

PUBLIC ATTITUDES ABOUT POPULATION ISSUES: A SURVEY IN SANTA BARBARA COUNTY

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Registered voters (N=751) from Santa Barbara County were surveyed by mail on their opinions and knowledge of population issues. The survey assessed attitudes concerning social, economic, and environmental causes and consequences of population growth, including some questions about the desirability of various population policies. In addition, respondents completed a test of their knowledge of certain population facts. Half the respondents took the test first and were provided with the correct answers before completing the rest of the survey; the other half took the knowledge test after they completed the rest of the survey. Results indicated a consensus of concern for population issues; however, the consensus was weaker when specific policy issues were mentioned. A factor analysis summarized responses to the attitude statements as varying along five dimensions we interpret as "Faith in Government", "Immigration", "Faith in Technology or God", "Environment", and "Pressing Need". Political party and degree of religious involvement were the demographic variables that accounted for the most variance in attitudinal factor scores. Neither performance on the knowledge test nor being provided with the answers to the test was related to population attitudes. Implications for efforts to modify attitudes about population are discussed.

Introduction

Research of population-environment relationships and interactions is gaining increasing attention both inside and outside the discipline of Geography. The media portrayal of heated debates and divergent conclusions about population-environment issues in academic

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and government circles may obscure a greater deal of conciliation and agreement on these issues than is generally recognized. This research attempts to measure the conclusions of the public regarding various facets of the population-environment problematic. Understanding public opinion of these issues is essential information for guiding present and future policies.

This research was designed to characterize and analyze public opinion concerning the social, economic, and environmental causes and consequences of human population growth. A survey was designed and sent to a randomly selected set of registered voters ($N=751$) of Santa Barbara County to assess variation in attitudes about population issues across socioeconomic, demographic, and political categories such as race, sex, income, education, religion, and political affiliation. In addition, a short knowledge test was included in the survey to determine whether there was a relationship between the accuracy of people's knowledge of several population facts and their opinions about various population issues.

The narrow geographic scope of the participants (Santa Barbara County, California) enabled a fine-resolution spatial analysis in which we explored whether or not the spatial context of the residence of the survey respondent was related to their opinion. For example, one of many questions we explored was: Is there a contact effect in which people who live in Hispanic neighborhoods have different attitudes regarding immigration than those who live in white neighborhoods? In addition, Santa Barbara County is similar to many counties in the southwestern United States in that it has a large Hispanic population. The economy of the northern half of the county is primarily agricultural, that of the southern portion of the county is based on a mix of tourism and industry. The Hispanic population is a critical component of the labor force for both of these economies and we were interested in determining whether these differences would manifest as spatially distinct attitudes about any population issues. The narrow geographic scope of this survey

limits the generalization of the survey results to other parts of the country. However, the results for some of the questions in this survey did not differ markedly from the results of similar questions in other national scale surveys (Belden and Russonello 1994; Stief and Kalish 1994).

The survey was conducted in late May and early June 1994. The survey instrument was designed to answer the following questions: What is the level of awareness and accuracy of public knowledge concerning the global, national, and local population levels and their associated demographic trends? What attitudes do people have regarding these prevailing demographic trends and their social, economic, and environmental consequences? What is the level of public support for various programs or policies that could potentially influence population growth both nationally and internationally?

The analysis of the survey consisted of running a factor analysis on attitudinal response questions. Five factors were identified that captured 51% of the variability of response to 51 attitudinal questions. We named the five factors (in descending order): 'Faith in Government', 'Immigration', 'Faith in Technology or God', 'Environment' and 'Pressing Need.' These factors were tested for significant differences across the various socioeconomic, demographic, and political characteristics of the respondents. In addition, the factors were tested against the respondents' performance on the knowledge test.

Background

Many population-related issues have received a great deal of attention not only in academic circles, but also among politicians and in the media. Such issues include immigration, environmental degradation, and resource depletion. However, the ever-growing human population itself, which many feel is a fundamental driving force behind these other issues, is given scant attention by politicians and the media. In fact, the

absolute number of articles on population in mainstream magazines has declined steadily since 1970 despite an overall increase in magazine articles published since then (Wilmouth and Ball 1992). This decline raises interesting questions as to the state of the public's attitudes regarding population issues. Is the population debate resolved in the mind of the public? It certainly does not appear to be in academic or governmental circles. Are fewer articles being published because the topic is too controversial, too complex, or too boring? An assessment of public opinion on these issues can provide valuable information for guiding the difficult political and pragmatic components of the policy-making process.

Some have argued that the solution to environmental problems will be determined more by our collective ability to change human behavior than by some sort of technological fix (Maloney and Ward 1973). Changing the collective behavior of humanity is a formidable task. A required first step is the belief that behavior needs to be changed. Identifying what people believe is therefore an important component of progress towards changing population-related behaviors. Undoubtedly, belief and reality are not independent. However, there may be a significant and dangerous time lag between the two. The reality of the consequences of population growth is debated, and most would agree that the consequences are uncertain if not unknowable. But the consensus of a growing number of economists, earth scientists, and others is that the rapidly growing human population is more likely to have detrimental than positive consequences (Johnson and Lee 1987; National Research Council 1992; Bretherton 1995).

Determining public opinion concerning population issues is also important because we live in what is increasingly becoming a "policy by poll" world. Public opinion appears to be a primary determinant of policy in today's political arena, as evidenced by the importance that opinion polls and surveys are given as dominant tools of both politicians and the media. If this is the case, public attitudes concerning population issues

may be more important for determining policy than the conclusions of a select set of analysts at the United Nations, World Bank, and other organizations attempting to objectively determine what should be done.

The potential regrets for not adopting a population policy are numerous. Both the growing human population and high levels of resource consumption will likely have myriad social, economic, and environmental consequences. We would argue that public opinion concerning population is not derived primarily from specific expected consequences but is more of a stochastic "horse-sense" that suggests that most of the probable consequences are not desirable. Assessment of these attitudes and opinions should shed light on appropriate and politically feasible policy avenues to address issues of population growth.

A fair amount of research has been conducted concerning environmental attitudes, some of which included attitudes about population growth and resource consumption as a component of the research. However, very little of this research has focused specifically on human population growth. Most such research has attempted to identify general environmental attitudes concerning issues such as biodiversity, pollution, and the economy. The scarcity of literature on the relationship between population and environmental attitudes has been documented by Stycos (1996).

