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POPULATION, DEMOGRAPHY, AND NATIONAL STRATEGY.(U)  
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10 JULY 1978

ACN 78037

**POPULATION, DEMOGRAPHY AND  
NATIONAL STRATEGY**



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⑨ Military issues research memo.

⑥ POPULATION, DEMOGRAPHY, AND  
NATIONAL STRATEGY.

by

⑩ Anthony L. Wermuth

⑪ 10 July 1978

⑫ 36p.

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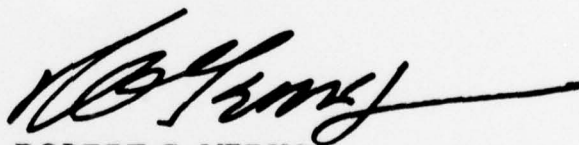
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## FOREWORD

This memorandum draws increased attention to the importance of demography in American national strategy—not only the familiar statistics of large magnitude (e.g., total population, males of military age, birthrate), but also the numbers of subelements of the population (e.g., ethnic segments, levels of education and skills, regional interests, age distribution, life expectancy). Changes in the objectives and relative power of internal groups, as well as sheer volume of population increase, can result in shifts in national objectives and hence in the strategy projected in pursuit of American national objectives.

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ROBERT G. YERKS  
Major General, USA  
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## BIOGRAPHICAL SKETCH OF THE AUTHOR

**DR. ANTHONY L. WERMUTH** joined the Strategic Studies Institute in 1974. He holds masters' degrees from Columbia University in English and from George Washington University in international affairs and a doctorate from Boston University in political science. A West Point graduate, Dr. Wermuth's military assignments over 32 years in the Regular Army included brigade command; Assistant for Central Europe, (OASD, ISA); and Military Assistant (Public Affairs) to the Chairman of the Joint Chiefs of Staff. He spent seven years on the West Point and US Army War College faculties. Following military retirement, he served for seven years as Director, Social Science Studies, Center for Advanced Studies and Analyses, Westinghouse Electric Corporation. He has contributed many articles on civil-military affairs to professional journals.

## POPULATION, DEMOGRAPHY, AND NATIONAL STRATEGY

The two greatest threats to life on the planet Earth, each highly ominous though in different ways, and both at the core of national strategy, can be expressed in an equation: The two greatest threats to life on Earth involve proliferation—of nuclear weapons, and—of people.

It is consistent with the onrushing pace of the world of the 1970's and 1980's that all realistic strategic planners now include in their calculations a great host of once-neglected factors—political, geographic, economic, psychological, even moral—well beyond military weaponry.

Possibly because of traditional linkages between weapons and strategy, we readily see the connection between strategy—the nation's plan for protecting and furthering its interests—and nuclear arsenals. We are less astute in discerning linkage between the nation's strategy and its population. This discussion gives the subject of nuclear weapons a respite, and makes an attempt to articulate the growing attention that strategists pay to the factor of demography.

It is a central premise of this discussion that population growth within a few years may transcend all other strategic problems in importance. It is a companion premise that those internal changes occurring under the rubric of "Demography" will, as well as nuclear arsenals, also shape external strategy.

It should be stated early that this paper has considered and rejected two moderately popular theses:

- that the subject of population growth is banal, or boring or overdone; the view of this paper is the opposite;
- that one must have faith in technology to rescue us. One recalls the comment of the eminent scientist, Dennis Gabor:

The most important and urgent problems of the technology of today are no longer the satisfaction of primary needs or of archetypal wishes, but the reparation of the evils and damage wrought by the technology of yesterday.<sup>1</sup>

Like almost everything else, strategy used to be relatively simple. Among potential antagonists, strategists counted the forces and guns and ships on both sides (to the extent one knew about them), measured the miles involved in reaching likely battlefields, gave as much attention to imponderables like fighting reputation as the state of one's sophistication permitted, and calculated probabilities. Gradually, many additional, less overt elements entered into one's calculations: financial reserves, steel production, ammunition stocks, port capacities, and so on. Many factors, previously considered irrelevant or trivial, have waxed in importance and visibility. Many of such burgeoning factors are facets related primarily to people.

The purpose of this paper is quite modest: merely to shed more enlightenment, to raise consciousness, about some ways in which demography, rooted in population, achieves impact on national strategy—not only internal changes in numbers or quantity, but particularly those in which the numbers may stay the same but in which the nature or quality changes. Many such factors are chains of cause and effect buried deeply, difficult to perceive.

Not that interest in such phenomena is entirely new; both Montesquieu and Burke suggested that a nation's foreign policy is largely an extrapolation of the dynamics in action within its own society. Study of the interconnectedness between domestic situations and foreign policy has only emerged formally in recent years, in a subfield of political science often called "linkage politics." More and more clearly, linkages to domestic conditions, especially manpower, are achieving greater awareness in our strategic consciousness and calculations. Internal productivity, or lack of it, for example, is seen to affect the strength of a nation's currency and hence to open or close certain strategic possibilities; the ascent or decline of the dollar does

not occur without revising some American and foreign strategic estimates.

The suddenness of the impacts on domestic interactions of such major problems as dangerous competition for dwindling resources may generate psychological instability and irrational behavior in populations, or in large subpopulations, perhaps inducing international conflicts or even civil wars. Concurrently, such limited resources as some developing nations can assemble may have to be devoted to life-sustaining domestic purposes, reducing (perhaps eventually eliminating) allocation of resources to national security and foreign policy establishments.

To be sure, a number of influential factors can affect people without their conscious decision, such as acts of God, accidents, or well-meaning miscalculations.

