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Broadcast Media Use and Social Structure in Guatemala

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This is one of a series of working papers produced by the Center for International, Health, and Development Communication at the University of Pennsylvania. The research reported here was done in collaboration with the Guatemalan Ministry of Health and the Nutritional Institute of Central America and Panama. The research was supported in part by the Academy for Educational Development through its Communications for Child Survival contract with the U.S. Agency for International Development, Bureau of Science and Technology, Offices of Health and Education (Contract no. DPE-1018-C-00-5036-00). This paper is the responsibility of the author and may not represent the views of those who have supported the research. This paper was prepared for presentation at the Latin American Studies Association XV International Congress, San Juan, Puerto Rico, December 1989.

Although watching television, listening to radio, or reading magazines are generally individual activities, social categories such as race, gender, and class seem to have stronger predictive power than personal characteristics on individuals' mass media choices (Wright:113). Communications scholars and sociologists, not to mention market analysts, have long recognized that patterns of mass media use vary with social group membership.

Detailed analyses of mass media audiences have been carried out in the United States, a society in which the media are entrenched and ubiquitous. With televisions in 98% of households (Hoffman:373), and radios in 99% (Newspaper Readership Project:37), very few people in this country do not have at least some exposure to broadcast media (Bower). Studies of social groups' media use have shown that women over age 50 watch more television than any other group (Comstock et al:93), that teenagers from lower-income homes watch more television than do their middle-income counterparts (Greenberg and Dominick:335), and that television viewing in the United States "is an experience common across demographic boundaries" (Comstock et al:85).

However, the reach of mass media is not as pervasive elsewhere in the world. The purpose of this study is to describe radio and television use in Guatemala, a country in which universal access to mass media cannot be assumed and in which patterns of mass media use are quite different from those in the United States. This topic is of concern to communications theorists interested in mass media issues in societies different from our own. In practical terms, those interested in the developing world in general, Latin America as a region, or Guatemala in particular, may find that information about the distribution of radios and televisions among the population either confirms their suspicions or provides a useful addition to their overview of contemporary conditions.

While statistics about the increasing numbers of receivers in developing areas may be interpreted as a sign of progress (Stevenson:108-114), these figures do not take into account the distribution of receivers throughout the population, an omission that limits what can be claimed for this "progress". Those audience studies that have been undertaken have generally been oriented to commercial ends (Bled:171; Romero), and therefore have excluded large segments of the population.

This study details radio and television use across all sectors of Guatemalan society, and attempts to explain observed differences between social groups' media use. Print media were not included in the study because unlike broadcast media, they are largely unavailable outside urban areas (Bertrand:79; Zavala). In examining social groups' broadcast media choices, particular attention is paid to the most recognized social differentiator in the country, ethnic identity. Indigenous and non-indigenous broadcast media behavior is examined in the context of three other factors: wealth, education level, and urbanity. Because of the predominance of the ethnic issue, a central question of this study concerns the effect that ethnic identity has on media behavior beyond the effects of the other variables, or in combination with the other variables. The study is based on a nationwide survey that was carried out in 1987.

BACKGROUND: GUATEMALAN SOCIAL STRUCTURE

Research related to mass media and Latin America by United States and European communications scholars has been criticized for its lack of attention to the area's existing culture and social structure (Beltran:108; Guzman:175; Early:178-180). It is important to frame a study--particularly a study based on social differences--within the wider social and cultural context. An investigation of communications in Guatemala must begin with an examination of Guatemalan society.

Guatemala is one of the least developed countries in Latin America, and one of the few to have a large remaining indigenous population. The ancient Maya civilization was centered in Guatemala, and cultural descendents of the Maya make up approximately one-half of the country's population today. There are no reliable statistics on their precise numbers, nor of their distribution within the 18-22 indigenous language groups. Estimates of the percentage of the Guatemalan population that is indigenous range from the 42% indigenous minority registered in the 1981 Guatemalan census (Instituto Nacional de Estadistica:37), to the 1978 estimate by the Inter-American Indian Institute of a 59.7% indigenous majority (Wilkie and Perkal:151). As Ronald Wright has pointed out, such estimates vary with the political sympathies of the observer (1989:116).

