Viewers like you: community norms and contributions to public broadcasting

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"Viewers Like You: Community Norms and Contributions to Public Broadcasting"

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Abstract

The logic of collective action (Olson 1965) suggests that public broadcasting may be underprovided, because non-contributors are not excluded from receiving the benefits. Why do so many individuals voluntarily contribute to public television, even though they can obtain the benefits of public television without contributing? We explore the hypothesis that giving to public broadcasting is determined in part by the strength of "civic norms" that limit the opportunistic behavior of individuals in large-numbers prisoners' dilemma settings. We also explore a variety of other explanations for charitable giving and collective action, including group size, tax deductibility, crowd out, and selective incentives.

Our findings provide evidence linking civic norms and giving to public broadcasting. Education and income have indirect effects through strengthening civic norms. We find some evidence that selective incentives increase the average size of contributions among those who contribute.

1. Introduction

About 90 percent of public television stations and 88 percent of public radio stations rely in part on viewer contributions. At least once each year, most of these stations embark on a "begathon": the periodic drive to raise funds from "viewers (or listeners) like you." These fundraising drives provide a key portion of many stations' budgets. In FY 1998, membership contributions comprised on average 23.8% of television stations' income, and 30.3% of radio stations' income (Konz 1999).[1]

The logic of collective action (Olson 1965) suggests that public broadcasting stations and programming will likely be underprovided if public broadcasting relied solely on member contributions. Public broadcasting is a non-rival good: large numbers of people can "consume" the good simultaneously with no reduction in average benefits. More importantly, it is nonexcludable.[2] Contributions intended to influence the level and quality of public broadcasting are inconsistent with rational, self-interested behavior, because the cost of contributing will exceed the expected benefits to an individual from increased provision of the public good. However, if all viewers chose to free ride, the quality of public radio or television would be substantially reduced, and many stations would cease broadcasting altogether. This is the classic collective action problem: maximizing behavior of individuals leads to sub-optimal outcomes for

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[1] This <u>percentage</u> has not changed since 1993, the year for which the data for this study were compiled. It was 23.9% to television and 29.5% to radio.

[2] With the advent of cable television, exclusion is technically feasible. Viewers of PBS stations on cable systems must pay a fee to the cable operator. The PBS stations receive no operating income from cable systems, however. Even these stations thus rely on voluntary contributions from members who cannot be prevented from viewing if they fail to contribute.

the group. Indeed, some scholars do argue that public broadcasting is underprovided because of its lack of resources (e.g., Rowland 1993: 172).

Despite the argument that public television is underprovided, public broadcasting does receive substantial member support, with subscribers donating approximately $519 million to public radio and television in 1998 alone (Konz 1999). In the data analyzed herein (for 1993), the average contribution per household in the television market area is $3.26, and six percent of households contribute. Why is there community support for public broadcasting, even though members of the community can obtain the benefits of public television without contributing? We explore the hypothesis that giving to public broadcasting is determined in part by the strength of "civic norms" that limit the opportunistic behavior of individuals in large-numbers prisoners' dilemma settings. Norms are "expectations about action—one's own action, that of others, or both—which express what action is right or what action is wrong" (Coleman 1987: 135). By "civic" norms we mean norms prescribing the choice to "cooperate" and proscribing the choice to "defect" when larger numbers of cooperators lead to more socially efficient outcomes. We proxy the strength of these norms by creating an index of behaviors and attitudes using: (1) community census response rates, (2) community voter turnout rates, and (3) a measure of the proportion of a community's citizens who believe that most people are honest.

We also examine alternative explanations for charitable giving. Some of these come from the literature on collective action, namely hypotheses concerning the impacts of group size, religious group membership, selective incentives, and asymmetry of demand (Olson 1965; Hardin 1982: 72). Other explanations come from the literature on charitable giving (a specific form of collective action), namely the effects of tax deductibility, government funding "crowd out," and the role of income and education.

Our findings provide evidence linking civic norms and giving to public broadcasting. Education and income have indirect effects through strengthening civic norms. Depending on type of religious tradition, church membership has negative effects on giving for evangelical Christians. Mainline Protestant membership has an indirect effect on giving by strengthening civic norms. In some cases, asymmetry in demand due to differing tastes for the public good matters. Selective incentives affect the average size of contributions per member to stations, but do not affect the number of contributions. We find no evidence of crowd out, and no effect for tax deductibility. Racial and ethnic heterogeneity impair collective action in funding public broadcasting only indirectly, through weakening civic norms.

2. Theory and Previous Literature

Past studies indicate that public goods are often voluntarily provided, but are underprovided relative to efficient levels (e.g., Marwell and Ames 1979). Factors affecting public good provision include government policy, selective incentives, asymmetric demand, and group size. Civic norms have received little attention in these studies, although several scholars have considered the role of norms in a cost-benefit calculus (e.g., Coleman 1990). Civic norms have received more attention in literature focusing on the determinants of political participation.

Government Policy

Government funding may crowd out or partially crowd out private giving (Kingma 1989; Andreoni 1993; Schiff 1990; Clotfelter 1985; Abrams and Schmitz 1978, 1984), because people view government funding as a substitute for their own giving. While Kingma (1989) found that government funding crowded out giving to public broadcasting, many studies have generated mixed results. Government policy can also influence giving by providing tax deductions. Tax deductibility can decrease the effective price of giving, leading to an increase in private giving, a

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finding of many empirical studies on charitable contributions (Ribar and Wilhelm 1995; Abrams and Schmitz 1978; Clotfelter 1990).

