Population Projections and Migration Commissions

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It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness….

Charles Dickens, *A Tale of Two Cities*

One might wonder what the famous opening lines of Charles Dickens *A Tale of Two Cities* might have to do with population projections and migration commissions. Surprisingly enough, long range demographic projections can fairly be described in Dickens' contrapuntal format, though of course not with the same literary elegance.

On the one hand the techniques of demographic projection are essential: they offer powerful and objective quantitative methods that, implemented and interpreted properly, can provide a hypothetical migration commission with critical insights into possible futures -- futures that might otherwise not be apparent by examining contemporaneous data. At the same time, if implemented improperly or interpreted naively, such long range demographic projections could represent instruments of confusion, exaggeration, and even deliberate distortion. Both the strengths and weaknesses inherent in the use of demographic projections need to be understood by any immigration commission that might emerge.

The key point is that the utility of demographic projections, at least when deployed as forecasts of the long-term future as they often are, rests entirely upon the extent to which the projection's key assumptions turn out to be close to the future trends that actually ensue. There is nothing magical about long-range demographic projections -- anyone with a PC and appropriate software can produce projections that are arithmetically correct; what really matters is the credibility of the assumptions that underlie the arithmetic.

Consider for example the long-range demographic projections produced and updated roughly every four years by the US Census Bureau. The most recent National Population Projections, released in 2012,[1] project a US population of 400 million in 2050. Yet the immediately preceding projections, produced by the same Census Bureau office and staff and released in 2008, had projected a population of 439 million for 2050. The Census Bureau projections are developed by highly competent professional demographers who are reasonably insulated from political pressures that some might be tempted to use to tweak the projection outcomes in

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[1] United States Census Bureau, "2012 National Population Projections,"
http://www.census.gov/population/projections/data/national/2012.html
For a discussion of the methodologies and assumptions embodied in these projections, see US Census Bureau, "Methodology and Assumptions for the 2012 National Projections,"
http://www.census.gov/population/projections/files/methodology/methodstatement12.pdf

particular ways. How could it be that these two projections produced by the same office only four years apart were reduced by fully 39 million persons for the same out-year of 2050? This is no small modification; 39 million is larger than the current populations of Austria, Sweden, Switzerland, and Belgium taken together.

This comparison illustrates a compelling truth about the outputs of all demographic projections that seek to look into the future beyond a decade or two. The numbers produced by such projections need to be viewed as highly speculative outcomes of assumptions about the future that <u>no</u> one can actually predict with any accuracy, and that are almost certain to be modified in subsequent projections as circumstances inevitably change over time.

In this particular case, the main reason for the reduction of 39 million in the projected 2050 US population over only four years between 2008 and 2012 were substantial changes in the Bureau's assumptions about future trends in net immigration, and hence have particular relevance for the forward-looking work of any prospective immigration commission that might be established. To give some sense of the scale of such changed assumptions about future immigration, in its 2008 projection the Bureau had assumed that net international migration would have reached to 1,377,000 per year by 2015, and that the years following would see a rising trajectory of net international migration such that it would reach 2,047,000 million per year in 2050. The 2012 Census Bureau projection assumed that net immigration in 2015 would be 42 percent lower (at 794,000) than it had assumed only four years earlier, and also that the volume in the years following to increase to an annual level of 1,204,000 by 2050, also 42 percent lower than its assumption only four years prior.

The reasons for such dramatically changed projection assumptions over such a short interval seem clear, and it would be unfair to attribute them to incompetence or to the many political pressures driven by immigration debates. Because there is no credible "theory" that can guide assumptions about future immigration, most projections necessarily are grounded in recent historical trends. Such trends are assumed to continue over the projection period, allowing in some cases for specified changes (usually fairly arbitrary) to be incorporated in the out-years. Yet after the Census Bureau's 2008 projections had been released, results from the 2010 US Census and evidence from other sources suggested that net international migration actually might have declined between 2008 and 2012 rather than continuing the upward trend that the Bureau had incorporated into its 2008 projections. Here it must quickly be acknowledged that measurement of US immigration is notably deficient and hence there is uncertainty about the reality of such a reversal in trend. Moreover even if true, such a reversal might have been due to a wide array of possible drivers --- changes in immigrants' countries of origin, the sharp US economic recession that became apparent in 2008, or to other factors such as changes in immigration policy enforcement or data collection.