A manageable approach to the question of ethnic percentages in Guatemala is that of the U.S. Department of the Army's area handbook for Guatemala, which declines to enter

the fray: "In the early 1980s, given the dearth of current and dependable data on rural Guatemala, experts hedged their bets, simply estimating the populace at half Indian, half ladino" (53).

Non-indigenous Guatemalans are referred to as "ladinos." In colonial times, the term designated mixed-blood (mestizo) descendents of Maya and the Spanish colonizers, and indigenous people who joined Spanish society (Nyrop:251). After centuries of contact, any racial distinction between indigenous and ladino has been largely eliminated. Ladino and indigenous identities remain strong, but as Kay Warren (ix) explains, all Guatemalans are now "mestizos in the sense of sharing the same gene pool"; ethnic identity is rather a "sociological construction" (de la Fuente:433) manifested in dress, language and customs.

Ladino control of politics, economic activity, and national affairs (Early:151, Lovell:125) provides an incentive for the continual process of indigenous assimilation into the dominant social group. As the distinction between ladino and indigenous is not racial but cultural, an Indian can "ladinoize" by adopting a ladino lifestyle, Western dress and the Spanish language (Warren:14-15; Early:88-89). While some Maya may go as far as discarding not only their native dress and language but also recognizably indigenous surnames, many participate in ladino institutional life while still maintaining indigenous identities. These necessarily bilingual Maya form an intermediate tier between the ladino/indigenous poles of ethnic division.

The ethnic division is reinforced by the urban/rural split, another characteristic of Guatemalan (and Latin American) social structure. Guatemala's rural population is variously estimated at some 2/3 of the country (Wilkie and Perkal:140-141) to more than 3/4 (Early:46), and is disproportionately indigenous. Rural areas tend to be poorer and lack infrastructure and services, and rural residents are for the most part impoverished peasants (Painter:31-2; Colburn:244).

Guatemala's socioeconomic structure is typical of Latin America: pronounced economic stratification with a very large lower class, small middle class, and tiny upper class. This pattern is more exaggerated in Guatemala than in much of the rest of the region (Painter:xv;Green:248). In the late 1970s, the top 5% of the Guatemalan population received more than half of the national income, while the bottom half received just 7% (Nyrop:50).

This variety of cultures, lifestyles, and structural conditions is paralleled by variety in mass media conditions. In contrast to the universality of television watching and radio listening in the United States, in Guatemala variation might be expected not only in who uses which media, but in who uses mass media at all. Indeed, although Latin America as a region of the developing world is media rich (Katz and Wedell:59; Wells 85-89; Stevenson:113), Guatemala's per capita radio ownership is the lowest in Spanish America. With just 61 radios per 1000 inhabitants, the country ranks far below neighboring countries with similar demographic and economic characteristics; in all of Latin America and the Caribbean, only beleaguered Haiti has lower per capita radio ownership, while only Paraguay and Haiti have lower levels of per capita television ownership (Unesco:ch.10). This low level of receiver ownership, in combination with a low literacy rate and multiplicity of languages, means that great portions of the Guatemalan population may not be reached by the media. Broadcast media do not reach those who do not have access to receivers, print media do not reach illiterates directly, and Spanish-language media may reach but do not serve non-Spanish speakers. This gap in potential media reach is a further division in a sharply divided society.

One additional division in contemporary Guatemala does not fit into a simple outline of social structure. For more than a decade the country has been torn apart by a civil war. Several revolutionary groups have been active, particularly in the Western highlands, and successive governments--both military and civilian--have attempted various strategies to suppress them (Nyrop:37;Colburn:246). This war has taken a high toll on the indigenous population. More than 100,000 Guatemalans, most of them indigenous, have been killed since 1954, and an estimated 40,000 have "disappeared." In addition to the lives lost, actions by the Guatemalan military--characterized by Richard Fagen (1987:94) as "perhaps the most brutal in Latin America"-- have resulted in substantial individual and community displacement. In an attempt to deprive the guerrillas of their base of support, the Army completely destroyed some 400 Indian villages. Internal and external refugees number in the hundreds of thousands (Painter xiii-xiv; Fagen:89-95; Lovell:46-47; McClintock:257-8; Manz:147; Guatemalan Human Rights Commission).

