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Household Production, Human Capital, and the Economics of Religion*

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This essay uses the concepts of household production and human capital to illustrate the economic approach to religion. I develop and test a simple model of religious behavior that explains numerous empirical findings: patterns of denominational mobility, religious intermarriage, and conversion ages; the relationship between church attendance and contributions; and the influence of upbringing and interfaith marriage on levels of religious participation.

Economic language has found its way into discussions of religion. We hear talk these days of "religious markets" and "religious entrepreneurs." Religious "consumers" are said to "shop" for churches much as they shop for cars: weighing costs and benefits, and seeking the highest return on their spiritual investment. Religious "producers," the erstwhile clergy, struggle to provide a "commodity" at least as attractive as their competitors'. Religion is advertised and marketed, produced and consumed, demanded and supplied.

One is tempted to dismiss such statements as a passing fad, misguided and possibly pernicious symptoms of a materialistic age with little or no appreciation of religion's true nature. This response is in my opinion mistaken. The logic of economics and even its language are powerful tools for the social-scientific study of religion. Economic theory offers a new paradigm for religious research, one that may eventually replace or encompass many of the approaches now competing for scholars' attention. The economic

approach is both conceptually clean and empirically fruitful. It accounts for much of what is already known about religious participation, generates new predictions that suggest new avenues for empirical research, and forges links between the study of religion and a growing body of economic research on other "non-market" institutions and activities.

Modeling Religious Behavior

Economic theories of religious behavior assume that people approach religion in the same way that they approach other objects of choice. They evaluate its costs and benefits and act so as to maximize their utility. Hence they *choose* what religion (if any) they will accept and how extensively they will participate in it. These choices need not be permanent -- people can and do change their religious identities or levels of religious participation over time. As in any other market, the consumers' freedom to choose constrains the producers of religion. Ultimately, it determines the content of religious commodities and the structure of the institutions that provide them. These effects are felt most strongly where religion is relatively unregulated and, as a consequence, competition among religious firms is pronounced.

Economic theory raises questions that we might otherwise ignore, questions such as: How do people produce religious "commodities" and how do these commodities differ from standard, secular commodities? Why are religious commodities usually produced and consumed collectively; why are they not more often packaged and sold for money?

What are the costs, both direct and indirect, of different religions and different religious practices? How do personal attributes, social settings, and technology affect these costs? Do "cheap" religions, which promise much and demand little, enjoy more success than costly religions? What are the consequences of religious market structure; does it matter if a given market is monopolistic or competitive, regulated or free? These are the kind of questions that I have sought to answer in my research. This essay focuses on a few such questions -- questions about church attendance, contributions, and religious affiliation. It illustrates the value of the economic approach through a simple model of religious behavior.¹ The model explains observed patterns in denominational mobility, religious intermarriage, conversion ages, the relationship between church attendance and contributions, and the influence of upbringing and interfaith marriage on levels of religious participation. The model rests upon the concepts of household production and human capital.

Household Production and Human Capital

Religious commodities are not physical goods, like cars or computers, that are readily manufactured, packaged, and sold in stores. Nor are they services, like hair cuts or banking, that we have others do for us. Rather, they fall into a third category that economists call "household commodities."

The study of household commodities, sometimes called "the new home economics," was pioneered by Gary Becker in the 1960s (Becker 1964, 1965). Since then

it has greatly expanded the boundaries of economics, enabling economists to analyze behaviors traditionally deemed beyond their reach: fertility, education, marriage and divorce, health, discrimination, and even crime (Becker 1976). Its central feature is that families are viewed as a quasi-firms engaged in the production of "household commodities." These commodities may be as concrete as meals and laundry or as abstract as relaxation and love. Unlike the products of a commercial firm, household commodities are consumed by family members rather than being sold. But like the products of a firm, household commodities can only be produced with scarce resources; they require inputs of purchased goods, household labor, and human skill. For example, a traditional, home-cooked meal is produced when a family member combines purchased inputs (such as meat, milk, and flour), with machine services (of sink, stove, refrigerator), and his or her own skilled labor to produce a valued output, which is promptly consumed by family members. As this example suggests, a fair amount of household production is just a scaled-down version of market production. But the real strength of the household production approach lies in its applicability to abstract commodities such as recreational enjoyment, relaxation, health, and childrearing. So, for example, even though we can not quantify the relaxation and enjoyment that come from recreational activities, we may usefully speak of households "producing" this commodity by combining purchased inputs (such as ski equipment, automobile services, or VCR's, TV's, and stereos) with their own skilled labor and time.