Selective Incentives

Collective action scholars have also theorized that selective incentives can encourage participation in group action. According to Olson's (1965) "by-product theory," individuals contribute toward the provision of a public good primarily because of some private-good benefits (what Olson calls "selective incentives" to contrast them to non-excludable or public good benefits received by both members/contributors and non-members/non-contributors). Few studies have examined the effects of selective incentives empirically. An exception is Mitchell (1979). Examining a 1973 survey of environmental organization members, he observes that a large percentage of people contribute more than the minimum required to receive selective incentives. Thousands of Sierra Club members even ask not to be sent the magazine that is free to members, because they prefer their membership dues to be devoted to environmental lobbying rather than to printing magazines. Most respondents mentioned public good benefits (improving the environment) as a reason for joining, while very few cited the selective incentives offered by the organization.

Intensity of Demand

People with particularly intense preferences for a public good may provide the good unilaterally. Hardin (1982) cites the example of Howard Hughes' purchase of a television station, so he could indulge his tastes for watching aviation and western movies in the middle of the night. In this extreme case, the existence of a viewer with an extremely high demand led to the unilateral provision of a non-excludable good.

In most cases, however, even for persons with relatively strong preferences for a public good, the cost of contributing will still exceed the expected benefits to an individual from increased provision of the public good. Nevertheless, stronger preferences can motivate giving if some people have an exaggerated sense of the efficacy of their contributions, or if some contribute out of a sense of obligation, and the sense of obligation varies with the value one places on the public good.

Tastes for public broadcasting may be stronger in market areas where there are more children, as one of the strengths of public broadcasting is its children's educational television (e.g., Sesame Street and Barney). Ideologically liberal persons may also have a greater demand for the programming, which conservatives often allege is not sufficiently balanced (e.g., Horowitz 1991). More generally, contributions may be higher in communities with more PBS viewers.

Group Size

Olson (1965) argued that it is easier to generate collective action when the number of potential beneficiaries is small rather than large. Goetze *et al.* (1993) test the relationship between market size and contributions to public broadcasting, arguing (like Olson) that the incentive of an individual to contribute declines with group size, because the fraction of group benefits accruing to an individual is smaller. However, as explained by Hardin (1982) and others, this part of Olson's logic applies only to public goods with elements of rivalry or congestion, and not to a fully non-rival public good such as public broadcasting. Benefits per person do not fall

as group size increases for a non-rival public good (by definition).[3] Thus, the inverse relationship between PBS giving and market size estimated by Goetze *et al.* is a finding in search of a theory. In smaller communities, repeated interactions with other individuals will tend to be more common, while interactions with strangers will be far less common than in a large city. Cooperating is more often a rational, self-interested response in small-number than in large-number games. In the case of public broadcasting one may be more likely to contribute if the other potential beneficiaries of your contribution are "people like you" with similar values. If civic norms are indeed stronger in smaller communities, "group size" in Goetze *et al.* (1993) conceivably acts as a proxy for civic norms.

Civic Norms as Social Capital

Cooperative norms can also influence contributions to public broadcasting quite independently of the issue of group size. Within the rational choice tradition, cooperative norms have received relatively little attention, often on the grounds that they are unmeasurable (e.g., Olson 1965). While many studies have noted the role of altruism or "warm glow" motives for giving (Ribar and Wilhelm 1995; Smith, *et al.*1995; Andreoni 1990; Sugden 1984), few studies have tried to measure altruism or related concepts systematically and empirically (but see Smith *et al.* 1995). However, Coleman (1990) and others have recently made progress in formalizing the role of norms as arguments in a utility function that shape the costs and benefits of decisions (Knack 1992; Putnam 1993; Rosenstone and Hansen 1993; and Crawford and Ostrom 1995).

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[3]The *fraction* of total benefits received by any one individual falls, but that concept is irrelevant in a benefit-cost calculus. For public goods with rivalry (congestion), benefits per person (and, purely incidentally, an individual's fraction of total benefits) decline with group size.

The role of norms has received attention in the political behavior literature on the determinants of participation. Some researchers have argued that social networks provide an enforcement mechanism to encourage participation. Knack (1992) provides empirical evidence that interpersonal pressures enforcing norms of civic duty play a role in decisions about whether to vote. Knack maintains that voting participation is a function of a person's own sense of duty and that of friends, family and neighbors and "frequency and quality of interaction with these potential enforcers" (138). Rosenstone and Hansen (1993) argue that these social networks are a key source of the costs and benefits of participation, as communities or social networks can bestow praise or esteem to those who cooperate, and shun or take note of those who do not.

The term "social capital" has become commonplace in social science recently (e.g. Putnam 2000, 1995; Brehm and Rahn 1997). Putnam (1995: 664-665) defines social capital as "features of social life—networks, norms, and trust—that enable participants to act together more effectively to pursue shared objectives." He (2000, 1995a, 1995b, 1993) argues that these norms, networks and trust allow people to bridge underlying social cleavages and facilitate political participation. In particular, Putnam differentiates between "bridging" and "bonding" social capital. "Bonding" social capital is that which promotes cooperation within a group; "bridging" promotes cooperation among groups for greater social benefit.

Civic norms constitute social capital, as a means for resolving prisoners' dilemma and other collective action problems. Even individuals who do not internalize cooperative rules of thumb as normative behavior may nevertheless conform to norms, if others apply positive (or negative) sanctions for conforming with (or violating) norms. We attempt to measure the strength of civic norms by identifying appropriate proxies, and test their importance in generating contributions to public broadcasting. Anecdotal evidence suggests that social norms matter:

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many stations report high demand among contributors for coffee mugs and bumper stickers with the station's logo printed on them, consistent with the view that social approval from one's friends, neighbors and colleagues is an important motivating factor for some contributors.

Norms of civic cooperation are not directly observable, but the above literature guides researchers in finding variables that may measure variations in the level of norm-generated cooperation across communities.[4] Proxy indicators for civic norms available at the community level include voter turnout and census response rates. If voting and responding to the census are higher (controlling for income, education and other influences) in communities where PBS giving is also higher, a reasonable interpretation is that PBS giving is determined in part by civic norms that are based on the same internal (e.g. guilt and shame) and external sanctions (e.g. disapproval and ostracism) that play a large role in other forms of large-scale social cooperation.

