

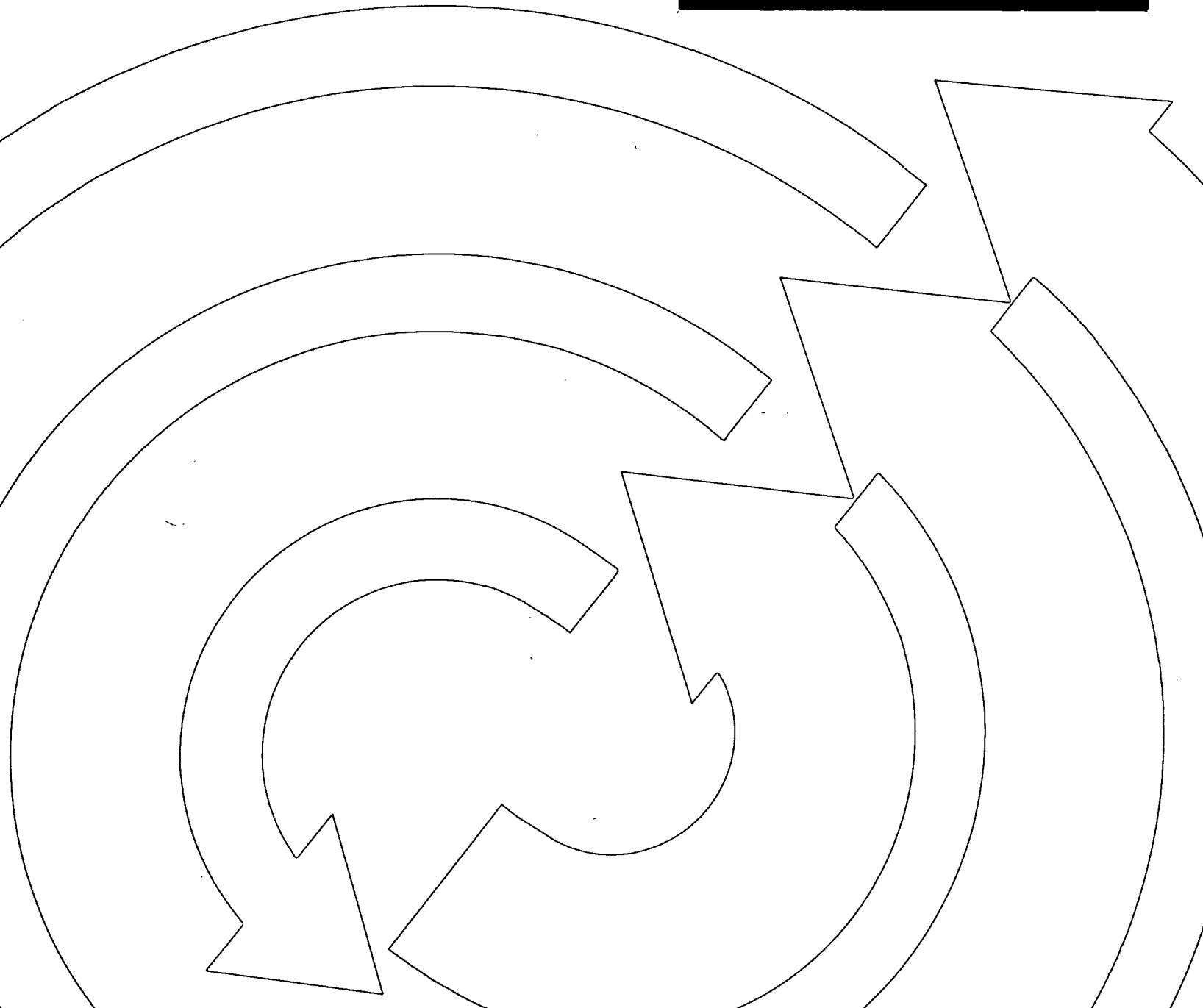
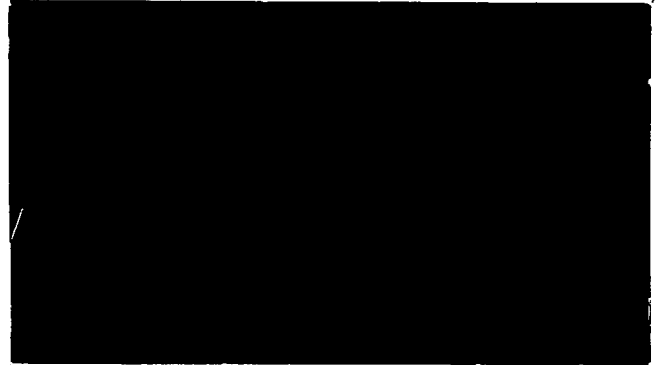


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POPULATION IN THE POPULAR  
PRESS, 1946-1987:  
TOWARDS A THEORY OF SOCIAL PROBLEMS

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Population in the Popular Press, 1946-1987:

Towards a Theory of Social Problems

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1. Introduction

What is good and bad about our society? How do we decide what are good and bad phenomena? What role does science play in determining the difference? Questions about knowledge, power, and the proper functioning of society are as old as sociology itself. In this paper, we examine the discourse of population in the popular press between 1946 and 1987 using a social constructionist approach to social problems. Because population is a technical issue, discussion tends to be dominated by professionals: demographers, biologists, agricultural economists. Therefore, examining population as a social problem raises questions about the nature of scientific knowledge, about what social problems are, and about how they can be studied.

In his classic article, Blumer (1970) suggested that social problems are "collective definitions," not self-evident dysfunctions of the social system. Therefore, the task of the student of social problems is uncovering "the process by which a society recognizes its social problems." Along with discourse theory more generally, the constructionist perspective has gained considerable prominence since Blumer's article (see Schneider 1985). Whether or not one agrees that social problems are collective definitions, we argue that by considering the process by which issues and problems are constructed sheds light on the internal dynamics of public discourse and provides a new perspective on the relation between science and ideology.

In this article, we define three levels of analysis of social problem phenomena: issues, interpretive packages, and social problems. We then present our summary of 503 popular articles sampled from the Reader's Guide to Periodical Literature. After a description of the structure of those articles, we analyze five interpretations of population phenomena which we find in the articles. Using recent histories of trends in academic demography, we relate changes in the

popular discourse to changes in the scientific discussion of population. We then discuss the theoretical implications of our work in connection with lay interpretations of social phenomena, and a discussion of the interplay between science and ideology, concluding with some suggested lines for future research.