Productive skills enter analyses of both commercial and household production because people's skills critically affect the quality and quantity of what they produce. Such

skills are just as important in childrearing and home maintenance as in construction and banking. Economists often refer to productivity enhancing skills as "human capital." They do so because human skill and physical capital both are needed to turn raw labor and physical inputs into valued commodities, and because people typically accumulate their skills through a process of investment (via education and practice) that parallels the investment that firms make in physical equipment. The importance of human capital is underscored by studies which find that economic progress in developing countries is more often constrained by work force inadequacies, such as low levels of health, education, and training, than by limited access to modern equipment and technology.

Human capital derives from various sources: native ability, general education that contributes to one's productivity across the board, and so-called "specific" education or training that enhances the ability to perform specific tasks. Cooking skills provide a concrete example of each source: native ability may endow one with a fine palate or ability to memorize complex recipes; general education helps one to plan nutritious meals, buy wisely, and benefit from cook books; and specific training teaches one specific recipes, cooking techniques, and so forth. General education and specific skills likewise affect one's ability to produce abstract commodities such as recreation and childrearing. In the home as in the workplace, most general training is acquired through schooling, and most specific training is acquired "on the job" through experience, experimentation, and the imitation of others.

Religious Production and Religious Capital

Religious practice can also be viewed as a productive process. Purchased goods, household time, and human capital affect a family's capacity to "produce" religious satisfaction just as they affect its capacity to produce meals, health, offspring, and recreational enjoyment. To be sure, religious products are complex and largely unobservable (though possibly no more so than recreational enjoyment). Nevertheless, the *inputs* to religious production are measurable and indeed are already routinely measured by researchers. These inputs include purchased goods, such as Sunday attire and transportation, sacrificial offerings, and money contributions which finance a church's operation and facilitate its charitable works. They also include family members' time and labor, such as time spent attending and traveling to and from church services, devotional time spent praying, meditating, and reading scriptures, and time and effort required for religious charity or other conduct motivated by religious concerns. Human capital, particularly human capital pertaining specifically to one's religion, comprises a third class of inputs. It is the input class most central to my analysis.

Although we are all familiar with the concept of a skilled clergy, we sometimes dismiss rank and file church members as passive consumers of religion. The household production approach reminds us that church members do not merely rely upon the skills of experts, but also employ their own skills and experience to produce religious satisfaction. The skills and experience specific to one's religion includes religious knowledge,

familiarity with church ritual and doctrine, and friendships with fellow worshipers. It is easy to see that these skills and experiences, which I will call *religious* human capital, are an important determinant of one's ability to produce and appreciate religious commodities. For example, the quality of fellowship experienced within a congregation depends strongly on what has been invested in these relationships, and over time this fellowship can become a major source of satisfaction and a major motive for continued church participation. Likewise, it is difficult if not impossible to appreciate religious services without first becoming familiar with the doctrines, rituals, and traditions that underpin them. It is also true that religious capital is an important *product* of religious activity. Many religious activities are explicitly "marketed" as a type of personal investment: religious services are designed not only to inspire or entertain the participants but also to instruct them; religious acts of charity and love are supposed not only to better the lot of others but also to better the actor as well; and in one way or another virtually every religion promises improved prospects in this life or the next.

These examples illustrate a fundamental interaction between religious capital and religious participation. Religious capital is both a prerequisite for and consequence of most religious activity. Religious capital -- familiarity with a religion's doctrines, rituals, traditions, and members -- enhances the satisfaction one receives from participation in that religion and so increases the likelihood and probable level of one's religious participation. Conversely, religious participation is the single most important means of augmenting one's stock of religious human capital. Religious activities yield a stock of specialized skills that

enhances the satisfaction received from subsequent religious activities. In this last respect, religion is like many other household activities that involve learning by doing. It is, to use a term introduced by Stigler and Becker (1977) a form of "consumption capital."

Putting the Model to Work

In religion as in economics the concepts of household production and human capital prove their value by generating testable predictions. Some of these predictions provide theoretical explanations for facts that are already well known but not well understood. Others suggest new lines of empirical research. The discussion below concerns predictions about denominational mobility, religious intermarriage, conversion, and religious participation. My purpose is to illustrate the value of an approach rather than to prove any particular hypothesis. Hence, the treatment of each subject is brief, limited to a statement of the model's predictions and a summary of the empirical evidence relating to them.