Research in the area of environmental attitudes has failed to reach consensus on the simple matter of whether pro-environmental attitudes have increased or decreased in the recent past. Morrison (1980) suggested that public support for environmental protection had increased. Thompson and Gasteiger (1985) suggested the opposite: support for environmental issues had waned over the same period of time. Research by Thompson and Barton (1994) identified two contrasting ideologies that underlie support for environmental protection. *Ecocentric* individuals value nature for its own sake and therefore judge that it deserves protection because of its intrinsic value. In contrast, *anthropocentrics* feel that the environment should be protected because of its value in main-

taining or enhancing the quality of life of people. Thompson and Barton determined that ecocentric individuals are more likely than anthropocentrics to act on their pro-environment attitudes and engage in conservation-oriented behaviors, such as recycling. Thus, ecocentric and anthropocentric individuals might have the same support for specific policy, yet their internal rationales for such policy and their tendency to act on their attitudes would be quite different. It is not clear whether attitudes about human population growth will similarly vary along ecocentric versus anthropocentric lines. Clearly there are many statements concerning population consequences and policy that can be answered by ecocentric and anthropocentric individuals in similar manners despite very different reasons for such responses.

In a series of papers, Catton and Dunlap proposed that the underlying worldview of Americans, if not all of Western society, is shifting from a "Dominant Western World" view, in which humans (aided by technology) are separate from and dominant over nature, to a newer worldview in which humanity is merely another inhabitant of the natural world and as such is subject to the same natural laws (Catton and Dunlap 1978; Dunlap 1980). An instrument for measuring this shift has been proposed by Dunlap and Van Liere (1978) in the form of "The New Environmental Paradigm" (NEP). Although there are some problems with the reliability of responses to the NEP (Arcury et al. 1986), general findings are that sympathy for environmental issues is directly proportional to educational level, and inversely proportional to religious commitment and age. The survey we report here examines the relationships of such demographic variables to attitudes toward population issues.

Culen et al. (1986) found an interesting relationship between environmental and population attitudes. They determined that highly educated members of environmental groups believe overpopulation to be the most important issue facing humankind. It is possible that these respondents were answering an implicit question: What is the most im-

portant fundamental *cause* of most of the environmental problems facing humanity? Perhaps a different group of respondents (e.g., the less educated) would not interpret the question in this way. To the degree that such variations in question interpretation occur, more effort should be spent on designing surveys that are very explicit in distinguishing the causes of problems from the problems themselves. It is not unreasonable that some people believe various manifestations of human suffering are the worst problems facing humanity. If the question posed was "Which of these two problems are more serious: mass starvation or overpopulation?" then overpopulation would not likely be chosen more often. Clearly there may be a relationship between starvation and overpopulation that will not be captured in the survey. Perhaps some individuals see mass starvation as an immediate manifestation of human suffering that is more important than the vaguer concept of overpopulation, whereas other individuals see overpopulation as the cause of starvation and consequently feel that starvation will necessarily result if population is not addressed.

Questions of this nature often appear in surveys. For instance, Belden and Russonello (1994) administered a telephone survey that asked respondents to rate the seriousness of various problems, some of which referred to the environment or population issues. Their results suggested that people are more concerned about tangible immediate problems such as crime and toxic waste, rather than general problems like rapid population growth and over-consumption of resources. However, the problems listed can be difficult for a respondent to rank because he or she may consider them to be causally interrelated. Unfortunately, the questions do not investigate what respondents believe to be the causal interrelationships among the specified problems, nor do they ask respondents to prioritize the relative importance of causes and effects. Questions like these could prove to be very powerful if they allowed respondents to prioritize the importance of the issues based on the fundamental underlying causalities they believed to be involved.

Other questions in the Belden and Russonello survey did address issues of causation, but only between one cause and one effect at a time. For example, 73% of respondents felt that the addition of three billion people to Earth's population in the next twenty years would have a negative impact on the global environment. Fifty-five percent agreed that rapid population growth in developing countries was an underlying cause of civil wars and regional conflicts. The same percentage felt that population growth held back economic development. However, eighty-three percent of the respondents felt confident that the human race will be able to find technological solutions to global energy and resource needs. These results point to another drawback of opinion surveys: questions are asked in isolation, and when the responses are examined as a whole, many contradictions arise. Nonetheless, the results of surveys of this nature do provide valuable information as to overall public attitudes concerning these issues.

A survey focusing specifically on issues of population growth might identify spectrums of variation that are quite different than surveys of environmental attitudes. Assessments of environmental attitudes often focus on the respondent's attitudes about nature; questions concerning human population issues clearly include a focus on attitudes about the human condition, and about conventional religious and spiritual issues. The spiritual component of attitudes about population issues has been recognized. Pamphlets and information bulletins aimed at explaining the importance of population issues to people of faith have been prepared by many organizations (Sommers, 1994; Waak, 1994). Others have argued that consensus on population policy will result from changes in religious attitudes (Coward, 1997).

A final point of interest is the relationship between knowledge and attitudes about population. This has implications for the possibility of changing people's population attitudes via education. Despite this, there have been very few studies on knowledge of population and population

growth. A study by Brown and Siegler (1993) asked participants to estimate population sizes of the 100 most populous countries. They showed that overall knowledge of absolute population sizes for these countries is very poor.

Most surveys on attitudes towards population issues are either very general or seek specific information on a narrowly defined topic other than population. Research on public attitudes regarding demographic trends and national population policy is not unprecedented; however, the demographic trend of concern is often a shrinking population, and the national population policy in question is thus often pro-natal (Moors, 1990). The survey we report below enhances previous research in several ways. It focuses specifically on population itself, in addition to population-related issues. It asks about attitudes towards the causes, consequences, and policies associated with human population growth. The residential locations of respondents are geocoded, allowing for comparisons of responses as a function of neighborhood characteristics. Finally, our survey includes a knowledge test to determine whether attitudes are related to knowledge of population facts.

Methods

Survey Instrument

The survey was composed of three sections. The first section consisted of 66 statements designed to elicit attitudes about various population issues. It included 51 attitudinal statements about population issues including immigration, resource consumption, and environmental degradation. Responses were given with five-point Likert scales: "Strongly Agree", "Agree", "Neutral", "Disagree", "Strongly Disagree", as well as a "Don't Know or No Opinion" category. This first section also included fifteen questions concerning various benefits, services, and opportunities that are available to some sectors of the public (e.g. vaccina-

tions, abortions, emergency medical care, and public education). Respondents were asked to indicate which people should be entitled to which benefits: "All People", "Only Legal Residents and Citizens", "No People", and "Don't Know or No Opinion."

The second section contained 27 items asking about demographic, socioeconomic, and political, and geographic characteristics of respondents, such as sex, age, income, home location, etc. One question asked respondents to describe their perception of the present population of Santa Barbara County. The possible responses were "Too Low", "Somewhat Low", "About Right", "Somewhat High", and "Too High." The surveys requested the street and cross street of the respondents' home and work locations in order to code them into a geographic information system. In conjunction with 1990 U.S. census data for Santa Barbara County, this information allowed us to determine variables such as the population density and demographic constituency of the census block group of respondents' home locations.

