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Press and Pulpit: The Growth of Religious Magazines in Antebellum America

Abstract

Many controversies in the sociology of religion hinge on how different schools of thought view religious denominations. Are they akin to for-profit firms that compete for adherents, groups that forge community among geographically dispersed adherents, or coordinating bodies that distribute resources across subunits? These three perspectives not only reflect divergent assumptions about what religious organizations are, they also emphasize different causal mechanisms (competition, social integration, or coordination), and make arguments at different levels of analysis (local communities or national fields). These fundamental differences have made it hard to reach agreement about what religious organizations do to mobilize and retain members, how they distinguish themselves from or align themselves with other faiths, and how interactions within and between them drive their behavior. We assess the empirical implications of these three perspectives for a key resource religious organizations use to mobilize adherents and build distinctive identities: religious magazines. We test hypotheses derived from all three perspectives on original data covering virtually all religious denominations and magazines in antebellum America, a time of great religious ferment. With this analysis, we seek not only to heal schisms in the sociology of religion, but also to shed light on group dynamics more generally, by revealing how interactions among the diverse groups that constitute modern societies affect how groups mobilize members and build distinctive identities through group media.

The kingdom of God is a kingdom of means. Preaching of the gospel is a Divine institution – “printing” no less so. They are kindred offices. The PULPIT AND THE PRESS are inseparably connected. The Press, then, is to be regarded with a sacred veneration and supported with religious care. The press must be supported or the pulpit falls. (Editorial in the *Christian Herald* 1823, quoted in Hatch 1989:142; emphasis in the original)

Religious heterogeneity has always been the hallmark of American religious life (Ahlstrom 1972). Long before the Revolution, America was home to not just the established Anglican and Congregational churches, but also Baptists, Quakers, Presbyterians, Lutherans, Mennonites, Dunkers, Dutch and German Reformed, Catholics, and Jews. After the Revolution, the disestablishment of state religions and successive waves of immigration further increased religious diversity. Perhaps even more important were two series of religious revivals that swept across America from 1733 to 1776 and again from 1790 to 1845 (Ahlstrom 1972; Butler 1990; Carwardine 1993). Revival leaders clashed with established religious authorities and seceded to found dozens of new sects and full-fledged denominations.

Persistent religious pluralism has directed historians’ and sociologists’ attention to competition and co-operation within and between denominations, and the ways denominations respond to these forces. Accordingly, in this paper we examine the interplay between the diverse religious communities that populated antebellum America and the growth of denominationally-affiliated print media. During this period religious periodicals were at the epicenter of American culture, the primary platforms through which religious groups communicated, energized adherents, and forged distinctive identities (Marty *et al.* 1963; Hatch 1989; Kaufman 2002; Nord 2004). As a result, the number of religious magazines exploded from only seven in 1800 to 149 in 1830 and 328 in 1860. By the 1830s, religious magazines had become “the grand engine of a burgeoning religious culture, the primary means of promotion for, and bond of union within, competing religious groups” (Hatch 1989:125-126).

This flourishing of the antebellum religious press should not be surprising because magazines are powerful instruments for community-building, recruitment, indoctrination, solidarity, and contestation with other faiths. They help construct shared meaning systems

within religious communities – not just theologies, but also shared understandings about authority, membership criteria, and practices. Magazines allow sponsoring faiths to draw sharp distinctions between members and nonmembers, and their serial nature allows magazines to reinforce those distinctions through repetition.

Three perspectives in the sociology of religion offer different explanations of why religious denominations create and sustain media: the model of religious organizations as competing for adherents (Finke and Stark 1988, 1992), the view of denominations as communities (Warner 1993; Becker 1999) that use media to create solidarity among geographically dispersed members (Park 1940), and the conception of religious organizations as coordinating bodies that share resources across subunits (Chaves 1993). All three lines of reasoning view denominational media as tools for attracting and retaining adherents, and for differentiating one faith from another, but they offer sharply divergent accounts of which social processes explain the growth of religious media: competition, social integration, or resource sharing. There are two reasons for this divergence. First, the three perspectives have different conceptions of which aspects of social context shape interactions among churches. Hence they direct attention to different axes of historical development: religious pluralism, geographic dispersion, and organizational integration. Second – and less thoroughly appreciated – the three perspectives attend to different levels of analysis, either local religious communities or a national religious field. These fundamental differences between the perspectives have generated much heat but little light (Chaves and Gorski 2001; Voas, Crocket, and Olson 2002; C. Smith 2008), as scholars in different camps have talked past each other more often than to each other. We seek to break through this stalemate and reconcile these three perspectives by revealing their points of convergence and divergence. We do this by deriving predictions from all three perspectives about growth in the number of magazines affiliated with in each denomination and testing them empirically.

Our analysis of religious denominations and denominational magazines has implications for other kinds of social groups that constitute modern society, including political factions, social

movements, ethnic groups, schools of art and literature, and professions (Park 1940; Olzak and West 1991; Calhoun 1998; Barnett and Woywode 2004). Religious magazines are one type of group media, which, in contrast to universalistic mass media, are affiliated with and oriented toward particular audiences (Fine and Kleinman 1981; Blau 1998), and so are excellent sites for understanding interactions within and between groups (Olzak and West 1991; Olzak 1994; Blau 1998; Barnett and Woywode 2004). To put it simply, group media are the glue that binds often far-flung group members together. Therefore, group media are part and parcel of modern societies, where many different groups flourish, even though their members are too scattered to meet face to face.

To ground our analysis in historical context, we begin by discussing how American religion evolved during the antebellum era, and the role that magazines played in forging bonds between adherents and supporting distinctive theologies and communities of practice. We then discuss each of the three perspectives in turn, and use each to develop predictions about the growth of religious magazines. Next, we detail our empirical approach, including how we measure concepts within each perspective, and how we analyze data. Finally, we present results and discuss their implications for the study of religious organizations and social groups more generally.

Religion and Print Media in Antebellum America

The period between the Revolution and the Civil War saw both tumult and growth in American religion. Religious disestablishment and the withering of local monopolies, immigration, and revivalism increased the number of denominations and heightened competition between them. Religious participation increased, new upstart churches and movements within existing churches aggressively courted adherents, and national denominational organizations proliferated. Denominations assumed their modern form as westward migration and energetic recruitment efforts generated spatially dispersed groups of adherents, tied together by national

associations. As a result of these developments, religion became a central expression of American culture. Below, we expand on each of these points in turn.

The rise of denominationalism. The gradual disestablishment of state religions, starting with New York in 1777 and ending with Massachusetts in 1833, leveled the playing field in the competition for souls. Waves of immigration from the 1830s onward, notably of Irish Catholics and German Lutherans, Anabaptists, and Catholics, also contributed to religious diversity. But even more important than disestablishment and immigration were the religious revivals that swept across America from 1790 to 1845. Revival leaders clashed with established religious authorities and seceded from their communities to found dozens of new faiths: full-fledged churches like the Methodists and Disciples of Christ, evangelical variants of long-established churches, utopian communities like New Harmony and the Shakers, and small, unstable sects like the Adventists and Plymouth Brethren. Revivals amplified the willingness of Americans in all walks of life to open religious debate and to question constituted church authorities (Ahlstrom 1972; Carwardine 1978). Revivals also led a much larger fraction of the population to participate in religious services (Ahlstrom 1972; Finke and Stark 1992).

Competition between denominations. Denominations competed ideologically over theological tenets and strategically for members. Many of these battles played out in the pages of religious magazines (Marty *et al.* 1963; Hatch 1989; Kaufman 2002; Nord 2004). By publishing sermons and theological debates, magazines helped create and sustain religious communities; by broadcasting news, stories, poems, educational items, and anecdotes, they also entertained religious adherents and thereby wove religion into the fabric of American social life. As serial publications, magazines could inculcate readers in the tenets of the faith, respond to opponents' salvos, and evolve in step with readers' sensibilities. Given these many benefits, it is not surprising that, despite their many theological and organizational differences, virtually all denominations embraced print media.

There is ample evidence that denominational publishing was driven by competitive threats from other faiths. For instance, the introduction to the Presbyterian *Christian's Magazine*,

founded in 1806, inveighed against the ways that preachers from upstart denominations, who had no theological training, distorted religion:

The mischiefs arising from these sources are increased by the activity of a “zeal not according to knowledge.” ... The duty of Christians is to confront and repel, not abet the enemy, nor admit him into their camp in order to subdue him. ...the *Christian’s Magazine* will not be backward in strengthening their hands and stirring up their zeal in this contest.