Denominational Mobility

Religious training, unlike general education and occupational training, is received directly from parents and the religious institutions they support. Hence, children are more likely to remain within their parents' denominations than to remain within their parents' occupations. Most children's religious human capital is acquired in a context determined and favored by their parents. As children mature and decide for themselves what beliefs they will accept and what church they will attend, they naturally gravitate to those of their

parents. And even those who do switch religions will tend to switch to religions that are similar to the one in which they were raised. Hence the likelihood of conversion between particular religious groups should be greater the more similar the groups, and that overall rates of conversion to and from a particular group should be lower the more nearly unique the group.

Empirical Evidence: These predictions are confirmed by James Kluegel's (1980) statistical analysis of denominational mobility. Drawing on merged data from five years of the National Opinion Research Center's General Social Surveys, Kluegel cross-classified about six thousand white adult respondents by their current denomination and "background" denomination (in which they were raised). Members of all denominations showed a strong tendency to maintain their background affiliation and this tendency was stronger in groups that have fewer close substitutes. The two most distinctive major religious groups in America, Jews and Catholics, had retention rates of 87% and 85% respectively. The less distinctive Protestant denominations had lower retention rates, ranging from 78% for Lutherans to 55% for Disciples of Christ. Those raised with no religious affiliation, and hence little or no religious capital, remained unaffiliated only 38% of the time. Moreover, those who had changed religious affiliation manifested a clear affinity for denominations that were similar to their background denomination. Similar patterns appeared in Samuel Mueller's (1971) study of intergenerational religious mobility.

Conversion Ages

The human capital model predicts that religious switching, like job changing, will tend to occur early in the life cycle as people search for the best match between their skills and the context in which they produce religious commodities. Over time the gains from further switching diminish as the potential improvement in matches diminishes and the remaining years in which to capitalize on that improvement decrease, whereas the costs of switching increase, as one accumulates more capital specific to a particular context. Conversions among older people should be very rare.

Empirical Evidence: These predictions are strongly confirmed by empirical studies. (See Iannaccone 1990 for details.) Three studies conducted about the turn of the century found that people made their first personal religious commitments at a mean age of 16 or 17. In 1928, a large survey found that religious "awakenings" usually began at age 12, but clear-cut conversion experiences usually occurred around age 16. In 1954, the most common age of "converts" at Billy Graham crusades was 15. Not surprisingly, the typical religious commitment in all these studies was a personal affirmation of the religion in which the subject had been raised. Decisions to join a different church usually come later. For example, my own analysis of data from the 1988 General Social Surveys find that people are most likely to switch religions in their late teens and early twenties (figure 1). Dean Hoge (1981) obtained a similar result in his study of 210 Catholic converts. The basic conclusion is clear: the decisions that lead to new religious commitments cluster in

the early part of the life-cycle. Eleventh hour conversions of aging sinners preparing at last to meet their Maker are mostly mythical.

[FIGURE 1 ABOUT HERE]

Religious Intermarriage

A household can produce religious commodities more efficiently when both husband and wife share the same religion. Shared-faith households benefit from "economies of scale." A single car drives everyone to church; there is no question as to how time and money contributions will be allocated over different religions; and parents need not debate the religion in which their children will be raised. (The magnitude of these costs is underscored by Becker, et. al. 1977 who found significantly higher rates of divorce for intermarried couples even when other traits were held constant.) Hence, the same forces that lead people to remain with the religion of their parents also lead them to choose mates from within their religion. Moreover, even those who do intermarry will have a strong incentive to later adopt the religion of their spouse (or vice versa). The efficiency gains from such marital realignments will tend to be greater when the less religious spouse converts to the faith of the more religious spouse.

Empirical Evidence: Empirical studies find patterns in religious intermarriage very similar to those of intergenerational religious mobility. (This is to be expected, since most intergenerational mobility is due to one spouse adopting the religious affiliation of the

other.) The tendency to marry within one's denomination is always very strong; *intramarriage* rates are higher in denominations with fewer close substitutes; and the *intermarriage* that does occur tends to be between people from relatively similar religions. These patterns have been verified in both Canadian and U.S. data.