The broadest of our basic concepts is an issue. As defined by Gamson and Modigliani (1989:1-2), an issue culture is "an ongoing discourse that evolves and changes over time, providing interpretations and meanings for relevant events." The discourse is relevant to a given notion, similar to what Foucault (1972) calls an "object." In this paper, we examine the issue of the size and density of human populations, and all utterances (i.e., popular and academic articles, speeches, and interviews) that pertain to population are thus a part of our field. However, as the above definition implies, it is difficult to consider an issue apart from its "ongoing discourse," or culture. Foucault warns that organizing a study of a discourse by its object assumes that the object itself has a fixed existence, what he calls a "secret content" or "silent, self-enclosed truth" (p. 32). For this study, we consider the issue culture of population to include articles indexed in the Reader's Guide to Periodical Literature under "Population" or its various related headings. From this group, however, we include only the articles that actually address population size or density, excluding, for example, articles about business demographics or migration to the Sun Belt. We also examine various studies and analyses made by professional, mostly academic, demographers. In lay terms, an issue culture is what people might say some utterance is "about," as in "that article is about population."

Issue cultures are not undifferentiated bodies of utterances; instead, they are internally organized by structural regularities.<sup>1</sup> Following Gamson and Lasch (1983) and Gamson and Modigliani (1989), we call these discursive regularities interpretive packages. Packages are organized by a central idea, or frame, which interprets the phenomena of the issue in a particular way. The idea that population growth necessarily outstrips resource production, dating to Thomas

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1 Our definition of packages is similar to Foucault's (1972) notion of discursive themes. However, our definitions here closely follow Gamson and Lasch (1983) and Gamson and Modigliani (1989).

Malthus, one of the frames in the population issue. But packages are more than frames or paradigms. They also are made up of characteristic political and stylistic elements, each of which comes to imply the other elements of the package.

Among the characteristic literary elements of a package are symbolic equating devices, including metaphors, similes, and analogies. To say that the interplay between population and resources is a "zero-sum game," such that more people means less for each, is to use such a symbolic device. Cartoons and complex scientific models (e.g., neoclassical economics) are other examples of symbolic equating devices. Narratives are also important to interpretive packages. In the discourse about population, telling the story of a given famine may become a characteristic example of a given package. Learning the story of the great Chinese famine may come to stand for the equation "more people means less for each (to the point of extinction)." Each story has a characteristic subject, a typical depiction of the issue. Starvation means children with swollen bellies, for example.

Package entrepreneurs, those who work to establish a given package as the dominant interpretation within given issue, may put forth short phrases which capture the meaning of their package in a few words; in the language of the early 1990's, a soundbite. "Resources are finite, but population is potentially infinite," is such a catchphrase. Entrepreneurs support their package and its core political position with a discussion of the likely consequences of ignoring the package's warnings: if we fail to implement global population control, there will be massive poverty, famine, and epidemics. Backing up the consequences, many packages include an appeal to the audience's principles, for example, "human survival is at stake."

There are generally several packages which contend to be the dominant interpretation of a given issue. However, they might not all disagree on specific policy questions. We argue that what people mean when they refer to a "social problem" is not a "problem" in the sense that it is defined in other spheres (a math problem, a loved one's substance abuse problem, a problem child,

a problem in a romantic relationship). We define a social problem as an implied policy solution.<sup>2</sup> The badness associated with a social phenomenon is framed, made recognizable, by an interpretive package. However, in order for the phenomenon to be recognized as a social problem, it must be associated with the badness and be construed as possibly under social control.

"Excess" population, for example, has been considered a bad thing since the ancient Greeks lamented the loss of rich agricultural land due to overcultivation. But only since about 1962 has population been a social problem. It was about then that referring to the social problem of "overpopulation" meant "we can and must implement population control." Before the early 1960's, population was in the category of natural phenomena, more like hurricanes than like crime -- a problem perhaps, a bad thing, but not a social problem. 1962 saw the rise of "demographic orthodoxy," a school of thought in which analysts agreed that rapid population growth had an unequivocally bad effect on social well-being, and that it was possible, even obligatory, to control population growth. We will discuss orthodoxy at length in the analysis section. Interpretive packages that can agree on a social problem we define as congruent within that problem. We need not agree that increasing population size necessarily means massive global famine, for example, to agree that the world is overpopulated.

But even congruent packages contend for public attention. There are only a few systematic ways that package entrepreneurs can make their claims to the mass public. Following Hilgartner and Bosk (1988), we suggest that issues take form in public arenas, such as journals, television, and newspapers. Since there is a potentially infinite supply of issues and only finite space in the public arenas, there must be a process of selection between issues, favoring some and excluding others. The key elements of selection, we argue, are drama and politics. Framed by particular packages, issues having dramatic consequences will command more attention than those that have less dramatic or more esoteric consequences. Mass starvation, for example,

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2 Notice that we have decoupled the notion of a "problem" from a "solution," much in the way that Cohen et al. (1972) do in their influential "garbage can model of decision making." However, our notion of a "social problem" is more akin to what Cohen et al. call a "solution." Cohen et al.'s "problems" parallel our the core frames of interpretive packages.

commands more public attention than a complex banking crisis. Of course, the drama must be renewed or the public will get bored. An entrepreneur cannot predict doomsday too many times without eventually being ignored.

Politics are also a key in the selection process. At some points, some packages may be more consistent with prevailing political systems, thus giving them an advantage in their struggle for attention. Politics can be defined deeply or on the surface. That is, one can discuss long standing cultural beliefs as aspects of a deep political grammar (e.g., "Americans like progress"), or in terms of prevailing political fashions (e.g., "this Administration is hostile to population control"). In either case, pointing out the importance of politics in an examination of issue cultures enjoins students to ground their analyses in the history of the period. Having recommended attention to history, we will put off our discussion of the history of the population issue culture until the third section. We now turn to our data and methods.

## 2. Data and Methods

Containing references to most of the journals in the United States, the Reader's Guide to Periodical Literature (RGPL) is an interesting window on popular culture. Building on Spector and Kitsuse (1977), we used the RGPL to define a sphere of the issue culture of population: the popular press. According to Jean Marra, the editor of the RGPL since 1979, there is no written documentation about how the index has been constructed over the years. Apparently, standards for assembling and classifying the entries are passed down as a matter of oral tradition.

The RGPL includes 1,620 articles published between 1946 and 1987 and indexed under "population" or one of its related headings (see Figure One for number of articles indexed by year, Appendix One for related headings). The most published and cited authors include many analysts well known to academic demographers, such as Paul Ehrlich, Kingsley Davis, and Philip Hauser (see Table One). The twenty journals that publish articles about population most frequently account for 61% of the articles published (see Table Two). Among these twenty journals are a



wide range of news magazines, science journals, political and diplomatic periodicals, and religious magazines.