Lester Brown suggests a number of worldwide indicators threatening strategic equilibrium. One is largely free of volition: the earth's 6 billion acres of grasslands, providing forage for 2.7 billion ruminants, are now under increasing pressure from overgrazing and from encroaching deserts. Another clearly results from human choice: the 20 million tons of fish caught annually by about 1950 escalated to 70 million tons in 1970; but the world catch, human society's principal source of high quality protein, has now begun to decline because of overfishing. Other strategic indicators are ambiguous; for example, in many regions, topsoil is being used up and lost (the total lost is escalating in the United States). It is also said that almost every country undergoing rapid population growth is being steadily deforested.<sup>2</sup>

These may not be universal occurrences; but in each country in which these impersonal forces emerge, they affect that country's strategic objectives and performance. In ways not always clear, they revise the strategic capabilities of the nations concerned, and strategic assessments of those nations by others. Quite clearly, the United States is not immune to many of these effects.

## BACKGROUND

To appreciate the dynamics of demography, one is well-advised to approach via the antechamber of population. Of course, the classic writers on national power and international relations, such as Hans Morgenthau and Klaus Knorr, analyze with competence the contributions of different mixes of population to national power.

Others analyze thoroughly the subject of population, without relating it to strategy. Many commentators discuss population growth primarily in conjunction with food production. Others emphasize various other possible programs relating to the growth of population, such as increased food production and distribution, energy usage, foreign aid, the green revolution, oil costs, the role of petroleum in production of fertilizers, and migration.

The Organskis<sup>3</sup> reduce the determinants of national power, the major variables essential to the exercise of power in world affairs, to three:

- the size of a nation's population;
- the level of a nation's economy;
- the skill and efficiency of the nation's government in mobilizing national resources in pursuit of national goals.

Thus, one critical collectivity of a nation's power, its people, comprises the fundamental core of linkage politics, as well as of all other politics. Almost everything of strategic significance that occurs in a country becomes intertwined with its people—their numbers, ages, distribution, intelligence, education, history, physical characteristics, occupations, productivity, values, attitudes, loyalties, energies, cultural vigor and quality, homogeneity, diversity, and so on. Strategic effects may result from changes in any of these factors. A population once distinguished by vigorous commitment to support of national interests, but that turns to egocentricity and hedonism, will sacrifice foreign strategic respect without a shot's being fired.

There is hardly anything novel in the *nature* of the roles currently played by demographics, but the complexity and importance of the roles seem to be growing. Most persons experienced in the study of political dynamics are generally aware, for example, of the possible impacts from accelerating population growth. But understanding is spotty. Few citizens anywhere appear willing to credit the possibility that population growth, as a supreme challenge intensified by food shortages, might actually expand at some intolerable rate, clogging the channels of human interaction, rendering academic any and all military strategies and programs, overtaking all other challenges to national survival.

We shall, therefore, despite the plethora of warnings extant, pause once more to express the dimensions of the population threat. First, however, we shall pause to propose an early linkage of demography to population in general.

What, precisely, is demography?

Like all much-used terms, demography bears a relatively narrow technical meaning and a broad, loose meaning. First used about 1855,<sup>4</sup> demography can be broadly defined as "the statistical description and analysis of human populations," including the changes.<sup>5</sup> It is sometimes said that the three fundamental variables of demography are fertility, mortality, and (physical) migration, on the grounds that the population of a given area can be changed only by a birth, a death, or the movement of a person in or out.<sup>6</sup>

Later, as we ponder an expanded definition of "demography," one might well add a fourth critical variable to those three: "Social Mobility," which is included on the argument that the demography of an area can change "without changing the numbers." This essay pays more attention to this fourth variable than is usual.

The great majority of quantitative analysis in the social sciences is ultimately based on a single quantitative source: the census. Without this demographic base, many social-problem analyses remain questionable abstractions. Even using a narrow definition of demography, one understands that the body of statistics involved forms the hard core of economics and sociology, and much of political science and a dozen other disciplines. Later, we shall venture partially down broader paths opened up by adopting a looser guide, a less rigid definition; sooner or later, exploration of the what and where of societal and cultural forces must be expanded to consider the *how* and *why*, in order to arrive at useful insights for national strategic purposes.

#### POPULATION: FOUNDATION OF DEMOGRAPHY

Population is a basic element of national power. It can be argued that population is *the* basic element. When one adds to the consideration of fundamental physical characteristics the politically significant traits of a society's people—such as the national character, the nation's morale, the quality of the nation's diplomacy, and the effectiveness of the nation's government—one is achieving a firmer grasp on differential measurement of the relative power of nations.<sup>7</sup>

Accordingly, a large population is indispensable for major power status; so that enough manpower is available for joining with the several other elements of national power in maintaining large and powerful armed forces; for creating national wealth by means of a skilled, diversified work force; for constituting markets for exchange and

consumption of products with other nations; for paying and collecting taxes as a proportion of wealth and transactions in order to underwrite the costs of government; and for maintaining substantial support of national programs.

The basic requirements for national power become even more indispensable, of course, in relation to superpowers. Former Undersecretary of State George Ball asserts that today "only a cohesive society with a population approaching two hundred million and national income of at least \$300 billion can claim a commanding position of world power."<sup>8</sup> These requirements currently validate the memberships of only the United States and the Soviet Union in the world club of superpowers.

A large and growing population itself is not *invariably* of benefit; without a minimally strong, growing national economy able to sustain a reasonably adequate level of per capita income, a nation is weakened, not strengthened, by an oversize, increasing population. Beyond a nation's capacity to support and constructively exploit its population, population growth can become counterproductive, even disastrous. To put it succinctly, if some nations today had half the population they now have, they might be twice as strong as they are.

Population expanding beyond the point of balance in national resource usage eats up more food, consumes all forms of energy more rapidly, demands more housing and other facilities, produces more waste, crowds available facilities to and beyond the limits of tolerance, and—as we now reluctantly learn—even uses up too many natural resources that we used to take for granted: fresh water, fresh air, trees, minerals and other nonrenewable resources, and even the fish in the sea. We do not become aware of many of these events as dangerous until "the next to last day."