Some magazines fought direct battles against a particular rival denomination. For instance, the prospectus of *The Spirit of the Pilgrims*, a Congregational publication founded in 1827, explained that its founders’ primary motivation was to counter the growing popularity of the upstart Unitarian movement, which orthodox Congregationalists saw as their closest competition, by debating perceived Unitarian slanders against Congregationalism:

Misrepresentations, the most palpable and injurious, of the doctrines, preaching, and motives of the orthodox [Congregationalist], have been common for many years; and the continual repetition of them has by no means ceased. The apparent object has been to keep the members of Unitarian congregations from entering the doors of an orthodox church... There are not a few proofs, however, that these misrepresentations are soon to recoil upon their authors with unexpected violence ... Unitarians have a magazine published here, upon which they spare no labor, and which is constantly employed in promoting their cause. We must have the means of meeting them on this ground... They have found it necessary to make strenuous efforts to keep up the publication and circulation of their magazine; and surely, with our views of truth and duty, we cannot do less than they.

For their part, the Unitarians utilized the aptly-named *Unitarian Defendant* as a vehicle to rouse their followers and respond in kind.

By the 1830s, the growth of Catholicism increasingly became the animus for Protestant mobilizing. The *Baltimore Literary and Religious Magazine* was, first and foremost, anti-Catholic. In its inaugural issue in 1836, it proclaimed:

We have from the beginning, had one object in our minds. We wish to establish ... a literary and religious monthly journal, which should be perfectly free – entirely evangelical – and thoroughly protestant. The larger part of our matter must ... relate to the great contest with the apostate church of Rome.

In their defiance, Catholics turned to magazines themselves, including the Baltimore-based *United States Catholic Magazine*.

Geographic expansion. Even as religious competition intensified, the spatial context in which it occurred was expanding. Many denominations spread beyond their old regional strongholds, especially as European settlement pushed westward. As a result, denominational activities and orientations became increasingly national in scope (Ahlstrom 1972; Goen 1985; Hatch 1989; Newman and Halvorson 2000). For instance, E. Smith (1963:77) speaks of the “nationalization of Baptist action” as early as the 1820s. Yet basic conditions of life in antebellum America made direct communication amongst religious leaders and between preachers and their flocks difficult. The populace was spread thinly, especially along the frontier. Travel was slow and arduous, even after canals were built in the 1810s and railroads in the 1830s.

Magazines offered an antidote to geographic isolation by reinforcing adherents’ shared identities and disseminating information among preachers. For example, the founders of the Episcopal *Churchman’s Repository* in 1820 hoped their periodical would coordinate and enrich church activities:

The want of a religious publication, that should be particularly serviceable to Episcopalians in this section of the Country, has long been acknowledged by all, who have reflected upon the situation of our churches. They are few in number, are scattered over an extensive territory, and are generally so distant from each other, that some of them are almost exclusively confined to the ministrations of their respective pastors. It is difficult therefore to have often those ministerial exchanges which operate ... towards the more extensive benefit of their parishes. From these evils are apt to flow much ignorance ... and a great want of union and zeal.

Similarly, in 1814 the Congregationalist *Christian Monitor* argued:

...the District of Maine, which is more extensive in territory than all the rest of New-England, and contains more inhabitants than either New-Hampshire, Vermont, or Rhode Island, and nearly as many as Connecticut, has never yet had a religious magazine published in it.

Moreover, there were few preachers to lead the geographically dispersed faithful. After the Revolution, there were just 1,500 clergy to serve some 3.3 million people scattered over 823,000 square miles (Mathews 1969). Because of the paucity of preachers and the difficulty of travel, religious leaders could not depend solely on sermons; instead, they had to rely on

magazines to reinforce religious messages. High levels of geographic dispersion led even such committedly decentralized groups as the Baptists to support many periodicals during the early decades of the century (Goen 1985:60). Since originality was not an established publishing principle (Haveman 2004), periodicals freely reprinted each others' material; thus, within any denomination, separate publications tended to promote a common denominational consciousness and frame of reference (Goen 1985).

National denominational structures. Geographic expansion pushed religious communities to develop complex organizational structures. Translocal agency structures managed denominations' far-flung operations (E. Smith 1962; Ahlstrom 1972; Chaves 1993). Missionary organizations like the Society for the Propagation of the Gospel (founded 1787 by Episcopalians) converted Natives and ministered to whites on the frontier, theological schools like the Presbyterian Seminary at Princeton (founded 1811) trained ministers in a standardized fashion, Sunday-school societies inculcated basic literacy and religious principles, and publishing houses like the Methodist Book Concern (founded 1789) printed and distributed Bibles, educational tracts, and periodicals. Denominations slowly developed nested, multi-level structures to integrate and direct these agency structures. Denominations' organizational structures administered both the core function of ministering to adherents and support functions like publishing and education (Chaves 1993).

Denominational publishing efforts represented the earliest instance of "a fundamental characteristic of modern denominationalism: the gathering of local and regional efforts into comprehensive organizational unity" (E. Smith 1962:78). For instance, the founding of the Congregationalist *Christian Monitor* in 1814 reflected intra-denominational resource sharing. Explaining their rationale for forming yet another Congregationalist periodical in New England, this magazine's founders pointed to the need for media in a large state where Congregationalists had few churches:

Periodical publications have an extensive influence upon the minds morals and happiness of men... But do any of these publications have an extensive circulation in the District of Maine? ... The natural consequences of this state are forgetfulness of God and divine

things, ignorance, error, profanity, a disregard of the Sabbath and the institutions of religion, immorality, and impiety. The means by which these evils must be arrested are the preaching of the gospel and the circulation of religious periodicals. The first of these can, at present, be but partially enjoyed. But, by the patronage and exertions of the well-disposed, a religious publication may be widely circulated and have a most beneficial effect upon the morals and religious state of this section of the Union.

Summary. Structural changes in American religion contributed to the explosion in the number of denominational magazines, from just one in 1790 to over 300 in 1860, as shown in Figure 1. In 1800, religious magazines constituted just 20% of the magazines published in the United States. Their share of this growing industry rose steadily over the next quarter-century, peaking at just over half of all magazines in 1827, and then declined slightly.

[Figure 1 about here]

Virtually all of the denominations in United States embraced magazines – not just large churches like the Congregationalist, Presbyterian, Baptist, and Methodist, but also small faiths: Mormon, African Methodist Episcopal, Mennonite, Seventh Day Adventist, Millerite, Swedenborgian, Plymouth Brethren, Moravian, Dunker, Shaker, United Brethren in Christ, and Christadelphian. Even deists, freethinkers, spiritualists, and atheists published magazines. The historical and qualitative evidence presented above suggests each of three structural transformations may have played a role in the growth of denominational media. In the next section we derive theoretically-informed, empirically testable hypotheses linking each to the proliferation of religious group media.

Explaining Denominational Magazine Growth

Three perspectives can be used to explain the growth of religious magazines: the model of religious organizations as suppliers competing for adherents (Finke and Stark 1988, 1992), the view of denominations as social communities (Warner 1993; Becker 1999) that deploy media to create solidarity among geographically dispersed members (Park 1940), and the conception of denominational groups as affiliational structures that amass and share resources across local subunits (Chaves 1993). Each points to a distinct set of transformations in American religion that prompted denominations to mobilize by publishing magazines. Below, we discuss each in

turn, and lay out empirical predictions about the linkages between religious organization and the growth of denominational magazines that derive from each.

Religious Economies Theory: Denominational Pluralism

Local pluralism. Religious-economies theory holds that religious organizations are similar to for-profit firms in that both compete in market economies: for-profit firms for customers, religious organizations for adherents (Finke and Stark 1988, 1992; Stark and Iannaccone 1994). This theory imports ideas from microeconomic models of firm behavior and adopts a rational-choice perspective. It holds that pluralism generates competition from rival faiths, which forces denominations to work hard to recruit and retain adherents, resulting in energetic and entrepreneurial mobilization efforts. Specifically, it holds that competition increases with the number denominations within a local religious market and the extent to which those denominations have about the same number of adherents – that is, as pluralism increases. Because magazines served as primary vehicles through which antebellum religious leaders pursued the sorts of marketing efforts that this theory holds as necessary stimulants for religious commitment and inevitable outcomes of religious competition (Stark and Bainbridge 1987), denominations should mobilize resources to sustain more magazines as pluralism increases. Moreover, media help denominations define their distinctive identities. This becomes increasingly important as religious markets become more pluralistic and each denomination must work harder to distinguish its identity from that of other faiths and demarcate its own particular niche: “Who are we? What makes us unique?” Because magazines are ideal instruments for such identity work, denominations should publish more of them as their environments become more pluralistic.

Hypothesis 1: As the level of pluralism in a location increases, the number of magazines a denomination publishes there will increase.

Local market position. While dominant churches can afford to be complacent, embattled minority churches must work hard to retain and recruit members, and they must mobilize their smaller pools of resources more intensively (Stark and McCann 1993; Stark and Iannaccone

1994). In support of this argument, cross-sectional research has found that churches' innovation efforts and their members' donations and rates of volunteering are inversely proportional to their local market share (Zaleski and Zech 1995; Stark 1998; Perl and Olson 2000), which proponents of religious-economies theory interpret as more active, entrepreneurial, and vigorous efforts by denominations with weak market positions (Finke and Stark 1998). The longitudinal implication is that as their share of any local religious market declines, denominations will defensively deploy more resources toward building and sustaining magazines:¹

Hypothesis 2: As a denomination's share of a local market decreases, the number of magazines it publishes there will increase.