The underlying uncertainties derive from the fact that most of the estimated decline appears in the category that is most difficult to measure accurately, i.e. the levels of net immigration outside of legal channels (variously termed unauthorized, illegal, undocumented, or irregular migration). Due to weak legal provisions and resulting ineffectual enforcement, such migration represents a substantial fraction of total US net immigration, and the 2008 projections had assumed that this category would continue to increase along the trend of the rates estimated for previous years; it is this pattern of continued increase that later estimates suggested may not

have occurred, although these estimates too are subject to substantial weaknesses [see Figure A].[2]

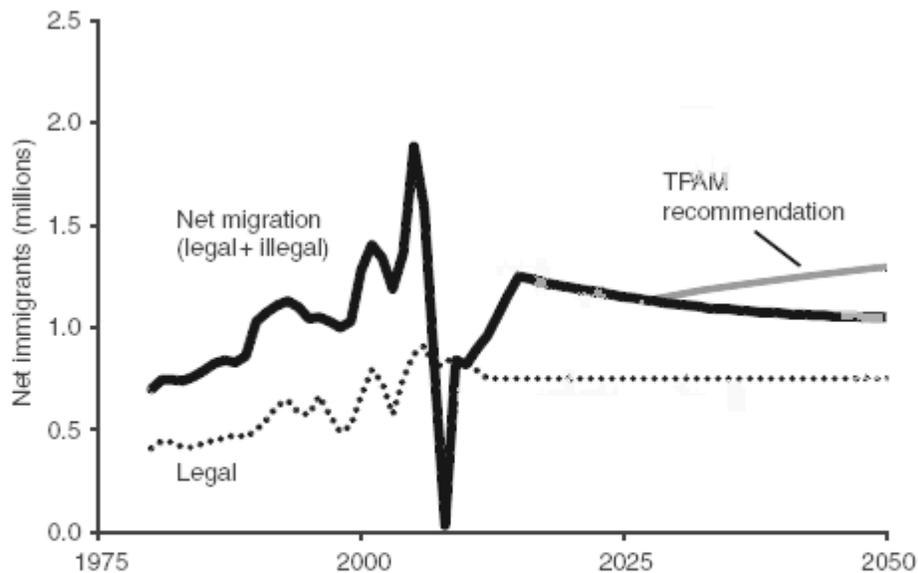<Figure A from p. 45 of NRC 2012, about here>

FIGURE 3-9 Net migration, 1980-2050. SOURCES: Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds (2011) and Technical Panel on Assumptions and Methods (2011).

This recent experience suggests a challenging truth: under the circumstances that currently prevail, no one – not the Census Bureau, not a new immigration commission, not any other group seeking objective evidence -- can be expected to provide realistic forecasts about the size and nature of future immigration, which is heavily affected by continuing measurement deficiencies about recent trends, by the volatile politics of US immigration policy, by unforeseeable events in sending countries, and by unpredictable economic and labor market developments in the US. Simply put, the factors that underlie future international migration simply cannot be accurately predicted.[3]

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[2] National Research Council, *Aging and the Macroeconomy: Long-term Implications of an Older Population.* Committee on the Long-Run Macroeconomic Effects of the Aging U.S. Population. Board on Mathematical Sciences and their Applications, Division on Engineering and Physical Sciences, and Committee on Population, Division of Behavioral and Social Sciences and Education. Washington, D.C.: The National Academies, 2012.

[3] It is worth noting that even professionally-sophisticated demographic projections that allow plausible variation only in fertility rates lead to outputs for 2050 that range widely. As one example of a respected source of such projections, the United Nations Population Division projections for the US in 2050 provide a "low variant" and "high variant" that differ by nearly 100 million persons, ranging from 357 million to 452 million. Most of this range is attributable to uncertainties about the future course of fertility rates over this long period, which the UN projections take into account by conducting thousands of probabilistic projections that allow for a variety of random shifts in fertility. The range of projection outcomes for 2050 would be even wider if similar variations were allowed for immigration. For more information, see Population Division of the Department of Economic and Social Affairs of the United

In earlier long-range projections, the Census Bureau simply adopted arbitrary numerical assumptions about future net immigration. In its most recent 2012 projections, the Bureau moved to somewhat more credible rate-based assumptions, but assumed that future emigration rates over nearly a half-century would be based essentially upon constant percentages of the populations (which themselves are based upon long-range demographic projections) of the countries and regions that are sources of most recent US immigrants.

