What causes a decline in the fertility level of a human population? An answer to this question has been sought from a variety of theoretical, ideological, and disciplinary perspectives. The result of this search is an enormous and ever-growing body of literature: books, articles, manuals, technical reports, bibliographies—all of which presume to contribute to the understanding of the phenomenon. The degree to which elements of this multifaceted body of literature articulate with one another varies widely among disciplines, theories, and methodological orientations. In some instances, distinct and relatively independent approaches to human fertility have converged on a single, though perhaps fragmentary, explanation. As we hope to demonstrate, substantial agreement exists about key aspects of the causal relationship among sociologists, economists, geographers, and historians. In other instances, the connection between conclusions drawn from distinct perspectives is weak, absent or, in the extreme, contradictory. The lack of articulation between results of research related to the establishment of nomological theory ("pure research") and of research related to public policy theory is a central and often-lamented weakness of the fertility literature.¹

The purpose of this paper is to contribute to a better articulation between nomological and public-policy approaches to fertility decline. To the extent that this difficult purpose can be served, and to the extent that future research can benefit from, incorporate, and improve upon the ideas presented here, the body of fertility literature will be made more coherent. More important, a better articulation between nomological and public-policy approaches can provide a rational alternative to current fertility control programs in the Third World.
Behavioral and Medical Models of Fertility Decline

The apparent incompatibility between nomological and public-policy approaches to fertility decline might be assessed in several ways. Geoffrey Hawthorn (1968) and Harvey Leibenstein (1974) are two among many leading population scientists who believe that the problem lies in the disjunction between description and explanation, between, in Leibenstein's words, "the theories and the facts." In this view, failures and frustrations which have resulted from attempts to use nomological theory to effect fertility decline in specific populations are due to a vagueness (or technically, the large variance) in the statement of relationships presumed to obtain between fertility levels and other variables. Others, like Garrett Hardin (1973), Allen Chase (1971), and Paul Ehrlich (1968), appear to be struck by the recalcitrance to social and cultural change of high-fertility populations. For them and for other population activists, frustrations are due to irrational ideological or religious factors characteristically excluded from nomological approaches but which, ironically, are central in public-policy experience.

While these and other assessments have considerable merit, an alternative view which is, to an extent, shared by population scholars and policy administrators seems especially useful. In brief, this assessment attributes the lack of articulation between nomological and public-policy approaches to the fact that each approach employs a distinct model of the relationship between fertility level and causal variables. The result of the existence of two distinct models has thus far been the accumulation of two very different sets of standards for what constitutes an adequate strategy for intervening in a population to bring about fertility decline.

Nomological approaches characteristically employ what has been termed a "behavioral" model of the causes of fertility decline. While the specific premises and conclusions of studies employing this model vary considerably, they share a focus on the role of historical, cultural, and economic factors and of social relationships or behavioral patterns as these influence fertility levels. From this perspective, in order to change, and specifically, to lower fertility levels of a population, behavioral patterns, social relations, and contextual factors need to be changed (Freedman, 1973; Davis, 1963; and our review in Weinstein, 1976:95-105).

Public-policy approaches typically employ what has been termed a "medical" model (ICP, 1974). Pioneering work on this model was done