experience of congregations with the most serious difficulty in resource mobilization would require further study of congregations that have ceased to exist.

We conducted a semi-structured interview with church leadership for those that agreed to participate. This was usually a clergy member, but occasionally other lay leaders key to the running of the congregation. Interviews lasted approximately 1 hour each. We structured our interview questions using the IAD framework, asking questions about characteristics of the congregation infrastructure and community, about the governance mechanisms (such as how congregational decisions were made, according to the formal rules and in practice), about who participates in congregational life, what the actions that the congregation takes are, and about outcomes, especially congregation growth.

Because of the nature of our data collection, respondent bias must be taken into account. For the most part, we interviewed only the clergy of a congregation, and didn't have any way of verifying their statements. Because many of the issues our interview addressed are important theological considerations, many clergy could give answers that are more in line with the official theology rather than actual practice, although when a difference between theology and practice did appear, it was illuminating as to motivations and practicality of managing a common resource.

APPLICATION OF THE INSTITUTIONAL ANALYSIS AND DEVELOPMENT FRAMEWORK

When designing our questionnaire, the Institutional Analysis and Development (IAD) framework provided a broad outline to be sure that we covered key aspects which

the commons literature would suggest as having a potential influence on resource mobilization. This included the contextual factors, action arena, patterns of interaction, and outcome. In this section, we use the IAD as a framework for presenting key insights on the religious commons. We map the insights from the religious economics literature into the IAD framework and then supplement it with findings from our own fieldwork.

Initial conditions

Characteristics of the Resource

Perhaps the most evident initial conditions that impact the form that collective action will take are the characteristics of the resource. The resources provide the starting point from which all collective action must proceed, as they shape the costs as well as incentives people have for working together. In the religious commons, the characteristics of the resource that we focus on are the physical infrastructure and the financial endowment. The first of these, the infrastructure, describes what spaces the congregation has at their disposal, whether sanctuary, social hall, school, offices, or other spaces, and the condition of each. Although we might assume that more and better quality of buildings would create incentive for people to contribute more, Smith et al. (2008) found that a more prosperous appearance of the church buildings can create an impression that the church does not need members' contributions. At the same time, maintenance of buildings can be a drain on finances, which several congregations interviewed cited as a major limiting factor. Hoge et al. (1996) found no evidence that the presence or level of infrastructure has any impact on levels of giving. However, Smith et al. found that capital campaigns do increase giving. Our findings indicate that this is because capital campaigns are associated with an identifiable goal, and are not expected to be maintained on an ongoing basis. Hoge et al. (1996) found some evidence that perceived need on the part of the congregation is associated with higher giving, but parochial schools associated with a congregation were not found to affect the level of contributions to the church (aside from tuition payments, which do not usually cover the full costs of the school). A lesser resource, but one which can have significant value, is liturgical materials. Though some congregations keep these minimal, others are elaborate, including musical instruments, robes, chalices, candles, and other supplies, many of which require expensive maintenance. The Jewish congregation we interviewed, for example, had commissioned a Torah scroll written entirely by a female scribe, which was a large expense requiring a capital campaign.

Endowment funds, contributed either through wills or as memorial funds, or setting aside funds in good times, provide a cushion for the congregation to draw upon in hard times. Hoge et al. (1996) found that the presence of an endowment was not associated with changes in the level of giving. In our conversations with congregational leaders, most that said they had an endowment also indicated that they do not draw upon it for the operating budget, rather trying to build it up or save it for unforeseen circumstances. Only in one case, where a congregation had changing socioeconomic conditions and problems with the previous clergy member, were they drawing upon their endowment for operating expenses.

Characteristics of the Community

The characteristics of the community are especially important in determining the transaction cost of collective activity. The individual characteristics of the community, including their assets and cultural norms, all impact the forms that collective action takes. Community cohesiveness, often identified with homogeneity of interests (for debate on the impacts of heterogeneity of interests and assets on collective action, see Baland and Platteau 1996), group trust, and a history of collective action, has long been associated with lower costs of collective action (McCarthy 2004). Group size has also been determined to impact collective action, as larger groups have more difficulty in organizing themselves without external stimuli (Olson 1971).

In the realm of religious economics, these individual and group characteristics were also determined to have a strong correlation with levels of giving. Hoge et al. (1996) find strong support for their primary hypothesis, that individual background factors such as income, education, age, and urban vs. rural location influence giving. Group size, whether measured by average attendance or membership records, was also a major factor in levels of giving, with larger churches having a much lower level of giving per member (Hoge et al. 1996). This is consistent with Olson's (1971) hypothesis that larger groups will provide a common good at a less optimal level than smaller groups, when they provide the good at all, because in a small group it is easier for members to know each other, and thus non-coercive third-party enforcement (ostracizing free-riders and defectors) is easier. Socioeconomic situation also has an important, although subtle, relationship with level of giving: as wealth of congregation members rises, so does absolute level of giving, although relative giving declines (Hoge et al. 1996). This situation is likely to occur in other forms of commons.

One of the most important factors in determining levels of giving to religious congregations is the theology of members. Hoge et al. (1996) and Smith et al. (2008) both stress the importance of the beliefs of members in determining levels of giving, with more traditional believers (professing strong belief in the statement that "only followers of Jesus Christ can be saved" and that the primary duty of Christians is "helping others commit their lives to Christ") having significantly higher levels of giving (1996:73). In fact, Hoge et al. (1996) identify a conservative theology as one of the most important factors determining giving across denominations. This is an area that is noticeably absent in traditional commons literature; the exploration of the relation between ideology of members and collective action is underdeveloped. The importance of beliefs cannot be ignored in a religious situation. However, they may also play a more important role in other commons management than is often recognized (Hess 2008), for they shape the way individual users think and act. Smith et al. (2008) argue that some congregations attempt to eliminate rational self interest in members by emphasizing "themes of good stewardship, sacrificial giving, service, gratitude [and] unconditional love;" this does not eliminate rationality, merely the individual character of it that neoclassical economics emphasizes. The internalization of norms facilitated by institutions means that individuals use group or other rationality when making decisions to give to a congregation (Vatn 2009). The norms of a particular congregation, formalized in the theology, have a significant impact on an individual's decision to give.