Mass Media Reach

Several studies of communication in Guatemala have been done by researchers examining development issues. Eduardo Contreras-Budge (1979) and Jeremiah O'Sullivan-Ryan (1978) studied the role of mass media and interpersonal communication in several Guatemalan development projects. Both found that mass and interpersonal communication had little reach and less effect among the poorest and most isolated sectors of society. (Contreras Budge:v, O'Sullivan-Ryan:205, 210-211).

The investigation by Bertrand et al (1978) of family planning in Guatemala is notable for its attention to mass media use (78-85). Bertrand and her colleagues surveyed 567 respondents in four rural Guatemalan communities, two indigenous and two ladino. They found that in the ladino areas surveyed, just 8-20% of respondents watched television at least once a week, while in the indigenous communities there were no televisions at all. Radio, on the other hand, was found to reach both indigenous and ladino communities, although favoring urban areas. Newspapers and magazines were scarce or absent in all of the communities studied.

CHARACTERISTICS AND METHODOLOGY OF THIS STUDY

Project

This study is based on data gathered in a 1987 survey undertaken by the Guatemalan Ministry of Health. The survey was carried out by INCAP (the Nutritional Institute of Central America and Panama) under the Ministry's supervision. The Annenberg School of Communications at the University of Pennsylvania provided technical assistance to INCAP and the Ministry of Health under the Communication for Child Survival (HEALTHCOM) program. Funding for the survey came from USAID/Guatemala, which provided additional technical assistance through the Primary Technologies for Health program (PRITECH).

Sample

The survey sample included 9187 mothers or caretakers of children under five years of age. They were randomly selected within clusters in all 22 departamentos of the country. According to the sample design, 12% of the sample respondents were drawn from the departamento containing Guatemala City, (the capital and the nation's largest urban area), and 4% from each of the other departamentos. Communities with less than 500 inhabitants were not included in the sample. The sampling design assured a reasonably representative sample of the population living in communities larger than 500 inhabitants in each departamento. The interviewees, 92% of whom were mothers of children under five years of age, were personally interviewed in February 1987 by Guatemalan health workers.

The total number of respondents used in each portion of the analysis varies slightly due to coding errors in the raw data, but the number of missing cases never exceeds 3% and seldom exceeds 1%.

Survey instrument

As the purpose of the survey was to provide baseline information for a health education program, most of the questions were about health issues. In addition, there were questions concerning demographic characteristics, radio and television ownership, and listening and watching times, that were used as the basis of this analysis.

RESULTS

Univariate Analysis

Independent Variables

Ethnicity

Ethnicity of survey respondents was determined by their self-report of language(s) spoken at home. Survey results were as follows: Ladino, 74.3% n=6829; bilingual 15.6% n=1427; indigenous 9.5% n= 875; total n=9187; (missing 0.6%).

In terms of the ladino/Maya division, the bilinguals should be considered as indigenous people, bringing the total of indigenous respondents to 25% of the sample. However, even when the bilingual and indigenous categories are added together, the population breakdown of this survey by language spoken at home does not reflect accepted estimates of approximately 50% indigenous population.

The primary reason for the unrepresentative ethnic mix of the survey is the exclusion from the sample of communities with fewer than 500 inhabitants. Difficulties in access to some rural areas may also have impeded data collection. As indigenous people tend to live in more remote areas, under-representation of rural Guatemala will lead to under-representation of the indigenous population in the sample.

The political and social situation in Guatemala is another consideration. The violence in recent Guatemalan history, particularly against rural indigenous people (Painter:xiii; Guzman:13-14;McClintock:257-8), may have encouraged indigenous people to give interviewers the "safest" answer: that they spoke Spanish at home.

