

Social Dimensions of Religious Diversity in Brazil

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Although Brazil remains a predominantly Catholic society, a variety of other religious groups have experienced dramatic growth over the last few decades. Scholars have offered some descriptions of social characteristics of these groups, but have not provided a theoretical explanation for social diversity, nor have they examined the underlying structure of diversity. Using rational choice theory, we argue that in a religious market place, religious organizations should emerge that attract different social constituencies. We then use factor analysis to explore the inter-relatedness of various social characteristics of religious groups with data from the 2000 Census of Brazil.

### *Context.*

The traditional dominance of Catholicism in Brazil is weakening (Pierucci and Prandi, 2000). A variety of Evangelical and Pentecostal and other Christian groups have had great success in attracting adherents. Some of these groups have an international base, while others have emerged within Brazil. Afro-Brazilian groups are also becoming increasingly visible (Prandi, 2000). The result is that Brazilians now have a wide variety of choices when it comes to religion. We argue that social characteristics can play an important role in the choices that people make about religious group membership.

Brazil is also characterized by substantial social diversity. Its level of income inequality is among the highest in Latin America (). Racial distinctions are also evident. Although socioeconomic, racial and religious diversity have been well documented in Brazil, less attention have been given to religious differences in racial and socioeconomic characteristics.

### *Rational choice and religious diversity*

Rational choice models of religious behavior begin with the assumption that individuals weight the costs and benefits of different actions, and then chose the actions that maximize their net benefits (Iannaccone, 1997). These models assume that religious behaviors such as membership, participation and switching can be explained by maximizing behavior. The theory applies not only to individuals, but also to religious organizations. Those organizations that are able to capture a growing share of members will thrive, while those that fail to provide benefits will decline. The religious marketplace created by choices of individuals and religious organizations creates a fragmentation of religious groups where religion reflects culture (Bibby, 1987). In contrast, Finke (1997) argues that much religious change can be explained in terms of the supply of religion. This perspective has been used to explain patterns of religious participation, as well as the emergence, growth and transformation of religious organizations (Stark and Bainbridge, 1985; Finke, 1997; Stark and Finke, 2000).

The model also implies that “a variety of religious groups, each catering to the unique demands of specific market segments, can mobilize the population to higher rates of membership and commitment (Finke, 1997: 56). In consequence, “the social markers of ethnicity, race, social class, and region will further divide the population into consumer segments with unique demands for their religion (Finke, 1997: 56). By implication, religious groups will develop to provide benefits to different segments of the population.

The paper examines the social diversity across religious groups. To the degree that different social groups find that different styles of worship, emphasis on teaching, physical structures and locations, and other aspects of organization increase their net benefits, we expect to find a wide variation in the social characteristics of religious groups. We emphasis three types of social characteristics including socioeconomic status, family structure, and race.

### *Why Social Characteristics matter.*

Social scientists have considered a variety of explanations for social differences of religious groups. First, people may feel attracted to religious groups because of the social characteristics they already have. Stark and Bainbridge (1985) argue that emergent groups tend to attract people who are not well connected to dominant social institutions including the dominant religious group. People may also find that teachings of a particular group fit with their perspectives. The prosperity gospel common in some Pentecostal groups may resonate with those who aspire to be upwardly mobile. Geographical mobility of disadvantaged groups in Northern Brazil has created neighborhoods where new religious groups find particular success. Style of language and dress along with the type of church buildings and neighborhood location reflect social class differences. People in particular family circumstances may feel more accepted in some churches. For example, Catholic positions on divorce or birth control may alienate some members.

Religious group membership may also motivate people to modify their behavior. Emphasis on the prosperity gospel legitimates more individualistic emphasis on upward mobility. Religious culture can influence orientations toward education and wealth (Keister, 2003; Heaton, James and Oheneba-Sakyi, forthcoming). Religious groups also emphasize the importance of marriage, appropriate sexual behavior, and family planning that can impact family characteristics.

### *Data and Analysis*

Data for this analysis are taken from the 2000 public use 10% sample of the Brazilian Census. Information about the sample is available at [www.ibge.gov.br](http://www.ibge.gov.br). A more complete description of the Brazil Census, the questionnaire and related information are available at [www.ibge.gov.br](http://www.ibge.gov.br). To improve statistical reliability, we selected all of the groups with at least 500 adult (18+) respondents in the sample. This implies a total membership of at least 5000. Analysis is restricted to people over age 18 because those under 18 may not have yet made a conscious choice to belong in a particular religion and because they are often too young to have completed school or started their own families. Some of the categories actually include several distinct groups. These include categories such as Indigenous, Christian without institutional ties, Undetermined Evangelical Protestant, and Pentecostal. These groups were included so that results would capture a large share of the Brazilian population. Although there is diversity within these groups, there is also great diversity within Catholicism and other large groups. We argue that average characteristics of these broad categories show important social differences, even if they mask substantial internal variation.