Plain saturation, or overpopulation, presents the most important immediate challenge; but the demographic change presenting the most disturbing internal disruption over the long term is probably a shift in the proportion of age groups. Except in highly homogeneous societies in which no generation gap of importance emerges (if there are such any more), the shift of the relative weight of age groups normally brings an unsettling shift in perspective in national policies, to be emphasized so as to accord with the will of the majority. Such shifts in domestic policies almost inevitably occasion a shift in strategic objectives, in foreign policies, and in priorities among them.

## “PRE-DEMOGRAPHIC” EVOLUTION

Before we become immersed in the current dynamics of demography, let us consider a few of the critical ratios, and also some of the might-have-beens, of population history; as instructive aides to understanding how we got to where we are. A pessimistic patina on this account is not deliberate, but the possibilities cited appear to promise more pain than panacea.

Again and again, one is led back to the instructive contemplation of aggregates; for it is the great totals and the rates of increase among them that loom most impressively ahead, sometimes projecting genuine possibilities of disaster—at first, generating ferment and chaos in enclaves that expand relentlessly to involve whole regions and continents, notwithstanding the presence of superpowers. Basic dimensions have been repeated many times; but some still seem not to have sunk deeply enough into policy makers and decisionmakers of all kinds, and at all levels. Certain challenges looming on the horizon appear to be largely unprecedented.

One professional estimate is that about 70 billion people have existed on earth,<sup>9</sup> perhaps 100,000 generations averaging 40 years each. It took practically all of the period of man's presence on earth, about 4 million years, up to 1850, to reach the population milestone of 1 billion people. This chart shows the time for subsequent additions and doublings:<sup>10</sup>

Milestone Stage	Approximate Year Reached	Duration of Change
1 billion	1850	4 million years
2 billion	1950	100 years for doubling
3 billion	1965	15 years to add 1 billion
4 billion	1977	12 years to add 1 billion and 27 years for doubling
5 billion	?	?
8 billion	?	?

Why have sheer numbers of people increased so spectacularly within ever-narrowing time periods of this century? Most scientists agree on two basic causes: improved nutrition and control of disease. Since the latter is something of a factor included in the former, a few scientists, if pressed to identify a single factor, point to improved nutrition—meaning better balanced diet, improved agriculture, cleaner water, controlled sewage, and related improvements.<sup>11</sup>

In assessing America's attainment of the status of superpower, it is interesting to note that, up to the mid-1800's, British population exceeded that of the United States. In 1870, the populations of France and of Germany each also exceeded that of the United States—all three countries depending for population growth primarily on their own birth rates,<sup>12</sup> as America chose not to do. It emphasizes American population dynamism to realize that, by 1900, immigration already accounted for about 40 percent of the population of the United States. Between 1870 and 1940, the combined increase in population in France and Germany was 31 million; but over the same 70 years, the increase in the heterogeneous US population was 100 million.<sup>13</sup> After the calamitous bloodletting of World War I, France was appalled to see the birthrate of Germany mounting while the French birthrate, for many reasons, was falling; one strategic consequence arrived by 1939 when Germany had about 15 million men fit for military service while the French had only about 5 million.<sup>14</sup> Such demographic imbalances have invited many past conflicts.

Some speculations about might-have-been's (or might-be's) are mindboggling, difficult to grasp, but substantiating the necessity that, sooner or later, population growth will probably have to be strictly controlled. Professor William W. Ballard, of Dartmouth, estimates that "if the present growth rate had started and continued from the time of Christ, there would be 20 million times as many people on the earth as there now are."<sup>15</sup>

## DISTRIBUTION

Where are all the world's people located today? Here is a general chart showing distribution by continent:

### 1977 Population Distribution<sup>16</sup>

Asia	59%
Europe (including European USSR)	16.5%
Africa	10%
North America	8.5% (350 million)
South America	5%
Other	1%

One notes promptly that well over half of all the people on earth live on the continent of Asia.

National Populations<sup>17</sup>  
(in millions)

Among individual nations, the US population ranks fourth:

1. China	825	9. Nigeria	73
2. India	586	10. Pakistan	68
3. USSR	250	11. FRG	62
4. United States	211	12. Mexico	58
5. Indonesia	129	13. UK	56
6. Japan	110	14. Italy	56
7. Brazil	104	15. France	53
8. Bangladesh	75		

One notes that China has about 1-1/2 times the population of India, 3-1/2 times the population of the USSR, and almost 4 times the US population. In the same vein, we note that India has over twice the Soviet population and 2-1/2 times the American population. Yet, huge populations mean different things in each country, largely because of demographic differences.

### PROJECTION

Every week that goes by adds further substantiation of our belief that Earth's ecosystem in the past maintained loose overall balances among herbivores, carnivores, "decomposers," and inanimate resources. So long as human presence remained below certain levels of density, familiar interchanges continued unaffected. Now, in some environs, it appears that man has reached, or possibly exceeded, saturation levels; and some balances, here and there, seem to be *beginning* to break down.<sup>18</sup>

Meanwhile, what are the prevailing forecasts for the overall course of population from here on?

Three more people every second. That is the rate of increase of world population as measured on the huge face of the World Population Clock unveiled outside its offices in Washington on October 26, 1977 by the Environment Fund.<sup>19</sup> Per hour: ten thousand. One-quarter million per day. Ninety million more every year. A billion in a bit over 11 years.

Obviously, world population is exploding, but not evenly, not at the same rate everywhere. *Relative* standings in population are not immutable; the ratios among countries are constantly changing, though very slowly. And as we know, fertility has steadily declined in America and in the advanced countries for the past 2-3 decades.

According to United Nations data, these are the annual rates of population growth in major regions of the world:<sup>20</sup>

#### Regional Rates of Population Growth

Europe	0.6%
USSR	1.0%
Asia - East Asia	1.6%
- South Asia	2.6%
North America	1.0%
Latin America	2.7%
Africa	2.7%
Oceania	2.0%

Thus, Asia, already with 59 percent of the world's population, appears to be destined to loom ever more predominantly in population. Both America and Europe (and the USSR) appear likely to lose ground in population standing, relative to the rest of the world.