Although survey percentages may not reflect the true population percentages, there are sufficient numbers of respondents in each category to permit using the data from this survey. As percentages of the total of each group, rather than raw numbers, are used for comparisons, the possible effects of an ethnically unrepresentative overall sample are largely neutralized.

Urban/Rural

The urban/rural variable was divided into four categories. The 20 municipalities in the 1973 Guatemala census with more than 10,000 inhabitants (R. Wilkie:273), were termed 'urban.' For smaller population centers, the average walking time to the local clinic was calculated. Interviewees' responses of walking time to the nearest clinic were aggregated by cluster, and the average cluster time was used as an index of rurality. Clusters not in an urban center but with an average walking time to the clinic of less than 1/2 hour were termed 'semi-urban,' those with an average walking time to the clinic of 1/2 to 1 1/2 hours were termed 'semi-rural,' and those further than 1 1/2 hours away were termed 'rural.' The urban/rural variable showed the following distribution: urban center 28%, semi-urban 39%, semi-rural 23%, rural 10% (N=8932).

This distribution appears to be disproportionately urban. Possible explanations for this distribution are the same as those discussed above on ethnicity of respondents. In any case, these figures do represent differences in urban and rural residence, and the results clearly demonstrate the distinctions.

Wealth

To determine respondents' wealth, a four-item, five-point scale was developed from the following survey variables: type of floor in the house; the number of rooms in the house used for sleeping; source of drinking water; and "people per room," a measure created by dividing the number of rooms used for sleeping by the total number of people in the house. These variables relate to enduring household wealth, as differentiated from the one-time and possibly impermanent investment represented by ownership of a radio or television. The wealth scale appears to be reliable, with a reliability coefficient alpha of .60 and the following distribution:

Points	% of population (n=9008)
4	11% (highest wealth)
3	15%
2	21%
1	29%
0	24% (lowest wealth)

This is not an interval level scale. As simply having some sort of nondirt floor in the house and using more than one room for sleeping elevated a respondent into the middle wealth category, this scale does not represent the large discrepancies in wealth, nor does it proportionally represent the distribution of income in the population. Rather, the scale divides the population into five tiers, with the upper wealth categories encompassing a greater range of wealth than the lower categories.

Education

Level of education was determined by self-report of the last grade of school completed by each respondent (in most cases the mother of a young child) and by the head of household. The distribution of this variable is shown below:

Years of school	Respondent	Head of Household
0	48%	33%
1	5%	6%
2	10%	12%
3	11%	15%
4-6	18%	23%
7-9	3%	4%
10-12	3%	4%
some univ.	1%	3%

(n=9187)

Dependent Variables - Broadcast Media Use

Twenty-three percent of survey respondents reported owning a functioning television, and 26% reported ever watching television. Sixty-three percent of respondents reported having a functioning radio. Radio listenership was high for those who owned radios; if there was a functioning radio in the home, most respondents reported listening daily.

Bivariate Analysis

Relationships Among Independent Variables

Examination of the relations between the independent variables confirm that the indigenous population of Guatemala is poor, uneducated and relatively rural. Indigenous people, 9.5% of the total sample, make up only 2.1% of the wealthiest stratum and 16% of the poorest. Given Guatemala's very skewed distribution of income, many ladinos are also poor (Early:152), but it is clear that those Guatemalans in the higher wealth categories are ladino. While ladinos make up 74% of survey respondents, they account for 91% of the wealthiest group. Bilinguals fall in the middle; at 16% of survey respondents, they make up 7% of the wealthiest group and 19% of the poorest.

Ethnicity also is clearly associated with education. Seventy-three percent of the indigenous heads of household were reported to have no schooling, compared to 26% of the ladino heads of households. Bilingual respondents fall between indigenous and ladino, with no schooling for 38% of the heads of household.

Finally, ethnicity is associated with place of residence. Thirty-five percent of the ladinos of the survey live in urban centers, compared to 11% of the indigenous population; conversely just 8% of ladinos live in rural areas, compared to 23% of indigenous respondents. The bilingual population is concentrated in semi-urban and semi-rural areas. It may be that these are settings that foster bilingualism and participation of the indigenous community in ladino society. In more remote areas, there would be no reason to become bilingual, while in urban centers, pressure might be toward ladinoization.