For our more in-depth study, we took a sample of the population of 1,620. The sample was stratified along three dimensions: author, journal, and time period. Since we consider the more prolific authors to be the "movers and shakers" of the issue culture, our first priority was to draw all articles by authors who had contributed six or more to the total population (for these authors' names, see Table One). Second, reasoning that editorial decisions also play a key role in shaping the population issue culture, we decided to oversample articles from the nine journals most frequently publishing on population (for the journals' names, see Table Two). Third, we stratified by five-year time periods in order to ensure similar levels of variability for our estimates. All estimates of the number of articles with various characteristics were derived using weights based on these sample percentages (Cochran 1977).

The three-tiered stratified random sample was composed of 507 RGPL citations, of which we located, read, and coded 503 articles; four articles were unavailable at any of the four major research libraries we searched. We first coded each article according to whether it actually addressed population size or density, leaving us with 447 relevant pieces. We dropped the 56 sampled articles which were indexed under one of our headings in the RGPL but addressed topics other than population size or density, e.g., migration to the Sun Belt or business demographics.<sup>3</sup> We considered each article's position (not mentioned, supportive, neutral, critical) on 53 argument categories. A partial list of the arguments for which we coded positions is contained in Appendix Two. We noted any dramatic metaphors that articles may have used, and then considered whether each article mentioned any of 22 historical or current entrepreneurs in the population issue (listed in Table One). We have defined five packages as contending within the population issue culture, and include in Appendix One only the arguments that we use to measure package

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<sup>3</sup> The detailed coding also included a thirteen-point measure of each article's general tone with regard to population, including "population is increasing rapidly," "population is increasing rapidly and this is a problem," "population is decreasing," and so forth. The scale was applied to 28 country and region categories. Although we do not use this part of our analysis in this paper, we consider the region specific data here (Wilmoth and Ball, 1991).

support or rejection. We now turn to the packages themselves in order to examine in more detail the structure and history of the population issue culture.

### 3. Analysis

#### 3.1. Population Packages

We grouped the arguments mentioned above in order to count the frequency of five packages we defined in our sample. Based on a nonrandom pretest of 50 articles, we chose 56 arguments about population which we felt were frequently used. After coding the sample articles, we grouped the arguments into what seemed to us consistent groups, each group capturing the general sense of a given package. Our codings of the articles allowed us to measure the consistency of our groups, that is, the internal validity of our package measures. There were thirteen internally inconsistent articles. That is, thirteen out of 447 articles supported one argument within a package but were critical of some other argument also defined as part of that package. The arguments used to measure each package are presented in Appendix Two. In this section, we describe each of the five packages and their characteristic literary elements. We present descriptions of the packages in Figure Three.<sup>4</sup>

The "Limits to Growth" package had as its most prominent early promoter Thomas Malthus. The core idea is that population can increase faster than can the production of key goods, especially food. The imbalance between population growth and economic growth often leads this package's promoters to suggest that this imbalance will inevitably lead to a catastrophic increase in the death rate. If resources are like a pie, the more slices that are cut out of it, the smaller each must be. Such "zero-sum game" reasoning is frequently linked to examples of starvation in China, South Asia, or East Africa, the choice of example depending on the specific article's time period. With phrases like "resources are finite but population is potentially infinite,"

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<sup>4</sup> Gamson and Lasch (1983) call a table of each package's elements an issue's signature matrix.

the Limits to Growth package entrepreneurs depicted masses of starving children as the victims of uncontrolled population growth, and predicted global poverty, famine, or epidemics as a result of continuing growth: human survival is at stake.

Entrepreneurs of the "Quality of Life" package argue that the existence of too many people, at home or abroad, will affect our comfortable lives. Typical users of this package depict a dirty, crowded, politically oppressive world, illustrated by references to the conditions of life in the less developed regions. Cartoons of people falling off a globe accompany stories about urban violence, child abuse, and environmental decline. Depictions of animal behavior in crowded conditions are often extended to human situations: when there is "standing room only" in our societies, we will behave "like rats in a cage," or so this package's entrepreneurs contend. Congested traffic, ecological degradation, and crowded parks will be only some of the ways in which the quality of our lives will be affected if population continues to increase.

In the "Population Pressure" package, war is the result of crowded nations. It is supposed that World Wars One and Two would have happened much sooner if Europe's "surplus populations ~" had not been able to migrate. After World War Two, however, Population Pressure entrepreneurs argue that "hungry masses are fertile ground for Communism," and that to protect the world systems of capitalism and democracy, we would soon need to implement population redistribution or population control.

The "Race Suicide" package contends that the intelligent, wealthy, white, or First World people are becoming outnumbered by the less intelligent, poorer, non-white, or Third World people. The imbalance between these groups can be argued to result either from differential birth rates or from "massive illegal immigration." One article using the Race Suicide package had, in a page margin, a cartoon depicting insects crawling through a hole in a window screen, suggesting the subversion of a home by unwanted, possibly unclean, intruders. Using the example of British decline after World War Two, Race Suicide package entrepreneurs appealed to a noble but shrinking group in the barbaric world to increase their own numbers or be overwhelmed.

The last of our defined packages is the "Growth is Good" package, which contains the upbeat message that each additional person in society is another producer and consumer. Growth is Good entrepreneurs depict historical shifts in modes of production as responses to an increasingly crowded world. More people means more economic and technological growth, and a better standard of living for all. Population is the "ultimate resource," exemplified best by the terrific growth of the United States during the 1950's' "baby boom." Supply expands to meet demand, argue the Growth is Good entrepreneurs who defend their position with the language of neoclassical economics.

Packages and social problems should not be accorded ontological status prior to the articles themselves. We defined packages as observed discursive regularities in the system of argument about population, but we must also avoid reducing this system to nothing more than the collection of utterances indexed by the Reader's Guide. By maintaining parallel analytic processes which consider both the system of utterances and the utterances themselves, we can avoid the error of assuming that the rules of a system are the system itself, and the converse, the error of forgetting that each article is embedded in a system that makes some utterances comprehensible and others not.<sup>5</sup>

### 3.2. The Rise and Fall of Demographic Orthodoxy

In the general political climate of the 1950's, many positions were voiced in the population issue culture. However, a growing consensus among academic demographers and other social scientists crystallized in Coale and Hoover's (1958) classic book linking population growth to economic development. As the argument that rapid population growth tends to impede economic development became accepted, the academic position of "demographic orthodoxy" (Hodgson 1988)

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<sup>5</sup> Elsewhere we discuss the literary history of the population issue culture (Wilmoth and Ball 1991).

took hold. But when the economic boom of the 1950's began to slow, fewer authors supported the position that although population growth is good for more developed countries, it is harmful to less developed countries. Instead, authors settled on one position or the other: either growth is good or it is bad. Most authors chose the latter.