Pluralism and market share are neither empirically nor causally independent.

Empirically, religious organizations can be small (or large) players in highly pluralistic markets *and* in markets dominated by a few large faiths. Causally, increasing religious pluralism in a denomination's core strongholds are likely to stimulate strong responses, while is likely to elicit little response from a denomination with only a small stake in a market. Therefore, the negative impact of market share predicted above should become stronger in as markets become more pluralistic:

Hypothesis 2a: The negative impact of local market share on the number of denominational magazines published will be amplified as local pluralism increases.

New Extensions to Religious-Economies Theory

Proponents of religious-economies theory have argued that faiths compete for adherents locally. This assumes both that the actions of religious leaders are locally oriented and that local religious markets are independent. But such a localized approach ignores extralocal dynamics. Here, we extend the religious-economies model in two ways: first, we consider the potentially

¹ Note that this argument concerns only the *impetus* to mobilize, not the *capacity* to do so. If declining market share indicated diminishing capacity to sustain magazines, we would predict the opposite of hypothesis 2.

extralocal orientation of denominations' actions; second, we consider the interdependence of their religious publishing activities across local markets.

Extralocal pluralism. To the extent that competition plays out at the national (rather than local) level, denominations will deploy more resources in more pluralistic national markets. But since denominations, like all organizations, have finite resources, they must decide how to allocate those resources across the nation. If local pluralism (pluralism in the focal location) is weaker than extralocal pluralism (pluralism in markets outside the focal location), we expect that denominations will siphon off resources, including resources to support denominational publishing, from the focal community to bolster their activities elsewhere (Montgomery 2003). This suggests that, after controlling for local pluralism, as extralocal pluralism increases, magazine publishing efforts in any local market will be reduced:

Hypothesis 3: As the level of pluralism outside a focal location increases, the number of magazines a denomination publishes there will decrease.

National market share. If competition is structured nationally rather than within local markets, media resources will be deployed in response to national market position, rather than local market position. This suggests that denominations will publish more magazines as their national market position becomes more tenuous.²

Hypothesis 4: As a denomination's share of the overall (national) religious market decreases, the number of magazines it publishes nationally will increase.

Interdependence of local markets. If denominations compete in multiple, interdependent markets, then their actions in one market will be shaped by their relations with rivals in others. This idea is at the center of microeconomic theory about multi-market contact and mutual forbearance. The basic tenet is that the more organizations meet rivals in multiple markets, the more they tend to forbear from competing aggressively with those rivals (Edwards 1950;

² Note that if we find support for both hypotheses 2 and 4, then any observed effect of national market share likely reflects the aggregation of local competitive pressures. If, however, we find support for hypothesis 4 but not hypothesis 2, then we can conclude that competition played out at the national level, not the local level.

Bernheim and Whinston 1990). Whereas the original version of religious-economies theory assumes that competitive threats from local pluralism spur publishing, multi-market contact theory holds that responses to pluralism in any single market are tempered by potential consequences in other markets.

This idea has a long history in sociology and economics. Simmel (1950:286-291) argued that the potential for cooperation among rivals increases when they interact in multiple domains, since each will gain by allowing the other to be superordinate in some domains in exchange for similar treatment in other domains. Fear of great reciprocal harm forestalls opponents who meet in multiple domains from using their strongest weapons against each other. Edwards (1955) echoed Simmel's argument in regard to large firms. When two firms meet in multiple markets, each has an incentive to stake out certain markets as its sphere of influence and to refrain from aggression in the spheres of influence of its rival, as long as its own sphere is similarly respected (Porter 1981; Bernheim and Whinston 1990). Multi-market contact thereby facilitates the development of live-and-let-live policies: each firm respects its rivals' turf for fear of retaliation in its own territory. In contrast, firms that have little multi-market contact with local rivals do not forbear from aggression because they do not fear widespread retaliation.³

This reasoning suggests that when denominations face increasing multi-market contact with rivals, their strategic behavior becomes embedded in increasingly dense webs, which constrain their actions, so they will be inclined to forbear from aggressive actions, including publishing magazines:

Hypothesis 5: As the level of multi-market contact between a denomination and the rivals it meets in a local market increases, the number of magazines the denomination publishes there will decrease.

³ Multi-market contact is distinct from local pluralism because the former is a characteristic of *the organization in the market*, while the latter is a characteristic of *the market*. One could imagine two different markets with the same number and size distribution of denominations and thus the same level of local pluralism, but in one a denomination meets many multi-market rivals (and few single-market rivals), while in the other it meets few multi-market rivals (and many single-market rivals).

The level of pluralism in the focal market may moderate the impact of multi-market contact. Mutual forbearance may be greatest in markets where one or a few large organizations control most of the market, because mutual forbearance is substantially easier for a few oligopolists than for a large number of rivals (Bernheim and Whinston 1990). Hence, mutual forbearance may diminish as local pluralism intensifies and oligopolistic control declines:

Hypothesis 5a: The impact of multi-market contact on the number of denominational magazines published in a local market will be attenuated as local pluralism increases.

Religious Community: Media as Identity Work and Connective Tissue

Whereas religious-economies theory suggests mobilization is driven by competitive dynamics in a pluralistic environment, a second approach to denominations treats religious media as tools for forging community in a spatially dispersed society. Sociologists and historians agree that religion has long been a primary basis for community-building and individuals' identification with a community in the United States (Herberg 1960; T. Smith 1968, 1978; Warner 1993; Becker 1999). Immigrants to the colonies and the young republic left behind kin and village, traditional bases for community and identity; religion was often the only replacement available, and it supported the establishment of distinctive religious and ethnic communities (T. Smith 1968, 1978). Moreover, religion was constitutive of many antebellum American communities, such as the Mormons and Seventh Day Adventists (Warner 1993).

Religious and ethnic media are powerful tools for integrating geographically dispersed communities (Park 1940; Calhoun 1998). Geographic dispersion increases demand for media because they weave "invisible threads of connection" (Starr 2004:24) and create "imagined communities," whose far-flung members share values, interests, and identities (Park 1940; Anderson 1991). From this perspective, the growth of denominational magazines can be seen as an integrative response to the expansion and dispersion of denomination members across ever-broader swaths of space.

If the growth of religious magazines was due to their capacity to connect denominations' far-flung adherents, then two closely related dimensions of denominations' geographic expansion are relevant. First, increasing *spatial scale* should heighten the importance of translocal technologies for coordinating and integrating communities. Simply put, spreading to more locations necessitates publishing more magazines to bind coreligionists together. Second, increasing *dispersion* of a denomination's congregations and clergy across locations should require more compensating connective tissue of the sort that magazines provide. This should both expand the circulation of existing magazines and promote launching new ones. These dimension of spatial expansion are conceptually and empirically distinct: a faith may have outposts in many locations, but the majority of its adherents may be concentrated in a single area or spread evenly across locations. Thus, we offer two independent predictions:

Hypothesis 6: As the number of locations in which a denomination is present increases, the number of magazines it publishes nationally will increase.

Hypothesis 7: As the dispersion of a denomination's congregations across locations increases, the number of magazines it publishes nationally will increase.

Resource Sharing

The third and final perspective on the growth of religious magazines points to their role as vehicles for redistributing resources across space (Chaves 1993). This model conceives of denominations as complex, multi-unit structures that amass and allocate resources from multiple congregations to pursue common purposes. And it recognizes that denominations *relied on* congregations for resources to support magazine publishing. This line of reasoning suggests that denominations use slack resources in their core strongholds to create organizational infrastructures, such as denominational magazines distributed nation-wide, that support adherents' faith in locations where they are most socially isolated and therefore most vulnerable to overtures from proselytizers in rival denominations. By highlighting internal differentiation, this perspective highlights mismatches between regions with (often latent) demand for

denominational media and regions where denominations possessed sufficient slack resources to support magazines (where market share was high).

Why might antebellum denominations experience such mismatches? Religious pluralism may weaken established religious institutions by diluting the homogenous social networks that sustain religion's plausibility as objective reality (Berger 1967). The challenges of social reinforcement in pluralistic settings are particularly acute for minority denominations, since their adherents have fewer day-to-day interactions with coreligionists (Blum 1985; Olson 1998; Perl and Olson 2000) and so are more isolated from the social fabric of their faiths. Religious media offer a potential solution to this problem insofar as they project religious canopies beyond particular locations.

This perspective is predicated on the assumption that religious leaders are attuned to and responsive to extralocal issues confronting their faith. Perusal of editorial statements and prospectuses indicates that the founders and editors of religious magazines often noted the salutary effect their publications might have on members "in the wilderness" or isolated in areas dominated by other faiths. Thus we predict that denominations will be especially likely to publish magazines to reinforce the faith of their members whose local minority positions afford them little day-to-day reinforcement from coreligionists. Whether driven by solidaristic or competitive motives, the key point is that religious magazines offer ways to compensate for resource disparities between low-market-share regions where cultural resources are most needed and high-market-share regions where they are most available.