These relationships between ethnicity and other variables imply additional relationships that were confirmed in the analysis: wealth and education are closely associated with each other and are concentrated in urban areas.

Relationships Between Independent and Dependant Variables

Television

Looking first at ethnic classification, 29% of ladinos, 6% of bilinguals, and 1% of indigenous people reported owning televisions; slightly higher percentages of ladino and bilingual respondents reported ever watching television.

Ninety-two percent of the televisions were owned by people who live in urban or semi-urban areas. This probably reflects not only the greater poverty in rural areas, but the absence of television signals outside of urban areas (Zavala).

Television ownership varied greatly with wealth. Since a television is a considerable investment, it is not surprising that the wealthiest respondents were more likely to own televisions. Just 3% of respondents in the lowest wealth category reported owning functioning televisions while 67% of the highest category had sets.

Radio

The relationship between radio ownership and ethnicity was significant but weak ($p < .001$ gamma=.2). While 63% of the sample as a whole reported having a functioning radio, the figure was 65% for ladinos, 61% for bilinguals, and 48% for indigenous respondents. Radio ownership was higher in urban areas than in rural areas: 73% of urban center residents reported owning a radio, compared to 49% of rural residents.

Radio ownership and wealth were associated, as were television ownership and wealth, but radio ownership was considerably higher than television ownership even among the poorest respondents. Eighty-six percent of respondents in the highest wealth

category had functioning radios, while 49% of respondents in the lowest wealth category had radios.

Language preference for radio listening

Two survey questions concerned language and radio listening: "In what language are most of the programs you listen to?" and "In what language or dialect do you prefer to listen?" Ninety-six percent of those who had radios stated Spanish as the listening language. Broken down by ethnic category, 99.6% of Spanish speakers reported listening in Spanish, while 90% of bilinguals and 69% of indigenous respondents reported listening in Spanish. Those bilinguals and indigenous monolinguals who did not report Spanish as their listening language named their own Mayan language as their language for listening virtually without exception.

Listening preference, however, did not always coincide with listening language. When asked for listening preference, 84% of radio owners named Spanish. Spanish was the language of choice for 98% of the Spanish speakers, 45% of the bilinguals, and just 16% of the indigenous respondents. As was the case with language listened to, language preference matched native language in those cases where the preferred language was not Spanish.

The gap between language listening and preference may be attributable to the lack of programming in Mayan languages. There is some programming in many of the Mayan languages, but some listeners may not live within range of a radio signal in their language, or may not be able to listen at times that such programming is broadcast. The relatively high figures for Spanish listening and preference even for monolingual Maya respondents may also reflect the respondents' inclination to give a "safe" or "correct" answer.