It is important to fix permanently into our consciousness, not only the absolute figures, but especially the *relative* statuses enhanced or disadvantaged by these figures. Looking ahead, an astute strategic analyst can see, via demographically sophisticated study, that population growth in China and India, for example, are two quite different things. India has only half the area of China, no resources to speak of, and heterogeneous population. China is demographically superior in almost every way. China today has about the *same population and area* as Europe to the Urals. Thus, population growth in China will occasion population density not worse than the effects of comparable population growth in Europe. Topping this situation are two features that can only accrete strategic significance: unlike India, China is rich in almost all natural resources (richer than Europe); and, still unlike India, China's culture produces a disciplined, industrious population.<sup>21</sup>

Here is one estimate derived from a perfectly reasonable projection of current reality; it may be citing the most important fact about the future of world population. In many respects, it may become the most important fact, without qualification, about the future:

If world population continues to increase at the same annual rate as obtained 1970-1973 (2.1%), by the year 2006, world population will have more than doubled—that is, in less than 30 years, the world will comprise some 8 billion people.<sup>22</sup>

It is sometimes thought that if we are successful in persuading fertile peoples to reduce their birth rate to the stabilized replacement level (specifically, 1.0), we can regard the problem as largely solved. It sometimes comes as something of a shock to learn that, *after* reaching the replacement-level rate, it takes 60-70 more years for a nation's population total to become stationary.<sup>23</sup>

Therefore, the prospects are even grimmer than that emphasized above. If *current trends* in fertility rates continue, the world is not likely to reach a worldwide rate of 1.0 until about 2020; if that level does arrive, it will still take about 70 more years for world population to stabilize at 11 billion.<sup>24</sup>

Let us pause for a moment to consider the consequences of doubling *current population* by the year 2005; it means eight times the population of 1850, and four times the population of 1950—that's four times the *people*, at least four times the needed *food*, four times the *income*, four times the required *capital formation*, and so on.

To be sure, from America's viewpoint, the almost-certainty of the presence of over seven billion people on earth by the early years past 2000 is fraught with a number of gloomy strategic prospects. Perhaps the most forbidding aspect is the *compression of time*—the arrival of additional people equal to the numbers now on earth, not over generations or centuries, but within, say, 25 years. Even though America will not be the hardest-hit country, imagine doubling America's 350-year accumulation of facilities within 25 years—each American community more or less *doubling* its number of houses, schools, hospitals, sewer systems, energy production, churches, jobs! "Instantaneous" expansion on such a massive scale may, like a tidal wave, simply smash to smithereens major current systems of administering society—e.g., work allocations, pay systems, tax systems, pension funds, medical networks, welfare and charity systems, etc.

The suddenness of the impacts of such intensifying problems as competition for dwindling resources may generate psychological instability and irrational behavior in populations, or in large subpopulations, inducing international conflicts or even civil wars. Concurrently, such resources as some nations can assemble may have to be devoted to life-sustaining domestic purposes, reducing (and perhaps

eventually eliminating) allocation of resources to national security establishments.

No one is saying that precisely this outcome *will* happen. Frequently, several higher and lower projections are offered as alternative possibilities. But *something approximately close* will happen. There *will be at least* 6-7 billion people on earth in 25 more years. The collective strategic implications of this bare projection are multifarious and titanic.

It is important to realize that these are not mere projections, or dreams, or speculations, or loose guesses, but facts. The population shown for 1977 is in existence, already born.

Let us relinquish our address to this section by quoting one specialist in population growth: "Unless man halts population growth, population growth will halt man."

#### DEMOGRAPHY: SIMPLE AND REFINED

From this point on, it may further our purposes to address an expanded scope for demography, to address some aspects of *how* and especially of *why*, and to relate to demographic bases various sociological and other nondemographic variables. These are always internal factors.

To be sure, if we were to adopt an unlimited definition of demographic change, we could continually expand our universe of population data, to explore such factors as geography, ethnic distribution, climate, longevity, mobility, occupational specialties, work force, professions, caste, class, intelligence, and so on, almost without limit.

Kingsley Davis has commented on the *expanded* scope of demography—or, as it is sometimes called, "population study":

... fertility, mortality, and migration are all to a great extent socially determined and socially determining. They are the inner or formal variables in the demographic system, whereas the outer or ultimate variables are sociological and biological. Whenever the demographer pushes his inquiry to the point of asking why the demographic processes behave as they do, he enters the social field.<sup>25</sup>

In special ways irrespective of numbers, McClelland's studies of the achieving society show that two societies with people of *equal basic physical characteristics* will address the challenges of progress differently, according to their culture.<sup>26</sup> One can postulate that some

Arab societies regarded the great physical challenges of the desert with resignation; philosophy and religion combined to leave them shrugging their shoulders, convinced that it was all Allah's will about which they could do nothing. Americans, confronted with massive wilderness—such as the Mormons (also facing deserts) in Utah—reacted as their culture pressed them to do, with energy and imagination. Two hundred years later, one society is advanced, while the other (ignoring the oil income) is still relatively primitive.