In the 1960's, the Ford Foundation (among others) and later the Federal government made available funds and political legitimacy to pro-population control entrepreneurs (Caldwell and Caldwell 1986). To benefit from the political support available, social scientists had to toe the "received population policy line" (Demeny 1988:464). One result of major institutional support was an increase in "industrial" research, characterized by "research products that were quantitative, standardized, replicable, and packageable for multi-country use" (p. 464). Popular articles, many produced by people in or around academic demography (see Table One), supported the "line," using several of the pro-population control packages (Limits to Growth, Quality of Life, or Population Pressure) in their articles. Thus demographic orthodoxy began its twenty-year reign, from the early 1960's to the early 1980's.

In popular discussions of population, a result of orthodoxy was the increased use of multiple packages within a single article. Coalition was the order of the day: "whatever your cause, it is a lost cause without population control," argued one entrepreneur (Collier 1970; this phrase was a refrain in much of Ehrlich's work). The Limits to Growth and Quality of Life packages, especially, benefited from increased public attention to the environment during the 1960's (Schoenfeld et al. 1979). We will discuss further the effect of orthodoxy on the package composition of articles in the next section.

Orthodoxy broke down in the early eighties. The dire predictions (sometimes even titled "Doomsday" and given a specific date: Friday, November 13, 2026) of the 1970's never materialized on the predicted scale. The entrepreneurs whom Hodgson (1988) calls "revisionists" began chipping away at the orthodox edifice. Although skepticism about more extreme orthodox positions had been common in academic demography throughout the orthodox period (Kuznets 1967), not until the 1986 National Academy of Sciences' report did revisionist academics publicly

separate the Limits to Growth from the less extreme Quality of Life charges (Preston 1986).<sup>6</sup> But the middle of the 1980's also saw an increase in extreme environmental crises, e.g. global warming, which possibly threaten human existence. Such crises shifted discussion about the environment from a nice place to play to the only place we have to live. That is, environmental arguments became more a part of the Limits to Growth package than of the Quality of Life package. We now return to the packages as used in our data to consider popular responses to demographic orthodoxy in academic circles.

### 3.3. Congruence and Contradiction Between Packages

A social problem is an implied policy position. For example, referring to the social problem of overpopulation is in fact a call for population control of some type. We define packages as congruent on a given social problem when some "badness" can be constituted within each of them. The Limits to Growth, Quality of Life, and Population Pressure packages all insist that population control is essential for solving the ills that each package diagnoses as results of overpopulation. Although the packages do not agree on what are, exactly, the ills associated with overpopulation, nonetheless each package is able to make an argument about why there are "too many people." Race Suicide package entrepreneurs, on the other hand, might agree that the "less fit" group is overpopulated, but they would still frame the "more fit" group as underpopulated. The Race Suicide package is therefore only partly congruent with the social problem of overpopulation. The Growth is Good package, however, would refuse the notion of overpopulation, claiming instead that more people will, in the long run, be better off than fewer people.

Because we now turn our focus to the social problem of overpopulation, instead of the population issue culture more generally, we consider only the three packages congruent on the

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<sup>6</sup> Some academics fiercely opposed the orthodoxy/revisionist labelling from the popular discourse. Ansley Coale, for instance, called himself a "pre-revisionist" in a 1986 Science piece about the NAS report.

problem of overpopulation in the following section. In Figure Four, we present the proportion of relevant, sampled articles that espouse one or more of the congruent packages, aggregated by five-year time period. The rise of demographic orthodoxy is coincident with a decline, between the periods 1961-65 and 1966-70, in the diversity of packages used in articles about population size or density. Not only do congruent articles increase their share (squeezing out Race Suicide and Growth is Good), the combination of Limits to Growth and Quality of Life packages comes to be the dominant form of argument about population. By itself and in combination with others, the Limits to Growth package continues to be the most used form of popular debate throughout the period of study. After the establishment of demographic orthodoxy between around 1962, the next major change comes in a possible change in the use of the Limits to Growth package. After 1985, article authors began to use the Limits to Growth package alone in their work, rather than combining the Limits to Growth package with other, congruent, packages, as had been the practice during the reign of orthodoxy. However, since this portion of our analysis is based on only two years, we would caution that the focus of Figure Four's relevance should be the declining diversity of packages used to support pro-population control arguments after about 1962.

So far we have seen that most articles do conform to our definition of congruent within the social problem of overpopulation. Articles that espouse packages inconsistently with regard to overpopulation we call contradictory articles.<sup>7</sup> Specifically, an article that supported one or all of the packages congruent on overpopulation (Limits to Growth, Quality of Life, or Population Pressure) but also supported the Growth is Good package would be contradictory. The converse also applies: a package that rebutted one of or all the congruent packages but also rebutted Growth is Good we would consider contradictory. Finally, a package that supported one of the congruent packages but also rebutted another congruent package would be counted as contradictory.

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<sup>7</sup> Since the Race Suicide package is ambivalent about the notion of overpopulation, we exclude it from this part of our analysis.

Contradictory articles appear at exactly the moments that one would expect from the narrative of demographic orthodoxy's rise and fall. We would expect that there would be contradictory articles before orthodoxy's establishment in the early sixties, and then few until the onset of revisionism in the eighties. In fact, among those that we sampled, there are five contradictory articles, in the early period 1946-1955, seven between 1956 and 1961, and then none at all until 1986, when two more were written (see Figure Two for gross numbers of indexed and sampled articles). In the period of intense debate just before the rise of orthodoxy, people published idiosyncratic articles. But after what Demeny called the "received population line" became clear to all, writers made their positions consistent with that line. Articles were for or against the policy position on population control, and overpopulation became a social problem.