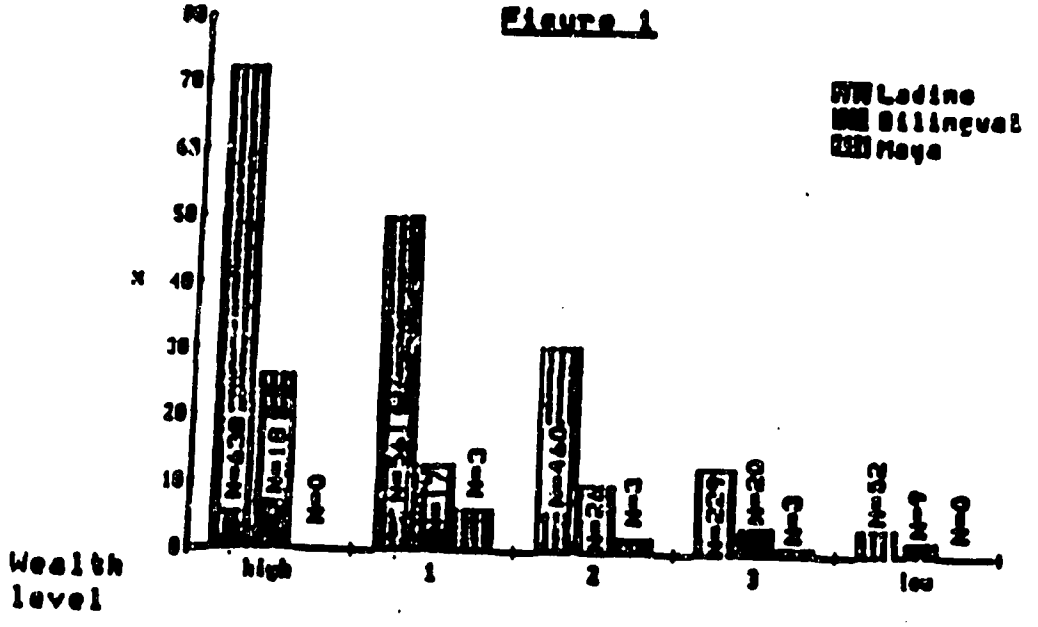
Multivariate Analysis

Multivariate analysis was used to sort out the effects of ethnic identity on media use beyond the effects of the other variables.

First, the relationship between television and ethnic classification was controlled for wealth to see if patterns of television ownership varied for respondents of different ethnic classifications in the same wealth category. In all wealth categories a higher percentage of ladinos owned televisions than did bilinguals and indigenous. Only 1% of all indigenous respondents (n=9) owned televisions.

As shown in Figure 1, the contrast is greatest at high wealth with 72% of ladinos, 26% of bilinguals, and no indigenous respondents owning televisions. Television ownership declines precipitously by wealth category, with just 4% of the ladinos, 2% of bilinguals, and no indigenous respondents in the poorest category owning sets.

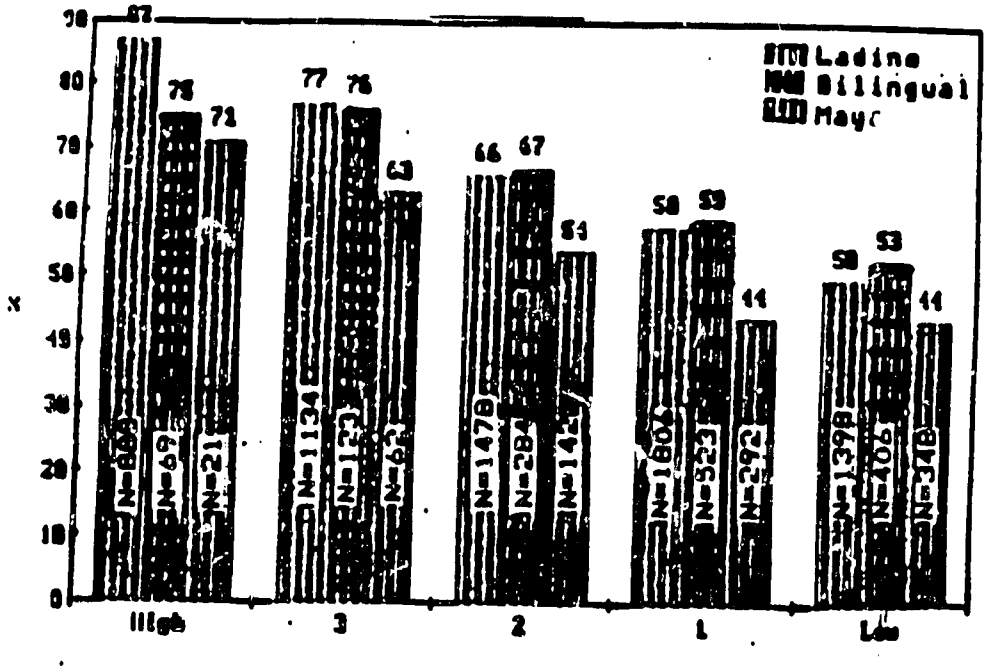
It is not surprising that ladinos are the most likely to be television owners. The predominance of ladinos in the highest wealth categories means that ladinos are most likely to be able to afford a television. In addition, television programs are broadcast in Spanish, further reinforcing the tendency for low viewership among indigenous people. While it is evident that television ownership is greater at higher levels of wealth, ethnic classification also has an effect within each wealth level.