These are rather Olympian assumptions to say the least. They do not allow for projected shifts in the age structure of source country populations that might be expected to have effects upon propensities to emigrate. They do not contemplate the possibility of any significant changes in the political, economic and social settings of these source countries and regions over the next four decades. They also do not allow for rapid increases in immigration from countries and regions from which US immigration has been small in the recent past. Finally they do not allow for any changes in US policy that might reduce or increase immigration, either global totals and sub-totals from particular regions or countries. Had similar fixed assumptions been made in, say, 1970 for US immigration from Asia, projections would have suggested very little immigration from Asia immigration by 2013. Yet in fact net immigration from Asia has grown more rapidly than that from any other region—driven by policy changes undertaken for other reasons in 1965 and by other forces such as the Vietnam War and refugee admissions.

Use of long range projections for advocacy:

The use of long-range projections is not confined to professionals seeking objective perspectives on future trends. To the contrary, long-range demographic projections have long attracted committed activists and ideologues who have deployed the outputs of long-range projections as putative forecasts of the ominous outcomes they claim will emerge if the policies they are advocating are not embraced.

In a 1987 book entitled *The Birth Dearth: What Happens When People in Free Countries Don't Have Enough Babies?,*[4] journalist Ben W. Wattenberg used population projections to forecast a 21st Century demographic dystopia if Western leaders did not take the actions he was urging to raise fertility levels. Wattenberg's long-range projections showed that in the absence of the fertility increases he was advocating, the political, economic and military power of the West (or NATO) would ineluctably wither relative to those of the Soviet Union and its Warsaw Pact allies. Wattenberg's demographic dystopia was based on demographic projections over a period of 120 years, from 1980 to 2100. The projections he presented for "the West," roughly defined as the industrial democracies,[5] showed their collective populations rising from about 740 million in 1985 to a peak of about 800 million in 2020, and then plummeting to 590 million by 2100, from which reduced level their populations would continue to decline in a "free fall". Over the same period, the book's projections showed that the combined populations of the USSR and Warsaw

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Nations Secretariat, *World Population Prospects: The 2010 Revision*, http://esa.un.org/unpd/wpp/index.htm

[4] Ben W. Wattenberg, *The Birth Dearth: What Happens When People in Free Countries Don't Have Enough Babies? (New York: Pharos Books, 1987).*
[5] Canada, U.S., Australia, New Zealand, Japan, Austria, Belgium, Denmark, Finland, France, West Germany, Iceland, Italy, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom

Pact, the "industrial communist world,"[6] would follow a steadily increasing pattern, rising from about 390 million in 1985 to nearly 525 million in 2100, after which their populations would continue on a rising path.

Wattenberg described his book as "a speculation and a provocation" and an "alarmist tract."[7] And so it was. It deployed forecasts based on apparently "hard" population trends for the West that were based on very long term projections he attributed to a "Special World Bank Projection."[8] Readers had to go to the Appendix at the back of the book to learn the provenance of this "Special World Bank Projection," in which Wattenberg's research associate Karl Zinsmeister enlisted the help of My T. Vu, editor of the World Bank's publication *World Population Projections*, to run a special projection for the "West" based on assumptions put forward by Wattenberg himself.

Specifically these "special" projections were driven by Wattenberg's assumption that the fertility rates of Western countries would remain <u>constant</u> at 1984 levels of 1.5 children per woman[9] – nearly 30 percent below the notional "replacement level" of 2.1 – from 1980 to 2100, a period of 120 years. Ms. Vu agreed, innocently if perhaps naively, to insert this constant-fertility assumption into the World Bank's PC-based projection model, even though it was very different from the World Bank's own projection assumptions, and then provided the printouts of this projection to Mr. Zinsmeister. She was quite upset when she learned that his 1987 book cited as its source a "Special World Bank Projection" –- but it was too late; the book was already in print.[10]

Wattenberg's book may have been, by his own reckoning, a "provocation" and an "alarmist tract", but the attractiveness of such arguments is such that it received some high-powered endorsements on its back cover. Indeed one of the leading Democratic intellectuals of the U.S. Senate, the former Harvard professor Daniel P. Moynihan, opined that