If denominational media grow as an effort to redistribute cultural resources across locations, then we should see such resources flowing from rich to poor regions. In other words, magazine publishing should be concentrated in areas where denominations have the most slack resources (where their market share is highest) and distributed to areas where they have the greatest need (where their market share is lowest). Market share can be calculated in two ways: relative to other denominations in a particular location (the traditional way we think of market share), or relative to other locations where the focal denomination operates (meaning a location's

share of the denomination's congregations). Thus we make two parallel predictions about market share:

Hypothesis 8: As denomination's share of a local market increases, the number of magazines it publishes there will increase.

Hypothesis 9: As the fraction of a denomination's congregations in a local market increases, the number of magazines it publishes there will increase.

Note that hypothesis 8 directly contradicts hypothesis 2, which is derived from religious-economies theory. Although both perspectives emphasize the embattled positions of minority groups, religious-economies theory emphasizes the disciplining effects of local competition (*e.g.*, Stark and McCann 1993), whereas the resource-sharing argument points to organizational infrastructures that can redirect resources from one area to another. While hypothesis 2 suggests magazine publishing will reflect efforts of church leaders in embattled low-market-share locations, hypothesis 8 predicts magazine publishing will be oriented toward low-market-share locations, but *concentrated in* core high-market-share strongholds.

Summary

As noted at the outset, the three perspectives emphasize different causal factors and make predictions at different levels of analysis. Religious-economies theory holds that denominations publish periodicals primarily to defend existing market share and steal additional market share from rival faiths in a pluralistic environment, while theories of religion as community treat religious media as tools for creating and sustaining social bonds and sharpening identities in spatially dispersed and pluralistic societies, and the theory of religious organization views denominations as vehicles for resource distribution between subunits. The first perspective relies on competition to explain the growth of religious media, while the second relies on cooperation and connection. The third perspective accepts both competition and cooperation as potentially important, but emphasizes a different theory of action, based on a view of religious organizations as neither unitary entities (national churches) nor disconnected aggregates of local congregations,

but rather as complex, multi-unit structures that amass and allocate resources from multiple congregations to pursue common purposes.

Table 1 summarizes the empirical predictions from these three perspectives and notes the level of analysis for each prediction. With the exception of hypotheses 2 and 8, which are directly competing, none of the hypotheses are mutually exclusive.

[Table 1 about here]

Research Design

Sampling Plan

We tested these hypotheses by analyzing the number of magazines affiliated with American religious denominations from 1790 to 1860. Our analysis starts in 1790 because that is the first year for which good data are available on many of our explanatory variables. Only five religious magazines were published before this date, so our analysis covers virtually all of the antebellum history of this religious resource. Our study ends in 1860, the year before the Civil War broke out, which disrupted many activities of religious organizations, including their publishing efforts. We analyzed all 22 denominations founded before 1860 for which we were able to find good data: Adventist, Baptist, Catholic, Church of God, Congregational, Disciples of Christ, Dunker, Dutch Reformed, Episcopalian, German Reformed, Jewish, Lutheran, Mennonite, Methodist, Moravian, Mormon, Presbyterian, Quaker, Shaker, Swedenborgian, Unitarian, and Universalist.⁴ Despite their great variety, all of these groups, even the very small ones, embraced print media. For example, the Disciples of Christ, which had followers in only a handful of states, published 63 magazines.

⁴ We followed Koçak and Carroll (2008) and distinguished between denominations (rather than between smaller groups within denominations, like the various branches of Baptists) because we expect denominations' publishing efforts were most strongly affected by between-denomination than within-denomination differences. But we were sensitive to the fact that some denominations, like the Presbyterians and Methodists, were racked with internal conflict. To deal with this, we included a control for the occurrence of schisms, as described below.

We conducted analyses at two levels – local and national – because the processes we probe are theorized as occurring at these two levels. Previous research on religious organizations has defined the contexts within which competition occurs as municipalities, counties, or states (Chaves and Gorski 2001). We defined locations as states, for three reasons. First and most basic, it was extremely difficult to find serially and cross-sectionally reliable state-level data on this time period; it would be impossible to piece together data on smaller geographic units. Second, empirical tests have shown that the size of the geographic unit analyzed makes little difference (Chaves and Gorski 2001). Third, religious magazines had circulations far beyond their places of publication. One-quarter of religious magazines' titles made explicit claims about their geographic scope; of these, 24% claimed national scope, 35% claimed to serve a multi-state region such as New England, 16% claimed to serve a state, and 25% claimed to serve a single county or municipality. Many magazines with titles signaling a local audience were based in large cities and had widespread readers.

For the state-level analysis, our data comprised one observation per denomination per year for every state in which the denomination had congregations; for the national-level analysis, they comprised one observation per denomination per year. We studied each denomination starting in 1790 (for denominations founded before that date) or the year each was founded. For the state-level analysis, the start of each denomination-state time series depended on two events: the state must have entered the Union and a denomination must have had at least one congregation in the state.

Data and Measures

Dependent variable. The outcome we studied is the number of magazines affiliated with a given denomination (in a given state) in a given year. While we would have liked to have studied growth in magazine circulation, such data are unavailable for the vast majority of magazines. Whereas much organizational research analyzes foundings and failures separately, we focused on growth in the number of magazines because we are interested in the growth of

denominations' infrastructures, to which each magazine contributes. Moreover, this approach builds on previous research on another important denominational resource, Sunday schools (Finke and Stark 1988; Koçak and Carroll 2008).

Data for the dependent variable come from a list encompassing virtually every magazine published in the United States from colonial times to the onset of the Civil War (Haveman 2004). We excluded non-religious and inter-denominational publications, leaving a total of 832 denominational magazines. For magazines that were available in archives, we coded denominational affiliation on the basis of contents and prospectuses; for magazines that were not available in archives, we relied on histories (*e.g.*, Mott 1930, 1938a, 1983b) and bibliographies (*e.g.*, Albaugh 1994).

Independent variables. We based measures of market structure and market position on state-level data on congregations (see King and Haveman [2008] for a full description). Ideally, we would conduct analyses using data on both congregations and members, but data on members simply do not exist for most of our study period. Examining the period 1890 to 1926, Koçak and Carroll (2008) reported that both sets of measures yielded similar results. Although some denominations tend to have larger congregations than others, this does not pose a problem since we estimate regression models with fixed denomination effects, which obviate biases that might result from differences in congregation size (Perl and Olson 2000:19).⁵

To test local-level hypotheses 1 and 2a, we measured *local pluralism* with the Blau (1977) index of heterogeneity. Although this measure has been criticized for producing artifactual correlations between pluralism and religious participation (Voas, Crocket, and Olson 2002), this does not happen in our analysis because our dependent variable (number of magazines published) is not composed of the same social units as the pluralism index (number of congregations). To test national-level hypotheses 3 and 5a, we measured *extralocal pluralism* by

⁵ Our measures might be skewed if, within any denomination, the number of members per congregation varied over time. To check this possibility, we compared national growth rates between 1776 and 1850, in terms of both congregations and members. For all major denominations, ratios of congregation growth to member growth were of a similar magnitude, ranging from 0.97 to 1.47.

summing the number of congregations in each denomination across all states *except* the focal state and then calculating pluralism. Both pluralism measures are specific to each annual observation on each denomination in each state.

We tested local-level hypotheses 2, 2a, and 8 by measuring denominations' positions in each state market, using denominational *market share* in each state each year. We tested national-level hypothesis 4 by calculating the *average national market share*, calculated across all states.

We tested local-level hypotheses 5 and 5a by calculating the aggregate intensity of *multi-market contact* between each denomination i and those multi-market rivals j operating in the focal state market m at time t (MMC_{imt}):

$$MMC_{imt} = \frac{\sum_{j \neq i} \left[MMR_{ijt} \times D_{jmt} \times \frac{\sum (D_{int} \times D_{jnt})}{\sum_n D_{int}} \right]}{\sum_j D_{jmt}},$$

where MMR_{ijt} is an indicator variable set equal to one if denomination j is a multi-market rival of denomination i at time t and zero otherwise, D_{imt} (D_{jnt}) is an indicator variable set equal to one if denomination i (j) has congregations in state market m at time t and zero otherwise. This measure is similar to one used in previous research on for-profit firms (Barnett 1993; Haveman and Nonnemaker 2000). Because this measure is complex, we discuss its components. We start by counting the markets where denomination i meets other denominations j at time t ($\sum_n D_{int} \times D_{jnt}$), and scale by the number of markets in which denomination i operates ($\sum_n D_{int}$) to calculate a proportion. Next, we condition this proportion on two facts: (1) denomination j operates in market m at time t ($D_{jmt}=1$), and denomination j is a multi-market rival of denomination i at time t ($MMR_{ijt}=1$). Finally, we sum this conditional proportion across all rivals of denomination i (all other denominations j) in market m and scale by the number of such rivals, both multi- and single-market. This yields the number of multi-market contact points per local rival per extralocal market. It ranges from zero, when a denomination has no multi-market

contact with local rivals, to one, when a denomination i meets all local rivals j in all other markets where i competes.