Survey response on beliefs in the honesty of other people is another available proxy of the propensity toward civic cooperation in a community. Many people are "conditional cooperators," who cooperate only if they perceive that a sufficient number of others are also cooperating (Elster 1989). In communities where a large proportion of people believes others are mostly honest and trustworthy, the sense of obligation to cooperate oneself will tend to be stronger—in other words, a belief in honesty undergirds the willingness to cooperate.[5]

In addition to these proxies, the impact of civic norms on PBS giving can be captured in part by factors that determine the strength of cooperative norms. These variables include a higher

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[4] All of the following variable definitions are available upon request from the authors.

[5] Knack and Keefer (1997) show that interpersonal trust and the strength of civic norms are significantly and positively correlated across nations.

disposable income, education (proportion of adults with college degrees), ethnic homogeneity (Knack and Keefer 1997), residential stability (the percentage of people in the community who have lived in the same county for five or more years), home ownership rates (Rosenstone and Hansen 1993; Nie *et al.* 1996; Putnam 1995; Ostrom 1990), and community size (as discussed above). Additionally, religious tradition may be important in generating social capital. Putnam (2000: 77) and others have found that mainline Protestants have a higher level of civic engagement than members of other religions (see also Knack, forthcoming). By contrast, Catholics and (particularly) evangelical Christians appear to devote more of their time and money to church causes than to the outside community, although Putnam (2000: 161) notes that studies have shown evangelicals to be more politically involved after 1974.

Several of these factors may affect the strength of civic norms in part by influencing the likelihood that individuals understand group expectations. Income and education provide both the resources to fulfill normative obligations and the knowledge that fulfilling these obligations is important (Verba *et al.* 1995; Nie *et al.*1996). Racial and ethnic homogeneity may increase the sense of normative consensus (Ostrom 1990). In that sense, the social capital may be bonding, or within a group. Residential stability and home ownership indicate that a household is knowledgeable about normative expectations in the community, embedded into the community (DiPasquale and Glaeser 1999), and more subject to potential "social sanctions" or disapproval of others. Those of a particular religious tradition may come to understand the norms of their congregations, and depending on the denomination, the wider community. Some religious traditions may encourage cooperation with norms only within the congregation or other religious causes, where others may encourage cooperation within the community as a whole.

Some of these variables may affect PBS giving in other ways as well as through their relationship with norms. Most notably, they may affect programming tastes. Public broadcasting research consistently finds that viewers and listeners tend to be highly educated and earn high incomes (e.g. Charlton 1997), so we would expect socioeconomic status to be directly correlated with PBS giving. Therefore, we include these variables in the model although they affect giving in part through their impact on norms.

3. Data and Methodology

Television markets ("Designated Market Areas" or DMAs, in Nielsen's terminology) are the basic units of analysis. The Corporation for Public Broadcasting (CPB) provided data on total member contributions to each station, and the total number of members, or contributing households, to each station in 1993. "Member" contributions do not include corporate contributions, only those from households. Contributions per TV household (in dollars) is our first measure of giving; contributing households as a proportion of all television households in the market area is our second dependent variable. For some purposes, we used a third measure, average contributions per contributing household (contributions divided by number of contributors rather than television households).

There were 211 DMAs in the United States, not including territories (PBS 1994). In 1993, there were 195 public television stations in the United States (also not including territories) that reported membership contribution data to the CPB. Many market areas, such as Los Angeles and Chicago, have more than one public television station, in which case we combined contributions data over the stations. When a series of stations are in a state network (e.g. Oklahoma) and the contributions data are available only for the network as a whole, then the market areas which receive that signal are aggregated. More complicated issues arose where the

broadcast signals of state networks overlap with those from a market area not in the network.

For example, Maryland's state network broadcasts from several sites, and reports contributions only for the network as a whole. The majority of residents of two of the largest counties in Maryland (Montgomery and Prince George's) probably receive a better signal from WETA in Washington, DC than from the Maryland network, and these counties are in fact included in the Washington DMA. However, an undetermined, possibly substantial portion of the Maryland network's viewers and contributors live in the outer regions of these counties. We therefore combined the Washington market with Baltimore and other Maryland markets. After aggregating markets, stations and networks as necessary, we are left with 120 "markets" which include PBS stations that accepted member contributions in 1993.[6]

The Public Broadcasting Service (PBS) provided data describing each market area, including the number of television households (households which receive the signal), the audience size (how many people watch the station for at least 15 minutes on an "average" day from 1996 Nielsen ratings), the cable penetration of each market area (percentage of TV households with cable service), and the percentage of residents of the area with a disposable income of greater than $25,000. "Group size" is operationalized in our model as the number of television households in each market. Where an observation represents multiple stations (or

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[6]There are 18 markets/state networks that are combined for the purpose of this analysis. Goetze *et al.* (1993) apparently did not aggregate stations, markets, and/or networks, with a resulting potential for measurement error in their tests of the impact of group size.

represents a state network) that report contributions, we divide TV households by the number of

stations or networks.[7]

Several additional demographic variables were obtained from the Census Bureau's CD-

ROM *USA Counties*[8]: education (proportion of adults with a college degree), home ownership

(as a proportion of households), residential stability (proportion of residents living in the same

county for more than five years), proportion of the population that is children under 14 years

old,[9] and 1992 voting statistics including voter turnout (as a percentage of the voting-age

population) and the Democratic vote.[10] *USA Counties* also provides the population of different

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[7]Failure to make this adjustment would treat Washington and Baltimore area residents, for

example, as members of a single group, when they are in fact providing for different local public

goods, in supporting different stations. With this adjustment, we are creating a measure of

average group size among the multiple "groups" in the observation.