Several of the social characteristics of these groups are reported in Appendix Table 1. These results were obtained by aggregating within religious groups, using individual cases from the census. The only variable that is not an aggregate measure is the age at marriage. The Brazilian Census does not ask age at marriage. To create this measure, a cross-tabulation of age by marital status was prepared for each religious group. Age at first marriage is calculated as the age at which 50 percent of the group is married. Because the number of religious groups is relatively small, analysis was first simplified by creating a socioeconomic index. This index combines educational attainment, total household income, and an index of possessions that equals the sum of the number of items present in the household. The items include electricity, a phone, a refrigerator, a computer, a VCR, air conditioning, and an automobile.

Substantial social diversity is evident in this table. Rather than give a detailed discussion of these differences, the goal of this paper is to explore the possibility of underlying fundamental differences. For this purpose, we conducted a factor analysis including each of the variables listed in the Table. Factor analysis is designed to calculate composite factors that account for the variation in observed variables. If a small number of composite factors can account for most of the variation in observed variables, then these composite factors provide a parsimonious summary of the data. Results of this analysis are reported below.

### **Results**

Factor analysis is designed to simplify data by identifying underlying factors that account for the correlations among a set of variables. The factors are a weighted sum of variables in the correlation matrix (Kline, 1994). In the analysis reported here, religious groups are the units of analysis. The variables of interest are reported in Appendix Table 1. Each of these variables is included in the analysis. Results of the first factor analysis are reported in Table 1. These results are based on Principle components and varimax rotation is used to simplify the interpretation of results.

Eigenvalues reported at the bottom of the table show the relative amount of variance explained by each factor. Factors with eigenvalues lower than 1.0 do not help simplify because these factors account for a relatively small percentage of variance so these factors are generally ignored. This analysis found three factors with eigenvalues greater than 1. Factor loadings show the correlation between each variable and the underlying factors. Factors loadings above .7 are generally considered to imply that the relevant variable is a good indicator of the underlying factor.

The first factor has a large eigenvalue. Factor loadings indicate that this factor is a combination of socioeconomic status, metropolitan residence, and three aspects of family structure including children ever born, age at marriage and divorce/separation. Collectively these variables represent what demographers consider to be key elements of the demographic transition (Weeks, 2008) and what developmental theorists theorize to be aspects of modern societies (Thornton, 2005). Naming this factor is problematic because the relevant term—

demographic transition, development and modernization—have been used in a variety of contexts and there exists ongoing debate about the appropriate application of these terms. For lack of a better term, this factor will be called development-transition. Religious groups scoring high on this factor are characterized by high socioeconomic status, urbanization, later marriage, small families and a comparatively high level of divorce/separation.

The second factor is straightforward, having two variables with high loadings. Religious groups with high scores on this factor have a high proportion of adherents who list their race/ethnicity as black or brown.

The third factor has two variables with high factor scores, namely the percentage indigenous and the percentage in consensual unions. The eigenvalue for this factor is not much greater than 1.0. This factor emerges because indigenous groups have a much higher percentage in consensual unions (49 %) than does any other group.

Age and male do not have high factor loadings, implying that these variables do not distinguish religious groups to the extent that other variables do.

In short, two key dimensions account for much of the correlation among the variables considered—development-transition and percentage nonwhite. To confirm this, a second factor analysis was performed after deleting the variables age, male and consensual union, and combining the three groups of nonwhites. Results of this factor analysis are reported in Table 2. This model supports the claim that two underlying dimensions account for much of the correlation among characteristics of religious groups. It is interesting to note, however, that children ever born has moderately high loadings on each factor. Groups that score high on the development-transition dimension tend to have smaller families and groups that score high on the nonwhite dimension tend to have larger families.

In order to see how groups compare, a scatter plot of religious groups was graphed. Results are shown in Figure 1. This graph shows wide variation in social aspects of religious groups on both dimensions. At the left end of the chart, indigenous groups (#1) and Lutherans (#2) show the lowest scores on development transition, but are very different in ethnic composition. A few Protestant groups score lower than Catholics (#7) on level of development-transition, the largest being the Assemblies of God(#6). A large number of groups cluster near the Roman Catholics. Similarity among these groups is overstated by this graph because a few outliers are quite extreme. The developmental transition variable is standardized, so the difference between the Congregational Church (#3) and the Anglican Church (34) is four standard deviations. Several protestant groups, largely Evangelical and Pentecostal, score somewhat about Catholics. There is substantial variation in ethnic composition of these groups. For example the House of Blessing (#24) is 58 % nonwhite compared to 41% nonwhite in the Foursquare Gospel (#18). With the exception of Lutherans, historical Protestants score relatively high on developmental transition, and have fewer nonwhites. But there is diversity within this group as well. For example, Anglicans (#34) score about .7 of a standard deviation higher on developmental transition and 16% lower on percent nonwhite than Methodists (#19). At the high end of the developmental transition scale we find Afro-Brazilian, and other nonChristian groups. Others have written about the attractiveness of Afro-Brazilian groups to a professional elite (Prandi, 2000). Many of the nonChristian groups have comparatively large percentages of foreign born adherents. For example the foreign born population makes up 18% of Jews (42), 22% of Buddhists (#39), and 50% of Muslims (#32). By comparison, only 0.5% of the total sample is foreign born. Only 5% of the New Oriental category (#38) is foreign born.