We tested national-level hypothesis 6 by measuring each denomination's *spatial scale* as the number of states where it had congregations. We tested national-level hypothesis 7 by measuring the *spatial dispersion* of each denomination's adherents in each year with the degree to which its congregations were spread evenly across states. We summed the squared proportion of a denomination's total congregations in each state and subtracted the total from one, thereby forming an index of geographic market heterogeneity (Blau 1977). Finally, to test national-level hypothesis 9, we calculated the fraction of each denomination's congregations that were in each state market each year (*focal-state share of denominational congregations*).

Model Specification and Estimation Methods

State-level analyses. Our dependent variable is a count: the number of religious magazines affiliated with a denomination in each state and year. Accordingly, we estimated Poisson regressions. Note that we used the Poisson distribution not to count events, but rather to count social units – not the number of magazines *founded*, but rather the number *published*. Therefore, we modelled a growth process: change over time in the number of denominational magazines in each state. Since size generally affects future size, we included the lagged dependent variable in our models (Heckman and Borjas 1980).

One aspect of these data further complicated estimation: each denomination could have congregations in multiple states, and each state could be home to multiple denominations. Thus we were dealing with cross-classified data, not hierarchically clustered data (Goldstein 1987; Rabe-Hesketh and Skrondal 2008:472-508). Therefore, we estimated event-count models with latent, crossed unit effects for denomination and state; the first latent effect controlled for unobserved factors that might affect each denomination's propensity to publish magazines, while the second controlled for unobserved factors that might impede or impel magazine publishing in each location. The models we estimated took this form:

$$\lambda_{ist} = \exp[\alpha y_{ist-1} + \beta' \mathbf{x}_{ist-1} + \zeta_i + \zeta_s] ,$$

where y_{ist} is the dependent variable (the number of magazines affiliated with denomination i published in state s at time t), y_{ist-1} is the lagged dependent variable, \mathbf{x}_{ist-1} is a vector of lagged explanatory and control variables, ζ_i is the latent effect for denomination i , and ζ_s is the latent effect for state s .⁶ We used the `xtmepoisson` command in Stata with the special group designation `_all` to treat the entire dataset as the highest-level group and take into consideration the fact that these data were cross-classified, not hierarchically clustered (Rabe-Hesketh and Skrondal 2008:475-478).

National-level analyses. Again we modelled a growth process for a count variable. But because we aggregated data across many states, the average number of magazines published was 5.4 and the range was 0 to 44. Accordingly, we estimated fixed-effects linear regressions:

$$y_{it} = \alpha y_{it-1} + \beta' \mathbf{x}_{it-1} + \gamma_i + \varepsilon_{it} ,$$

where y_{it} is the dependent variable (the number of magazines published by denomination i across all states at time t), y_{it-1} is the lagged dependent variable, \mathbf{x}_{it-1} is a vector of lagged explanatory and control variables, γ_i is the denomination-specific fixed effect, and ε_{it} is the error term. Again, the denominational fixed effects control for differences, net of other variables, in denominations' likelihoods of publishing magazines.

Because the lagged dependent variable is correlated with denomination-specific effects and because standard techniques to purge these effects (differencing or time-demeaning) create correlations between the transformed lagged dependent variable and the transformed disturbance, ordinary-least-squares estimates can be biased (Nickell 1981; Kiviet 1995). To circumvent this problem, we estimated fixed-effects instrumental-variable (FE-IV) models via two-stage least squares, using the `xtivreg2` routine in Stata (Schaffer 2007), which is well-tailored to the structure of our data (max $t=70$, $n=22$). We followed the standard practice of instrumenting y_{it-1}

⁶ We also estimated negative-binomial models using `xtnbreg`, with population-average effects for each denomination-state pair, robust standard errors, and a first-order serial autocorrelation correction. We discuss this alternative estimation strategy in the robustness checks section below.

with y_{it-2} since the latter was highly correlated with the former but not with the time-demeaned idiosyncratic error. We confirmed our choice of instrument with a Sargan test of the instrument's validity; we also compared the first- and second-stage R^2 to ensure adequate instrument strength.⁷ Because denominations varied greatly in size and number of magazines, we corrected for heteroskedasticity. Because unobserved factors that varied greatly between denominations and that changed slowly over time might have influenced the outcome, we corrected for serial autocorrelation. Finally, we estimated robust standard errors.

Control Variables

State-level models. We controlled for *denomination size* (total number of congregations in the focal state in the focal year) and *denominational growth rate* in the focal state (a five-year moving average). We also controlled for *state population* (in millions) and the *percent state urban population*. We obtained decennial state population data from Bogue (1985) and interpolated linearly to create annual data. We took data on municipal populations (over 2,500 inhabitants) from Purvis (1995) and the Census (1998). We included an *index of industrial production* (Davis 2004), corrected for inflation using a historical deflator index (McCusker 2001). We also controlled for the *magazine postage rate*, using data from postal histories (Rich 1924; Kielbowicz 1989; John 1995). Finally, we controlled for the possibility that intra-denominational conflict spurred the publication of competing magazines, with an indicator for denominational schism. This indicator spanned a four-year time window around each schismatic event – the two years before the schism occurred, the year of the schism, and the following year – so it captured the effects of mobilization efforts prior to schisms as well as the effects of differentiation in the immediate aftermath of schisms. We coded incidences of schisms within

⁷ Denomination size may be endogenous. If magazines did help denominations grow, as both historians and contemporaneous champions have claimed, then the causal dynamics may be recursive. To assess this possibility, we re-estimated the 2SLS model, treating denomination size as endogenous. The c statistic test of the instrument's exogeneity revealed at most marginal evidence of endogeneity ($p=.11$).

each of the twenty-two denominations from standard reference works on denominational histories (Mead 1980; Williams 1998; Melton 2003).⁸

National-level models. These include a similar set of controls, calculated for the country as a whole: *denomination size* (total number of congregations across all states), *denominational growth rate* (a five-year moving average), the *index of industrial production*, and the *magazine postage rate*. We also controlled for several factors related to the overall growth of literacy and print media that we could not include in the state-level analysis, due to multicollinearity: *miles of postal roads* in the nation, using data from postal histories (Rich 1924; Kielbowicz 1989; John 1995), *maximum printing speed* (in sheets per hour), using information from printing-industry histories (Thomas 1874; Berry and Poole 1966; Moran 1973), *immigration*, from Census data, and the number of *colleges*, using data from Marshall (1995). We also controlled for denominational schisms, as described above.

Results

State-Level Analysis

Table 2 presents descriptive statistics on all variables in the state-level analysis, while Table 3 shows the results of this analysis. Model 1 in Table 3 shows the model containing only control variables. As expected, the lagged dependent variable, the number of denominational magazines published in the focal state the previous year, has a significant positive effect. Both the index of industrial production and the magazine postage rate have effects in the expected directions, positive and negative, respectively. But surprisingly, the denominational growth rate has a significant negative effect on the growth of denominational magazines published, as does the percentage of people in the state living in urban areas.

[Tables 2 and 3 about here]

⁸ We tried other controls – number of post offices and miles of postal roads in the state plus maximum printing speed, immigration, and number of colleges in the nation – but multicollinearity prevented convergence.

Model 2 adds five variables to test all main-effect hypotheses robustly. Local pluralism has a significant positive effect on the number of denominational magazines published, which supports hypothesis 1 and is consistent with both religious-economies theory. Religious-economies theory and resource-sharing theory made opposing predictions about the effect of local market share. We see a significant positive effect of local market share, which confirms hypothesis 8 (resource sharing) and disconfirms hypothesis 2 (religious economies).⁹ The level of pluralism in all states other than the focal state, has a significant positive effect. This unexpected result runs counter to hypothesis 3, which predicted a denomination would be less likely to publish magazines in one location if it faced more intense competition elsewhere. In combination with the positive effect of local pluralism, the positive effect of extralocal pluralism indicates that competition *anywhere*, either inside or outside the focal state, spurred denominations to publish magazines to proselytize and distinguish their faith from rivals. As expected, multi-market competition induced denominations to forbear from proselytizing by reducing the number of magazines they published. This significant negative effect supports hypothesis 5. Finally, the share of a focal denomination's congregations located in the focal state has a significant positive effect, which supports hypothesis 9. Taken together, these results indicate that as the focal state became more important to a denomination – either as more of its congregations were there or as its share of that state's religious market increased – the denomination worked harder to mobilize adherents by publishing more magazines in that state.