[8] We aggregated the county-level data as necessary to create market-level measures for each

independent variable. Except for the voter turnout data, the data from *USA Counties* is from

1990.

[9] Ideally, we would identify a slightly younger age group (e.g. children 0-10), but *USA Counties*

only breaks younger children into two age categories: those up to five years old and those 5-14.

[10]The Democratic vote as a share of the two-party president vote in 1992 is our proxy for liberal

ideology, one of our "taste" variables. Necessary permission to use the voter turnout data was

obtained from Election Research Service. Political ideology measures aggregated from survey

data are available only at the state level (Erikson *et al.* 1993) and not at the county level.

races in each county (white, black, Asian American, Native American).[11] We create a Herfindahl Index of ethnic homogeneity using the proportions of each race in each DMA.

Survey data on beliefs about honesty were provided by the DDB Needham Life Style data from Market Facts.[12] Census response data (mail return rates from 1990) were obtained directly from the Census Bureau. State-level information on the tax deductibility of charitable

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[11]Hispanics can be of any race, as the Census Bureau defined race in 1990, when it used a separate question to identify Hispanics. To include Hispanics as a separate group in an index that does not double count anyone, we used the proportion of people who did not identify themselves in one of the racial categories, recognizing that this is a highly imperfect approximation. This residual category includes those who identify themselves as "other" on the race item, many or most of whom are likely Hispanic. Therefore, we do not expect this approximation to affect our measurement of diversity within a market area.

[12] Robert Putnam generously provided this measure. County level data are aggregated to the DMA level, which are not necessarily representative at the television market level. This survey is not from random population samples; rather, the sample is drawn from a pre-recruited mail panel. The response rate to the initial recruitment is about 5-10%, but response to the specific survey request is 70-75%. The question asks people to agree or disagree (on a scale of 1-6) with the statement "Most people are honest." These data are collapsed into an agree/disagree dichotomy. The variable used in the analysis is the proportion that agrees with the statement, aggregated to the DMA level. Because there is no negative response category given, this variable is subject to acquiescence response set bias. All of these factors are sources of measurement error, which can make it more difficult to reject the null hypothesis.

contributions was provided by the Advisory Commission on Intergovernmental Relations.[13]

Church denomination membership data are available from the Glenmary Research Center in

Atlanta.[14] Finally, the CPB has also provided data regarding the amount granted to each station

from public broadcasting, federal, state, local, and university/college sources in 1992.

4. Results

We proxy the strength of cooperative norms using an index.[15] We create this "norms

index" using a summated ratings scale taking the mean of census response rates, turnout,[16] and

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[13]Where markets encompass residents of multiple states, the tax treatment of contributions may

differ within a market. This was a problem for only one of our 120 observations, however, and

the estimated effect of tax deductibility is not sensitive to how we code this observation.

[14] A machine-readable form of the data was obtained from the Roper Center. Classifications of

the denominations into "evangelical" and "mainline" follows Green *et al.* 1996: 188-189. See

also Knack, forthcoming.

[15] In a principal components analysis, the eigenvalue for the factor upon which the three variables

load is 2.09. The correlations of the honesty, voter turnout and census response variables with the

factor are, respectively, 0.86, 0.82, and 0.83.

[16]Census response and turnout are both widely considered to be determined in large part by civic

duty (e.g. see Knack 1992; Couper *et al.* 1998). We do not explicitly control for structural effects

on voter turnout, such as state motor voter or registration day laws that (modestly) influence

voter turnout across communities. However, we create an index of civic cooperation in order to

increase our confidence in our findings. We do not expect the same structural effects that affect

turnout to affect census response or belief in honesty.

belief in the honesty of others. [17] Using any of these variables alone in place of this index yields

similar results. Due to large differences in the size of our observations, we tested for

heteroskedasticity with a Glejser Test, confirming that the absolute value of the error terms are

significantly and negatively related to the size of the market in the models presented in Table 2,

but not in Table 1. Thus, OLS is used in Table 1; in Table 2, we use weighted least squares to

estimate the models, using market size as the weighting variable.

[TABLE 1 ABOUT HERE]

Table 1 explores the hypothesis that civic norms partially mediate the impact of many of

our independent variables—these variables help determine the level of civic norms in a

community. Table 1 also provides evidence to validate the norms index. The norms index is

regressed on socioeconomic status, [18] ethnic homogeneity, proportion of the market's population

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[17]The honesty variable is missing for three market areas (located in Alaska and Hawaii). We

imputed the value of honesty for them by regressing the honest variable on turnout and census

cooperation, and using the resulting coefficients to estimate their values for belief in honesty.

[18] The socioeconomic status variable is the average of the proportion of the market area's

population older than 25 years old with a college degree and the proportion of the market area's

population with a disposable income of greater than $25,000, and is measured as a proportion

from (0-1). In a principle components analysis, the eigenvalue for the factor upon which the

variables load is 1.68. The correlation of the college education variable with the factor is 0.915,

and the correlation of the income variable with the factor is also 0.915.

that is white, proportion over 50 years old, a stability index,[19] group size (in millions of households to facilitate interpretation of the coefficient). The model also includes the proportion of adherents to the three largest religious traditions.

Socioeconomic status is significantly related to norms. The norms index also increases with homogeneity (marginally significant in Model 2: p=0.08 for a two-tailed test), even controlling for proportion that is white. The racial homogeneity result is consistent with Ostrom's (1998) arguments, and suggests that elements of the social capital illustrated by these norms are bonding. Shared understandings and expectations are more easily created in homogeneous groups. Therefore, one expects to see fewer contributions in more heterogeneous communities.