The third section was a knowledge test in which respondents were requested to estimate the populations of the whole planet, China, Mexico City, The United States, California, and Santa Barbara County. These regions were chosen because we thought that respondents would be able to make reasonably accurate estimates of them, given their local interest and/or large population sizes (see Brown and Siegler 1993). Respondents were also asked to estimate the doubling time for both the global population and the United States. The knowledge test became part of an experimental component to the research. Half of the respondents were given the knowledge test as the first part of the survey; they were instructed to check their answers against a key that was provided before completing the rest of the survey. The other half of the respondents did not take the knowledge test until the very end of the survey; they were never provided with the answers to the test questions. This allowed us to examine whether providing information about population

influenced responses to subsequent attitudinal items. A summary of the survey responses can be found in the appendix.

Sampling Frame and Procedure

Our sampling frame consisted of the registered voters of Santa Barbara County. The total population of Santa Barbara County according to the 1990 U.S. census was 369,600. The total number of registered voters in the county according to the registrar of voters was a little over 201,000 in 1992. Many of the 369,600 residents are under 18 years of age. Thus, the set of registered voters represents a very large percentage of the adult population and is a good proxy for the adult residents of the county existing as a data set that could be readily sampled.

To begin, 5,000 names were randomly selected from the voter registration list; these were stratified by zip code to ensure a uniform geographic distribution of respondents. In order to increase the rate of response, we conducted a telephone pre-screening, asking people to participate in the survey study. Although we could not find phone numbers for some people, and many others could not be reached, almost everyone we talked to agreed to participate. Of the 5,000 originally selected, surveys were sent to all 3,000 registered voters who had valid addresses listed with the registrar, whether or not they had been reached by phone (except those who were reached and declined to participate). On May 15, 1994, 1,200 surveys were mailed out, and another 1,800 were mailed out on June 4, 1994. We thought this would be enough to receive 300 returned surveys, assuming a low response rate of 10%.

Characteristics of Final Sample

Out of 3,000 surveys sent out, 751 were returned. This represents a response rate of at least 25% (.37% of the registered voters). Some of the 3,000 addressees would not have received the survey, so the 751 returned represents a response rate that is actually higher than 25%,

possibly much higher. A number of potential respondents may have moved or died, but because bulk mail is thrown away when the address cannot be confirmed, we were not notified of this. To examine this, we sent 40 surveys to rural residents who had not been reached by phone to confirm their addresses (we had been informed that some of the rural addresses in the voter registration records would not be sufficient to get the survey delivered). These 40 were mailed with first class postage to ensure that the deliverable addresses would be looked up. Fourteen were returned stating that the addressee no longer lived at that address and that no forwarding address was provided. If this rate of undelivered surveys is extrapolated to all of the surveys, the 751 returned would actually represent a 40% rate of response for those who received the survey. It may have been even higher if it is true that urban residents are more mobile than rural residents.

Of the 751 respondents, 51% were female and 49% were male, ranging in age from 18 to 92, with a mean of 49. About 83% identified themselves as White, 5% as Hispanic, 4% as other, and about 3% as Black, Asian, or Native American. The remaining respondents declined to state their ethnicity. The respondents had a median income of between \$20,000 and \$50,000 dollars, with 11% earning less than \$10,000 and 9% earning more than \$100,000. About half the respondents had at least a bachelor's degree, only 10% had no college coursework. About 74% of the respondents identified their religion as some denomination of Christianity; however, nearly 50% said their degree of religious involvement was "minimal."

Assessing the 'representativeness' of our sample to Santa Barbara County's registered voters is difficult because the registrar of voters has no information about the registered voters other than their political party affiliation. Nonetheless, this information did provide some clues as to the nature and magnitude of one component of the non-response bias. According to the registrar of voters 45% of the electorate consisted

of Democrats, 39% Republicans, and 16% Other. The political party breakdown for the *survey respondents* was 39% Democrat, 43% Republican, and 19% Other. The fact that Republican responses outnumbered Democratic responses despite the majority of Democrats in the sample population suggests a non-response bias against Democrats and in favor of Republicans. Nonetheless these results most likely parallel the voting patterns of the electorate. Republicans in Santa Barbara County have higher incomes, are more likely to have stabilized living situations, and are consequently easier to reach via mail surveys. Santa Barbara County Republicans are also more likely to vote than Democrats. Perhaps the probability of completing a mail survey on issues such as this is comparable to the probability of voting.

Another non-response bias that seemed very likely was associated with the Hispanic and non-Hispanic proportions of the population. Only four percent of the respondents indicated Hispanic ethnicity despite the fact that according to the 1990 U.S. Census almost 30% of the population of Santa Barbara County was Hispanic. If the Hispanic population of Santa Barbara County was substantially younger and/or less likely to register to vote our sample may have been representative of the registered voters of the county with respect to Hispanic vs. non-Hispanic. However, in light of the fact that 34 Spanish-language versions of the survey were mailed to those who requested them in the telephone pre-screening and none were returned it is almost certain that there was a non-response bias that reduced the number of Hispanic respondents. Consequently the limited response from the Hispanic portion of the population raises questions as the validity of any of the analyses measuring differences across racial or ethnic categories.

Results

First, results of a univariate analysis are briefly described by present-

ing descriptive summaries of responses to individual items (the survey instrument and results for each item may be obtained from the first author). A factor analysis of attitude items was performed to more efficiently capture the dimensions of variation in population attitudes and these results are presented. Differences in factor scores as a function of demographic and neighborhood characteristics of respondents are examined next. Finally, the results of the population knowledge test are presented.

Univariate Summary of Results

Overall, it appears that the electorate of Santa Barbara is concerned about the global population situation (see appendix). Seventy-three percent of the respondents agreed with the statement: "The global population growth rate is too high and active means should be found to reduce it." Seventy-five percent of the respondents agreed with the statement: "The Earth has finite limits of land, air, and water which impose a ceiling on the number of people that can live on it." These results indicate a fair consensus of public opinion rather than a strongly divided electorate.

More than seventy percent of the respondents agreed or strongly agreed with the 10 statements linking environmental degradation to population growth. In fact, a majority disagreed with none of the items linking population growth and environmental degradation. Furthermore, seventy-three percent of the respondents agreed that population growth aggravates international violence, and sixty-one percent agreed that population growth contributes to racial conflict. Thus a majority of the respondents see population growth as having a detrimental effect on environmental quality and social relations.

Factor Analysis of Attitude Items

Summarizing responses to the survey by examining each of the 51 attitudinal items individually is neither efficient nor intellectually satisfying, given the statistical and semantic overlap between the various items.

The multivariate data reduction technique of factor analysis was applied as a means of capturing and summarizing variation in the responses to the statements in a simple and meaningful way. After extraction of five factors, we used a varimax rotation (which preserves orthogonality among factors) to aid interpretation of the factors. The major factors we extracted appear to be clearly interpretable. The first factor accounts for 28% of the variation in responses to the 51 original statements; all five factors together account for about 50% of the variation. The items making up each factor are listed in decreasing order of loading, along with the variation accounted for by each factor. Following is an explanation/justification of the names and interpretations we give to each factor.