Even climate can make a great difference. We recall Toynbee's identification of the temperate zones as the zones of encouragement of achievement, the tropics being just too hot for the expenditure of energy. Remember his differentiation between the colonies of Maine and Massachusetts; the border between, he said, roughly marked the northern edge of the productive belt—Massachusetts being a hotbed of all kinds of creative activity, but Maine allegedly remaining unsophisticated.<sup>27</sup>

Interactions among domestic economic, biological, and ecological factors, in certain equations, are being more clearly seen as possible threats to a nation's strategic status and objectives—even, for example, a change in prices, with nothing else changed, alters human responses and hence strategic outcomes. When world oil prices suddenly tripled and quadrupled, shouldering some nations away from petroleum usage even in agriculture, several strategic relationships abruptly changed. At about the same time, the world price of wheat tripled (1970-74), the price of soybeans increased 2-1/2 times, and the price of newsprint doubled;<sup>28</sup> none of these actions occurred without impacts upon strategic interactions maintained by the nations affected.<sup>29</sup>

Or consider another powerful factor, not dependent upon *numbers* of US citizens: food. The United States is the only major world power with great surpluses in the essential strategic commodity of food—a category in which the United States is even more dominant than the Middle East is in oil. Since 1945, “every continent except North America has become food deficient.”<sup>30</sup> North Africa, once the granary of the Roman Empire, now imports most of its grain, a result occasioned largely by an occurrence we mentioned early: shifting sands. “For some countries,” says Lester Brown, “encroaching deserts pose a far greater threat than invading armies.”<sup>31</sup>

## LONGEVITY

At the last turn of the century, life expectancy in the United States

was (anybody want to guess?) 47. Today, life expectancy is 72 in the United States, Japan and France, and 75 in Sweden and Switzerland. This statistic runs all the way down to 42 in India, to 45 in Haiti, to 38 in Algeria, and 32 in Mali and Upper Volta.<sup>32</sup> In Egypt, over one-half of all deaths occur before the age of 5.<sup>33</sup> We need not explore here the many ramifications of such statistics; but it does not take much imagination to sense existing differences in world view and life-view, affecting strategic posture and performance, as different emphases affect such physical qualities as health, and such psychologically conflicting qualities as confidence in a long life or resignation to a short one.

Societies with low life expectancy are also the ones afflicted with high infant mortality, which forges in them perspectives quite different from those of advanced societies. In confrontations over birth rates with citizens of developing countries, advocates of zero population growth sometimes feel that they are talking to stone walls. But the farmer's response is understandable. Low birth rates make no sense to a farmer in a poor country, for many reasons. Children are the social security, the insurance policies, of the poor. In many cultures, to have many sons is to have great prestige; sons are alleged to be proof of one's virility. Sons are economic assets; for with more sons, one can plow more acres. In poor societies, one must have many children in order to be assured of having a few that will survive into maturity.

Mozart, even in sophisticated Vienna only a century and a half ago furnishes a mild example; he was one of seven children, only two of whom lived past six months. Mozart had six children himself, of whom only two lived past six months; and he died at the age of 35.<sup>34</sup>

Realizing that a country must have a sizable population in order to have influence in the world, many a citizen of a developing country feels impelled to respond: "What! Cut our birth rate! Why should my country be condemned to mediocre or low standing forever, while your country basks in power and comfort near the top of the heap?"

## EDUCATION

The great cauldrons of educational ferment frequently produce important indicators of demographic change. One prodigious demographic change worldwide occurred about 1955, when for the first time in history, the *majority* of mankind became literate.

There are two strategic sides to the educational coin, of course. On

the one hand, beneficial outcomes include more restrained appreciation of the cycles of history, more realistic understanding of other nations, larger pools of administrators and operators of technological society, greater skill levels in the work force and in businessmen and in representatives abroad. For military forces, it means more sophisticated weapons systems operators. On the other hand, negative aspects also emerge (that is, "negative," as local elites see them): educated people no longer turn over the control of their societies to small elites; educated persons become less deferential; demonstrate their determination to participate in political decisions affecting them and to influence foreign policies that represent their society. Education means domestic diffusion of power, and, very likely, revised strategic goals. Small self-conscious elites emphasize law and order at home and modest foreign policy goals abroad. Widespread education brings social mobility, democratization, and social ferment at home, and foreign policy goals denying benefits to foreign authoritarian regimes.

The United States, for its part, continues its domestic commitment to mass education, and the level of education continues to mount:

#### Percent of 20-24 Year Olds in College<sup>35</sup>

1967	20%
1977	23%

Educational progress certainly includes women:

#### Percent of Women Going to College<sup>36</sup>

1967	18%
1977	25%

### AGE DISTRIBUTION

As indicated earlier, perhaps the most powerful and disturbing of all demographic changes in any society is shift in age groups.

For example, we might reflect upon the unprecedented accumulation of casualties suffered during World War I by France, Britain, and Germany. The slaughter physically destroyed much of the "flower of a whole generation," including a priceless proportion of potential leadership (effects which had something to do with US

emergence to preeminence during the 1930's and World War II). The European nations responded strategically in a traumatic way; thus, the seeds of World War II were sown not only in the *events* of World War I but also in the *nature* of the carnage.

Let us regard one thumping demographic change that occurred in America in the 1960's. We recall that the decade of the 1960's shook up American society, as *youth* values suddenly seemed to take priority in almost every national activity. (Some even credit the youth ferment with ending American participation in the Vietnam war—certainly a strategic effect!) In any event, the demographic changes shown below certainly help explain what hit America in the 1960's.

Basic assumption: that the 14-24 age group is the locus of most social ferment. The following chart shows the measure, during successive decades, of the *increase* in population of the 14-24 age group:

Increase in 14-24 Age Group Per Decade<sup>37</sup>

	1890 - 1990	1-2 million
	1900 - 1910	1-2 million
	1910 - 1920	1-2 million
	1920 - 1930	1-2 million
	1930 - 1940	1-2 million
	1940 - 1950	1-2 million
	1950 - 1960	1-2 million
TOTAL:	1890 - 1960	about 12.5 million
But	1960 - 1970	13.8 million

Noting that the increase in that age group exceeded in *one decade* cumulative increases *over 70 years*, we understand more clearly that an unprecedented numerical change underwrote the powerful explosion of youth's views on national programs, including strategic problems.