Model 3 adds interactions between local pluralism, on the one hand, and local market share and multi-market contact, on the other hand, to test hypotheses 2a and 5a. Our test of hypothesis 2a is complicated by the fact that the main effect of local market share in model 2 was positive, in contrast to the prediction of hypothesis 2. In model 3, this positive effect was apparent only when local pluralism was high: the coefficient on the main effect of market share is nonsignificant and the coefficient on the interaction with local pluralism is positive and

⁹ In support of religious-economies theory, this result also suggests that declining market share may indicate diminishing capacity to sustain magazines.

significant. Model 3 also shows a significant positive coefficient for the interaction between local pluralism and multi-market contact, which supports hypothesis 5a. This pattern of results indicates that the tempering effect of multi-market contact was weakest when and where high levels of pluralism rendered mutual forbearance infeasible.

Table 3 also shows the estimated standard deviations for the latent denomination- and state-specific effects. The denomination-specific effect varied much less than the state-specific effect: in model 1, the estimated variance on the former was less than one-third of the variance on the latter, and in models 2 and 3, it was just over one-sixth. This indicates that differences across states had much bigger impacts on the scale of denominational publishing efforts than did differences across denominations. In other words, variations in context shaped the growth of religious media far more than did variations in theology.

National-Level Analysis

Table 4 presents descriptive statistics on all variables in our national-level analysis, while Table 5 shows the results of this analysis. Model 1 in Table 6 includes just the control variables. There were no real surprises. The instrument for the lagged dependent variable clearly had a strong positive effect. As expected, denominations published more magazines as they grew larger and as the postal network expanded; both of these variables reflect the increasing availability of resources to support publishing. Net of size, none of the other controls exert significant effects.

[Tables 4 and 5 about here]

Model 2 adds all theoretical variables to test all main-effect hypotheses robustly. National market had a significant negative effect, which supports hypothesis 4. This finding suggests that weakening national competitive positions mobilized denominations to publish more magazines, whereas strengthening competitive positions made them less apt to expand their publishing efforts. This result is robust to an alternative measure, the focal denomination's share across only those states where it had congregations (instead of all states in the Union). In results not

reported here, we also found that the more states where a denomination was the largest incumbent, the less likely it was to expand its magazine offerings, further confirming the religious-economies prediction. Given the positive effect of local market share in the state-level analysis, the negative effect of national market share suggests that antebellum religious leaders were oriented less locally than religious economies theory has assumed.

Consistent with hypothesis 6, the effect of the number of states where a denomination had at least one congregation (spatial scale) was positive and significant. This supports the claim that denominational magazines grew in response to the challenges of organizing the faithful across ever larger geographic areas. The positive effect of spatial scale is independent of the effect of denomination size (number of congregations), which suggests that that the former variable taps into spatial expansion in particular, not denominational growth in general. In contrast, the dispersion of congregations across states had a nonsignificant effect, which fails to support hypothesis 7. We experimented with other dispersion measures: we scaled the Blau index by the number of states and adjusted it to account for uneven population dispersion *within* the states where the focal denomination operated. Both alternative measures yielded nonsignificant results. Together, tests of hypotheses 6 and 7 suggest that denominations' geographic spread was important in spurring the growth of magazine-publishing efforts, but what mattered was the absolute scale of expansion across states rather than the degree to which congregations were unevenly spread across states.

Disambiguating the Effect of Denominational Market Share

While these findings confirm the predictions of several hypotheses, they also invite questions. One notable ambiguity concerns the opposite effects exerted by denominational market share at the state and national levels of analysis: positive at the state level and negative at the national level. This pattern indicates that while denominational magazines grew in response to diminishing national market share, these responses were concentrated in states where denominations were growing stronger than their local rivals. This result is consistent with the

resource-sharing model: magazines grew as a compensating reaction as denominational agents in resource-rich areas sought to address overarching challenges their faith faced.

One possible objection to this interpretation is that since the state-level models used fixed-effects estimators, the results actually show that magazines grew in times and places where a denomination's market share was *growing*, not where it was the largest. To assess this possibility, we re-examined the cross-sectional relationship between market share and magazine growth in Figures 2 and 3. Figure 2 plots the state market-share rank of the denomination founding each magazine. It shows that the founding denomination was usually the predominant faith in the state. Figure 3 plots the absolute difference between a denomination's market share in the state where it founded a magazine and its maximum market share across all states. It shows that denominations usually founded magazines in the state where they had the largest relative market share. Thus, contrary to the religious-economies claim that religious organizations behave more vigorously where they constitute a smaller portion of the population, locally dominant denominations were disproportionately active in establishing print media, which they could use to support their congregations elsewhere. The convergent results of the longitudinal and pooled cross-sectional analyses lend further support to the resource-sharing model, and they suggest that the impetus to mobilize may be spatially disconnected from the site where mobilization occurs.

[Figures 2 and 3 about here]

Robustness Checks

We conducted a variety of robustness checks. We first considered whether interactions between the Jewish and Catholic faiths, on the one hand, and Protestant faiths, on the other, differed from interactions among various Protestant faiths (Blau, Redding, and Land 1993). Catholic and Jewish congregations often have different structures than Protestant congregations, which could affect the validity of deriving market-share measures from counts of congregations (Koçak and Carroll 2008). Although Jews never constituted more than a tiny fraction of the

population, and Catholics did not constitute a large fraction until the very end of our study period, we re-estimated all models including only Protestant denominations. The results were the same as those shown here.

We also experimented with different estimators. For the state-level analysis, we estimated negative-binomial models with population-average effects for each denomination-state pair, robust standard errors, and a serial autocorrelation correction. This procedure handles overdispersion in the dependent variable and explicitly corrects for any autocorrelation remaining after including fixed effects. But it cannot compare outcomes within clusters (denomination-state-year), just between each observation and the population average (Neuhaus, Kalbfleisch, and Hauck 1991); it does not deal with endogeneity; and it assumes that, net of the effects of explanatory and control variables, each denomination's publishing efforts in each state were independent of its publishing efforts in other states, and that the actions of different denominations in each state were independent. Notwithstanding these limitations, the results of this analysis were the same as those in Table 3 for all variables except multi-market contact, which had a marginally significant negative main effect ($p=.07$) and a nonsignificant interaction with local pluralism.

For the national-level analysis, we experimented with a bias-corrected least-squares-dummy-variables estimator (LSDV), extended for use in unbalanced panels (Kiviet 1995; Bruno 2005). Instead of instrumenting the lagged dependent variable, this approach to dynamic estimation uses a bias approximation to adjust coefficient estimates. Standard errors are then calculated via bootstrapping. The LSDV method yielded results that are basically similar to 2SLS, though a few coefficients cease to be statistically significant. These results are shown in Models 3 in Table 5.

Discussion and Conclusion

This paper studies the growth of denominational magazines in the antebellum era. Like all group media, denominational magazines are potentially powerful instruments for recruitment,

indoctrination, identity construction, solidarity, and contestation (Marty *et al.* 1963; Hatch 1989; Kaufman 2002; Nord 2004; Koçak and Carroll 2008). During the nineteenth century they became a key resource for almost denominations in the United States. Examining their growth offers a window into the dynamics of denominational mobilization.

Our choice of outcome – the growth of denominational magazines – avoids a thorny problem that has plagued many studies of religious mobilization and identity building, namely definitional dependency between explanatory and outcome variables. Most previous studies have predicted religious participation, measured as the number of adherents. But the most common measure of religious pluralism has a mathematical relationship to this measure of religious participation, producing artifactual results (Voas, Olson, and Crockett 2002).

More fundamentally, our analysis breaks new ground in the study of religious mobilization by linking these processes to three more general models of why social groups expand their mobilizing and organization-building efforts: the theory of inter-group competition (Finke and Stark 1988, 1992; Olzak and West 1991), which we extend beyond its original local focus to consider interdependencies across locales; the view of denominations as social communities (Herberg 1960; Warner 1993; Becker 1999) that use media to connect their members across long distances (Park 1940; Anderson 1991; Calhoun 1998); and the model of denominations as multi-level associational structures for sharing pools of resources across locations (Chaves 1993). We thereby advance debates about religious mobilization beyond the narrow question of whether it increases or decreases with local pluralism to consider the growth of denominational media as a response to the multifaceted challenges groups face in modern fields of social action.

To fairly test predictions derived from all three lines of reasoning, we were careful to capture observable indicators of underlying causal mechanisms and to make explicit what have often been implicit assumptions about geography. Therefore, we analyzed denominational responses to environmental dynamics at both the local (state) and national levels. We also applied dynamic techniques to longitudinal data, so we were able to carefully assess causality,

which is an advance on previous, mostly cross-sectional research. The last column in table 1 summarizes our findings. We discuss the findings for the predictions derived from each perspective in turn.

We found mixed support for the original (locally focused) version of religious-economies theory. Increasing local market pluralism increased the number of denominational magazines published, as expected. But increasing local market share increased rather than decreased magazine publishing, which runs counter to the religious economies prediction. And this effect was seen only when local pluralism was strong.