> A major and threatening demographic change in America has escaped public attention. When Ben Wattenberg sounds an alarm like this one, *we had better listen.*

Jeane J. Kirkpatrick, a former professor of government at Georgetown University who served as Ronald Reagan's foreign policy advisor and later as his Ambassador to the United Nations, wrote

> I really like this book. Wattenberg is not just 'worried' about population trends. He *knows* what he is talking about. His new book is indispensable for those trying to think seriously about our future.[11]

One attractive aspect of projections that stretch out 50 or 100 years or more into the future is that those who design them are unlikely to be alive and available for criticism when the actual demographic trends depart dramatically from those projected. In this case, however, it was striking to see how quickly Wattenberg's projection assumptions published in 1987 were negated by reality. By 1991, the "industrial communist world" (USSR and Warsaw Pact) had imploded. Both the USSR and the Warsaw Pact dissolved, the former into some 15 successor

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[6] USSR, Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania

[7] Ben W. Wattenberg, *The Birth Dearth….*, pp. 1, 10.

[8] Ben W. Wattenberg, *The Birth Dearth…*, pp. 31-32.

[9] Ben W. Wattenberg, *The Birth Dearth*, Appendix, pp. 169-170.

[10] Personal communication, My T. Vu, World Bank, 1987.

[11] Italics in original.

states of the Soviet Union, and fertility rates in most plummeted. Moreover, many of the members of the former Warsaw Pact rejected the political and economic system sustained by the USSR, and most of them became members of "the West", joining either the European Union or NATO, and in some cases both. As the present author suggested in a review of Wattenberg's book, also published in 1987

> One wonders…what political scientists would make of forecasts that hold national characters and military alliances constant for a full century; put another way, if Wattenberg had been writing 100 years ago, when the Czar ruled Russia and Britain ruled the waves, what would he have predicted about the relative strength of NATO and the Warsaw Pact in 1987?[12]

Ethnic/racial projections:

Many projections include changes in different ethnic/racial/religious groups over time. Such efforts normally hold constant the categorization of such groups at the time of the projection exercise. Hence it is worth noting that over periods of 50 to 100 years, the boundaries of such "socially constructed" categories can themselves change in dramatic ways. A few examples should suffice:

For the US Census in 1910, Census-takers were instructed to classify "race" by the following categories:[13]

> "Mu" for mulatto and "Ot" for other with an instruction to write in the race; "B" was called "black" only. The definition for "B" and "Mu" is: "For census purposes, the term "black" (B) includes all persons who are evidently full blooded negroes, while the term "mulatto" (Mu) includes all other persons having some proportion or perceptible trace of negro blood."

(This categorization did not include concepts such as "quadroon" or "octoroon" that had appeared only 20 years earlier.)

Fifty years later, the 1960 Census classified data in the following way:

> The data item is called "Color or race" with categories for "White, Negro, American Indian, Japanese, Chinese, Filipino, Hawaiian, Part Hawaiian, Aleut, Eskimo, (etc.)" Note that "black" did not appear on the form. The instructions called for census-takers to complete the race item by observation, and directed that Puerto Ricans, Mexicans, or other persons of Latin descent would be classified as "White" unless they were definitely "Negro," "Indian," or some other race. Southern European and Near Eastern

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[12] Michael S. Teitelbaum, review of "The Birth Dearth", reprinted in *Congressional Record, Proceedings and Debates of the 100th Congress, First Session*, Vol. 133, No. 125, July 28, 1987, p. 21398.
[13] D'Vera Cohn, "Race and the Census: the 'Negro' Controversy," Pew Research, Social and Economic Trends, January 21, 2010, http://www.pewsocialtrends.org/2010/01/21/race-and-the-census-the-%E2%80%9Cnegro%E2%80%9D-controversy/ ; For one tabulation of US Census race categories for the full history of the Census from 1790 through 2010, see "US Census Race Categories, 1790-2010," http://www.mixedracestudies.org/wordpress/?page_id=4590

nationalities also were to be considered "White." Asian Indians were to be classified as "Other," and "Hindu" was to be written in.