Three aspects of the figure are of particular importance in light of theoretical perspectives emphasizing the religious marketplace. First, there is substantial variation in the social makeup of religious groups. This diversity is consistent with the notion that different groups will emerge to serve different consumers. Second, most groups cluster around the Roman Catholics. Because Catholics are by far the largest group, they mark the approximate average on all social characteristics. Clustering around this center suggests that competition is greater in social categories that have the largest number of persons and so more groups form to attract people in these social groups. Finally, most groups score higher on the developmental transition scale than do Catholics. Early work by Strak and Bainbridge (1985) suggest that the opposite would occur. That is, that new groups might fall at the lower end of the distribution. Perhaps, real or perceived opportunities for individual achievement in Brazil have fueled the emergence of new groups with above average scores on developmental transition.

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Table 1. Factor Loadings and Eigenvalues for Characteristics of Religious Groups:  
 Brazil, 2000.  
 (rotated component matrix)

Factor loadings for:	Component		
	1	2	3
Age	.427	-.553	-.120
Male	.016	-.468	.483
Black	.165	.885	.036
Brown	-.353	.859	-.118
Indigenous	-.242	-.149	.874
Metro-status	.812	.229	-.358
Consensual union	-.090	.319	.926
Divorce/separated	.845	.064	.031
Children Ever Born	-.783	.310	.107
Age at marriage	.868	-.224	-.100
SES index	.762	-.558	-.162
Eigenvalues	4.450	2.390	1.517

Table 2. Simplified Factor Loadings and Eigenvalues for Characteristics of Religious Groups: Brazil, 2000.  
(rotated component matrix)

Factor loadings for:	Component	
	1	2
Metro-status	.847	-.119
Divorce/separated	.838	-.094
Children Ever Born	-.654	.629
Age at marriage	.858	-.718
SES index	.927	-.313
Nonwhite	-.566	.963
Eigenvalues	3.85	1.039