Our own conversations with clergy and laypeople confirmed the importance of user characteristics in the religious commons. Particularly interesting was group size:

though both membership records and average attendance can be used as measurements for group size, the difference between these two figures can be illuminating for the level of involvement in the congregation, which has been shown to have a major impact on giving levels. Congregational groups with large membership records but relatively low attendance find it more difficult to harness the potential giving of their members, as Olson (1971) predicts in his theory of the suboptimal participation of large groups.⁴

Socioeconomic condition we also found to be important in levels of giving: the congregations that indicated more difficulty in meeting their budgets were also selfidentified as having an average income that was significantly different from the surrounding community, whether lower or higher. This is perhaps in part explained by the pattern of geographic income segregation in Saint Louis, our study location. If a congregation reported a significant difference between the incomes of members and the surrounding community, it was likely to not be drawing its members only from the neighborhood, and there was a greater likelihood that members traveled farther to attend. This isolated the congregation from the daily lives of its members, giving it a lower salience to its members. Ostrom (1990) identifies proximity of resource to users as one of the factors reducing transaction costs and facilitating collective action in the management of the commons. Also, those congregations that drew members from a wide range of socioeconomic conditions reported particular strength. This is perhaps a product of Olson's (1971) theory of privileged goods, for some members that value the services the congregation provides highly will be willing and able to contribute and support the collective action without the input of other members.

Rules in Use

The IAD framework includes the rules in use as the final aspect of the initial conditions. Rules can be further distinguished as operational rules, collective choice rules, and constitutional rules.

The lowest order of rules are the operational rules, which specify the day-to-day management of the commons, including requirements for provision and extraction. These rules have the most immediate effect on the management of the commons. In a religious congregation, the most basic example of an operational rule would be who can receive communion, a practice that varies by denomination and congregation. As shown later, this relates to the degree of exclusion that the congregations may practice. Other operational rules that are more directly relevant to the question of contributions include rules on giving, such as whether tithing (giving ten percent of one's income to the church) or pledging (making an estimate of yearly giving) are expected. Both have a positive impact on the levels of giving: denominations that teach tithing have

_

⁴ The vibrant growth of "megachurches" with thousands of members might seem to belie Olson's theory, but a closer examination of these churches reveals that they cultivate many small group fellowships focusing on social interaction, ministries, or prayer and bible study, while also welcoming a large number of anonymous participants—who are not expected to contribute—at worship services (Thumma 2007).

significantly higher giving than those that do not, and members who pledge (and congregations which encourage pledging) have higher rates of giving (Hoge et al. 1996, Smith 2008). The structure within the congregation also falls under the category of operational rules, such as whether there are designated small groups. This concept will be explored in more detail later, under the design principle of nested enterprises. Denominational allegiance also has an immediate economic impact, in the contributions that most congregations make to the larger denomination and the services that are provided in return. All of these operational rules directly impact the level of giving, but we must look deeper to understand the structure of the organization.

Collective choice rules, the next level of rules in use, determine how operational rules are set. In the case of a congregation, a key set of collective choice rules would be how the congregational council or clergy make the rules. Some churches are very much run by the pastor, others have a core of lay leadership that makes decisions, and others have decisionmaking distributed among committees, where many members have a say. Although each of these arrangements have distinct processes, there is no clear evidence that one set of collective choice rules leads to higher donations, as long as members are happy with the arrangement and trust those that are making the decisions (Hoge et al. 1996). In our own research, we asked congregations about their staff (whether paid or volunteer) and congregational council, trying to discover where and how decisions were made about the group. We found a wide variety of arrangements, with no clear pattern as to which form of collective choice rules was the most effective for resource mobilization.

Constitutional rules, the most fundamental level of rules in use, determine who can participate in the collective choice process. In a congregation, this would include membership rules. These membership rules determine the rigidity of the boundaries of the group members, one of Ostrom's (1990) design principles. For example, some congregations, such as the Assemblies of God, restrict membership to individuals that have been screened as to morality by the pastor and congregational council. Many economists of religion have focused on this boundedness in studies of cults and mainstream churches, demonstrating that "cults" (that is, congregations that maintain a distinct, countercultural way of life) have much higher rates of giving (lannacone 1992). This example of extreme boundedness will be discussed at length as part of the discussion of design principles, below. There are also aspects of denominational structure that can be considered constitutional rules. Some denominations are structured in a very hierarchical manner, such as the Catholic and Episcopal churches, while others are considered congregational, following a federated structure with considerable autonomy for congregations, and some congregations exist apart from any denomination (considered "nondenominational"). This structure shapes the way that decisions are made not only in the denomination as a whole but in individual congregations.

Action arena

In the IAD framework, the action arena is where the contextual factors influence the choices of actors in particular action situations. In our study, we focus on the congregation as the action arena, with particular attention to resource mobilization efforts as the action situations of greatest interest.

Actors

In the action arena, we need to consider not only the users of the resource, but also external actors who influence the management and outcomes of the action situation. The most relevant actors in a religious commons situation include clergy, staff, congregation members, non-member attendees and visitors, and possibly other outsiders, such as denominational officials. When looking at members, the primary actors in this situation, we must consider their elite or nonelite status, and the origins of such. In some congregations, elite status is a product of wealth and level of financial contributions, whether actual or potential. It could also be that level of participation determines elite status, perhaps in more asset-homogenous groups. Because it has been shown that individuals who participate more in congregation life are more financially generous (Hoge et al. 1996), these two factors are not independent. The presence and status of nonmembers also creates interesting permutations, for here is where the boundedness of congregations comes into question. Most mainline congregations encourage nonmember participation in their worship and most of their programs, often although not exclusively with the aim to encourage joining. The awareness of nonmember participation shapes the forms of collective action and the goods and services that the action provides. In denominational congregations, the actions of actors outside the congregation in the denomination can have a large impact. In the Catholic church, church-wide and diocese-level decisions shape not only the theological and social stance of the congregation, but also resource mobilization and management. Congregations have no independent legal standing, and must obtain both loans and approval from the bishop for any major building projects, and even for the selection of their clergy. At the other extreme, nondenominational congregations are independent organizations that can make all policy and financial decisions locally.