The strategic prospects concerning this same age group change drastically in the subsequent two decades:

Change Per Approaching Decade in Population of 14-24 Age Groups<sup>38</sup>

1970 - 80 (est)	Increase of only 600,000
1980 - 90 (est)	Decrease of about 450,000

Let me set out a few other basic items of data that characterize American demography right now, coupled with a few projections. In connection with some of them, I cite possible strategic effects:

Changes in Age Groups Over Next 10 Years (1977-1987)<sup>39</sup>

Under 13	Increase 11%
Teenagers (13-20)	Decrease 17%
Young Adults (20-34)	Increase 13%
Young Middle Age (35-49)	Increase 31%
Older Middle Age (50-64)	Decrease 1%
Elderly (65 and up)	Increase 19%

A strategic planner does not need overpowering sophistication to realize that different populations of identical numerical totals but different age-group composition have different capabilities to carry out certain enterprises, and that populations that are predominantly younger or older want to make different choices among selected critical national programs. It is obvious that the American population is getting older (across the Atlantic, Europe is even more severely involved with a "geriatric society"). Strategic interest is therefore natural on the part of a number of foreign nations in these projections about the median age in the United States.

Median Age in the United States<sup>40</sup>

1970	27.9
1976	29.4
2000	35.5

The Census Bureau theorizes that the rising median age will peak at 38.1 about 2035.

## URBANIZATION

Urbanization is of considerable strategic importance. It may be of value to realize how recent is the gathering of huge masses in cities. The very earliest towns formed themselves about 5000 to 3000 BC. In

Roman times, some cities grew to 100,000 size; but not until about 1800 did any city (Tokyo, or Edo, as it was then called) reach 1 million people.<sup>41</sup>

The United Nations applies the term "urban" to concentrations of 200,000. Using that measure, only 2 percent of world population lived in urban circumstances in 1800. By 1950, about 20 percent. In the 1970's about 28 percent. By 2000, perhaps 50 percent of the world.<sup>42</sup> The United States is certainly a well-urbanized nation, but not the world's "leader" in this respect. The following chart shows the distribution of the largest urban concentrations in 1955:

#### 1955 Distribution of Cities of 100,000 or More<sup>43</sup>

Total	1107
Asia (Japan 64; China 103)	341
Europe (USSR 148)	279
North America (U.S. 189)	202
Latin America	78
Oceania	11

#### 1955 Distribution of Metropolitan Areas of 1 Million or More<sup>44</sup>

Total	108
Europe (excluding USSR)	34
Asia	32
North America	26

Some forecasts predict that by the 1990's, 90 percent or more of all Americans will live in urban concentrations. So what? Would such a development have any strategic significance? Let me suggest two "strategic cuds" to chew on. One is that a nation overwhelmingly housed in cities is more vulnerable to nuclear exchange, especially a *limited* nuclear exchange, than a nation not so concentrated. Another strategic (or perhaps tactical) possibility is that, if conventional war requires military forces to go where people and communications controls are located, one capability that may mount in importance is that of conducting effective combat in cities.

### ETHNIC DISTRIBUTION

The strategic importance of *ethnic distribution* would have been

discounted long ago in settled, homogeneous populations; but its importance mounts rapidly in societies undergoing ethnic ferment. Some nations are being weakened in international relations by domestic irredentist movements, usually emphasizing some ethnic identity. Perhaps the closest example to us with direct strategic importance is the separatist movement in Canada.

On a lesser scale are potentials in various nations, including the United States, for domestic ethnics to press for favorable concessions to certain foreign nations, depending on the number, the organization, the passion, and the issues. Joint Chiefs of Staff Chairman General George Brown, got into trouble by mentioning the organized domestic support for Israel; but there is no question that powerful support for Israel exists within America, disproportionate to the Jewish subpopulation of the United States. One recalls the agitation a few years ago in which well-organized lobbies of Americans of Greek extraction pressed the American government for the interests of Greece over the interests of Turkey; but, apparently, there are no domestic organized pro-Turkey lobbies.

When we review cross support for the activities of terrorist groups over the past year alone—funding of the IRA by American Irish, IRA terrorism in Ireland and England, the South Moluccans in Holland, the blacks in Rhodesia, and others—one realizes how much a nation's strategic posture can be affected by internal ethnic dynamics.

The whole world is 2/3 nonwhite. In less than a century, probably the majority of every important category will be nonwhite: scientists, bankers, billionaires, bishops, premiers, and presidents.

Here are presented a few perceptions concerning the status of nonwhite citizens of the United States:

#### Non-Whites in the United States<sup>45</sup>

1950	10.5%	16 million
1977	13.4%	--
2000 (est)	15.9%	41 million

That the United States is making substantial progress toward equitable sharing of its affluence with its ethnic minorities is supported by two statistics cited here. In 1967 the percentage of blacks in college was 10

percent, but in 1977, 23 percent.<sup>46</sup> In 1974, the total income of 23 million black Americans was about \$52 billion, equal to the total GNP of India (600 million people), and greater than the GNP of 140 (all but 9, at that time) of the world's nations.<sup>47</sup> It is certainly of strategic importance for America to be seen by the majority of the rest of the world to be fair and equitable in treatment of our racial minorities. It is of strategic value to the United States *not* to be confronted now or soon by a world that is largely hostile over race, or any other bone-deep issue. This problem will not soon disappear.

### AVERAGE INDIVIDUAL SIZE

Even average personal size may have military significance—in tactics, if not strategy. The average height of an American recruit in the Revolutionary War was almost 5 feet 6 inches, and that average remained constant for a hundred years. Renewed steady increase in American height began about 1876 and ended in 1960 at the 18-year-old's average height of 5 feet 9-1/2 inches.<sup>48</sup> Average height in America has remained constant since that year. In World War II, combatant Japanese and Americans repeatedly commented on the greater height and overall size of the Americans. It is interesting to note current observations that the (literally) rising generation of Japanese males (the rising sons) “towers” over the previous generation by about 4 inches.