Before about 1962, people had discussed population as a problem, but not in the sense that policy could be mobilized, or that population size was really a part of social action. Like crop failure or natural disasters, population size was outside our ability to change. In his 1948 book *Road to Survival*, Vogt suggested that we could, perhaps, control fertility as we had mortality, but he argued this point weakly and vaguely, considering that the book predicted the possible end of humankind. But in 1965, Vogt centered a *New York Times Magazine* article on the necessity of providing birth control technology as part of foreign aid. Of course birth control technology (the tool of population control) had advanced considerably between 1948 and 1965. But this is precisely the point: technological advance, in combination with a political opening that made population control a legitimate topic of political discussion, brought population control into the "calculus of conscious choice" (Coale 1973) in policy debates. No longer was population size a "natural" phenomenon, to be wished in one direction only to see it move in another, like drought. Overpopulation provided a bridge between contending but congruent packages in the population issue, and a social problem was discovered. With the rise of demographic orthodoxy, overpopulation brought together many other recognized social problems, from hunger to crime to war, linking them by presenting a common solution, population control. The evidence on the decline of diversity among popular articles in the population issue culture, the dominance of the



Limits to Growth package, and the dramatic distribution of contradictory articles exactly at the moments predicted by the narrative of demographic orthodoxy's rise and fall, supports our description of the events in the population issue culture. Now we turn to some of the theoretical implications of our analysis.

#### 4. Discussion

In the final section, we will consider how our analysis could be extended to a more general discussion of knowledge and power in society. First we summarize our model's basic concepts. Then we discuss a problem with our method of content analysis and make an argument for methodological pluralism. From the injunction to be creative about evidence, we shift our epistemology and consider the parallels between our model and the form of lay discussions about social phenomena. We finish with a reflection on the relationship between science and ideology and some possible directions for future research.

Our model organizes public discourse by its participants and by its objects. What lay people would say a given utterance is about, we would call an issue; the collection of such utterances and the rules that govern them is an issue culture. Internally, the issue culture takes form from interpretive packages which entrepreneurs construct in order to frame the social phenomenon (Foucault's discursive object) in their particular way. In addition to the framing idea, package entrepreneurs develop a set of literary devices, each of which tends to imply the others in an internally consistent way. Packages that can agree on given policy positions can frame a social problem which implies the policy position. Such packages are congruent on that problem.

Before examining the ramifications of our model for lay understandings of issues and problems, we highlight a changed use of arguments about the environment during the middle of the 1980's. The Greenhouse Effect, for instance, which might lead to global crop failure and the extinction of our species, would be an argument in the Limits to Growth package. However, by

reifying our coding by a set of explicitly defined characteristic arguments, we were forced to choose to which of the packages the argument "increased population growth destroys the environment" might belong. Since through most of the period of study environmental degradation referred to unpleasant but not life threatening conditions (e.g., dirty parks, litter), we chose to consider arguments about the environment to be part of the Quality of Life package. This shift in meaning is a discontinuity in the discourse about population, to which, unfortunately, our quantitative analysis was not sensitive. However, by combining both a quantitative content analysis with a qualitative reading and historical context, the discontinuity becomes apparent. Our point here is an argument for methodological pluralism. By using various methods and theoretical systems we are able to be sensitive to more aspects of social formations than if we choose only one. In that vein, we now vary our epistemology, from social scientific to lay, by considering how our conceptual terms relate to lay systems of understanding social phenomena.

There are parallels between each of our terms and characteristic lay expressions. An issue, as we have stated throughout this paper, is what utterances are about. Packages define what the signs that constitute utterances mean. "Like rats in a cage," for example, means that too many people in too little space will be hostile to one another. People signify their acceptance or rejection of various packages by agreeing or disagreeing with the equation proposed by the package. Agreeing, for example, that increased population means a degraded park system because of overcrowding accepts the Quality of Life interpretation. Social problems, on the other hand, are about action. Agreeing that we are "overpopulated" means (since the establishment of orthodoxy) that we must implement population control. Our model explains the system by which people decide what utterances are about, what they mean, and what they will do about them.

Our model of the organization of meaning by packages and action by problems also allows us to reconsider the relationship between science and ideology. Packages are, in a loose sense, science. That packages have rhetorical elements should not detract from their status as scientific, since all sciences have rhetorics (McCloskey 1985). Packages organize phenomena in ways that are sometimes even explicitly hypothetical: if we have more people, and if food supplies are fixed,

then each of us will have less food. Only in their appeals to their audiences' principles do packages make moral or ethical claims. Principled appeals are the aspect of packages which connects the package to a social problem.

In contrast to the knowledge-organizing packages, social problems, implied policy positions, are ideological. Problem claims contain an implicit moral difference, a contrast between a good outcome from accepting the proposed action and a worse outcome from rejecting the proposed action. The distinction between packages and problems was not lost on the demographers before orthodoxy. Among scientific demographers, Philip Hauser and Dudley Duncan wrote in 1959,

... it is almost universally recognized ... that a sharp division of labor must be effected between research with its related scientific activities and "social engineering" behavior directed toward the formation and implementation of policy. (quoted in Demeny [1988:451])

This pronouncement comes only one year after Coale and Hoover's classic book (1958) marking the birth of demographic orthodoxy. They argued that rapid population growth inhibited increasing standards of living, and that population control was feasible -- not necessarily desirable, but feasible. The distinction between desirable and feasible is the line between building a package and making the package explicitly congruent with a social problem -- it is the line between science and politics.

We do not mean to imply that demographers are "ideological" in any pejorative sense. Demographers are not ideological any differently from any other scientists. What we do argue is that the line between science and ideology may be thinner, or more porous, than it seems. The principled appeals that give packages their force are the bridges between packages and social problems. Science is interesting because it matters, because it affects human beings' lives. It would be a paltry science that had nothing to say about the conditions of human existence; it would be a science that didn't matter. But what we should do about the mattering is an ideological question inseparable from the science which exposed the knowledge.

Still remaining to be considered are the relations between various issues. For example, how much of the upsurge of interest in population in the late 1960's was a result of environmental

issues generally becoming more successful? How do issues, and packages within issues, compete or support interest in similar (or opposing) issues and packages? Nor has our model considered explicitly why certain issues or packages are more or less successful than others. A theory that could specify under what historical conditions specific issues or packages would be likely to ally with which others would be a considerable advance in the study of issue cultures, interpretive packages, and social problems.

Table One:  
Number of Articles and Estimated Number of Times Cited, by Author<sup>a</sup>

Author	Authored Articles	Estimated Citations <sup>b</sup>
Ehrlich, P.R.	22	37
Davis, K.	17	25
Hauser, P.M.	11	62
Cook, R.C.	10	47
Brown, L.R.	8	42
Taeuber, I.B.	7	4
Brown, H.	6	24
Ehrlich, A.H.	6	0
Green, M.	6	0
Holden, C.	6	0
Holdren, J.P.	6	0
Notestein, F.W.	6	14
Simon, J.L.	6	13
Spengler, J.J.	6	16
Davis, W.	5	0
Dow, T.E.	5	0
Gara, J.	5	0
Gardner, R.N.	5	0
Greenberg, D.S.	5	0
Jones, L.Y.	5	0
McNamara, R.S.	5	9
Thompson, W.S.	5	13

a The data are all articles indexed in the Reader's Guide to Periodical Literature, 1946-1987, under "Population" or a related sub-heading (see Appendix 1).