We also found partial support for our extensions of religious-economies theory. At the local level, multi-market contact dampened religious publishing, and this effect was strengthened by increases in local pluralism. Both were as expected. But extralocal pluralism had an unexpectedly positive effect. Moreover, decreasing national market share was associated with increases in the number of denominational magazines published at the national level. This result suggests competitive pressures may have been operating at the national rather than local level.

We found partial support for the argument that denominational publishing expanded to build community as a counter to geographic disconnection: there was a positive and significant effect of spatial scale, and a positive but nonsignificant effect for spatial dispersion.

Finally, we found consistent support for the conception of denominations as organizations sharing resources across locations. Both the positive main effect of local market share and the positive effect of the fraction of a denomination's congregations in the local market were consistent with this model.

Taken together, these results carry several implications for our thinking about religious mobilization and identity building. Most basically, we must be explicit about the geographic scope of these processes and must consider factors beyond pure competition. In particular, our results suggest previous debates about the mobilizing and identity-building effects of religious pluralism have been muddled in part because they have failed to account for the basic fact that modern groups are structured translocally. We have demonstrated the power of thinking outside

the local box by showing how geographically dispersed groups use media to forge community and redistribute resources across great distances.¹⁰ Furthermore, our results suggest that religious organizations choose their battle site strategically: they forbear from aggressive mobilization efforts in locations where they meet many powerful multi-market rivals.

Our results also carry methodological implications for research on modern groups more generally. In particular, our finding of a spatial disconnect between the social processes that catalyze organization-building and the sites where mobilizing responses occur highlights the limitations of local ecological study designs which have dominated research on inter-group relations, including the literature on religious mobilization. It is not just the case that the incidence of group mobilization across locales is non-independent due to spatial diffusion processes (*e.g.*, Land, Deane, and Blau 1991; Cunningham and Phillips 2007). Rather, researchers must be attentive to the fact that modern groups are themselves complexly structured as translocal communities and sets of organizational affiliations, in which members' concerns and actions may be oriented beyond the bounds of their immediate localities. This implies that future research on many different kinds of organized groups – ethnic communities, political factions, and professions – should assess not only outcomes within local communities, but also outcomes between communities and across larger regions. While our analysis focuses on the nineteenth century, this issue has only become more pronounced over time, as the ability to transfer monetary, symbolic, and organizational resources across space has increased.

¹⁰ Empirical support for the theory of denominations as multi-location organizations that share resources between units is suggestive, not conclusive. In order to definitively prove the validity of this theory, one would have to gather geographic data on the circulation of magazines and other denominational media. Unfortunately, such data simply do not exist for the antebellum era.

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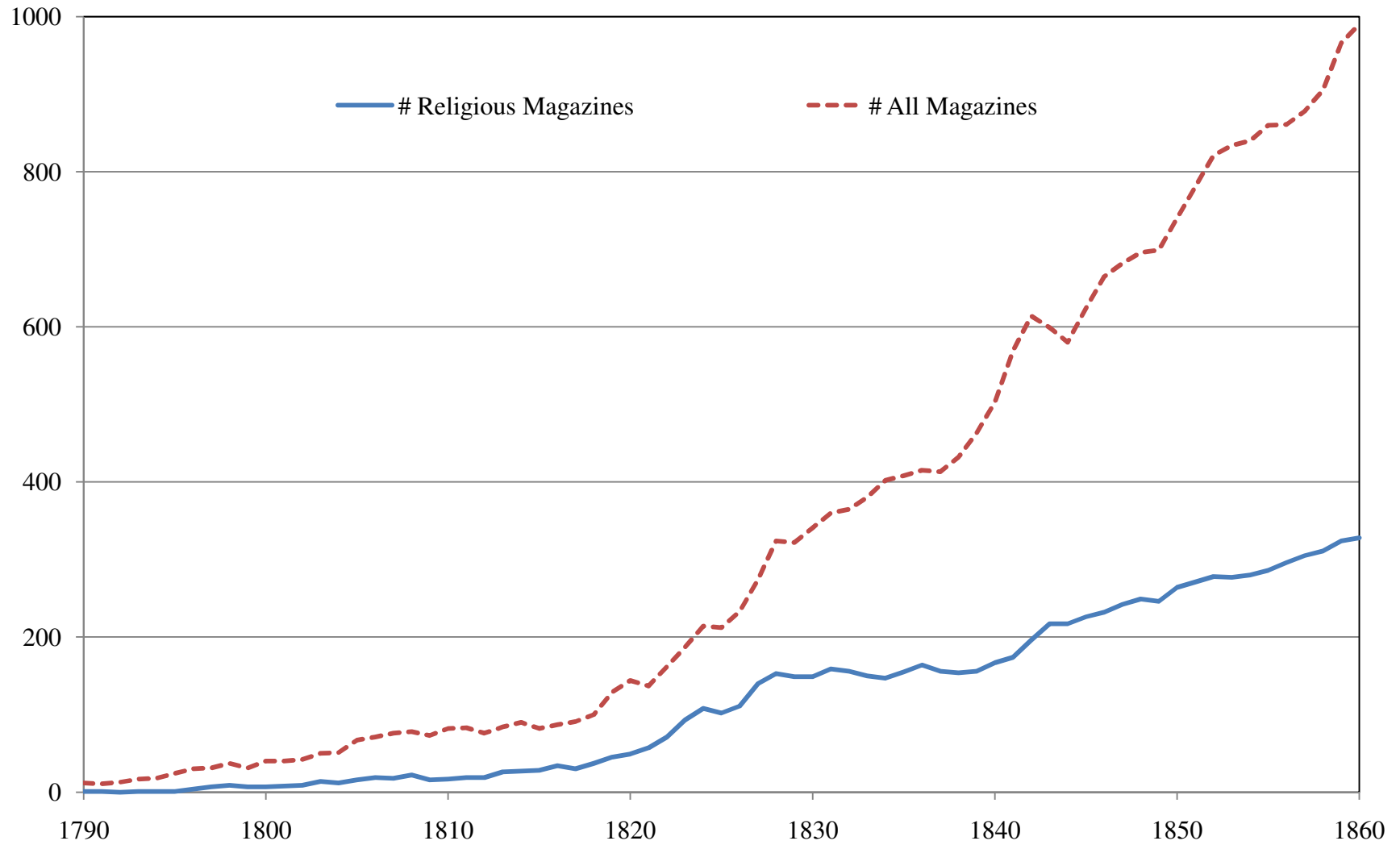
Figure 1: The Growth of Religious Magazines in Antebellum America

Table 1: Summary of Predictions about Religious Magazine Publishing

Perspective	H	Level of Analysis	Independent Variable(s)	Predicted Effect	Result
Religious Economies – Original Formulation	1	Local	Local market pluralism (Blau index of heterogeneity of denominations in the location)	+	✓
	2	Local	Local market share (percentage of local congregations affiliated with the denomination)	–	✗
	2a	Local	Local market share × local pluralism	– –	✗
Religious Economies – Extended to Consider Extralocal Competition	3	Local	Extralocal pluralism (all markets except the focal one)	–	✗
	4	National	Average market share across all locations where the denomination has congregations	–	✓
Religious Economies – Extended with Multi-Market Contact Theory	5	Local	Multimarket contact	–	✓
	5a	Local	Multimarket contact × local pluralism	– –	✓
Religion, Community, and Identity	6	National	Spatial scale (number of locations where the denomination has congregations)	+	✓
	7	National	Spatial dispersion (Blau index of the denomination’s heterogeneity of locations)	+	✗
Religions as Organizations Sharing Resources across Locations	8	Local	Local market share	+	✓
	9	Local	Fraction of the denomination’s congregations in the location	+	✓

Table 2: Descriptive Statistics for Variables Used in the State-Level Analysis

Variable #	1	2	3	4	5	6	7	8	9	10	11	12
Mean	.430	88.1	.173	.756	.121	62.7	10.1	.742	.099	18.9	.814	.078
Standard Deviation	1.15	172.	.477	.666	.124	54.1	31.0	.098	.140	9.47	.173	.124
Minimum	0	.5	-.667	.047	0	4.82	2	.237	0	1	.425	0
Maximum	13	2,341	24	3.88	.633	159	300	.871	.868	34	2	.972
1 Number of Denominational Magazines												
2 Denomination Size (Number of Churches)	.550											
3 Denominational Growth	-.039	-.053										
4 State Population/1,000,000	.448	.301	-.046									
5 Percent State Urban Population	.261	.017	-.082	.243								
6 Index of Industrial Production	.148	.156	.040	.316	.332							
7 Magazine Postage Rate (cents)	-.040	-.033	-.010	-.063	-.064	-.195						
8 Local Pluralism	.169	.004	-.091	.301	.378	.098	.000					
9 Market Share in the State	.169	.594	.006	-.159	-.116	-.095	.017	-.254				
10 Extralocal Pluralism	.204	.394	.071	-.037	.050	.456	-.092	-.153	.379			
11 Multi-Market Contact	-.240	-.297	.002	-.168	-.093	.054	-.008	-.199	-.540	-.229		
12 State Share of Denominational Churches	.210	.140	-.056	.312	.128	-.153	.031	.262	-.394	.015	.198	

Note: This table is based on 14,389 state-year observations on 22 American denominations in 33 states between 1790 and 1860.