Similar average disproportion existed between Americans and Vietnamese in the war in Southeast Asia. Recently, a North Vietnamese captain recalled the system of three-tiered underground tunnels that the Viet Cong built over a period of 30 years. The slippery, humid corridors, usually two feet wide and two feet high, were far too small for most American troops to penetrate in pursuit of their small and agile enemies.<sup>49</sup>

### AGE AND MILITARY SERVICE

These considerations all relate to one special major challenge that looms on the horizon of the American military establishment: Where will quality manpower, with requisite skill levels, come from? The size of the available pool of potential candidates of the youthful ages required has a good deal to do with success in manning the armed forces. But the forthcoming American supply of eligible teenagers will

be declining for a while. At the same time, the skill requirements for most jobs steadily increase, inside the military as well as outside; and the pressures outside the military raise the intensity of the *competition* for the same young people. Many will not be eligible for military service, of course—one must eliminate from the raw age-groups all the physically, mentally, and morally unfit; the veterans and members of the reserve components; and the students still in school.

A Congressional Research Service study<sup>50</sup> of April 1977 cited these figures:

#### Number of Americans Reaching Age 18

1979	2.14 million
1980	2.13 million
1985	1.80 million
1990	1.70 million
1995	1.60 million

The same study forecasts the increasing recruiting challenge to the armed forces:

#### The Armed Forces Requirement to Recruit Annually<sup>51</sup>

- 1977—1 out of every 5.6 males 18 years of age
- By 1985—1 out of every 4.6 males 18 years of age

The same study makes this statement:

There is a general consensus that, given *present manpower procurement and utilization policies*, the services will not be able to maintain current military strength in the 1980's.<sup>52</sup> (*italics added*)

This forecast is certainly an example of demographic change, and it certainly has strategic implications. An even more impressive obstacle to the manning (and womaning) of the nation's armed forces via *volunteer* systems is implicit in the social goal of providing community employment for teenagers. The Department of Labor has announced substantial grants to six cities to test a program in which every teenager who wants a job will get one.<sup>53</sup> This is a notable example of significant demographic change accomplished by changing the conditions, not the numbers, of a population.

I have already suggested that the age distribution within a population has some effect upon that nation's strategic policy. On the one hand, the foreign policy of young people may be vigorous, belligerent, and challenging, while that of their elders remain calmer. Depending upon the issues, however, such roles may be reversed. Anger, or choler, among the elderly has often led nations into wars. As Walter Lippman once said, "Wars are made by old men who don't have to fight in them."

Another negative strategic consequence of accelerating population growth will surely be even faster depletion of the earth's resources, some of which are already beyond any possibility of replacement. America, as the leading consumer of resources, is probably in for some very painful adjustment. Professor Ballard estimates that each American today needs energy support equivalent to the expenditure of a 100-watt bulb; he estimates that in the United States today we use about 10,000 thermal watts per capita (or the energy equivalent of the work of 100 personal "slaves" constantly serving every man, woman, and child in America).<sup>54</sup> Can we expect future usage to spiral ever onward and upward as Americans plug in more appliances, for which total energy supplied must double and redouble? Some observers doubt that the trend can be supported much longer, if in fact current levels can be sustained. As a vast generalization, Professor Ballard suggests that there are already on Earth five times as many people as Earth can support over extended time.<sup>55</sup>

A national leader cannot project power abroad without a strong base of power at home. If a nation's population can be manipulated into monolithic support of national policy, or if voluntary homogeneous support can be aroused, that nation's voice carries more weight internationally than a nation whose population is hopelessly splintered among numerous factions in relation to foreign policy. When France at last rallied to support DeGaulle, the power of France's voice internationally was at least doubled.

Perhaps our own experience in Viet Nam tends to substantiate this relationship. God knows we were a divided people at home, and our passionate pluralism was played openly on the world stage. Consequently, America's strategic power was weakened considerably in a number of ways, and on a number of issues, still is.

In the course of citing some illustrative statistics, we have raised a number of examples of actual current problems related to demographic change and strategic implications. We refer in this essay not only to

situations involving the United States, but also to the USSR, Britain, France, China, India, the Arab countries, Canada, Mexico, Israel, Greece, Turkey, Viet Nam, Holland, Rhodesia, and other nations.

Demographic change is continuing to churn our world every day. As we approach the conclusion of these remarks, let us glance at three instances of demographic change, each of considerable importance, right out of the daily press during the month of August, 1977:

The first concerns a shift in Israel's foreign-policy line:

Prime Minister Menachen Begin's emergence as a leader of unquestioned domestic strength reflects not only a remarkably rapid growth of authority in his less than three months in power but important underlying changes in Israel society . . . he is now seen to represent the new Israeli mixture that has been developing over the last two decades and the accompanying change in attitude. The crucial difference is demographic. The Jewish population of Israel is now about equally divided between people of European background and those from Moslem countries. Because those from Moslem countries—the so-called oriental Jews—have a higher birth rate, in the generation now coming of age the ratio is 60 to 40 . . . .<sup>56</sup>

The second example concerns Mexico. One analyst recently forecast that within 45 years, there will be more people in Mexico than in the United States.<sup>57</sup> Another cited a comparison concerning a growing problem with our neighbor to the South:

. . . There is "no ground whatever" for supposing that Mexico can go on doubling its population and unemployment every generation and exporting its talented but *workless* people to the United States without provoking a really serious crisis in United States-Mexican relations within the next few years.<sup>58</sup>