Action Situation

The action situation may be a whole range of things related to the management of the commons. In our case, while many types of action situations could be considered in an analysis of religious commons, we are focusing on the resource mobilization process. While our greatest emphasis is on fundraising, we also consider other contributions, which in commons language are often referred to as labor and in-kind contributions; a number of churches refer to this as "time, talent and treasure". The very emphasis on all three was developed as a way to move away from association with pure monetary fundraising. Similarly, resource mobilization cannot be fully divorced from how resources are used, an aspect which is highlighted by the frequent use of the term "stewardship" in referring to this process in congregations. The ideology used in teaching members about giving at the congregational level is also shown by large-scale studies on religious giving to have a significant impact on levels of giving: those congregations that teach giving as a part of stewardship, a continual way of giving back to God and a personal, rather than an institutional, necessity see much higher levels of giving over the long term than those that focus on immediate financial necessities of the congregation (Smith et al. 2008, Hoge et al. 1996). However, specificity in goals for giving (such as for a new building or major repairs) has a positive impact, so a balance must be struck in the methods used for resource mobilization.

Patterns of interaction

The constellation of initial conditions and actors' choices within a congregation lead to particular patterns of interaction. Although many different aspects of this may be relevant, we focus on patterns related to contributions, both monetary and in kind. Although financial contributions are perhaps easier to analyze, it must be recognized that in kind contributions of time and skills are essential for the functioning of most congregations, and that this involvement often is associated with higher giving (on an individual and congregational level), because it engages people on multiple levels (Hoge et al. 1996).

One key pattern of interaction is the attitude towards contributions and the motivation thereof. Smith et al. (2008) detail two ideal types of this attitude, which he terms "Live the Vision" and "Pay the Bills". The former involves an ideology of giving back to God, and thus donations are made out of a sense of gratitude for blessings received and at times out of a hope that more blessings will be forthcoming, in effect part of a reciprocal relationship with God. Whether this reciprocal relationship was considered obligatory or discretionary (and many individuals use both discourses in their discussion of giving), the "Live the Vision" model conceptualizes generous religious giving as an integral part of a spiritual life, important more for the act of giving (and with it, allowing God into all parts of one's life) than for the impact that money has. By contrast, the "Pay the Bills" model focuses on the uses of the money, presenting specific needs for members to meet. Most congregations employ a mixture of these two types. There is also an age effect in personal responses, with older generations preferring the "Live the Vision" message while younger members prefer the specificity of the "Pay the Bills" approach. Each congregation must navigate their own compromise between these two, depending on their own theology, demographics, and group character.

Another related, but distinct, pattern found in congregational giving is the congregation's focus for the use of its resources. The two main emphases can be classified as inward and outwardly oriented. The former uses contributions to benefit the members, including building, staff, and such programs as worship, religious education, youth groups, small groups, or social fellowship events. Outwardly oriented programs focus on missions or social service, which are primarily intended to benefit nonmembers, whether in the local community or around the world. The former use of a congregation's resources is more in line with traditional commons theory; however, some of the new commons discourse is consistent with the outward focus (Hess 2008). Each focus appeals to different individuals, and neither has any strong impact on level of giving; in fact, both approaches are generally present in the type of congregations we studied. Smith et al. (2008) reinforce the idea that no matter the intended use of the resources, it is important to be concrete and specific when presenting them to the members at large.

One of the most interesting patterns of interaction is the structure of congregations as they grow. Olson (1971) explores participation in large groups, concluding that in most cases, large groups will not provide the necessary motivation to encourage joining solely to achieve the intended benefits of collective action, but require some level of coercion or "selective incentives" to motivate latent members. These

selective incentives are peripheral benefits to members that can be bounded more easily than the main collective action, thus inducing rational individuals to participate. In the religious commons, we find larger congregations have a higher degree of formalization of programs, as a way of structuring interactions among members. Because in a large group, the ability to free ride is much higher, there is less incentive to contribute, so congregations use small groups and the attendant personal relationships as selective incentives to encourage joining and full participation. The literature on church growth (Thumma 2007) notes the importance of developing a number of small group programs (such as prayer or bible study groups). Though the majority of congregations we interviewed had some form of small groups, these were emphasized much more in the larger congregations. These are consistent with Olson's (1971) description of selective incentives: they provide additional benefits and a stronger feeling of connectedness to a subset of other members.

Outcomes

Outcomes can be evaluated on a range of criteria, often related to the sustainability of the resource base itself or the welfare of the users. The outcomes in turn influence the initial conditions and the action arena in the next cycle of collective action. It is essential to not neglect the dimension of time in an analysis of congregations, for there is not simply one action that is in question but a whole series of them, each interacting with and impacting each other. The outcome of particular interest for our study is the viability of the congregation: its ability to support its staff and its physical infrastructure. Change in size is also an important outcome, and one that very directly feeds back into the initial conditions for future collective action. As a result of the impacts of size on group action, detailed above, any growth or decline will have an impact on the structure of actions to follow, in effect throwing the system out of equilibrium. In the realm of outcomes we confront the most severe cause of bias in any study of the religious commons, for those congregations that are unsuccessful are difficult if not impossible to study. We do know, however, that some congregations are not successful; they do not survive as effective groups. In our attempts to contact congregations, at least thirty of the congregations listed in the St. Louis Church Directory had telephone numbers no longer in service and could no longer be located in the phone book or online. The selection of existing congregations gives us a skewed viewpoint that we must remain aware of. Further case studies on congregations that ceased to operate would be very instructive, just as studies of irrigation systems that deteriorate are an important counterbalance to studies of the "islands of salvation" to which Chambers (1988) refers. Our sample does include a range of outcomes, including some that are growing, some stable, and some that are having difficulty meeting their expenses, as discussed below.