Intermarriage and Participation

Empirical studies consistently find rates of church attendance to be much higher among marriage partners sharing the same religion. The reason for this finding, however, has been unclear, prompting one pair of researchers to remark that "a convincing explanation, if found in future research, would probably have far-reaching implications for understanding motivations for church participation today" (Hoge and Roozen 1979:47).

The household production model provides a simple explanation for the higher rates of church attendance within shared-faith marriages. Partners of the same religion can produce religious commodities more efficiently. Their religious activities tend to be complementary, lowering the overall costs and raising the overall benefits of religious participation. In mixed-faith marriages, complementarity is replaced by competitive (or at best neutral) use of family resources. Since this argument applies to any religious activity that permits a sharing of partners' resources, we would also expect more contributions and perhaps even more prayer and Bible reading in shared-faith marriages. On the other hand, a shared faith should have only indirect effects on personal belief.

Empirical Evidence: I have tested and confirmed these predictions with regression analyses of data from a wide range of surveys -- two national surveys of American Catholics (conducted in 1963 and 1974), a 1963 survey of church members in the San Francisco Bay Area; and the 1972-1991 General Social Surveys. In each case, I found that married respondents reported much higher rates of church attendance, contributions, and prayer if married to a spouse of the same religion. Indeed, the differences were on the order of thirty to forty percent.² These differences remained strong and statistically significant even after "controlling" for background variables, such as age, income, education, and denomination. (See Iannaccone 1990 for details.)

There is, however, an alternative explanation for these results that has more to do with sampling bias than productive efficiency. People who are more serious about their religion, and so more likely to participate in it, may well be more likely to marry in their faith. If much of this sorting goes on, members of shared-faith marriages will average higher rates of religious participation than their mixed-faith counterparts *even if marriage itself has no impact on an individual person's participation*. Although the household production model predicts some sorting (since people desiring high levels of religious participation gain more than others from a shared-faith marriage), the model also predicts higher rates of participation in shared-faith marriages *even if no sorting occurred*. Stated differently, the model predicts that members of shared-faith marriages will not only participate more than members of inter-faith marriages, but also more than they

themselves would have had they remained single. We can therefore measure the relative importance of pure sorting versus pure efficiency effects by comparing religious participation rates among single, mixed-faith, and shared-faith respondents. Under pure sorting, average participation rates for single people should equal those of married people as a whole, with mixed-faith marriages averaging less and shared-faith marriages averaging more. Under pure efficiency, average participation rates for single people should be less than those of married people as a whole, with mixed-faith marriages averaging about the same and shared-faith marriages averaging more.

As it turns out, the household production model passes this test. Statistical results indicate that production efficiency has an impact that is independent of and stronger than the impact of sorting alone. For every measure of religious *participation* -- attendance, contributions, and prayer -- mixed-faith married respondents participate only slightly (and never significantly) less than single respondents, whereas shared-faith married respondents participate substantially (and significantly) more than single respondents. On the other hand, in regressions measuring belief (in the Bible and in an afterlife) marriage effects are insignificant. Both these sets of results are consistent with the "efficiency" model but contradict the pure "sorting" model.

Religious Upbringing

Since religious capital accumulates largely as a by-product of religious participation, and since religious capital provides an incentive for further religious

participation, the household production model predicts that people's adult rates of religious participation correlate strongly with their childhood religious participation and training.

Empirical Evidence: It comes as no surprise that strong religious upbringing constitutes a "leading indicator" of adult religious participation. Nevertheless, it is worth noting that careful statistical analyses support this prediction as well. In the 1974 Catholic American survey, both childhood religious instruction and parents' frequency of mass attendance (while the respondent was growing up) have positive effects on the respondents' current contributions and mass attendance. The effect of childhood religious instruction is also positive in the 1963 church member study (which did not include information on parental church attendance). And the effect of parental church attendance is again positive in the 1972-1990 General Social Surveys (which do not include information on childhood religious instruction).

Time Versus Money

The concept of "input substitution" underpins many of the most distinctive and important predictions of household production theory. Virtually all production processes, whether household or commercial, require both purchased inputs and labor inputs. But the *ratio* of these inputs can often be varied. Home cooked meals and restaurant meals can be equally good (or bad), but the former require much greater inputs of household time relative to purchased goods. In like manner, lawns can be watered by hand or by

automated sprinklers, trips can be taken by bus or by plane, and children can be cared for by parents or preschools. In each of these cases, the efficient method of production will depend on the monetary value of the household's time. The higher the value of time, the more likely it is that the household will substitute time-saving, "money-intensive" forms of production for money-saving, "time-intensive" forms. Hence, it comes as no surprise that people with high wage rates are more likely to dine out, install sprinklers, travel by air, and enroll their children in preschools.