Factor 1: "Faith in government". Thirteen of the fifteen statements specifically mention policy or action that should be taken by the government or governments to mitigate the consequences of population growth (Table 1). We interpret variation in responses to these statements to be fundamentally influenced by attitudes respondents have regarding the ability of governmental institutions to appropriately identify problems that need addressing, and to effectively address those problems with policy.

Factor 2: "Immigration". Five of the six statements making up factor 2 have to do with immigration policy (Table 2). The sixth has to do with the idea that welfare support to unwed mothers acts as an incentive to produce more children. The sense we get from this set of statements is a concern about current issues dealing with illegal immigration and welfare. The suggestion is that the issues raised in the survey are real issues that need to be addressed, and that the source of the problem is illegal immigrants and welfare recipients. The factor might thus be named a 'Blame Them' factor.

Factor 3: "Faith in Technology or God". The items in this factor appear to vary along a spectrum between "humanity is responsible for itself" vs. "we are in God's hands" (Table 3). One end of this spectrum

Table 1. Attitude Items Loading on Factor 1: "Faith in Government"

1. Imposing restrictions on CFC emissions that cause depletion of ozone in the stratosphere was a necessary and appropriate government action. (.83)
2. The potential consequences of global warming justify the spending of money to reduce the emission of greenhouse gases (CO₂ and CH₄). (.83)
3. To protect the environment for future generations, present economic and behavioral sacrifices are justified. (.76)
4. Human activities are the major cause of environmental degradation. Governments of the world must formulate policy to minimize this degradation. (.72)
5. The government should insure that various types of contraceptives are available at affordable prices for all members of our society. (.69)
6. Efforts, including funding, should be made to enhance the opportunity for women worldwide to achieve improved educational, economic and political status. (.66)
7. To reduce teen pregnancy, sex education should be mandatory in the schools. (.63)
8. Policies regarding environmental degradation must also address the high per capita levels of resource consumption that are common in the industrialized nations such as the U.S. (.55)
9. Government-sponsored educational programs can be an effective means to achieve voluntary reduction of family size. (.54)
10. The U.S. should lead the way in addressing global population control because it is one of the few nations wealthy enough to provide any significant funding. (.51)
11. International cooperation is necessary to address the causes and consequences of population growth. (.47)
12. The government should not provide any funding for abortions. (-.47)
13. Increasing human population threatens the diversity and survival of many plant and animal species. (.45)
14. Population growth is a cause of deforestation in the U.S. and worldwide. (.43)
15. Abortion should remain legal as defined in Roe vs. Wade. (.43)

Note: Loadings are in parentheses. Variation accounted for by this factor equals 28.4%.

Table 2. Attitude Items Loading on Factor 2: "Immigration"

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1. The U.S. should deport all illegal aliens. (.82)
 2. The U.S. should issue a counterfeit-proof National Identification card so that only U.S. citizens receive benefits that are restricted to U.S. citizens only. (.78)
 3. Federal law should be changed so that citizenship is not automatically granted to children born in the U.S. of non-citizen parents. (.76)
 4. The U.S. should tighten up border security. (.71)
 5. Immigration policies, laws, and law enforcement are federal responsibilities; individual states should be reimbursed for costs resulting from lack of enforcement of these laws by the federal government. (.62)
 6. Welfare support to unwed mothers acts as an incentive to produce more children. (.54)
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Note: Loadings are in parentheses. Variation accounted for by this factor equals 9.0%.

consists of people who believe that humanity is capable of identifying, understanding, and taking responsibility for its own collective behavior within the context of recognizing limits of knowledge and technology. The other end sees attempts at explanation, prediction, and control as arrogant and self-destructive acts of hubris. We would argue this end of the spectrum has faith in technology or God to avert problems. It is interesting to note that the statements in this factor clearly seem to line up with contemporary secular vs. non-secular debates. Every statement that mentioned abortion made it into this factor. In addition, the one statement that mentioned the word religion made it in also. One way or another, this factor seems to be about "faith": faith in the salvation of technology, faith that space colonization will avert overpopulation problems, faith that religious teachings and fundamentals determine human behavior.

Factor 4: "Environment". We choose the term "Environment" here rather than "Environmentalism" in an attempt to avoid the value-laden baggage carried by the latter term. The factor does not reflect the ecocentric/anthropocentric distinction described by Thompson and

Table 3. Attitude Items Loading on Factor 3: "Faith in Technology or God"

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1. Population growth is good because it increases the supply of our most valuable resource: people. (.69)
 2. A growing population is necessary for a growing economy. (.69)
 3. Attempts at curbing population growth are usually the racist schemes of the people in power. (.55)
 4. Countries that allow or condone abortion should be denied any kind of foreign aid. (.54)
 5. Human ingenuity has provided improved agricultural yields, better energy utilization and other technological innovations. This ingenuity can be counted upon to avert the need for population control. (.49)
 6. No government population policy is necessary since space colonization will begin before the world becomes too crowded. (.48)
 7. Abortion should remain legal as defined in *Roe vs. Wade*. (-.48)
 8. Cheap labor is necessary for a healthy economy. (.45)
 9. Religious fundamentals and teachings are more important than educational and/or economic conditions in determining family size. (.45)
 10. The government should not provide any funding for abortions. (.45)
 11. The global population growth rate is too high and active means should be found to reduce it. (-.43)
 12. The U.S. population growth rate is too high and active means should be found to reduce it. (-.40)
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Note: Loadings are in parentheses. Variation accounted for by this factor equals 5.5%.

Barton (1994). Instead it seems to be measuring whether respondents believed that the growing presence of humanity on the planet is having a detrimental impact on the physical and social environment in which we live, regardless of their personal utilitarian or non-utilitarian attitudes about the environment (Table 4). This factor is loaded with statements concerning social and environmental consequences of human popu-

Table 4. Attitude Items Loading on Factor 4: "Environment"

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1. The growing population causes increasing traffic congestion. (.74)
 2. Population growth increases competition for natural resources such as land, oil, and water. (.74)
 3. International violence is aggravated by issues such as immigration and competition for natural resources that are directly related to the growing human population. (.71)
 4. Population growth is a cause of increased pollution. (.64)
 5. Increasing human population threatens the diversity and survival of many plant and animal species. (.64)
 6. The growing population contributes to interracial conflict. (.63)
 7. Population growth is a cause of deforestation in the U.S. and worldwide. (.56)
 8. The earth has finite limits of land, air, and water which impose a ceiling on the number of people that can live on it. (.52)
 9. The global population growth rate is too high and active means should be found to reduce it. (.50)
 10. The U.S. population growth rate is too high and active means should be found to reduce it. (.50)
 11. As the population increases the cost of housing generally increases. (.49)
 12. Human ingenuity has provided improved agricultural yields, better energy utilization and other technological innovations. This ingenuity can be counted upon to avert the need for population control. (-.47)
 13. The U.S. should have an explicit and well-publicized international population policy. (.44)
 14. The U.S. should have an explicit and well-publicized national population policy. (.41)
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Note: Loadings are in parentheses. Variation accounted for by this factor equals 4.2%.