APPLICATION OF COMMONS DESIGN PRINCIPLES

Ostrom's (1990) design principles have proved insightful in examining the performance of groups managing natural resource commons. But do they also apply to the religious commons? To test the applicability of the design principles in this domain, we operationalized the design principles as modified by Cox et al. (forthcoming), developing indicators for each, which were "scored" as 0 if the principle was absent, 2 if

it was strong/clearly present, and 1 for in-between (as defined for each principle, below). Although the sample size is not enough to conduct statistical analysis of this, it allows us to look for broad patterns. A summary of scoring by denomination is presented in Table 2.

User boundaries

Boundaries, of both the resource and the users, are what separate a commons situation from open access, and thus are a key element in any study of the commons. But boundaries are not always clear, and the definition of boundaries, both in degree and extent, is important in shaping the interactions surrounding the resource. In a congregation, the definition and status of members are the clearest way of identifying user boundaries. The status of nonmembers must also be considered, as they play a role in the action arena as discussed above. In compiling our study results, we assigned values to each congregation based on the level of member definition. A zero was assigned to those congregations that had no member definition, often not keeping record of members. One would be for those that keep member rosters, but do not otherwise distinguish between members and nonmembers. A two was assigned to congregations that were explicit in their member definition, either by requiring an indepth commitment to become a member or some other mechanism for dividing members from nonmembers. This division has been the subject of analysis, explaining the seemingly unprofitable costs to members of a cult as a way of screening out low participators and increasing participation among those who do remain (lannacone 1992). Thus, cults have much stronger user boundaries than mainline congregations. Our sample included one nondenominational church that did not keep member records, and two with strict definitions of members. However, the relatively "fuzzy" membership categories of most congregations indicate that a clearly defined user group is not a design principle that most of the congregations follow.

In fact, there is often an explicit Christian theological stance against excluding noncontributors from worship services in particular, meaning that the category of "member" is a highly permeable barrier. But this theology does not just prohibit: it also obviates the need for strict boundaries. The Christian tradition stresses a salvation for all, which is translated into a call to evangelize and on a smaller scale, welcome others to worship. In economic terms, it creates a utility function which values the "we" rationality (Vatn 2009), but that "we" is defined more broadly and is looking to expand by incorporating new members, whether they contribute or not. This blurs the distinction between "we" and "they" oriented rationality, and deliberately downplays the "I" rationality. The role that theology plays in shaping beliefs, which then in turn create our understanding of reality (North 1990), means that the same theology that disallows for user boundedness precludes the need for clear distinctions between members and nonmembers, explaining this deviance from Ostrom's design principle.

Resource boundaries

The resource boundaries in a religious commons are often less well defined than user boundaries. Rather than goods that the commons produces, as is the case in traditional natural resource commons, a congregation produces services, such as worship and programs. Indeed, "service" has a specialized meaning in Judeo-Christian

religious groups, in which worship is a service to God, and many of the programs feature service to fellow parishioners or to those outside. Many congregations express theological problems with excluding anyone from these services, so resource bounding is often not an option, as Smith et al (2008) point out in their suggestions for increasing giving in congregations. In our analysis of our data, we used the level of restrictions on programs to measure resource boundedness. A zero was used to indicate no programs distinguished between members and non-members, a one to indicate some level of boundedness, such as restrictions being formally present but not observed regularly, and a two for having programs that were explicitly bounded for members and enforced. Overall, the level of resource boundaries was extremely low, especially among Christian congregations. This is a crucial difference from traditional resource commons, and is a direct result of the ideology of the members. When asked about whether programs were restricted to members in any way, most respondents replied with some variation on the theme that it is their duty to be open to all, so they would not willingly exclude nonmembers. Some denominations restrict the sacrament of holy communion to those from the same denomination, and in the past may have denied communion to anyone not known to the pastor, but several in our study from these denominations were large congregations, and the pastor said that he would not know if someone was from that denomination, so would therefore not deny communion to anyone of appropriate age. The lack of boundedness springs from the ideology, and also means that congregations are less able to rely on conventional rationality for invoking contributions. This creates a greater need for intrinsic motivations, as we will discuss below.

Congruence with local conditions

There have been many studies that demonstrate the interaction between resource characteristics and forms of collective action. In a traditional commons, rules for governance need to be adapted to both biophysical conditions (such as forest regeneration rates) and to community characteristics (such as level of human capital and the uses that the community has for the resource). In the congregations we looked at, we subjectively judged how well the congregation fit with the community it was located in. At one end of the scale, which we ranked a two, were congregations that were completely in-tune with the surroundings, such as large community churches in an affluent outer suburb. At the other end, ranked zero, the building and/or the members of the congregation did not match the surroundings. Often, this was a product of conditions (usually socioeconomic) of the area changing while the church remained the same: either the church remained a small rural church while affluent suburbs grew around, or the church buildings remained large while the neighborhood became poorer, and was no longer able to support the church infrastructure. As Hudnut-Beumler (2007) points out, congregations, unlike retail stores, are participatory, so they must be adapted to be successful. The standardization model of many successful businesses in the United States is not applicable to the commons, and the religious commons is no exception.

Appropriation and provision

Congruence between appropriation and provision rules refers to the match between benefits and costs. The benefits that are appropriated by individuals in congregations can include opportunities for worship, service, socializing, food, and recognition. While this may seem one of the most fundamental principles in a natural resource commons, it is one of the most complex issues for religious congregations. This is not only due to the low boundedness of congregations, but also to religious teachings that stress the equality of all members and other theological barriers to giving greatest benefits to those that contribute most, especially financially. Many congregations attempt to provide goods and services to all, regardless of level of contribution, and there is generally a desire to keep knowledge of others' contributions to a minimum. So in the purely human realm, the benefits for increased contributions are largely limited to peer recognition of giving, and that is often suppressed. In the congregations we studied, we assigned a value of zero to those congregations that avoided any recognition of donors, explicitly stating their opposition to such differential treatment. A one was assigned to congregations that provided some recognition to large or specific contributions, whether this recognition involved a personal thanks, a formal presentation to the community, or a permanent plaque or other way of recognizing the donor. The highest value, a two, was assigned to those congregations that did provide different services depending on level of giving, such as a Jewish congregation that allowed admission to important worship services only for members, determined by dues. Though some respondents expressed a distaste for recognition, saving that it sets up divisions between members, some excused it, saving the knowledge that others are giving generously could help motivate other members to contribute more. These contrasting desires play out slightly differently in capital campaigns, where there is more agreement that peer recognition is acceptable (Hoge et al. 1996). This is perhaps a result of a distinction between the sacred (often identified with donations to God through the church) and the human. Because capital campaigns are generally for specific human projects such as buildings, appealing to more profane motives is not as frowned upon.