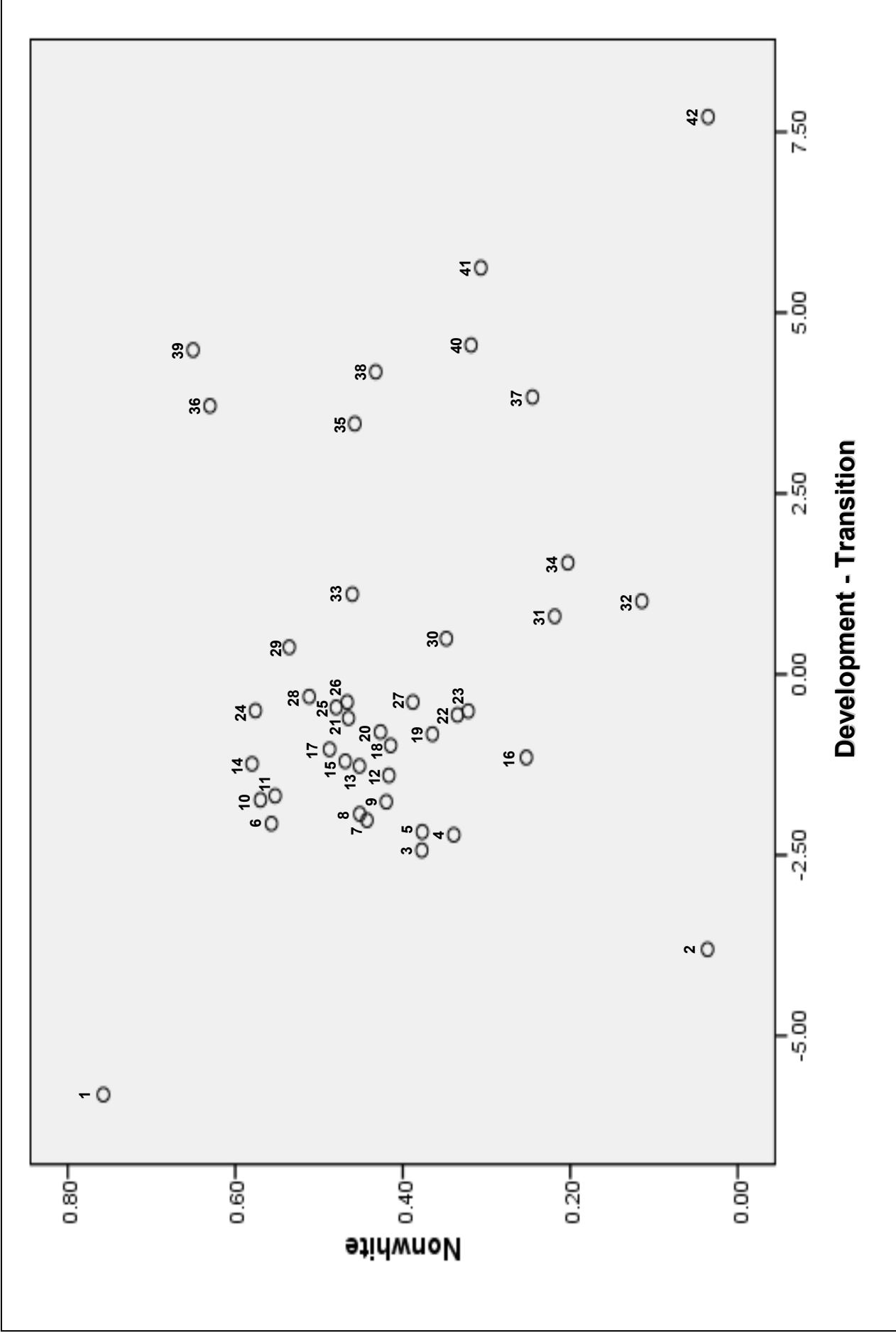


Figure 1. Distribution of Religious Groups by Developmental Transition and Percent Nonwhite.

**Key:**

- |   |  |
|---|--|
| 1 Indigenous  | 22 Presbyterian  |
| 2 Lutheran  | 23 Renewed Evangelical Protestant without institutional ties |
| 3 Congregational                                      | 24 House of the Blessing                                     |
| 4 Religion Of God                                     | 25 Baptist   |
| 5 Christian Congregation of Brazil                    | 26 Maranata  |
| 6 Assembly of God                                     | 27 Latter Day Saints (Mormon)                                |
| 7 Catholic (Roman Catholic)                           | 28 Pentecostal Evangelical without institutional ties        |
| 8 House of Prayer                                     | 29 Universal of the Kingdom of GOd                           |
| 9 Evangelical Protestant Biblical Revival Pentecostal | 30 Church of the Nazarene                                    |
| 10 God is Love  | 31 Orthodox  |
| 11 No religion  | 32 Muslim  |
| 12 Brazil for Christ                                  | 33New Life Evangelical Protestant Pentecostal                |
| 13 Jehovah's Witnesses                                | 34 Anglican  |
| 14 Brazilian Catholic Apostolic                       | 35 Umbandist Mediumistic                                     |
| 15 Adventist / Seventh-day adventist                  | 36 Candomblecist Mediumistic                                 |
| 16 Mennonite  | 37 Mediumistic Spiritist                                     |
| 17 Christian without institutional ties               | 38 New Oriental  |
| 18 Foursquare Gospel                                  | 39 Buddhist  |
| 19 Methodist  | 40 Spiritist   |
| 20 Undetermined Evangelical Protestant                | 41 Esoteric  |
| 21 Pentacostal  | 42 Jewish  |



Anglican	1.542	0.203	42.83	0.470	0.030	0.124	0.005	0.044	2.148	0.061	1.861	1.323	24	636
Umbandist Mediumistic	3.465	0.457	41.06	0.414	0.169	0.273	0.007	0.007	2.373	0.100	2.291	0.360	25.4	16310
Candomblecist Mediumistic	3.711	0.630	38.77	0.431	0.232	0.379	0.009	0.010	2.639	0.089	2.259	0.345	25.6	4987
Mediumistic Spiritist	3.835	0.245	41.83	0.388	0.046	0.185	0.003	0.010	2.122	0.099	1.774	1.085	26.5	93078
New Oriental	4.183	0.432	44.21	0.365	0.050	0.209	0.003	0.170	2.277	0.093	2.019	0.876	26.7	6038
Buddhist	4.484	0.650	47.18	0.439	0.048	0.154	0.003	0.445	2.314	0.064	2.456	0.811	27.9	8815
Spiritist	4.552	0.318	43.53	0.404	0.046	0.253	0.007	0.013	2.293	0.134	1.976	0.866	24.5	1052
Esoteric	5.621	0.307	45.12	0.461	0.046	0.245	0.004	0.013	2.192	0.129	2.014	0.933	26.8	2501
Jewish	7.708	0.035	47.82	0.503	0.004	0.025	0.000	0.006	2.868	0.087	1.719	2.151	27.5	3473