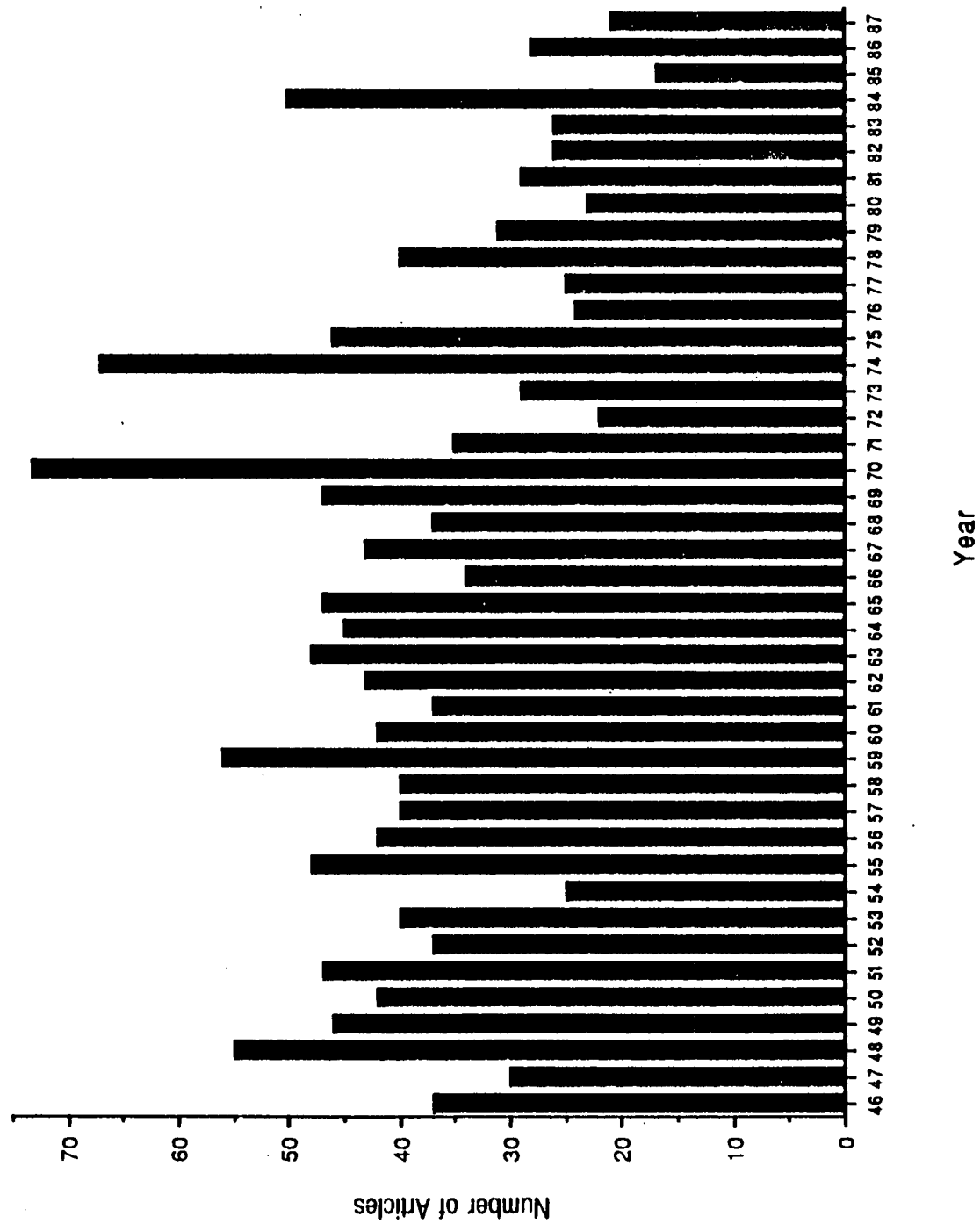
b The estimation procedure is a particular case of the general estimation procedure. The variables coded for each article (major/minor author, major/minor journal, time period) were either dichotomous or polytomous. For each variable, the percentage falling into each of two or more categories was estimated (Cochran 1977). For example, the estimated number of positive citations for an author equals the sum of sample weights for the articles in this category.

Table Two:  
Number of Articles and Cumulative Percent, by Journal<sup>a</sup>

Journal	Number of Articles	Percent
U.S. News and World Report	183	11
Science (Scientific Monthly)	102	7
Science News (Science News Letter)	72	4
Scholastic Update (Senior Scholastic, incl. Teachers' editions)	51	3
Time	51	3
Newsweek	47	3
Science Digest	46	3
New Republic	42	3
Scientific American	41	2
America	38	3
U.N. Chronicle (U.N. Bulletin, U.N. Review, U.N. Monthly Chronicle)	37	2
Commonweal	36	2
New York Times Magazine	36	2
Business Week	32	2
Saturday Review (Saturday Review of Literature)	32	2
Christian Century	31	2
Department of State Bulletin	30	2
Annals of the American Academy of Social and Political Science	29	2
Science and Public Affairs (Bulletin of the Atomic Scientists)	28	2
Vital Speeches of the Day	24	1
Total		61