The stability index is positively related to the norms index, but not significantly. Group size is negatively but not significantly related to the norms index. The proportion of evangelical Christians is negatively and significantly related to the norms index, and the proportion of mainline Protestants is significantly and positively related to the norms index. This is consistent with the research of Putnam (2000). The proportion of Catholic adherents in a community is not related to the norms index.

The upshot of the results of Table 1 is that these independent variables may have an indirect effect on giving through their effect on the level of norms in community and thus their

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[19] The stability index variable is the average of the proportion of the market's households that are owner-occupied and the proportion of the population that has in the same county for five years or more. In a principal components analysis, the eigenvalue for the factor upon which the variables load is 1.63. The correlation of the home ownership variable with the factor is 0.90, and the correlation of the stability variable with the factor is also 0.90.

effect is partially mediated by the inclusion of civic norms in the model. This is confirmed by the

results presented in Table 2. Table 2 reports the results of two regressions analyzing the impact

of the civic norms index on contributions per TV household (Model 1) and on the proportion of

TV households which contributed (Model 2).

[TABLE 2 ABOUT HERE]

Regressors include the nine presented in Table 1, as well as variables testing other theories

related to charitable giving. The variables are various sources of government funding aggregated,

(crowd out test), tax deductibility, proportion of the market's population that are children age 14

and under, proportion of votes that were cast for Bill Clinton in the 1992 election, audience size

(intensity of demand variables), and cable television penetration.

Table 2 indicates that civic norms play a significant role in motivating contributions. The

civic norms index is positively and significantly related to contributions per TV household (first

column) and to the proportion of TV households which contribute (second column). Each

percentage-point increase in the norms index is associated with a 9.9-cent increase in the average

contribution per TV household, and a 0.17 increase in the percentage of TV households which

contribute. Significantly, SES does not directly predict giving in these models. As Table 1

indicated, the impact of SES is indirect, suggesting that public broadcasting researchers should

consider civic norms.

We include both the Herfindahl Index and the proportion of the population that is white

in the model to ensure that any effects of the former are truly attributable to homogeneity, rather

than to the effect of a community being predominantly white. Controlling for other factors, ethnic

homogeneity has no statistically significant effect on giving, independent of its effect as a

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determinant of norms.[20] Proportion of the population that is white has no effect in either model. Proportion of residents over the age of 50 and the stability index do not predict giving.

Market size in Table 2 is not associated with amount contributed per household, though it is marginally significantly related to number of households which contribute (p=0.07 for a one-tailed test). In the models presented in the paper, group size is operationalized as the number of television households in the market. Alternatively, one could measure group size as the size of the audience (rather than measuring audience as a taste variable). Other substantive results presented here do not change substantially when "audience size" is used as a variable or as a weight. However, audience size is positively and significantly related to giving, where market size is marginally and significantly negative. We conclude that number of television households is a better measure of group size; audience size is much smaller and people are more likely to have a rough idea of the population of the area, but have little or no idea about the number of others who watch PBS. Even controlling for audience size, in the number of contributors model group size is consistent with theory. The size of the contribution is not determined by group size.

As for religious traditions, the proportion of Catholic and of mainline Protestant adherents in a community have no effect on contributions or number of contributors. Neither does the proportion of evangelical Christian adherents. Table 1 provides evidence that the effect of proportion of mainline Protestants may be partially mediated through its effects on civic norms.

The remainder of this section reports evidence from our tests relevant to other theories on the determinants of collective action and of charitable giving, presented in the order they appear

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[20] Removing proportion white from the equation does not change the results.

in Table 2.

Crowd Out Hypothesis

Table 2 indicates that government and university funding has no effect on contributions. We did not present the results of the regression including a variable for CPB grants to public broadcasting stations, which provide indications of "crowding in," as coefficients on this variable were positive and significant in all the regressions in Table 2. The CPB awards grants to stations partially on the basis of how successful they are in prior fundraising efforts. Thus, our "crowding-in" result may have been attributable in part to reverse causality, as viewer contributions lead to CPB grants rather than the other way around. We chose not to include it because we were unable to identify good exogenous instruments for CPB funding to run two-stage least squares.

Tax Deductibility of Contributions

Tax deductibility of donations decreases the cost of giving, which should increase the likelihood that someone will contribute. The tax code for federal income taxes obviously does not vary across television markets. However, the tax treatment of charitable contributions differs at the state level. Many but not all states have a state income tax; of these, many but not all allow charitable contributions to be deducted. In states with either no deductibility, or with no income tax at all, contributors bear the full cost of contributing.

Tax deductibility in our tests has no significant effect on contributions or on the proportion of households that contribute. The deductibility variable is a simple dummy coded 1 for markets located in states in which there is a state income tax and charitable contributions are deductible, and coded 0 in all other markets. Using individual-level data, Kingma (1989) is able to construct finer indicators of variations in the price of giving implied by tax provisions, which

may explain why tax deductibility increased giving in his tests.

Intensity of Demand

Table 2 provides strong evidence that greater demand for the public good is related to voluntary contributions for the good. Audience size is positively and significantly related to giving in both models. However, more specific tests of taste did not reveal evidence of intensity of demand. A greater proportion of children under the age of 14 as well as a higher proportion of individuals who voted for the Democratic presidential candidate[21] are not related to greater contributions or proportion of contributors.[22]

Cable Television

For both models, on the assumption that households hooked up to cable receive clearer TV signals, the impact of cable television penetration is tested. If the image and voice of Big Bird are clearer, viewers' enjoyment of them and sense of obligation to reciprocate by making a monetary contribution may be greater. Cable penetration proved insignificant, possibly because the greater number of substitute stations made available by cable reduced PBS viewing—and contributing—more than the improved reception of PBS programming increased them (Schwer and Daneshvary 1995). Another possible explanation is that cable television viewers may not contribute if they feel as though they have already paid once, through their cable subscription.