While most churches do not make a material connection between contributions and benefits from the church, there is an interesting theological permutation of the appropriation and provision rules, which is variously called the "Prosperity Gospel," the "Gospel of Health and Wealth," the "Faith Movement," and the "Word Movement" (Hudnut-Beumler 2007). This teaching essentially calls upon reciprocity with God to motivate individuals to give. Often, this takes the form of saying that those who give generously to God (through the church) will be rewarded. This either is couched in terms of financial returns or spiritual blessings, but essentially treating religious giving as a form of investment. Some pastors feel that this concept is too temporal in its vision, choosing instead to emphasize the delayed benefits of giving: implying that being generous on earth will ensure one's place in heaven (Hoge et al. 1996). All of these approaches, however, appeal to a sense of reciprocity with God and the assumption of proportionality on the part of God. Hoge et al. (1996) demonstrate that those individuals who believe that God will reciprocate for giving are more generous, providing evidence for the importance of equity of costs and benefits on an individual, psychological level. In our study and that of Hoge et al. (1996), some pastors, especially those from a more evangelical tradition, talked about some part of this concept, such as if one gives generously. God comes through in difficult circumstances. But others disagreed with this theology, emphasizing instead giving out of a sense of gratitude to God, rather than

out of any rational calculations of the benefits one will receive. Even this may be seen as a form of reciprocity, but one in which God was the first mover, and people are "giving back to God" from a sense of gratitude for past benefits rather than expectation of future gain. Thus, at an individual level certainly, and in some cases at a larger theological level, the correspondence between costs and benefits is an important motivation in collective action in the religious sphere, although it is often disapproved of by those who feel that religious giving should be motivated by more altruistic or spiritual goals.

There has been a shift in recent years towards more program-oriented congregations (Hudnut-Beumler 2007), which use the principle of congruence between costs and benefits at a larger level. We use the term program-oriented congregations to refer to those groups which choose to allocate their resources more on programs for members than on outward-oriented missions. Hoge et al. (1996) found that congregations that provided more programs for their members, controlling for size, received larger contributions, and we posit that this is at least in part because members feel they are receiving a greater benefit for their contributions.

Collective-choice arrangements

The collective-choice arrangements of a commons describe the ways that decisions are made in a group setting. In a congregational setting, there are a variety of collective choice arrangements in use. For example, the clergy could be extremely active, making all major decisions in the life of the congregation. Another option would involve a core of lay leaders whose involvement overshadows that of the majority of the members. A third would be a very democratic decisionmaking process, involving the majority of the congregation in discussion and implementation (rather than simply requiring a congregational vote for such major decisions as an annual budget, which most arrangements involve). It also occurs, although many congregations are shifting away from this, that the church hierarchy at the denominational level or above make most of the important decisions for the congregation. In identifying different arrangements in our study, we focused on the denominational degree of devolution, assigning a zero to hierarchical denominations such as Catholics, which involve a lower amount of decision-making at the congregational level, a one for denominations that identify as "associations" of local congregations, and a two for extremely localized congregations such as non-denominational churches.

Hoge et al. (1996) did extensive testing of various collective-choice arrangements and individuals' preferences for them, to find correlations with levels of giving. They found that lay perception about democratic decision making did not have an association with higher giving, but those individuals who felt excluded from the process, whatever it was, gave less. Based on these findings, they concluded that blockages of the existing arrangement, whatever form it takes, are more important than the form itself. When testing whether involving the whole membership in setting the budget was associated with higher levels of giving, they also found no significant correlation. Evidently, the form of the collective-choice arrangements is not the crucial factor, but rather the level of trust in that form. This is in part a product of local cultural conditions: each membership prefers a slightly different arrangement for governing the

congregation. What matters is not so much the form of the governance arrangements but the membership approval and trust in each.

Monitoring users

Monitoring of contributions plays two important roles in sustaining the commons. First, monitoring increases the likelihood that an individual will not shirk, and provides an assurance to the individual that others will likewise abide by their commitments. In many cases, however, religious congregations attempt to avoid internal monitoring of their users, especially financially. In fact, several congregations mentioned user monitoring as a negative action of other congregations, felt to be contrary to the religious nature of a congregation. Religion does provide an essential concept of monitoring of contributions, in that God is considered to monitor all, leaving little incentive for believers to shirk. This external monitoring internalizes itself on an individual level as guilt (Smith et al. 2008). However, Smith et al. (2008) contend that without human monitoring, individuals lack the assurance that others will contribute, and so are more likely to shirk themselves. They also point to the higher levels of giving of Mormons and Jews, which they attribute to higher expectations of giving, but do not connect this with the form of monitoring these groups use. We feel that more attention should be given to the fact that these denominations track contributions and have mechanisms to ensure that members meet their commitments. For most mainline denominations, however, monitoring is difficult even when it is accepted theologically, because of the private nature of finances in American culture. The majority of congregations we spoke to answered questions about monitoring by saying "It's between them and God." The one form of monitoring that is routinely found in many congregations is pledging: each year, members are asked to make an estimate of their giving for the coming year. There are varying degrees of enforcement of these pledges. Although some dislike them for reasons of freedom and the legalistic motivations, but they are strongly correlated with higher levels of giving (Hoge et al. 1996). In compiling the results from our study, we assigned values based on how much a group keeps track of individual contributions: zero to those congregations that only track for tax purposes, one to those that encourage pledging, and a two to those that enforce a specific level of contribution, such as a tithe.