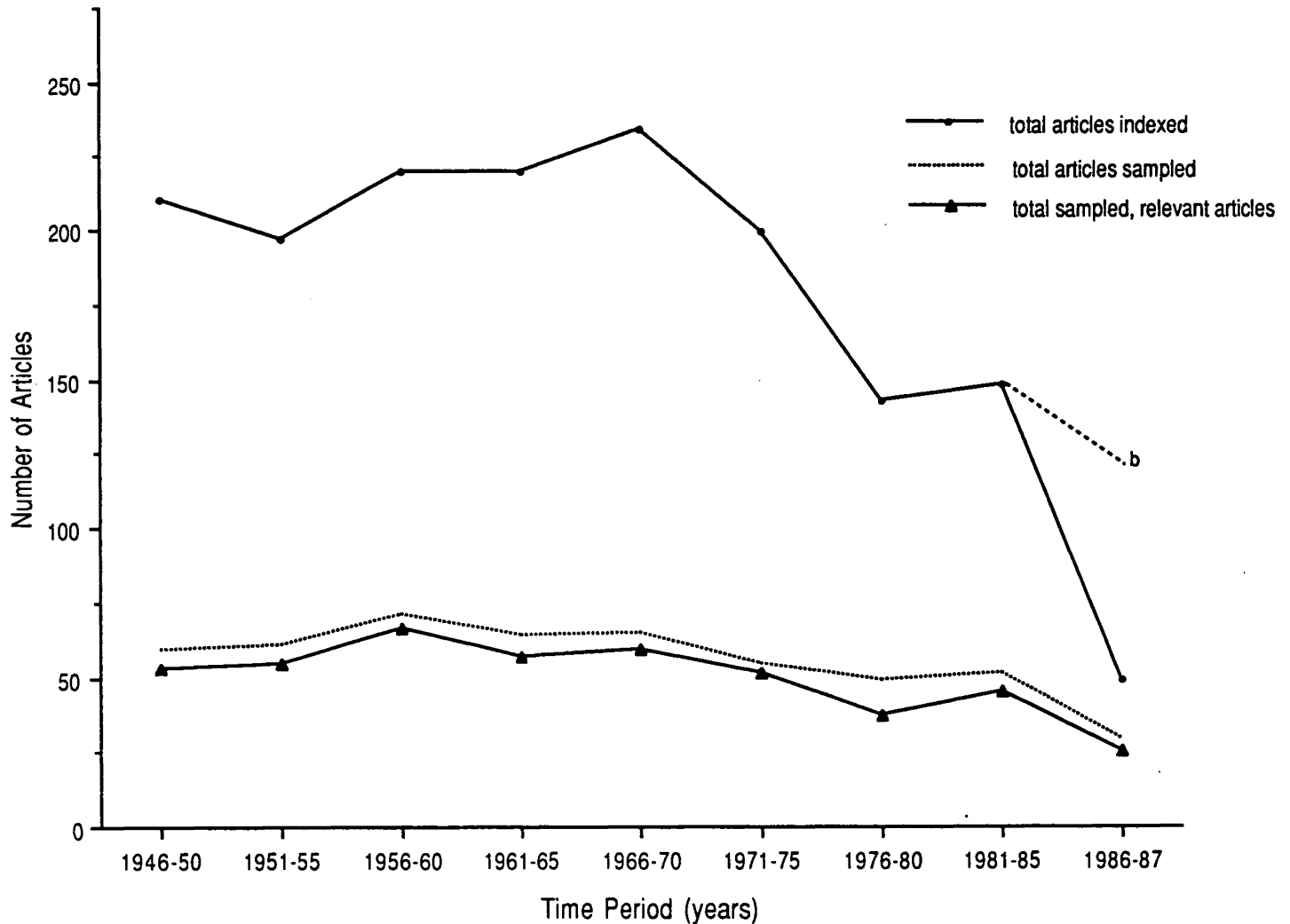
a The data are all articles indexed in the Reader's Guide to Periodical Literature, 1946-1987, under "Population" or a related sub-heading (see Appendix 1).

Figure One:  
 Number of Articles Indexed Under "Population" or a Related Heading, by Year<sup>a</sup>



<sup>a</sup> The data are all articles indexed in the *Reader's Guide to Periodical Literature, 1946-1987*, under "Population" or a related sub-heading (see Appendix One for list of headings).

Figure Two:  
Total, Sampled, and Relevant Articles Indexed under "Population"  
or a Related Heading, by Period<sup>a</sup>



a The data are all articles indexed in the Reader's Guide to Periodical Literature, 1946-1987, under "Population" or a related sub-heading (see Appendix 1). Relevant articles are those that in some way mentioned population size, growth, or density. Please see the text for sampling procedures.

b Because the period 1986-87 contains only two years and the other periods contain 5, we have included an estimate of the number of articles which would have been included if the trends of 1986-87 had continued through 1990. That is, we multiplied the number of articles in the period (49) by 5/2, yielding about 122 articles.



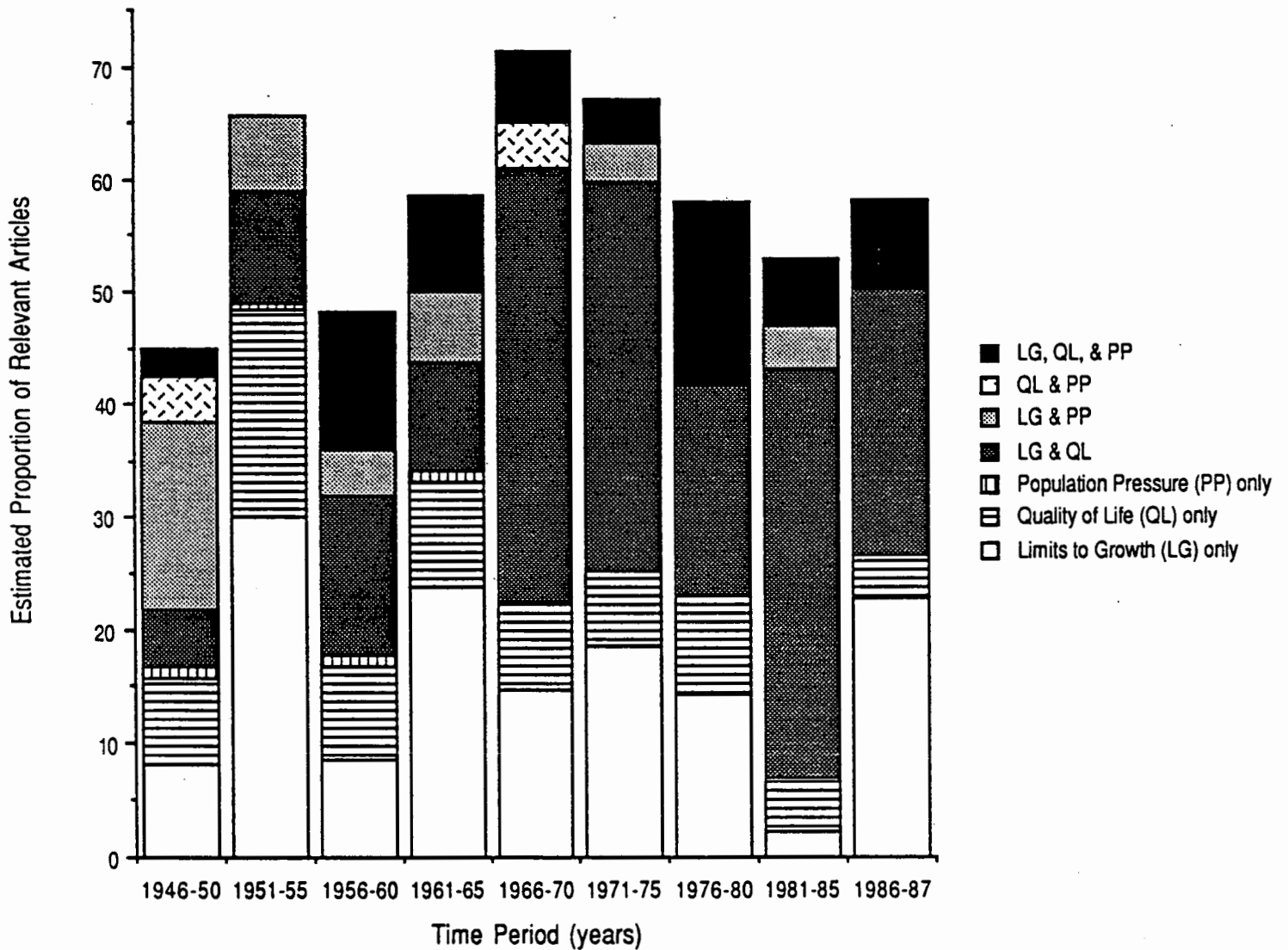
**Figure Three:  
Signature Matrix of the Population Issue Culture**