Applied to religion the concept of input substitution yields a uniquely economic prediction: people with high monetary values of time will conserve on their time by engaging in money-intensive religious practices. In particular, their money contributions will be high relative to their rates of attendance and vice versa. People with low monetary values of time will adopt more time-intensive practices and so do the opposite. These predictions provide a strong test of the proposed model since they have no precedent within traditional models of religious participation.

Empirical Evidence: The three surveys discussed above support the prediction that religious participation is more "money-intensive" among people with high values of time. Regression analyses show that income is one of the strongest predictors of the ratio of attendance to contributions. Richer people contribute more dollars per service they attend and, conversely, attend less per dollar they contribute. Hence, higher income leads to participation that is more money-intensive and less time-intensive. This finding must be

kept in proper perspective, however. People's participation in religious activities becomes less time-intensive (and hence more money-intensive) whenever their time inputs decrease *relative* to their money inputs. But this relative decrease need not be accompanied by a decrease in the *absolute* amount of time devoted to religious activity. So, for example, the attendance statistics show that income has a positive, albeit small, effect on absolute levels of attendance. In other words, the attendance/contribution ratio decreases simply because contributions have increased much more rapidly than attendance. This leads one to ask whether the concept of substitution between time and money really has relevance. Might not the regression results simply reflect people allocating to religion a fixed fraction of their time (e.g, one morning per week) and a fixed fraction of their income (e.g, 5 percent per year)?

Figures 2 and 3 help to distinguish between these two competing interpretations by providing a different view of the data. Figure 2 plots respondents' average rates of contributions and church attendance as a function of their ages. Notice that attendance and contributions are in no sense static over the life cycle -- people do not merely allocate a fixed fraction of their time to religion, nor do they merely allocate a fixed fraction of their income. Attendance displays a strong upward trend which begins to level out and only after age 70.³ Contributions increase steadily and far more rapidly than income between ages 25 and 45, remain fairly stable from 45 to 65, and decline thereafter. Despite these differing patterns, the average *ratio* of attendance to contributions (plotted in figure 3) reveals a life-cycle pattern that is both regular and consistent with the

household production model: compared to people in their prime-earning, middle years, the young and the old attend much more relative to each dollar they contribute.⁴ Conversely, the age groups with the highest monetary values of time contribute the greatest number of dollars per hour of church attendance.

[FIGURES 2 AND 3 ABOUT HERE]

In short, the data across both age groups and income strata support the prediction that people substitute money for time in the production of religious commodities. How might this substitution occur? My own, admittedly unsystematic, observations suggest that richer congregations opt for a variety of time-saving, money-intensive, practices: shorter services, more reliance on professional staff (such as clergy, custodians, choir directors, and paid soloists), larger and more costly facilities (permitting less use of members' homes for special meetings), less reliance on volunteered labor, and more reliance on purchased goods and services (such as catered meals in place of pot-lucks). A careful, comparative study is needed to determine whether these observations really reflect an overall pattern.

Is Religion "Addictive"?

We saw in figure 2 that rates of religious participation, particularly church attendance, increase with the age of the respondent. Numerous other surveys taken in the past fifty years confirm this finding and leave little doubt that the observed pattern is

indeed linked to age.⁵ Household production models offer two very different explanations for this pattern. The first, due to Azzi and Ehrenberg (1975), rests on the assumption that most people attend church and contribute in order to accumulate afterlife rewards. If in fact most religious activities constitute a form of afterlife investment, then rational people will tend to defer their religious investing until they are relatively old and, conversely, will devote most of their youthful energies to secular pursuits. An alternative explanation, which I introduced in my doctoral thesis, is that religion is habit forming. If, as I have argued throughout this essay, religious satisfaction depends critically upon the stock of religious human capital that people accumulate, and if this stock of human capital is the product of prior religious participation, then religious involvement will tend to be self-reinforcing. As people age, they will tend to become more religious because, in a very real sense, they become more adept at being religious. Compared to the afterlife explanation, habit formation has several attractive features: it does not invoke unique assumptions about the nature of religious commodities; it rests on the same basic concept that we have used to explain other aspects of religious behavior; and it fits the data somewhat better.⁶ (See Iannaccone 1984 for details.)