By the time of the 2010 US Census, the "race" categories had again changed greatly. By then there were some 15+ "races" categorized in the Census, along with the opportunity to indicate more than one race and to write in additional "races". In addition there was a separate question on respondents' "Hispanic, Latino or Spanish origin" that preceded the "race" question; those responding positively could be of any race. (See Census 2010 questions #6 and #5).

<Insert Census questions #6 and #5>

6. What is this person's race? *Mark* [X] *one or more boxes.*

- [ ] White
- [ ] Black, African Am., or Negro
- [ ] American Indian or Alaska Native — *Print name of enrolled or principal tribe.* ⟍

- [ ] Asian Indian
- [ ] Chinese
- [ ] Filipino
- [ ] Other Asian — *Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.* ⟍

- [ ] Japanese
- [ ] Korean
- [ ] Vietnamese

- [ ] Native Hawaiian
- [ ] Guamanian or Chamorro
- [ ] Samoan
- [ ] Other Pacific Islander — *Print race, for example, Fijian, Tongan, and so on.* ⟍

- [ ] Some other race — *Print race.* ⟍

5. Is this person of Hispanic, Latino, or Spanish origin?

- [ ] **No,** not of Hispanic, Latino, or Spanish origin
- [ ] Yes, Mexican, Mexican Am., Chicano
- [ ] Yes, Puerto Rican
- [ ] Yes, Cuban
- [ ] Yes, another Hispanic, Latino, or Spanish origin — *Print origin, for example, Argentinean, Colombian, Dominican, Nicaraguan, Salvadoran, Spaniard, and so on.* ⟍

With respect to ethnicity, a century ago much of the controversy about US immigration was focused upon subsets of immigrants from Europe, with special attention paid to perceived differences between those from north and west European countries (e.g., UK, Ireland, Germany, Scandinavia) and those from east and central regions of Europe (Italy, Greece, Poland, etc.) Since then these distinctions among Europeans have substantially atrophied, with all of these categories now folded under the rubric of "European" or "white." Given such major changes in categories of "race" and "ethnicity", projections that hold constant current categories over many decades present their own challenges of interpretation.

Workforce projections:

If projecting population over the long term is difficult, projecting labor market supply and demand is even more so. To project labor market supply, one needs to make not only Olympian assumptions about long-range demographic changes, but also about labor market conditions and labor force participation rates, which are affected by hard-to-anticipate developments such as overall economic growth, changes in technology, government transfer programs and expenditures, and so on. Similarly, to project demand one needs to make key assumptions about economic trends, international trade, retirements from the current workforce, etc. – all of which carry with them their own deep uncertainties, especially when they extend very far into the unknowable future.

The US Bureau of Labor Statistics produces an Occupational Outlook Handbook that is based upon occupational projections over a 10-year period. The most recent such Handbook, dated 2012-13, includes projections for the period 2010-2020.[14] These are intended primarily to inform readers as to the occupations that at a given point in time the BLS believes are likely to experience the most and least robust growth or decline.

Note that these projections are for a 10-year period or less, not for 40-50 years. Even so the BLS is careful to revise its occupational projections every two years, in recognition of the volatility of such projections. The BLS has also conducted interesting retrospective analyses of the extent to which its past occupational projections turned out to provide useful forecasts.[15] In general these evaluations found that its projections provided useful forward looks over the medium term of a decade for the broad US labor force and for major occupational groups. However this decent performance appears to be due to compensating errors for more detailed occupations and industries. The utility as forecasts of BLS's projections for smaller and more detailed occupations has been quite limited and has not changed over time.

Projecting the immigration results of proposed legislation:

Of the three primary demographic drivers – fertility, mortality, and migration – the last is the most responsive to changes in law. Control over the entry of non-nationals is conventionally considered a core attribute of state sovereignty under the global system of states. There appears to be no case of a state unilaterally declaring that it will not exercise its sovereign control over

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[14]Bureau of Labor Statistics, *Occupational Outlook Handbook 2012-13* (Washington: US Department of Labor, 2012), http://www.bls.gov/ooh/

[15] See for example Neal H. Rosenthal, "The Quality of BLS Projections: A Historical Account," Monthly Labor Review, 122, 5, May 1999, pp. 27-35.

entry by non-nationals, although some states have acceded to multilateral agreements such as the EU Schengen Agreement that limit such sovereign control over movement of nationals among signatory states.