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[21] When one removes the religious tradition variables from the model, SES (which could also represent ability to meet your demand) and proportion of votes for the Democratic presidential candidate are both significant.

[22] Although public television stations devote more programming time to children's shows than do commercial stations, much of the programming time on most public stations is devoted to adults' shows such as "Antiques Roadshow" and "Frontline."

Findings Not Presented In Tables: Selective Incentives Hypothesis

Olson (1965) argued that "selective incentives" or private goods such as magazines, sent only to contributors, are crucial to explaining successful instances of group formation and collective action. In the context of public television, mailing a program guide to contributors (but not to non-contributors) may increase the proportion of contributors. Many of the selective incentives offered by PBS stations appear to turn what on the surface is a private act—writing a check to public television—into a public act. The coffee mug, sweatshirt or totebag that contributors receive from their PBS station allow them to display their civic-mindedness.

Most PBS stations give selective incentives or "premiums" (most commonly a program guide) to anyone making a membership contribution of a certain minimum size (the basic "fee" for membership). Most of these stations provide additional premiums (e.g. coffee mugs, discounts to restaurants etc.) to anyone willing to contribute an amount that is somewhat higher than the basic membership fee. These selective incentives do not necessarily cause people to contribute, but station managers hope they increase the size of contributions from persons who were inclined to contribute anyway.

The premiums offered by stations vary widely, so we narrow our focus to two very popular premiums—program guides and coffee mugs—and two somewhat less-common premiums, discounts to local restaurants and stores, and children's toys or children's clubs.[23] These data were obtained from a survey of public television stations conducted in 1995. For

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[23] By no means are these all the selective incentives stations offer. Sweatshirts or theme premiums tied to the programming (for example, "The Three Tenors" tapes or a t-shirt commemorating the tenth anniversary of *Car Talk*) are also commonly offered.

those stations that did not complete the survey, we filled in basic information from the station's web page, where possible. The necessary data remained missing for about 20 markets, however, which is the reason we do not include selective incentives variables in Table 2.

In an initial analysis, we constructed dummy variables for each of the four selective incentives variables, indicating whether or not the station offers a program guide, a coffee mug, discounts or children's toys or clubs. None of the four were significant when added to the models in Table 2, providing no support for the selective incentive hypothesis.

In a second analysis, we created a selective incentives index, by simply adding the four dummy variables. The selective incentives index is not significantly related to contributions per TV household or to the proportion of TV households that contribute. However, the selective incentives index is marginally significant ($p=0.07$ for a two-tailed test) when a third dependent variable is used, the average size of contributions per contributing household. This result is consistent with the conventional wisdom in public broadcasting that premiums increase the size of contributions for many people already predisposed to contribute.

The weak findings on selective incentives may be partially attributable to measurement error. For observations in which there were multiple PBS stations with different selective incentives, we used the information from the largest station in that market. Where data were missing for the largest station, we used data from the next largest station. These procedures inevitably introduce error into our selective incentives variables.

5. Discussion

This analysis provides evidence that civic norms are positively associated with contributions to public broadcasting in a community, even controlling for such significant variables as socio-economic status. A civic norms index, composed of census response rates,

voter turnout and the proportion of people who believe "most people are honest," was

significantly and positively related to the proportion of contributing households and to the level

of contributions per television household.

Other variables, in particular socioeconomic status, are shown to be associated with

giving through their impacts on civic norms. Socioeconomic status provides both the resources to

fulfill normative obligations and the knowledge that fulfilling these obligations is important

(Verba *et al.*1995; Nie *et al.* 1996). The proportion of community members with adherence to a

mainline Protestant church affects giving indirectly through civic norms. Proportions of

evangelical Christians in a community appear to affect giving negatively because of its negative

effect on norms. These findings are consistent with Putnam (2000), indicating some religious

traditions are more likely to create bonding social capital, others bridging.

This analysis also provides a conceptual link between selective incentives and civic

norms. Selective incentives have commonly been considered a benefit appealing to self-interest.

As a by-product of exchanging member dues for selective incentives, public goods are provided.

However, we argue that selective incentives can be an important means of communicating

expectations to other people (enforcing norms) and showing others that one is following

normative standards within a community. Indeed, selective incentives are a very important way

to turn a private act into a public one. The evidence presented here shows that selective

incentives do cause people to give more once they have already made the decision to contribute.

This study is the first, to our knowledge, that incorporates a role for social norms together

with a range of economic theories of charitable giving and collective action: government funding,

tax deductions, asymmetric demands, selective incentives and group size. The strong

performance of the norms proxies in explaining giving to public broadcasting supports the view

that social scientists should include an analysis of cooperative norms when considering the motivations for participation in collective action. This paper thus contributes to a growing literature that considers norms and other "social capital" as productive resources, in the same way that education has come to be seen as adding to "human capital."

SOURCES CITED

Abrams, Burton, and Mark Schmitz. 1984. "The Crowding-Out Effect of Governmental Transfers on Private Charitable Contributions: Cross-Section Evidence." *National Tax Journal* 37: 563-568.

Abrams, Burton and Mark Schmitz. 1978. "The 'Crowding-Out' Effect of Governmental Transfers on Private Charitable Contributions." *Public Choice* 33: 30-39.

*All-Station Cume Report: Based on 1996 NSI County Coverage Data.*1996. Nielsen Media Research: New York.

Andreoni, James. 1993. "An Experimental Test of the Public-Goods Crowding-Out Hypothesis." *The American Economic Review* 83: 1317-1327.

Andreoni, James. 1990. "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving." *Economic Journal* 100: 464-477.

Brehm, John and Wendy Rahn. 1997. "Individual-Level Evidence for the Causes and Consequences of Social Capital." *American Journal of Political Science* 41: 999-1023.