**Table 3: Poisson Regression Models (with Crossed Unit Effects)
of the Number of Magazines Published by Each Denomination in Each State in Each Year**

	(1)	(2)	(3)
Lagged Number of Denominational Magazines in the State	.321*** (.007)	.306*** (.008)	.305*** (.008)
Denomination Size (#Churches in the State/1,000)	-.075 (.074)	-.908*** (.092)	-1.02*** (.097)
Denominational Growth Rate in the State	-.126** (.049)	-.063 (.049)	-.056 (.048)
State Population/1,000,000	.040 (.047)	.290*** (.050)	.306*** (.050)
Percent State Urban Population	-.820* (.342)	-2.24*** (.373)	-2.18*** (.376)
Index of Industrial Production (constant \$1860/100)	.393*** (.055)	.444*** (.074)	.436*** (.074)
Magazine Postage Rate (cents/100)	-.176* (.070)	-.173** (.071)	-.169* (.071)
Local Pluralism (Blau Index for the State)		3.76*** (.377)	-1.77 (1.26)
Market Share in the State		2.58*** (.187)	-.187 (.711)
Extralocal Pluralism (Blau Index for all Other States)		.023*** (.005)	.023*** (.005)
Multi-Market Contact		-1.60*** (.228)	-5.91*** (1.18)
State Share of Denominational Churches		2.33*** (.144)	2.15*** (.147)
Local Pluralism × Market Share in the State			4.33*** (1.08)
Local Pluralism × Multi-Market Contact			5.72*** (1.51)
Constant	-2.69*** (.277)	-4.90*** (.457)	-.765 (1.03)
Standard Deviation of the Latent Denomination-Specific Parameter	.683 (.115)	.474 (.086)	.469 (.086)
Standard Deviation of the Latent State-Specific Parameter	1.26 (.190)	1.15 (.177)	1.13 (.175)
Log-likelihood	-7,984.	-7,519.	-7,504.
Wald χ^2	5,281.	5,577.	5,570.
Number of Observations	13,990	13,975	13,975

Notes: This table presents the results of mixed Poisson regressions of the number of magazines published by a denomination in each state and year for 22 American denominations from 1790 to 1860. These models include crossed latent effects for state and denomination. Standard errors are in parentheses below parameter estimates. * indicates $p < .05$, ** $p < .01$ and *** $p < .001$, two-tailed t tests.

Table 4: Descriptive Statistics for Variables Used in the National-Level Analysis

Variable #	1	2	3	4	5	6	7	8	9	10	11	12	13
Mean	4.97	10.1	.045	.057	45.9	.066	1.08	.229	1.14	82.4	.052	13.3	.822
Standard Deviation	7.95	23.0	.104	.232	50.2	.076	.728	.551	1.01	63.2	.081	9.09	.187
Minimum	0	.015	-.286	0	4.17	.002	.038	.020	.096	16	.000	2	.083
Maximum	44	192.	2	1	158	.2	.251	3.00	2.82	258	.375	35	1
1 Number of Denominational Magazines													
2 Denomination Size (# Churches/1,000)	.830												
3 Denominational Growth	-.024	-.028											
4 Schism Dummy (yes=1)	.161	.153	-.028										
5 Index of Industrial Production	.466	.268	-.003	.029									
6 Maximum Printing Speed (pages/hour)	.460	.267	-.016	.016	.980								
7 Postage Rate for Magazines (\$)	.496	.273	-.006	.071	.934	.919							
8 Postal Roads (millions of miles)	-.163	-.079	.004	-.031	-.252	-.236	-.329						
9 Immigration	.453	.246	.008	.040	.802	.824	.853	-.290					
10 Number of Colleges	.470	.270	-.010	.060	.973	.940	.961	-.269	.788				
11 National Market Share	.567	.796	-.038	.182	-.052	-.050	-.060	.026	-.056	-.055			
12 Spatial Scale (# states)	.770	.648	-.023	.130	.371	.374	.371	-.104	.361	.361	.627		
13 Spatial Dispersion (Blau index)	.277	.246	.064	-.026	-.008	-.004	-.010	.002	-.011	-.010	.298	.421	

Note: This table is based on 1,314 annual observations of 22 American religious denominations between 1790 and 1860.

Table 5: Analysis of the Number of Magazines Published by Each Denomination Each Year

<i>Modelling Strategy</i>	(1)	(2)	(3)
	2SLS FE-IV		B-C LSDV
Lagged Number of Denominational Magazines (instrumented)	0.919*** (0.012)	0.866*** (0.018)	0.913*** (0.021)
Denomination Size (total # churches /100)	0.025*** (0.004)	0.048*** (0.006)	0.031*** (0.006)
Denominational Growth Rate	0.210 (0.226)	0.127 (0.327)	0.178 (0.319)
Schism Dummy (yes=1)	0.0607 (0.214)	0.101 (0.218)	0.0669 (0.220)
Index of US Industrial Production (constant \$1860/1000)	-0.226 (0.484)	-0.127 (0.500)	-0.193 (0.581)
Maximum Printing Speed (# pages per hour/100,000)	1.629 (2.136)	0.255 (2.240)	0.916 (2.317)
Post Roads//100,000	0.737*** (0.209)	0.787*** (0.228)	0.655* (0.314)
Magazine Postage Rate (\$/100)	-1.553 (5.950)	-2.136 (6.124)	-2.229 (6.542)
Immigration/1,000,000	0.039 (0.061)	-0.035 (0.069)	-0.009 (0.093)
Number of Colleges/100	-0.557 (0.355)	-0.734* (0.372)	-0.693 (0.499)
National Market Share		-5.379** (1.66)	-3.290 (1.963)
Spatial Scale (number of states)		0.064*** (0.015)	0.054*** (0.017)
Spatial Dispersion (Blau index)		0.201 (0.538)	-0.170 (0.867)
Number of Observations	1,346	1,314	1,309

Notes: This table presents regressions of the number of magazines published by a denomination in a each year for 22 American denominations from 1790 to 1860. Models 1 and 2 present two-stage least-squares fixed-effects, with instrumental variables models (2SLS FE-IV), corrected for serial autocorrelation and heteroskedasticity. As a robustness check, model 3 presents results using a bias-corrected least squares dummy variables estimator (B-C LSDV). Standard errors are in parentheses below parameter estimates. * indicates $p < .05$, ** $p < .01$ and *** $p < .001$, two-tailed t tests.

Figure 2:
Frequency Plot of Denominational Market-Share Rank in State where Magazine was Founded

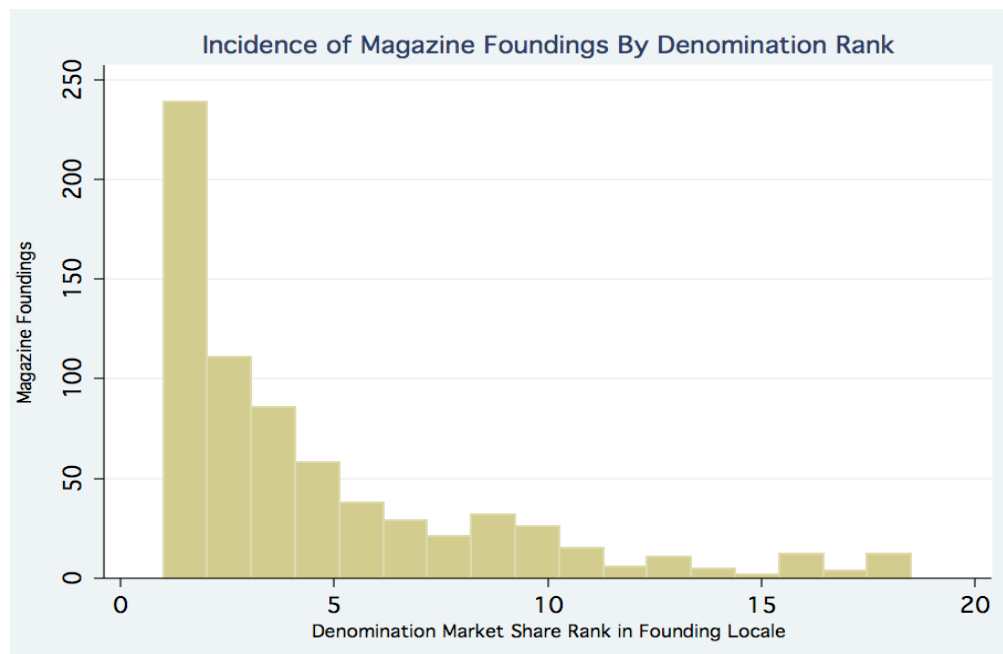


Figure 3:
Denominational Market Share in States where Magazines Were Founded, Relative to the Denomination's Maximum Share across All States