Table 5. Attitude Items Loading on Factor 5: "Pressing Need"

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1. The global population growth rate is too high and active means should be found to reduce it. (.47)
 2. The U.S. population growth rate is too high and active means should be found to reduce it. (.44)
 3. The U.S. should have an explicit and well-publicized national population policy. (.66)
 4. The U.S. should have an explicit and well-publicized international population policy. (.62)
 5. Any policy resulting in curbing the birth rate of any race, ethnic group, religious group, etc. should not be considered since it would be racist or discriminatory. (-.46)
 6. Incentive strategies such as tax laws favoring small families and penalizing large families are appropriate actions for govt. to use. (.60)
 7. The government should provide economic incentives for seekers of public assistance to be temporarily or permanently sterilized. (.67)
 8. As a condition of public assistance, child abusers and drug addicts must accept implanting a contraceptive such as NORPLANT. (.55)
 9. U.S. tax laws should limit deductions for dependent children to a maximum of two. (.50)
 10. The U.S. should lead the way in addressing global population control because it is one of the few nations wealthy enough to provide any significant funding. (.40)
 11. Coercive population control policies such as China's are justified because they are in the best interest of the Chinese despite the fact that they do limit individual rights. (.54)
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Note: Loadings are in parentheses. Variation accounted for by this factor equals 3.4%.

lation growth. It also touches on faith in technology and belief in the existence of absolute limitations. One end of the spectrum of this factor consists of people who are not particularly concerned about the environmental consequences of human activities and population growth.

Factor 5: "Pressing need". This factor has every item stating that population growth rates are too high and that policy is necessary (Table 5). In addition, the specific, harsh, and immediate policy statements also load on this factor. The factor seems to clearly separate those with an urgent "do something now" feeling from those with a "let's wait and see" attitude about the issue of population.

Factor Scores as a Function of Demographic Variables

Comparisons of factor scores were made across the demographic attributes of political party, race/ethnicity, religion (religious affiliation), religiosity (degree of religious involvement), education, and sex. Relationships were tested for significance with analysis of variance (ANOVA), using a rejection probability of .01 (Table 6).

A word of caution is in order here. In many instances the magnitude of the differences between demographic groups is not very large yet is clearly statistically reliable. Significant differences do not always represent opinions that are on opposite sides of the question at hand. Instead, they frequently represent differences in the strength of opinion regarding the statement. In fact, the level of agreement on these statements across subgroups dominates the disagreements among them. Nonetheless, despite the fact that the magnitudes of differences are often not very large, they are indicative of underlying attitudinal trends that are interesting and deserve attention.

Demographics against Factor 1: "Faith in government". Scores on this factor differed significantly as a function of political party, religion, and sex. Republicans had less "faith in government" than any of the other

Table 6. Differences in factor scores of attitude across six demographic categories

Factor/Sub-group	Political Party	Race/Ethnicity	Religion	Religiosity	Education	Sex
1. Faith in Government	*		*			*
2. Immigration	*			*		
3. Faith in Technology or God	*	*	*	*	*	
4. Environment						
5. Pressing Need				*		

* = $\alpha < .01$ Significance Level

political parties, which matches conventional wisdom regarding the distinction between Republicans and Democrats. Atheists, agnostics, and others had significantly more faith in government than Catholics and unspecified Christians. Men also had less "faith in government" than women, the only factor that differed between men and women.

Demographics against Factor 2: "Immigration". Factor 2 differed significantly as a function of political party and religiosity. Republicans were significantly more anti-immigrant than Democrats. Once again these results match the conventional wisdom concerning differences between Republicans and Democrats. Those respondents who marked "Extensive" for their degree of religious involvement were significantly more pro-immigrant than the rest of the respondents.

Demographics against Factor 3: "Faith in technology or God". The third factor registered the highest number of significant differences across the demographic categories. Significant differences in means were found for political party, race/ethnicity, religion, religiosity, and education. Atheists, agnostics, those with a "Minimal" degree of religious involvement, and those with bachelor's degrees and higher had the weakest "faith in technology"; respondents with high degrees of religious involvement and those with low levels of education had higher "faith in technology." Republicans and Hispanics also had higher scores on this factor.

Demographics against Factor 4: "Environment". The fourth factor did

not differ significantly across any of the demographic variables. Consistent with our discussion above, it did not differ across variables such as political party or education, as might be expected for an "environmentalist/non-environmentalist" factor.

Demographics against Factor 5: "Pressing need". The fifth factor differed significantly only for religiosity. Respondents with greater degrees of religious involvement were less concerned about population growth.

Geographic Analysis: Factor Scores as a Function of Neighborhood Characteristics

We examined whether factor scores differ as a function of characteristics of the locations of respondents' residences. The areal unit of analysis is the census block group; these are roughly equivalent to or smaller than what are conventionally considered "neighborhoods." We first looked at population density to determine whether people living in densely populated neighborhoods are more or less likely to be concerned about the consequences of human population growth. No significant relationships of this nature were found, however. We also found no relationships between the percentage of population that are Hispanic and any of the factor scores, even the factor concerning immigration. A test of variances was also statistically insignificant, indicating no increased polarization of attitudes toward immigration in highly Hispanic neighborhoods. Finally, there were no significant differences in factor scores between respondents who lived in high-income neighborhoods and those who lived in low-income neighborhoods.

Analysis of the distribution of respondents and their views around Santa Barbara County, we noted one significant difference in the factor scores. Santa Barbara County can be roughly separated into the 'North County' and the 'South Coast.' The 'South Coast' economy is based on tourism, aerospace, and the university, whereas the 'North County' is primarily agricultural. The 'North County' respondents were significantly more anti-immigrant on Factor 2: 'Immigration.' The North

County was also more Republican (51% North County, 39% South County). Since Republicans were also more anti-immigrant on Factor 2 this confounds the question of a spatially driven difference on this factor and the spatial difference disappeared once we controlled for political party affiliation. Further research of this nature may identify differences in attitudes about population issues across larger areas.

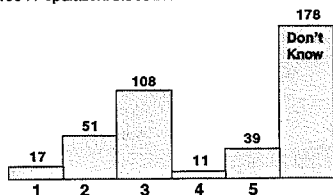
Knowledge Test

We examined responses to the test of knowledge of population facts. There were no significant differences in factor scores between those who were provided with the answers to the knowledge test and those who were not. Unfortunately, a substantial fraction of the respondents that received the survey containing the answers to the knowledge test clearly ignored the instructions, looked at the answers, and wrote in the correct answers to the eight questions concerning population levels and growth rates. This is confirmed by the fact that only about 25% of the respondents who were provided with the answers marked "Don't Know" on the knowledge test questions; about 50% of those not provided with the answers responded this way. Also, the accuracy of the respondents who were provided with answers was much higher than the accuracy of those who were not provided with answers. For this reason we decided to use only the responses of those who were not provided with the answers for all subsequent analyses involving the knowledge test. This was still a substantial sample size of 404.