Charlton, Wendy. 1997. "Perceptions of Commercial Activities in Public Broadcasting: Results from a 1997 National Survey." http://www.cpb.org/library/researchnotes/ SECTIONA.HTML. Washington, DC: Corporation for Public Broadcasting.

Clotfelter, Charles. 1990. "The Impact of Tax Reform on Charitable Giving: A 1989 Perspective." In *Do Taxes Matter? The Impact of the Tax Reform Act of 1986*, ed. Joel

Slemrod. Cambridge: The MIT Press.

Clotfelter, Charles. 1985. *Federal Tax Policy and Charitable Giving*. Chicago: University of

Chicago Press.

Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge: Harvard University

Press.

-----. 1987. "Norms as Social Capital." in Gerald Radnitzky and Peter Bernholz, eds.

Economic Imperialism: The Economic Method Applied Outside the Field of

Economics. New York: Paragon House Publishers.

Couper, Mick, Eleanor Singer, and Richard A. Kulka. 1998. "Participation in the 1990

Decennial Census: Politics, Privacy, Pressures." *American Politics Quarterly* 26: 59-80.

Crawford, Sue E.S. and Elinor Ostrom. 1995. "A Grammar of Institutions." *American Political*

Science Review 89: 582-600.

DiPasquale, Denise and Edward Glaeser. 1999. "Incentives and Social Capital: Are Homeowners

Better Citizens?" *Journal of Urban Economics*, 45: 354-84.

Elster, Jon. 1989. *The Cement of Society: A Study of Social Order*. Cambridge: Cambridge

University Press.

Erikson, Robert S., Gerald C. Wright and John McIver. 1993. *Statehouse Democracy*. New

York: Cambridge University Press.

Goetze, Linda, T.F. Glover, and B. Biswas. 1993. "The Effects of Group Size and Income on

Contributions to the Corporation for Public Broadcasting." *Public Choice* 77: 407-414.

Green, John C., James L. Guth, Corwin E. Smidt and Lyman A. Kellstedt. 1996. *Religion and the*

Culture Wars: Dispatches From the Front. New York: Rowman and Littlefield.

Hardin, Russell. 1982. *Collective Action*. Baltimore: John Hopkins University Press.

Horowitz, David. 1991. "The Politics of Public Television," *Commentary*, 92:25-32.

Kingma, Bruce Robert. 1989. "An Accurate Measure of the Crowd-out Effect, Income Effect,

and Price Effect for Charitable Contributions." *Journal of Political Economy* 97: 1197-

1207.

Knack, Stephen. 1992. "Civic Norms, Social Sanctions and Voter Turnout." *Rationality and

Society*. 4: 133-156.

Knack, Stephen. forthcoming. "Social Capital and the Quality of Government: Evidence From

the States." *American Journal of Political Science*.

Knack, Stephen and Philip Keefer. 1997. "Does Social Capital Have an Economic Payoff? A

Cross-Country Investigation." *Quarterly Journal of Economics*, 112,1252-1288.

Konz, Kenneth A. 1999. Membership/Donor Lists With Political Organizations. Audit

Assignment No. SR99-07, Report No. 902. September 9, 1999. Office of the Inspector

General.

Marwell, Gerald and Ruth E. Ames. 1979. "Experiments on the Provision of Public Goods, I.

Resources, Interest, Group Size and the Free-Rider Problem." *American Journal of

Sociology* 84: 1335-1360.

Mitchell, Robert Cameron. 1979. "National Environmental Lobbies and the Apparent

Illogic of Collective Action." in Clifford S. Russell, ed., *Collective Decicion

Making: Applications From Public Choice Theory*. Baltimore: Johns Hopkins

University Press. pp. 87-121.

Nie, Norman, Jane Junn and Kenneth Stehlik-Barry. 1996. *Education and Democratic

Citizenship in America*. Chicago: University of Chicago Press.

Olson, Mancur. 1965. *The Logic of Collective Action*. Cambridge: Harvard University

Press.

Ostrom, Elinor. 1998. "A Behavioral Approach to the Rational Choice Theory of Collective

Action, Presidential Address, American Political Science Association, 1997." *American

Political Science Review* 92: 1-22.

Ostrom, Elinor. 1990. *Governing the Commons: The Evolution of Institutions for Collective

Action*. Cambridge: Cambridge University Press.

Public Broadcasting Service. 1994. *DMA Market Profiles*. Alexandria, VA: Public

Broadcasting Service.

Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*.

New York: Simon and Schuster.

Putnam, Robert D. 1995. "Tuning In, Tuning Out: The Strange Disappearance of Social

Capital in America." *PS: Political Science and Politics* XXVIII: 664-683.

Putnam, Robert D. 1993 *Making Democracy Work*. Princeton: Princeton University Press.

Ribar, David C. and Mark O. Wilhelm. 1995. "Charitable Contributions to International Relief

and Development." *National Tax Journal* 48: 229-244.

Rosenstone, Steven J. and John Mark Hansen. 1993. *Mobilization, Participation and

Democracy in America*. New York: Macmillan Publishing Company.

Rowland, Willard D. 1993. "Public Service Broadcasting in the United States: Its Mandate,

Institutions, and Conflicts" in Robert K. Avery, ed. *Public Service Broadcasting in a

Multichannel Environment: The History and Survival of an Ideal*. New York: Longman.

Schiff, Jerald. 1990. *Charitable Giving and Government Policy: An Economic Analysis*.

New York: Greenwood Press.

Schwer, R. Keith and Rennae Daneshvary. 1995. "Willingness to Pay for Public Television and

    the Advent of "Look-Alike" Cable Television Channels: A Case Study." *Journal of*

    Media Economics 8: 95-109.