Monitoring does not simply encompass financial contributions. In most congregations, this aspect is downplayed and relegated to an administrative function of sending out statements. The more important aspect is the monitoring of behavior according to the moral code of the congregation. Historically, in small communities there has been considerable monitoring of behavior of church members. Because our sample was drawn from a large metropolitan area, most members are not interacting with each other or with church leadership on a daily basis. Only one of the congregations in our study mentioned monitoring members' behavior, and it is interesting to note that this congregation also was assigned a two for monitoring financial contributions.

Monitoring the resource

In the natural resource commons, there are two important aspects of monitoring the resource. The first is whether there are regular checks on the condition of the

resource (water supply, forest condition, etc.) so that prompt action can be taken to address problems, whether from natural or human causes. The second is whether the monitors are accountable to the users, which is likely to increase trust in the monitoring information. For example, if government agencies monitor water supplies, the users may not trust and act on the data supplied as much as if the group employs common irrigators who monitor the resource. In the religious commons, some level of monitoring must occur: in a financial sense, records must be kept for taxes and budgeting, and buildings and other physical resources must be maintained. However, it is difficult to distinguish in more detail the level of monitoring that occurs, as it is the effectiveness of monitors that has the largest impact. Also, physical infrastructure is not all that matters. Because the worship and other services are crucial to the users, monitoring the clergy and staff is equally important, and the congregations that reported the greatest struggles to us often ascribed it to poor management by the clergy. Thus a number of congregations have two councils responsible for managing different aspects of the resource; one, sometimes referred to as the congregation council, deals with practical matters while the other, sometimes referred to as the board of elders, deals with clergy and matters relating to worship.

The second part of the issue of monitoring the resource, whether the monitors are accountable to the users, is important in congregations. Hoge et al. (1996) effectively demonstrate that a high level of trust must exist in those dealing with their contributions and leading the collective action. This implicitly brings up the question of monitoring, and to whom the monitors are responsible, which is often a product of the collective-choice arrangements.

Many churches do not stress monitoring of the resource because of the doctrine of "stewardship". This concept teaches that everything we have is a gift from God, and casts the faithful as caretakers of these gifts. Thus, there is a theological basis for giving, in that it is giving back to God, but also grounds for taking care of resources. Stewardship is taught in many congregations, and the assumption that every individual is involved in monitoring as a result of their duty to practice stewardship makes it unnecessary for the congregation to set up monitoring mechanisms.

Graduated sanctions

Graduated sanctions, considered to be one of Ostrom's (1990) crucial insights into the management of the commons, are one of the most significant deviations of congregations from the design principles. Largely, graduated sanctions, or any sanctions, are simply not present in religious congregations, at least related to contributions⁵. None of the congregations we talked to, nor any in the larger studies by Hoge et al. (1996) and Smith et al. (2008) gave any form of sanctioning for low participation or giving. The only form that is possibly present, although hard to detect, is informal social pressures (Hoge et al. 1996). The high culture of secrecy regarding personal finances in the United States and especially in congregations makes it unlikely

⁵ While excommunication (exclusion from communion and participation in the congregation) is possible in some denominations, this is usually reserved for gross immorality or other behavior, or serious theological disagreements. Even so, strong messages of forgiveness often contravene the application of sanctioning mechanisms.

that other members would find out about levels of giving. In fact, many congregations take precautions to avoid such social sanctions, out of a feeling that it is not theologically sound to punish members for violations, preferring to leave enforcement to God. There is an interesting divergence over the role of the pastor in this matter: in some congregations, the clergy play a large role in monitoring contributions of members, while in others, there are explicit rules against this (or the clergy choose not to participate), out of a desire to provide the same services to all members, regardless of contributions. Smith et al. (2008) suggest that sanctioning is internalized, perhaps manifesting itself in guilt. He also argues that the inability of congregations to have sanctions because of theological rules is one of the factors in the low levels of religious giving. However, the lack of external sanctions does not necessarily lead to low contributions: North (1990) argues that ideology is also critical. If people really believe in a cause, there is less free riding because people will act out of an internalized sense of morality. While North focuses on secular ideology, his insights would also apply (perhaps even more so) to religious ideology—an aspect that is often overlooked in rational choice analyses.

Conflict-resolution mechanisms

Conflict-resolution mechanisms are essential to sustain collective action over time. These mechanisms must be recognized by all actors, and must be efficient and relatively easy to access. But as with many other commons situations, we found that many congregations were reluctant to talk about conflict resolution, and it was never emphasized as an important aspect of the congregation. The religious economics literature makes very little reference to conflict management. This noticeable absence is not an indication that there are no mechanisms, but rather that most congregations have not had major conflicts that they are willing to discuss with outsiders. When we probed, a variety of informal processes were mentioned, such as taking issues to a clergy member or the congregational council. However, identifying the range and effectiveness of conflict resolution mechanisms would require much more detailed observation of congregations over time.

Minimal recognition of rights to organize

Without minimal recognition of the rights to organize, any commons management group will find it difficult to carry out collective action. Because our sample was limited to the United States, all had religious freedom and the right to organize, so there were no formal prohibitions against congregations. The one source of variation of recognition of rights to organize comes in degree of autonomy related to denominational differences. Some denominations are hierarchical, with more power in the denominational leadership. For example, in the Catholic and Episcopal churches, the diocese (the regional level of the church) owns the property of the church and thus is able to make many more decisions about the local congregation. At the other end of the spectrum are nondenominational churches, which are completely localized. For the congregations included in our study, this variation was recorded as the inverse of the values assigned for collective-choice arrangements. It would be interesting, although beyond the scope of this study, to look at religious congregations operating in areas that do not have legal recognition of the right to organize, either historical or contemporary,

to judge the importance of this design principle in the religious commons. Certainly lack of recognition would restrict the ability of the group to own property in common, and hence restrict the ability to build and maintain the place of worship and the tangible resources of the religious commons.