A summary of the knowledge test results is provided in a summary of respondents estimates of the populations of the World, China, Mexico City, the United States, California, and Santa Barbara County (Figure 1). Answers to the knowledge questions are treated as continuous variables for the purposes of regression analyses with the factor scores. A few respondents clearly had trouble with these questions, providing answers far outside the correct range. For instance, some estimated the population of

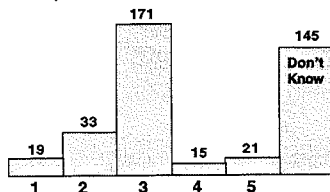
World Population Estimates

1994 Population: 5.566 Billion



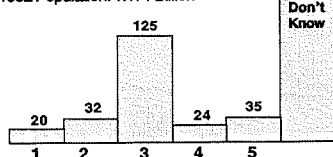
U.S. Population Estimates

1993 Population: 259 Million



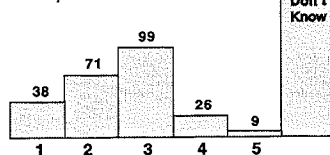
China Population Estimates

1992 Population: 1.171 Billion



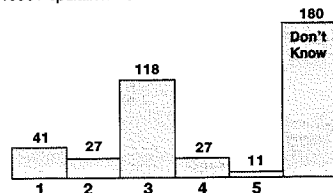
California Population Estimates

1991 Population: 30 Million



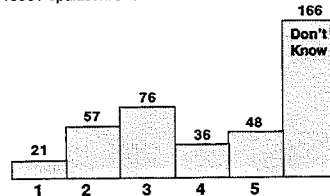
Mexico City Population Estimates

1990 Population: 15 Million



Santa Barbara County Estimates

1990 Population: 370 thousand



Explanation of ordination of responses depicted above:

- 1: Subject's estimate <50% of actual population
- 2: 50% of actual population <= Subject's estimate <80% of actual population
- 3: 80% of actual population < Subject's estimate <120% of actual population
- 4: 120% of actual population <= Subject's estimate < 150% of actual population
- 5: Subject's estimate >150% of actual population

Figure 1. Summary of knowledge-test responses regarding population estimates of the world, selected countries and Santa Barbara County.

Earth to be 50 trillion, while others estimated the population of Mexico City to be two billion. These would clearly be influential outliers in any regression analysis. Consequently, the knowledge-test data were analyzed in several ways. First, regressions between the raw data and the five factor scores were run. None of these produced significant slopes. These regressions were repeated, removing extreme estimates that were at least an order of magnitude greater than the actual value. None of these slopes were significant either. Because the sizes of respondents' errors may be misleading, we tried a third transformation in which scores were re-coded as 1 to 5, "very low" to "very high" (as shown in Figure 1). This also revealed no significant relationships. A fourth treatment of the knowledge-test scores ignored the direction of error in estimation by taking the absolute value of the difference between respondents' estimates and the actual value. These regressions also yielded no significant slopes.

Most of these regressions were run on about 200 cases, because about half of the respondents marked "Don't Know" on the knowledge test questions. In order to include these respondents, "Don't Know" responses were coded as a distinct category. These data were then tested via ANOVA techniques. Again, no significant differences were found. In particular, factor scores of people that answered "Don't Know" to the knowledge-test questions were not significantly different than those that made low estimates, accurate estimates, or high estimates. In sum, therefore, accuracy of population knowledge was not related to any of the attitudinal variance captured by the factor scores.

Finally, demographic categories were not related to knowledge of population. Women were much more likely than men to answer "Don't Know" to the world population estimation question. Yet, the men and women that did give numerical estimates for the world population did not differ significantly in their accuracy. In addition, education was not significantly related to the accuracy of world population estimates. Neither were political party, race/ethnicity, religion, or religiosity.

Discussion

Responses to the survey indicate that the electorate of Santa Barbara is concerned about the global population situation. There is a high level of support for general statements identifying human population growth as one of the fundamental causes of social, economic, and environmental problems. There is also a high level of support for general statements that something should be done about the population problem, though few respondents believe that technology can be counted on to "fix" the problems of excess population. However, once specific policy to address these issues is mentioned, support for such policy erodes markedly.

Factor analysis provides an interesting summary of the range of variation in attitudes about population issues. We extracted five factors of such variation: "Faith in Government", "Immigration", "Faith in Technology or God", "Environment", and "Pressing Need." These factors seem to be of a general rather than a specific nature. That is, they appear to tap into fundamental attitudes that people have regarding the role of government and epistemological issues about the limitations of scientific understanding of complex systems, rather than attitudes specifically relevant only to population issues.

Respondents' knowledge of population size and growth rate was not particularly accurate. There were no significant differences in factor scores between those who were provided with the answers to the knowledge test and those who were not. Analyzed in several ways, respondents' accuracy of knowledge about population size and growth rate was not related to scores on any of the attitudinal factors.

Overall, the high level of agreement across subgroups is one of the most interesting aspects of the results of the survey. Political party and religiosity account for the most variation in attitudes about human population size and growth. Population issues raise difficult moral and practical questions concerning the human condition. Perhaps attitudes concerning human population issues are driven by some fundamental atti-

tudes that individuals have concerning spiritual ideals and political realities. For instance, the measurement of an individual's degree of religious involvement or secularization may be tapping into some fundamental spiritual values concerning that individual's interpretation of the meaning of human existence. These spiritual values act as personal moral guidelines for individuals and are a major influence in the responses to questions like the ones in this survey. Similarly, identification of one's political party is a means of measuring an individual's pragmatic assessment of human nature. This assessment of human nature profoundly influences what kinds of laws and societal rules are appropriate and feasible in a legal and public sense. Consequently, these pragmatic beliefs about human nature also have a strong influence on responses to the questions posed by this survey.

Education level, as a demographic variable, was not very strongly related to attitudes about population. Furthermore, the results of the knowledge test suggest that there is no relationship between a person's knowledge of population facts and their attitudes concerning the social, economic, and environmental consequences of human population growth. We find this clear lack of a relationship quite surprising. Also a bit surprising was the fact that providing answers to the questions about population on the knowledge test prior to assessing population attitudes did not have any significant impact on those attitudes. These negative results strongly suggest that there is something other than mere knowledge of population facts that drives attitudes concerning the population issues addressed in this survey. The results are also consistent with the hypothesis that there is a lack of real understanding of the magnitudes of these numbers and their significance. Apparently, efforts aimed at changing attitudes concerning population growth will not be successful if they focus solely on dispensing information about population levels and growth rates.