Smith, Vincent H., Michael R. Kehoe, and Mary E. Cremer. 1995. "The Private Provision of

    Public Goods: Altruism and Voluntary Giving." *Journal of Public Economics* 58:107-

    126.

Sugden, Robert. 1984. "Reciprocity: The Supply of Public Goods Through Voluntary

    Contributions." *Economic Journal* 94: 772-787.

Verba, Sidney, Kay Lehman Schlozman and Henry E. Brady. 1995. *Voice and Equality: Civic*

Voluntarism in American Politics. Cambridge: Harvard University Press.

APPENDIX: Descriptive Statistics

INDEPENDENT VARIABLES	N	MEAN	STD. DEVIATION	MINIMUM	MAXIMUM
TURNOUT	120	58.75%	7.9%	36%	82%
CENSUS	120	66.52%	6.73%	48.07%	80.04%
CIVIC NORMS INDEX	120	62.64%	6.34%	43.31%	76.02%
BELIEF IN HONESTY	117	66.38%	3.32%	58%	74%
GROUP SIZE (TV Households)	120	448,638	389,737	30,820	1,816,700
AUDIENCE SIZE 1996 (Nielsen ratings)	120	120,819	186,986	4,190	1,348,140
STATIONS IN MARKET	120	1.5	0.98	1	5
MEDIAN INCOME	120	61.62%	7.23%	43%	78%
COLLEGE EDUCATED	120	18.32%	4.45%	9%	31%
HOME OWNERS	120	66.28%	5.88%	49%	77%
PERCENT OVER 50	120	25.37%	4.17%	10%	40%
ETHNIC HOMOGENEITY	120	0.74	0.14	0.44	0.96
PERCENT WHITE	120	83.95%	10.75%	32%	98%
PERCENT BLACK	120	7.5%	7.44%	0%	37%
PERCENT ASIAN	120	2%	5.8%	0%	61.8%
PERCENT NATIVE AMERICAN	120	1%	2%	0%	12.7%
PERCENT "OTHER" (INCLUDES non-white/black HISPANICS)	120	5.4%	5.7%	0%	28.5%
PERCENT KIDS UNDER 14 YEARS OLD	120	22.0%	2.4%	16.6%	30.99%
PERCENT VOTES DEMOCRATIC PRESIDENTIAL CAND.	120	40.61%	6.96%	24%	57%
CPB FUNDING—1992	120	$3.12	$3.70	$0.57	$28.22
LOCAL FUNDING—1992	120	$0.45	$1.20	$0	$8.30
STATE FUNDING—1992	120	$2.87	$4.23	$0	$21.42
UNIV. FUNDING—1992	120	$2.44	$5.15	$0	$35.44
SELECTIVE INCENTIVES	102	1.54	0.82	0	4
PERCENT OF POPULATION EVANGELICAL	120	16.11%	11.52%	2.58%	51.34%
PERCENT MAINLINE PROPTESTANTS	120	12.17%	7.13%	1.77%	42.88%
PERCENT CATHOLIC	120	36.83%	24.81%	2.97%	100%

Table 1: Determinants of Civic Norms

VARIABLE	CIVIC NORMS OF COOPERATION
INTERCEPT	0.32
	(0.07)
SOCIOECONOMIC STATUS	0.34**
	(0.09)
RACIAL HOMOGENEITY	0.15
	(0.09)
PROPORTION WHITE	0.07
	(0.10)
PROPORTION OVER 50	-0.16
	(0.10)
STABILITY INDEX	0.09
	(0.09)
GROUP SIZE	-0.007
	(0.01)
EVANGELICAL CHRISTIANS	-0.08*
	(0.04)
MAINLINE PROTESTANTS	0.12*
	(0.06)
CATHOLIC ADHERENTS	-0.02
	(0.02)
Mean, dependent var.	0.64
Model Fit	Adj. R^2=0.53
n	n=120

*p<0.05; **p<0.01. Significance levels reported for a two-tailed test.

Table 2: Determinants of Giving to PBS Stations

VARIABLE	Model 1 CONTRIBUTIONS	Model 2 PROPORTION CONTRIBUTORS
INTERCEPT	-6.22 (6.94)	-0.15 (0.13)
NORMS INDEX	9.91* (4.37)	0.17* (0.08)
SOCIOECONOMIC STATUS	1.30 (4.86)	0.07 (0.09)
ETHNIC HOMOGENEITY	-2.44 (4.01)	-0.03 (0.07)
PROPORTION WHITE	4.73 (4.42)	0.07 (0.08)
PROPORTION OVER 50	-2.13 (7.45)	-0.03 (0.13)
STABILITY INDEX	-5.71 (4.70)	-0.08 (0.09)
GROUP SIZE (TV HOUSEHOLDS)	-0.09 (0.38)	-0.01 (0.01)
EVANGELICAL CHRISTIANS	-3.20 (1.87)	-0.04 (0.03)
MAINLINE PROTESTANTS	-2.40 (2.75)	-0.05 (0.05)
CATHOLIC ADHERENTS	1.36 (0.74)	0.01 (0.01)
TOTAL GOVERNMENT/ UNIVERSITY SPENDING, 1992	0.04 (0.03)	0.0005 (0.0006)
TAX DEDUCTION	-0.09 (0.27)	0.003 (0.005)
DEMOCRATIC PRESIDENTIAL VOTES	3.20 (2.62)	0.06 (0.05)
PROPORTION KIDS	3.09 (14.31)	0.11 (0.26)
AUDIENCE SIZE	9.16** (2.64)	0.14** (0.05)
CABLE TV PENETRATION	1.49 (2.18)	0.02 (0.04)
Mean, dependent var. Model Fit n	$3.26 Adj. R^2=0.44 120	0.06 Adj. R^2=0.38 120

*$p<0.05$; **$p<0.01$. Significance levels reported for a two-tailed test.