Nested enterprises

Nested enterprises refers to a series of smaller groups within any larger one. Olson (1971) argues that these are essential to the functioning of any large group. These nested enterprises can take the form of smaller groups within the congregation, but can also go the other direction, through horizontal and vertical linkages above the level of the congregation through a denominational structure, which allows congregations to deal with larger issues such as missions and training of clergy.⁶ Small groups within the congregation were present in some measure in every congregation we studied. The level of involvement in these small groups varied by group and by congregation; we assigned a zero to those congregations who did not emphasize small groups, either mentioning very few or that they were not a large part of congregational life, a one to those that had some active small groups and some less active, and a two to those congregations where small groups were a large part of the programming. These small groups include those designated by gender, age, or common interests, such as bible study, music, crafting, or missions. Small groups provide an avenue for closer social ties among members, which can be used in appeals for donations, as members are more likely to give when the appeal comes from those that are closer to them socially (Hoge et al. 1996).

Overall patterns of design principles in congregations

The small size of our sample precludes statistical analysis, but in order to examine the broader patterns of outcomes and how they relate to the application of design principles, we assigned coded value for outcomes of collective action. Though an incomplete measure of the success of a congregation, we used growth to approximate one aspect of success. In coding, we assigned a zero to those congregations that were declining, a one to those that were stable in size, and a two to those that were growing. When looking at this data, however, it is essential to keep in mind confounding variables, for example demographic shifts.

Looking overall at the pattern of design principles by denomination in Table 2, we see that the Jewish congregation applied the most of these design principles (13 out of 16 possible points). While this is based on interviews with a single congregation, these principles are consistent with the practices of other Jewish congregations. Jewish congregations are followed by Catholic (8.5) in application of design principles. There is not much difference between the other Protestant groups, a result of a larger sample and more heterogeneity among them. Looking geographically, West County and Kirkwood, the relatively more prosperous areas, each average application of almost half (over seven each), while North and South city have fewer, but our sample in those areas was also smaller. In addition to poorer communities applying fewer of the design

⁶ For an analysis of the denominational structure of the congregations in our study, see the discussion of Collective Choice rules above.

principles, one congregation in West County that received an abnormally low score for the area also drew members from the poorer subareas in the affluent area.

Although the number of cases in our sample is too small to show statistical significance, an interesting pattern emerges between the total score on application of design principles and whether the size of the congregation is increasing, stable, or decreasing. The Jewish congregation, with the highest score for application of design principles, is decreasing in size, which the Rabbi attributed to demographic changes in the area. However, Miller (2010) argues that the model of assessing members in Jewish congregations actually presents a constraint for growth and even survival. Among the Christian congregations, the declining churches had scores of six or less, while most of the stable or increasing churches had scores from six to ten. Catholic are the most likely to be growing, whereas mainline Protestant are most likely to be declining, a pattern observed nationally. Similarly, by area, North and South St. Louis are more likely to be declining. However, there is not a clear pattern with regard to any of the individual variables, and without looking at a larger sample and changes over time, it is impossible to assess cause and effect.

Table 2. Design Principles by Denomination (Mean Values)

Denomination	User Bound aries	Resource Bound- aries	Adapta- tion to Local Condi- tions	Congru- ence of Appropri- ation and Provision Rules	Collective Choice Mechan- isms	Monitor- ing of Users	Nested Enter- prises	Success ful?	Total
Catholic	1.00	1.50	2.00	1.00	0.00	0.50	1.00	1.50	8.50
Mainline Protestant	1.00	0.40	1.20	0.60	0.80	0.80	1.00	0.40	6.20
Small/No denomination	1.00	0.50	1.25	0.75	1.25	0.50	0.50	1.00	6.75
Jewish	2.00	2.00	2.00	2.00	1.00	2.00	2.00	0.00	13.00
Overall mean	1.08	0.75	1.42	0.83	0.83	0.75	0.92	0.75	

Note: for each design principle, 0=absent, 1=some element, 2=strong application, as explained in the text.

Looking at the totals of each principle, we notice that adaptation has the highest score (1.42 out of 2 points possible). User monitoring is the most consistent across congregations: only one congregation lacks any form of user monitoring, but only two congregations feature a high level of user monitoring. For the other design principles, there is a wide range of values without any clear patterns across denomination or congregational outcomes.

CONCLUSIONS

Religious congregations in the United States⁷ share many similarities with natural resource commons. In both cases, identifying common objectives and mobilizing and managing cash, time, and other in-kind contributions to achieve them are essential for the viability of the enterprise. But are religious congregations just another type of resource commons, or are they qualitatively different? To what extent do lessons from one domain apply to the other?

Commons theory does add a more coherent framework for analyzing resource mobilization in congregations, beyond what is available in the main religious economics literature. In particular, the treatment of churches as "club goods" and the lack of a clear conceptual framework in the religious economics literature are limitations that linking with commons scholarship can redress.

The application of the Institutional Analysis and Development (IAD) framework provides an entry point for examining patterns of resource mobilization and use in congregations. Considering the initial conditions (including characteristics of the resources, of the community, and of the rules in use) draws attention to where there are likely to be good matches between the existing conditions and factors that increase contributions, and where disconnects between these are likely to cause problems. In the St. Louis congregations studied, for example, there were a number of cases where the community surrounding a church changed more rapidly than the physical resources, causing strains in resource mobilization. Turning attention to the action arena, the IAD framework helps to identify the range of internal and external actors whose preferences and action resources need to be accounted for, and the way that different rules can engage these different actors. And the dynamic nature of the IAD framework highlights the way that outcomes from the action arena of resource mobilization will impact on the future conditions of a congregation, including the state of its physical resources and the growth or loss of members.