Percent of each ethnic classification at each wealth level owning television
$p < .001$

Examination of radio ownership by ethnic classification controlling for wealth suggests that the independent effect of ethnicity is small. As shown in Figure 2, in all wealth categories, indigenous people were less likely to own radios. In the lower wealth categories, bilinguals were slightly more likely than ladinos to own radios, and they were slightly less likely than ladinos to own radios as wealth increased. The only category in which ladino and bilingual radio ownership differs by more than 3% is the highest wealth level. This level encompasses a large range of wealth. Since ladinos are likely to be relatively more wealthy than bilinguals within a single wealth level, the disparity between ladino and bilingual ownership at the highest wealth level probably reflects differences in wealth. At the other wealth levels, ladino and bilingual radio ownership is very similar, suggesting that language differences may be a key factor in lower indigenous radio ownership once wealth is equalized.

Figure 2



Percent of each ethnic classification at each wealth level owning radios

$p < .05$

Multiple Regression Analysis

Multiple regression analysis was used to examine the weight of each variable in predicting media use. Table 1 shows the results of this analysis. Again, the central question was whether ethnicity per se adds anything to the effects of the other variables. After controlling for wealth and education, the direct effect of ethnic classification on radio ownership was minimal. The Maya and bilingual variables were therefore not included in the final equation, and their coefficients do not appear in Table 1.

Table 1

Predicting radio ownership
(n=8673)

Predictors	Mean	S.D.	Additional R^2	Cumulative R^2	B	Beta	F
wealth (0=lo...4=hi)	2.6	1.3	6.0%	6.0%	.064	.173	555.3 (p<.001)
education (in years)	2.3	3.1	1.3%	7.3%	.018	.115	339.8 (p<.001)
urban/rural (0=urban...3=rural)	1.2	.94	.2%	7.5%	.024	.047	232.6 (p<.001)
Maya			.2%	7.6%			
bilingual			.1%	7.7%			
constant					.427		

As the table indicates, none of the variables predicted large amounts of the total variation, but the analysis showed wealth to be the strongest predictor of radio ownership, followed by education and urban or rural residence. This does not mean, however, that ethnicity is without importance. Wealth and education are intervening variables between ethnicity and radio ownership. Ethnicity affects levels of wealth and education, which in turn affect receiver ownership.

CONCLUSION

This study found that television is owned and watched by approximately one-fourth of the Guatemalan population, in great part educated, relatively well-to-do, urban ladinos. Radio's reach is greater, with more than half of the population listening daily. Like television watchers, radio listeners are disproportionately ladino, wealthy, educated, and urban, but the imbalance is far less than that of television.

The study provides evidence to support common claims about Guatemala's rigid social cleavages. Divisions in Guatemalan society strongly reinforce each other. In this very large national sample of the country's population, urban residence and high levels of wealth and education co-occured consistently. The categories of ethnic identity occured in a repeated pattern with respect to each of the other variables: ladinos were in the most favorable position (highest wealth, most education, most urban, highest levels of receiver ownership), indigenous people were in the least favorable position, and bilinguals were in the middle. This pattern will not surprise anyone familiar with Guatemala or Latin America. What is notable is the consistency of the relative positions of ethnic categories across all variables considered.

The central question of this study concerned differences between indigenous and ladino broadcast media use. Ethnicity was shown to have only a small effect on radio and television ownership when other factors were controlled. But ethnicity is a very important factor in Guatemala, and it does affect receiver ownership. Because indigenous people are more likely to be poor and uneducated than ladinos or bilinguals, the effect of ethnicity is felt through the intervening variables of wealth and education.

The disparity in media use between ladino and Maya, rich and poor, in Guatemala is just one manifestation of a situation of marked social, political, and economic inequality. The most disadvantaged members of Guatemalan society are also those most likely to be beyond the reach of mass media. This link between social group membership and media use is important to note when considering the many matters--democratic politics, development projects, and mass marketing, for instance--that are affected by the availability of information and the channels for receiving it.

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