I have described the habit formation model because it illustrates the unexpected synergies that often arise in the study of "non-market" behavior. When I first began studying religious behavior for my thesis, it became immediately apparent that upbringing and past religious involvement exerted major influence on a person's current religious practices. As a student of Gary Becker, it was only natural that I try to model this

tendency as the consequence of rational choice and the accumulation of human capital. The resulting model (Iannaccone 1984, 1986) formalized Stigler and Becker's (1977) treatment of addiction. Subsequently, Becker and Murphy (1988) greatly extended this line of research in their "Theory of Rational Addiction." The economics of religion thus benefitted from and contributed to a very different line of research.

Conclusion

The economic concepts of household production and human capital generate a powerful model of religious participation. Although the model side-steps questions about what religion "really" is,⁷ it nevertheless illuminates a great many issues: denominational mobility, religious intermarriage, the timing of conversions, the influence of religious upbringing, the ratio of attendance to contributions, and the impact of mixed-faith marriage.

In each case, the model's predictions receive strong empirical support. Conversions are concentrated in the early stages of the life cycle, as people search for the best match between their religious skills and the context in which they produce religious commodities. Religious mobility, like career mobility, diminishes as people age. The patterns of mobility also fit the model's predictions. People switch denominations in ways that preserve the value of their religious human capital. Rates of intergenerational mobility tend to be low, particularly for people raised in distinctive religious traditions, and

the switching that does occur tends to be among similar denominations. Religious intermarriage displays similar patterns. People seek out partners whose religious human capital complements their own, and the productive efficiency inherent in shared-faith marriages leads to higher levels of church attendance and contributions. Religious upbringing, probably the most important source of religious human capital, is a major determinant of religious belief and behavior. Money and time substitute for one each other in the production of religious commodities. People with high monetary values of time display higher ratios of contributions to attendance, suggesting that they engage in more "money-intensive" forms of religious activity. There is even some evidence that religious activity tends to rise with age because it is habit forming.

None of these findings is by itself very surprising. It is, however, surprising to see so many different findings emerge as predictions of a single model. The economic concepts of household production and human capital deserve researchers' attention precisely because they explain so much of what we already have observed. They further deserve attention because they raise new empirical questions, such as those concerning the substitution of money for time. Indeed, the human capital approach to religious participation illustrates the threefold contribution of economic theory to social scientific research: integrating numerous predictions within a single conceptual framework; providing theoretical explanations for observed empirical regularities; and generating new hypotheses to guide future empirical research.

NOTES

1. See Iannaccone (1992) for a more sophisticated model that takes account of the club-like, congregational setting in which most religious activities occur.
2. In the 1974 Catholic survey, shared-faith couples contributed 71 dollars per year more than mixed-faith couples (relative to an overall average of \$193), and Catholics married to other Catholics attended mass 11.8 times per year more than Catholics married to non-Catholics (relative to an overall average of 39). In the GSS survey, which surveyed people of all faiths, the corresponding differences are 86 dollars per year and 9.2 services per year (relative to means of 376 dollars and 23.6 services, respectively).
3. For the purpose of my analysis it does not matter whether the observed increase is due to age, period, or cohort effects. Nevertheless, studies suggest that most of the observed trend is in fact related to age (Hout and Greeley 1987).
4. Note, in particular, that attendance/contributions ratio is nearly the same for people in their 30's and 60's, despite the fact that the latter attend twice as frequently as the former.
5. If the pattern were not so pervasive we might instead suspect that it was due to "secularization" -- a progressive decline in religiosity that induces each new generation to be less religious than its immediate predecessor.
6. The afterlife model predicts ever-accelerating rates of religious participation, whereas the habit formation model predicts eventual convergence toward a steady-state. As is seen in figure 2, observed patterns in attendance and contributions are more consistent with the latter prediction.
7. Such side-stepping is quite common and arguably beneficial in economic discourse, since it facilitates the construction and application of abstract theories. For example, agricultural economists rarely worry about the essential characteristics of apples or why people enjoy eating them. Yet, by studying the external forces that govern the supply of and demand for apples -- weather, price, income, and familiarity with the product, and so forth -- they generate valuable insights and information.

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