But whereas the IAD framework is useful for examining congregations, the design principles for enduring commons do not fit well with most of the congregations we studied. "Open access", which the commons literature generally treats as a problem that leads to degradation of the resource, is seen as a good thing in most congregations. Clearly defined boundaries are at odds with biblical injunctions to welcome the stranger. Many congregations similarly do not like to monitor contributions and sanction those who do not give, or to link contributions to the benefits that people can receive. All of these deviances can be explained by the role of theology and beliefs, which simultaneously prohibit the traditional theoretical application of the design principle in question while obviating the need for it by internalizing the motivations usually achieved by application of that principle. While participatory collective choice arrangements would seem to be desirable, Hoge et al. (1996) found that what mattered was not whether members participated in decision-making or decisions were made in a very centralized manner, but whether people trusted in that form of decision-making. Overall, our study found that the Protestant congregations averaged less than half of

⁷ Churches in countries such as Germany, where the state provides funds drawn from mandatory tax revenue, would have less in common with natural resource commons.

the potential points for application of design principles. Our sample was not large enough to test for quantitative relationships between application of design principles and outcomes of the resource mobilization patterns. Further research would be useful to examine whether there is a relationship between application of these principles and whether congregations were growing, shrinking, or staying even. We would also encourage further investigation of whether there are similar or different patterns in other religions, as well, including Hindu temples, mosques, and a larger sample of Jewish synagogues, as well as more comparison across Christian denominations.

However, the important point to note is that many congregations do perform well without application of the design principles. The congregational commons does not seem to be explained by conventional rational choice models, because religious communities tap into "other-oriented" rationality and intrinsic motivations of members to give for collective benefits, and even benefits of those who are not members of the group. In this, the study of the religious commons can provide insights into the study of other types of resource commons, to identify ways that these other types of commons currently do, or potentially can, tap into such other types of rationality. What motivates people to care about biodiversity, or carbon sinks, even when they would not directly benefit? And what prompts people to move from caring to action? Bridging the divide between spiritual and material commons can help to address these pressing questions.

REFERENCES

- Baland, Jean-Marie, and Jean-Phillipe Platteau. *Halting Degradation of Natural Resources: Is There a Role for Rural Communities?* Rome: Food and Agriculture Organization of the United Nations, 1996.
- BrainyMedia. "Missouri Zip Codes." Brainy Zip. http://brainyzip.com/state/zip_missouri.html (accessed October 12, 2010).
- Chambers, Robert. *Managing Canal Irrigation: Practical Analysis from South Asia.* New Delhi: Oxford and IBH Publishing Co, , 1988.
- Cox, Michael, Gwen Arnold, and Sergio Villamayor-Tomas. A Review and Reassessment of Design Principles for Community-Based Natural Resourcce Management. *Ecology and Society*, forthcoming.
- Hess, Charlotte. "Mapping the New Commons." Paper presented at "Governing Shared Resources: Connecting Local Experience to Global Challenges;" the 12th Biennial Conference of the International Association for the Study of the Commons, University of Gloucestershire, Cheltenham, England, July 14-18, .
- Hoge, Dean, and Douglas L Griffin. Research on Factors Influencing Giving to Religious Bodies. Indianapolis, IN: Ecumenical Center for Stewardship Studies, 1992.
- Hoge, Dean, Patrick McNamara, and Charles Zech. *Plain Talk about Churches and Money*. The Money, Faith and Lifestyle Series. Herndon, VA: Alban Institute, 1998.
- Hoge, Dean R, Charles Zech, Patrick McNamara, and Michael J Donahue. *Money Matters: Personal Giving in American Churches*. Louisville, KY: John Knox Press, 1996.

- Hudnut-Beumler, James. *In Pursuit of the Almighty's Dollar: A History of Money and American Protestantism.* Chapel Hill, NC: University of North Carolina Press, 2007.
- lannacone, Laurence R. "Introduction to the Economics of Religion." *Journal of Economic Literature* 36 (September 1998): 1465-1496.
- lannacone, Lawrence R. "Sacrifice and Stigma: Reducing Free-riding in Cults, Communes and Other Collectives." *Journal of Political Economy* 100, no. 2 (1992): 271-291.
- ——. "Skewness Explained: A Rational Choice Model of Giving." *Journal for the Scientific Study of Religion* 36 (1997): 141-157.
- Life Church St. Louis. St Louis Church Directory. http://www.stlouischurches.org/ (accessed October 12, 2010).
- McCarthy, Nancy. "Local-Level Public Goods and Collective Action." In *Collective Action and Property Rights for Sustainable Development*. Edited by Ruth S Meinzen-Dick and Monica Di Gregorio., 9-10. Washington, D.C.: International Food Policy Research Institute,
 2004. http://www.ifpri.org/sites/default/files/pubs/2020/focus/focus/1/focus11.pdf (accessed October 14, 2010).
- Meinzen-Dick, Ruth S, K. V. Raju, and Ashok Gulati. "What Affects Organization and Collective Action for Managing Resources? Evidence from Canal Irrigation Systems in India." *World Development* 30, no. 4 (2002): 649-666.
- Miller, Lisa. "The Cost of Being Jewish: How the Recession Affects Religion." *Newsweek*, July 19, 2010, 28.
- North, Douglass C. 1990. *Institutions, institutional change and economic performance*. New York: Cambridge University Press.
- Olson, Mancur. *The Logic of Collective Action: Public Goods and the Theory of Groups.* Cambridge, MA: Harvard University Press, 1971.
- Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action.*Cambridge, UK: Cambridge University Press, 1990.
- ——. *Understanding Institutional Diversity*. Princeton, NJ: Princeton University Press, 2005.
- Ostrom, Elinor, Roy Gardner, and James Walker. *Rules, Games and Common-Pool Resources*. Anne Arbor, MI: University of Michigan Press, 1994.
- Smith, Christian, and Michael O. Emerson. *Passing the Plate: Why American Christians Don't Give Away More Money.* Oxford, UK: Oxford University Press, 2008.
- Thumma, Scott, and Dave Travis. Beyond Megachurch Myths: What We Can Learn from America's Largest Churches. Hoboken, NJ: John Wiley and Sons, 2007.
- Vatn, Arild. "Cooperative Behavior and Institutions." *Journal of Socio-Economics* 38 (2009): 188-196.
- Wade, Robert. Village Republics: Economic Conditions for Collective Action in South India. Cambridge, UK: Cambridge University Press, 1988.