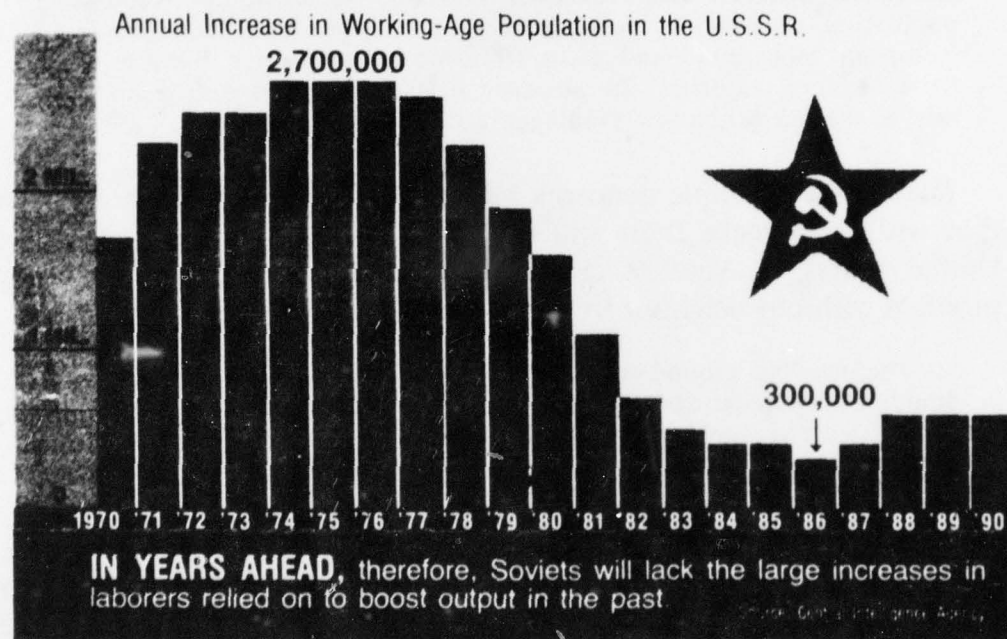
The third subject is the Soviet Union, which has more area than any other nation on earth, greater population than the United States, and about equal status with the United States in military power. The USSR also ranks high in government motivation. But in almost every other category of national strength, the Soviets lag—in government efficiency, and in all the elements that determine income per capita—so that unlimited population growth might not be of unalloyed benefit to the USSR in the long run. To be sure, their birth rate is even lower than ours right now, so that the rate and kind of demographic change for which the Soviet Union is fated in the next two decades will eventually have considerable effect on strategic equations.

The American birthrate has been the lowest in our history in the past decade (0.7 in 1976), but the Soviet rate has been even worse. A CIA report<sup>59</sup> predicts decline in Soviet intransigence during the next decade, due to substantial decline in economic performance ascribable to two primary factors:

- one is a looming oil shortage in the USSR<sup>60</sup>
- the other factor is future contraction of the labor force, as shown by these figures:<sup>61</sup>

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### Basic Kremlin Problem SLOWER GROWTH IN RUSSIA'S WORK FORCE



U.S. NEWS & WORLD REPORT, Aug. 22, 1977

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Thus it appears that whatever manpower-dependent projects the Soviets intend to undertake will be severely handicapped during the 1980's.

Ethnicity is still another source of possible tension in the USSR—more subtle but possibly equally upsetting. Americans are certainly rising in consciousness of their ethnic minorities—blacks, hispanos, and Indians; but ethnic ferment is also endemic to more than a few other nations and regions (e.g., India, Canada, the Middle East, the Balkans, Africa). The Soviet Union is no exception; for despite its protestations of equity for all, the USSR continues to favor Russians. For example, despite the fact that the 1970 census established that ethnic Russians constituted only 53 percent of USSR populations, *all* eleven positions on the Secretariat of the Central Committee are still occupied by ethnic Russians.<sup>62</sup>

Even a Soviet scholar, G. A. Bondarskaia, predicted recently that the Russians in 2000 will constitute only 44 percent (still a plurality, but no longer the majority) of the USSR population, outnumbering their Asian peoples by 2 to 1, instead of by 4 to 1 as at present,<sup>63</sup> as demographic change works its way.

We have here only scratched the surface of this subject. When one seeks causes and “remedies” for demographic change, one moves into the far more complex universe of social and cultural change. After all, people do not decide to have more or fewer babies to influence statistics or manpower totals. Such decisions emerge from tangled roots, fluctuating relationships, personal values, and opinions, cost of living, per capita income, living styles, the state of public health, and unnumerable other factors which we have only hinted at here. The cumulative effect of all such choices, frequently and sometimes drastically, affect such national strategic policies as easing relations with some foreign nations but straining relations with others, shifting geographic or economic goals, or intensifying or relaxing participatory activity in international organizations.

It seems clear that most demographic change is linked to numerical change in the proponents or proportions affected. Presumably, the more people there are in the world, the greater will be the impact of demographic change. As we have seen in several instances above, however, significant overall strategic interrelationships can, on occasion, change the natural or mental or psychological factors independent of numbers. It is not that one aspect is superior, for each can have importance equal to the other.

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1. REPORT NUMBER ACN 78037	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) POPULATION, DEMOGRAPHY, AND NATIONAL STRATEGY	5. TYPE OF REPORT & PERIOD COVERED Military Issues Research Memoranda	6. PERFORMING ORG. REPORT NUMBER
		7. AUTHOR(s) Dr. Anthony L. Wermuth
9. PERFORMING ORGANIZATION NAME AND ADDRESS Strategic Studies Institute US Army War College Carlisle Barracks, Pennsylvania 17013	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE 10 July 1978	13. NUMBER OF PAGES 32
	14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	
		15. SECURITY CLASS (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Demography, Demographic Change, Social Change, Cultural Change, Population, Population Growth, Strategy, National Strategy, Strategy and Change, Elements of Strategy, Linkage Politics, Domestic Change and Foreign Policy.		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The role of population in strategic analysis has been recognized for some time— at least, in gross numbers. The role of demography, or changes in population, has been less appreciated in strategic equations. This paper is an effort in consciousness-raising about demographic changes and their potential importance for strategic status. Most demographic changes are, of course, changes in domestic factors, but with inter-nation significance. Such factors extend well		

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↳ beyond mere numbers of military-age males to include many factors of social and cultural ferment, such as age distribution, intelligence, education, history, physical characteristics, occupations, productivity, values, attitudes, loyalties, energies, cultural quality and vigor, homogeneity, diversity, and others. Examples are cited of demographic change in the USSR, Mexico, France, the USA, and other nations.

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