If these hypotheses are true, it is clear that actively attempting to

change human attitudes about population issues is a daunting task. Religious conviction and political ideological values are often held tenaciously. In addition, simplistic methods of educating individuals such as informing them of the population of the world and its growth rate will not have any significant influence on attitudes about population issues. Perhaps a more comprehensive educational program that engenders a broader understanding of the potential ramifications of these facts would have an impact. However, it is more likely that such a program would have a greater impact if it also focused on religious and political beliefs, the practical and ethical difficulty of this notwithstanding. Further studies of this nature that focus specifically on these variables and sample from a wider geographic area would shed more light on these issues.

In many respects the results of this survey share similarities with surveys of environmental attitudes. In a national survey, Gutfield (1991) found that 80% of those sampled identified themselves as "environmentalists"; a national survey by Milbrath (1985) found that 72% agreed that "environmental problems were urgent." According to Stief and Kalish (1994), Americans believe the growth of the human population has an aggravating effect on social, economic, and environmental conditions because the world is already overpopulated. Yet, despite the fact that many people express environmental sentiments and identifications, only a small fraction of them practice conservation behaviors that would mitigate damage to the environment (Lipsey, 1977).

However, the issues associated with human population growth are not completely analogous to environmental issues. One particular issue that is not often associated with environmental issues is the abortion issue. The abortion issue is intimately involved with the population issue, as was clearly demonstrated at the U.N. International Conference on Population and Development. Our survey included the statement "Abortion should remain legal as defined in *Roe vs. Wade*." Response to this statement was one of somewhat greater support for legal abortion

than in most other polls. Fifty percent of the respondents "strongly agreed" with the statement and twenty-eight percent "agreed." Only five percent were "neutral", while five and eleven percent "disagreed" and "strongly disagreed", respectively. Only two percent of the respondents checked "Don't Know or No Opinion." There are several possible explanations for this high support for abortion rights (see Adamek, 1994, for discussion of the complexities of assessing abortion attitudes). One is simply that the question occurred in the context of many questions on the issue of overpopulation, which may be expected to enhance support for abortion. Belden and Russonello got similar results in the context of their population survey: seventy-two percent of their respondents agreed that "All women should have the right to choose abortion." Another explanation may be the brevity and simplicity of the question. Many other survey questions on *Roe vs. Wade* contain long and complex descriptions of viability, trimesters, and contingencies about the mother's health that may greatly erode support for the law. Furthermore, other surveys have exposed public ignorance about the *Roe vs. Wade* decision. Only 30% of 1,004 adults could correctly complete the statement, "*Roe vs. Wade* was a landmark Supreme Court case which dealt with..." (Blendon, 1993). The majority of the public in fact supports the conditions under which most abortions occur in this country (Public Opinion Strategies, 1992).

The cost of administering the survey was the primary reason we limited sampling to residents of Santa Barbara County. Generalizing these results beyond Santa Barbara County may be inappropriate. One likely reason is because this county has one of the highest rates of membership in environmental organizations in the country (Wikle, 1995). However, a comparison of the self-reported political views and parties from the survey with recent voting patterns of the electorate in the county helps to establish the ways in which this survey may be generalized. Overall representativeness aside, it should be valid to generalize interre-

relationships among items on the survey.

It is within this light that the results of our survey should be considered. They are probably an accurate reflection of the attitudes of that proportion of the electorate that actually votes. In that sense, the results may be of particular interest to politicians. However, it is clear that the results may not be representative of the poorer, less educated, and non-white constituents of the population. Nonetheless, many of the results of this survey agreed with the findings of the Pew Global Stewardship survey conducted by Belden and Russonello (1994). Furthermore, the sample size of our survey was relatively large for studies of this nature.

Conclusion

The results of this survey show a surprisingly high level of consensus across virtually all levels of demographic variables. The mean responses clearly indicate a broad level of public concern for many of the issues associated with human population growth. The appropriate responses to these issues are still intensely debated in many professional circles. Not surprisingly, public opinion as to the appropriate policy responses is also quite varied and shows that population issues are just as controversial in the eyes of the public as they are in the policy arena. The results of the factor analysis may provide some insight for policy makers by clarifying some of the underlying paradigms through which the public sees these issues. Clearly the public is concerned about rapid human population growth and would like to see changes in existing growth trends. However, lack of faith in the government's ability to implement appropriate and effective policy seems to be a major source of reservation. In addition, strongly held religious beliefs are also an impediment to the implementation of publicly acceptable policy. Education alone is unlikely to transform these strong convictions. The challenges to policy makers interested in addressing population issues will be to convince

people that the governments of the world are correct in trying to curb population growth rates, capable of doing so in an equitable and effective manner, and capable of doing so in a way that is sensitive to the religious and spiritual convictions of people.

This is clearly not a simple task. Debates concerning the causes and consequences of population growth have raged for centuries. Academic, religious, and governmental institutions of the world have not presented a consistent or coherent message regarding the population issue. Public mistrust of the claims and counter-claims concerning the consequences of human population growth are therefore understandable. Despite this mistrust, there are many scientists and policy makers who feel more must be done. It seems clear that many people want leaders to address these problems, but these leaders are having great difficulty reaching any kind of consensus as to what constitutes an appropriate response. In fact, vacillation is common, for example the developed countries of the world (including the U.S.) are way behind on their funding commitments to international family planning assistance that were identified in Cairo. Unfortunately, the history of U.N. International Conferences on Population and Development, and the Earth Summit in Rio de Janeiro, are more accurately characterized by discord than harmony. To paraphrase former U.S. Senator Tim Wirth:

‘Simmering tensions ignited at the two previous U.N. population conferences. At the World Population Conference in Bucharest in 1974, the U.S. and other industrial countries advocated programs to slow population growth, while the developing countries countered that “development is the best contraceptive.” By 1984, when the U.N. held its second Conference on Population in Mexico City, the tables had turned: the developing countries acknowledged the need for population programs, but President Reagan’s U.S. delegation pronounced population ‘a neutral factor’ and scaled back funding for international family planning efforts. And at the 1992 Earth Summit in Rio, a variety of representatives questioned the importance of population growth as an environmental concern.’

Many would argue that the most recent U.N. Conference on Population and Development in Cairo was also characterized by conflict. American media coverage of the conference focused on the Pope's participation in the conference and his attempts to ally the leaders of many Islamic nations in an obstructionist manner. These conferences are windows through which the public sees the inability of our world leaders to reach a consensus on this critically important issue. Many of the academic, religious, and governmental leaders who contribute to this debate have struggled valiantly to reach a consensus on the population issue. Hopefully a consensus will be reached before widespread social, economic, and environmental chaos results from unmanaged human population growth.