<b>Package</b>	<b>Core Idea</b>	<b>Core Position</b>	<b>Symbolic equating device ("population is like...")</b>	<b>Stories About</b>
<b>Limits to Growth</b>	although the number of people is increasing, our resources are finite and will soon be exhausted	we must reduce consumption; pro-population control	pie and slices	starvation, resource crises (e.g., energy)
<b>Quality of Life</b>	increasing people decreases our quality of life by degrading our environment and causing bad (if unintended) social effects	variety of end-pipe solutions (e.g., more police, pollution control); pro-population control	people falling off a globe, sardines in a can	urban violence, child abuse, environmental decline, animal studies and comparisons, e.g. "Calhoun's horrible mousery"
<b>Population Pressure</b>	too many people in too little space leads to nation-state conflicts for land, or to internal political instability	redistribute crowded peoples; pro-population control		WW1, WW2 would have happened much sooner/ been more severe had US not absorbed excess European population
<b>Race Suicide</b>	the smart/white/first world people are being outbred by the dumb/non-white/third world people	increase "our" numbers while encouraging or enforcing population control on "them"	insects crawling through a hole in a screen (illegal immigration to the U.S.); a lifeboat: if we keep occupancy stable, we will survive, but if we let them in, we will all die	decline of Britain (i.e., loss of colonies, cultural preeminence) after WW2 said to be a result of relatively low fertility
<b>Growth is Good</b>	population growth stimulates economic and technological advancement	anti-population control	microeconomics	booming United States economy and population in the 1950's

Figure Three (continued)

Package	Catchphrases, Soundbites	Story Subject	Consequences of continued population growth	Appeals to Principle
Limits to Growth	resources are finite, but population is potentially infinite; population increases geometrically, but resources increase arithmetically	starving children	global poverty, famine, epidemics	human survival is at stake
Quality of Life	"shoulder to shoulder," "too many people," "like rats in a cage," "standing room only"	victims of violence, once beautiful trout stream now filthy, frustrated commuters (traffic congestion), social deviants and unhappy parents (crowded schools)	traffic and school congestion, crowded parks, ecological degradation, crime, riots	our way of life will suffer
Population Pressure	"hungry masses are fertile ground for Communism"; <u>lebensraum</u>	wars, imperialism	war, revolution, communism	the decline of the world-systems of capitalism and democracy
Race Suicide	race suicide; massive illegal immigration	shrinking but noble group in a barbaric world	loss of Western culture, values, language; decline of species intelligence	group superiority
Growth is Good	population is the ultimate resource	consuming and producing nuclear family of the fifties	prosperity	benefits of technological progress; the freedom to reproduce

Figure Four:  
 Estimated Proportion of Articles Espousing One or More  
 Pro-Population Control Packages, by Period<sup>a</sup>



a The data are all articles indexed in the Reader's Guide to Periodical Literature, 1946-1987, under "Population" or a related sub-heading (see Appendix 1). For sampling and estimation procedures, as well as the definition of packages, please see the text. For the absolute numbers of articles by period, see Figure Two. Omitted from the proportion are articles which espouse the Race Suicide and Growth is Good packages, as well as the very few articles which espouse none of the five packages discussed here.

## Appendix One

### Headings Related to "Population" in the Reader's Guide to Periodical Literature

Population (various subheadings)  
Population, Distribution of  
Population, Increase of  
Population Association of America  
Population Education  
Population Forecasting  
Population Institute  
Population Policy  
Population Reference Bureau, Inc.

There are also numerous sub-headings referring to specific regions or countries, such as Population - Asia, or Population - France. After 1959 (vol. 22 of the RGPL), country and regional subheadings under the main heading "Population" were moved to the individual country or region category, e.g., Asia - Population. To insure consistency across time, we chose a set of countries and regions and included only those. For reasons of space, the country and region specific analysis is excluded from this paper; see Wilmoth and Ball (1991) for more discussion. For a more complete description of the population and sample, please write to the second author.

## Appendix Two

### Arguments Constituting Package Definitions

We coded each article on the following categories according to whether the article did not mention, supported, mentioned, or rebutted the suggestion that population growth or decline had the posited effect. All categories refer to possible results of population growth unless specifically mentioning decline.

#### Limits to Growth:

- famine, food shortages, Earth's carrying capacity
- disease, misery, human suffering
- bring end of human race, destroy mankind
- impoverishment of entire world
- breeds poverty in Less Developed Countries (LDC's), keeps per capita income low
- impedes economic development of LDC's
- encourages dependency of LDC's on foreign aid
- floods labor market, increases unemployment
- consumes natural resources

#### Quality of Life:

- urban sprawl, traffic, congestion
- strains schools, housing capacity
- bigger population requires bigger government
- threatens human freedom
- crime, internal violence (e.g., riots)
- destroys environment
- increases pollution
- limits/degrades park space, recreation areas

#### Population Pressure:

- pushes LDC's towards communism
- Soviet-bloc growth presents political/military threat
- population pressure a cause of past/future wars
- wars for lebensraum (national or racial living space)

#### Race Suicide:

- US/MDC's world being outbred by LDC's/non-European peoples
- US fertility higher for lower classes/non-whites than for upper classes/whites
- population decline poses a military threat
- population decline portends the end of US/Western cultural preeminence

#### Growth is Good:

- population growth supports economic expansion
- younger population is more productive, creative
- population decline threatens societal productivity, creativity, etc.

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