More generally, laws and the effectiveness of their enforcement have powerful effects upon the scale and pattern of international migration. One might reasonably expect, then, that any proposed changes in immigration law would be accompanied by credible estimates and projections of the effects of such changes upon future immigration flows. Indeed such projections might be one important activity to be undertaken by the possible migration commissions being discussed.

With this in mind, it is striking to note that the sponsors of the last major proposed "Comprehensive Immigration Reform" bill, Senate bill S.2611 that failed in 2007, chose to provide no estimates or projections of the numerical effects of the bill, either in overall terms or with respect to any particular provisions. In the absence of such estimates by the bill's sponsors, projections of its numerical effects were produced by a number of other groups, but these projections were remarkably divergent.

Those undertaken by the staff of a an opponent of the draft legislation, Senator Jeff Sessions, suggested the bill as written would result in an increase in US immigration of between 78 to 217 million over a 20-year period. An unrelated projection by Robert Rector of the conservative Washington think-tank Heritage Foundation suggested that immigration numbers under the proposed bill would be 103 million over the same period, representing increases of about 80 million over then-current law. The appearance of these surprisingly large numbers led the Senate to adopt amendments that reduced the number of guestworker visas and automatic escalators that were essential parts of the original bill, and these changes in turn led Senator Sessions' staff to reduce their estimates to between 73 and 92 million increase over 20 years, and the Heritage Foundation to reduce its projected increase to about 47 million. [16]

Meanwhile an analysis of the same bill by the National Foundation for American Policy (NFAP), a small think-tank founded and directed by a former staff member of the libertarian Cato Institute who was a vocal supporter of the proposed legislation, argued that S.2611 actually would produce far smaller increases in immigration -- 28.5 million new visas. This large difference apparently was due to its key but less-than-explicit assumption that only a fraction of the additional visas made available by the bill would actually be utilized.

The Congressional Budget Office estimates were lower, but driven by a very different but also important assumption that

> the US bureaucracy will remain inefficient and under funded; therefore, the number of visas that will actually be processed and issued will be low compared to what S.2611 permits. [17]

It is worth noting that these wildly varying projections about the impacts of an actual piece of legislation are based on projections for only 20 years from 2007. Had those developing the

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[16] B. Lindsay Lowell and Micah Bump, "Projecting Immigrant Visas: Report on an Experts Meeting," (Washington: Institute for the Study of International Migration, Georgetown University, October 2006), p. 2. Available online at: http://www.docstoc.com/docs/2916938/PROJECTING-IMMIGRANT-VISAS-REPORT-ON-AN-EXPERTS-MEETING-October-by

[17] Lowell and Bump, "Projecting Immigrant Visas…", p. 12.

different projections carried them forward to 40-50 years into the future, the disparities would presumably have been even wider. The enormous range of these alternative prognostications illustrates how susceptible long-range projections can be to sometimes less-than-transparent but critical assumptions.

Demographic projections: essential yet uncertain

The above discussion is not intended as a counsel of despair. Indeed, any effort to assess proposed changes in immigration policy cannot sensibly be considered without thoughtful efforts to project their longer-term impacts. In part this is because the current structure of US immigration policy includes long delays such as those involved in naturalization, which can open new avenues for additional immigration via visa petitions for immediate and extended family members, with some of these categories carrying with them their own lengthy delays. A failure by legislative sponsors to include objective projections of the legal provisions they propose, as occurred during the 2006-07 efforts, verges on the irresponsible.

At the same time, it would be most unwise to take seriously any single projection of demographic impacts, given the wide uncertainties that prevail. To this intrinsic uncertainty must be added the reality that proponents and opponents of such provisions have proven themselves willing to deploy dubious assumptions in long-range projections that serve their political goals.

In the end long-range demographic projections represent important methodologies available for use by any future immigration commission that might be convened. Paraphrasing Dickens, demographic projections are both essential and uncertain; potentially informative and potentially misleading; provide the most explicit of assumptions and the most hidden; offer the best available windows into the future and the most clouded... In short they are necessary contributors to any serious review of alternative immigration policies. Yet it would be important that members of such a commission be knowledgeable not only about the valuable insights projections can provide, but also about their demonstrable limitations and their potential for misunderstanding and abuse.