Appendix

Page 1 of Survey

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know No Opinion
1. Growing populations increase the supply of cheap labor.	13%	47%	11%	21%	4%	4%
2. Cheap labor is necessary for a healthy economy.	2	17	15	46	15	5
3. Population growth is a cause of increased pollution.	38	42	4	11	5	1
4. Population growth is good because it increases the supply of our most valuable resource: people.	2	8	13	39	36	2
5. Population growth is a cause of deforestation in the U.S. and worldwide.	32	41	6	13	6	2
6. The growing population causes increasing traffic congestion.	43	48	4	3	1	0
7. Population growth increases competition for natural resources such as land, oil and water.	49	45	3	2	1	1
8. International violence is aggravated by issues such as immigration and competition for natural resources that are directly related to the growing human population.	31	42	9	11	3	3
9. The growing population contributes to interracial conflict.	22	39	13	20	5	1
10. The global population growth rate is too high and active means should be found to reduce it.	41	32	10	9	5	3
11. The U.S. population growth rate is too high and active means should be found to reduce it.	28	35	14	15	3	5
12. As the population increases, the cost of housing generally increases.	16	48	13	15	3	5
13. Increasing human population threatens the diversity and survival of many plant and animal species.	37	43	7	8	4	1
14. A growing population is necessary for a growing economy.	2	13	16	46	19	4
15. The earth has finite limits of land, air, and water which impose a ceiling on the number of people that can live on it.	40	35	9	9	4	2
16. Policies regarding environmental degradation must also address the high per capita levels of resource consumption that are common in the industrialized nations such as the U.S.	29	45	11	7	2	7
17. Women, world wide, who achieve some educational, economic, and/or political status have fewer children, i.e. smaller families.	27	58	6	4	1	4

Page 2 of Survey

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know No Opinion
1. Attempts at curbing population growth are usually the racist schemes of the people in power.	3%	9%	10%	45%	29%	4%
2. The U.S. should have an explicit and well publicized National Population Policy.	15	31	17	21	10	4
3. The U.S. should have an explicit and well publicized International Population Policy.	14	25	19	25	12	5
4. Any policy resulting in curbing the birth rate of any race, ethnic group, religious group, etc. should not be considered since it would be racist or discriminatory.	18	29	10	24	16	3
5. No government population policy is necessary since space colonization will begin before the world becomes too crowded.	2	3	12	34	38	1
6. Human ingenuity has provided improved agricultural yields, better energy utilization and other technological innovations. This ingenuity can be counted upon to avert the need for population control.	4	12	12	41	26	5
7. Religious fundamentals and teachings are more important than educational and/or economic conditions in determining family size.	5	10	10	41	32	2
8. Illegal immigration is a symptom of over-population in the country of origin.	16	32	9	30	10	3
9. Human activities are the major cause of environmental degradation. Governments of the world must formulate policy to minimize this degradation.	33	45	9	6	3	4
10. Imposing restrictions of CFC emissions that cause depletion of ozone in the stratosphere was a necessary and appropriate government action.	33	39	9	7	6	6
11. The potential consequences of global warming justify the spending of money to reduce the emission of greenhouse gases (CO ₂ and CH ₄).	24	37	14	9	7	9
12. To protect the environment for future generations, present economic and behavioral sacrifices are justified.	27	48	11	7	3	3
13. Occurrences of famine in various parts of the world are not due to overpopulation. They are the result of an inadequate and/or inequitable food distribution system.	9	32	13	25	13	8
14. Efforts, including funding, should be made to enhance the opportunity for women, world-wide to achieve improved educational, economic and political status.	26	38	18	14	3	0

Page 3 of Survey

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know No Opinion
1. International cooperation is necessary to address the causes and consequences of population growth.	38%	50%	5%	4%	2%	1%
2. Welfare support to unwed mothers acts as an incentive to produce more children.	38	36	10	10	4	2
3. Incentive strategies such as tax laws favoring small families and penalizing large families are appropriate actions for government to use.	11	27	17	28	13	4
4. Government-sponsored educational programs can be an effective means to achieve reduction of family size by voluntary cooperation.	15	52	11	13	4	4
5. The government should insure that various types of contraceptives are available at affordable prices for all members of our society.	35	38	7	12	7	1
6. The government should provide economic incentives for seekers of public assistance to be temporarily or permanently sterilized.	15	29	17	23	12	4
7. To reduce teen pregnancy, sex education should be mandatory in the schools.	39	35	10	10	5	1
8. As a condition of public assistance, child abusers and drug addicts must accept implanting a contraceptive, such as NORPLANT.	24	30	14	17	9	6
9. Abortion should remain legal as defined in Roe vs. Wade.	50	28	5	5	11	2
10. The government should not provide any funding for abortions.	18	17	11	5	11	2
11. U.S. tax laws should limit deductions for dependent children to a maximum of two.	14	22	12	31	17	4
12. Countries that allow or condone abortion should be denied any kind of foreign aid.	5	4	9	31	48	4
13. The U.S. should lead the way in addressing global population control because it is one of the few nations wealthy enough to provide any significant funding.	12	33	19	22	10	4
14. Coercive population control policies such as China's are justified because they are in the best interest of the Chinese people despite the fact that they do limit individual rights.	9	28	17	25	15	7
15. Population policies can be effective only at the national level. Therefore, policies that require international are doomed to failure.	5	17	17	36	10	15

Page 4 of Survey

Many benefits are available to the general public in the U.S. which are paid for by the government (Federal, State, County, and City). There is much controversy as to which people should be entitled to which benefits. In the list below, please mark the appropriate box to indicate your opinion.

	All People	Only Legal Residents and Citizens	No People	Don't Know No Opinion
1. Government Subsidized Housing	5%	81%	11%	3%
2. Emergency Medical Care	64	34	1	1
3. Abortion Services	37	34	24	5
4. Family Planning Services	55	38	5	1
5. Primary Education (kindergarten - high school)	30	67	1	2
6. College Education	17	74	7	2
7. Vaccinations	64	34	1	1
8. Maternity Care	29	62	6	2
9. Food Stamps	7	78	13	2
10. Aid to Families with Dependent Children	7	81	10	2
11. Unemployment Insurance	8	87	3	2
12. Social Security	7	90	2	1
13. Workman's Compensation	12	83	3	2
14. National health care	11	71	14	4
15. The legal right to work in the U.S.	16	79	2	3

Questions on Immigration	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't Know No Opinion
1. The government should deport all illegal aliens.	44%	32%	7%	9%	4%	4%
2. The U.S. should issue a counterfeit-proof National Identification Card so that only U.S. citizens receive benefits that are restricted to U.S. citizens only.	47	32	7	7	5	3
3. Immigration policies, laws, and law enforcement are Federal responsibilities; individual states should be reimbursed for costs resulting from lack of enforcement of these laws by the federal government.	39	39	8	5	2	6
4. Federal law should be changed so that citizenship is not automatically granted to children born in the U.S. of non-citizen parents.	49	27	7	9	5	3
5. The U.S. should tighten up border security.	60	29	4	4	1	1

Questions on Local Population Issues	Too High	Somewhat High	About Right	Somewhat Low	Too Low
1. Your perception of Santa Barbara County population:	1%	7%	56%	25%	11%

	STRONG				
	None	Pro-Growth	Slow Growth	No Growth	Negative Growth
1. What policy should local government have regarding the population of Santa Barbara Co.?	19%	2%	55%	19%	5%

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