Stationary Population as Theoretical Concept and as Policy Vision [1]

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Stationary population as a desirable demographic configuration, or as an inevitability in due course, has lost the appeal it enjoyed among earlier generations of economists and population scientists − from John Stuart Mill on to more recent proponents of Zero Population Growth, spanning over the inter-war years during which the doctrine of economic maturity was much debated. The 1970s and 1980s saw a flurry of model building whereby demographic variables and time paths to achieve stationary population were put forth, but these were primarily heuristic in scope rather than policy advocacy.

Yet, it seems to this writer that demographic, social and technological developments underway for some time now world-wide (but more so in economically advanced countries) call for a fresh look at the idea of the stationary state. World demographics have been turned upside down in many respects. High fertility, except for the better part of tropical Africa, is no longer the burning issue it was. Economically advanced societies have reached a stage that can be termed *demographic maturity:* a phase wherein longevity of life inches towards biological limits and fertility settles in at sub-replacement levels, ostensibly becoming permanent fixtures of demographic reality. Immigration too is under critical scrutiny for its short and long term consequences. Integration of ever-growing immigrant minorities of diverse cultural backgrounds into mainstream society has proven to be a formidable challenge, fraught with many setbacks. Viewed rightly or wrongly as the response to many problems and challenges of today's Western nations − from the shortage of manpower, the aging and potentially imploding population to the ideal of the cosmopolitan society in a global world − immigration has become a highly divisive public issue. As well, there is potential for tension between nations on either end of the migration stream – origin and destination. The former might see themselves as being robbed of qualified manpower, thus hampering their economic development; the latter might have doubts about the loyalty of migrant Diasporas.

While the above change in mindset and demographic configurations unfold, developments are taking place that potentially may make stationary population not only desirable but also feasible. I have in mind, in particular, spectacular advances in labour-saving automation; advances in wireless communication making possible the almost instantaneous transfer of knowledge and skill-sets without actual physical transfer; last but not least are significant productive potentials of a growing elderly population that enjoys good health. All this may combine to make highly industrialised countries less dependent on foreign workers, and in the final analysis render population growth as a national policy goal obsolete. Perhaps, too, the time is ripe to give serious thought to the question of how to balance purely economic imperatives with a desirability for social harmony, in a spirit reminiscent of John Stuart Mill, though with accents more in tune with the contemporary world. As Mill wrote, *"It must always have been seen, more or*

[1] **Paper presented at the 26th General Population Conference – Marrakech 2009**

less distinctly, by political economists, that the increase of wealth is not boundless: that at the end of what they term the progressive state lays the stationary state..." (1965: 746).

Stationary population may be part of the solution to such challenges and opportunities that confront the world, and more to the point economically advanced societies.

This paper will address two sets of issues. First it will articulate more completely the rationale for a stationary population; and second discuss the means of achieving it.

The rationale for a stationary population

Taking a contemporary view of the world, there are in my assessment three compelling reasons for embracing a policy of stationarity. First, *environmental* concerns. Though of worldwide significance, environmental stresses are at present of greater acuteness in highly industrialized countries where per capita propensity for pollution is highest on account of both the population size and the levels of technology generating toxic waste. Second, *demographic* concerns – i.e. low fertility and high immigration. The third concern is *national identity.* To avert the population implosion and respond to the demand for labour due to an ever expanding economy, Western nations have adopted polices that allow for ever-increasing immigration.

I shall discuss each of these concerns in what follows.

Concerns for the ecosystem

Nowadays, ecological concerns are in the forefront of public debates, nationally and internationally. Yet the issue is by no means a new one. Since John Stuart Mill argued the limits to growth justified his call for a stationary state, the theme has been resurrected under different guises. We shall briefly summarize the underlying arguments to put the current debate in historical perspective.

The theory of *economic maturity*, the topic hotly debated by economists in the interwar years, is one of them. Whereas a stationary state, in Mill's conceptualisation, was regarded as the more happy terminal stage in social evolution, the advent of economic and demographic stagnation in the interwar years caused a great deal of discomfort among the intellectual and political elite of the time. "Laissez-faire capitalism has reached its end," professed those of the more radical persuasion. "Can capitalism survive?" was the question on the minds of the more skeptical thinkers. The economists' dominant view was that economic development has reached the end as the sources of secular economic growth had dried out. There were no new lands to colonize, they argued: the era of great technological discovery had come to a close, and, as a result, opportunities for new investment were fewer. True enough, the population − the powerful engine of economic growth (capital formation) in the 19th century − was in recession (Hansen, 1939; Keynes, 1937; Hurd, 1939; Thomson, 1931). This doctrinal posturing was accompanied by a flurry of logistic modeling of a growth process in a finite space.

Then, after World War II, the new concept, that of *Zero Population Growth,* came into the limelight of intellectual debates among demographers and social scientists. The 1950s and 1960s, in particular, have seen a plethora of theories and models, and also a surge of vocal advocacy groups preaching the vision of the ZPG. (Bourgeois-Pichat, and

Ahmed, 1998; Coale, 1972: Cohen, 2008; Frejka, 1973; Notestein, 1970; Sauvy, 1976). In response to Roma Club appeals to curb growth, Meadows (1974) and his associates from MIT developed models purporting to show that the continuation of growth in certain key sectors of the economy combined with the consumption of non-renewable resources and a growing population may cause the collapse of ecosystem. They even anticipated when it was likely to happen – the year 2000!

The most recent instance of concern for the ecosystem comes from Homer-Dixon (2007) in terms the five tectonic stresses: *i*- population stress arising from differences in the population growth rate between rich and poor nations; *ii*- energy stress; *iii*- environmental stress; *iv*- climatic stress; and finally *v*- economic stress arising from instability in the global economy and ever-widening income gaps between rich and poor people. All these stresses have a population component, to a greater or lesser degree, depending on the type of stress. Homer-Dixon's book, *The Upside of Down* (2006), remarkable for its fortitude, wisdom and historical insight, is not overly pessimistic. The author emphasises human ingenuity as a way out the environmental conundrum.

I have purposely taken this historical detour, maybe longer than I should have, only to demonstrate that I am not uncritically taken by the ecological concerns and that we should take these concerns with due composure. The elasticity of the *limits to growth* and the resilience of the ecosystem to stresses have proven to be much greater than it is generally assumed. Some may bet as a way out, at least in the long haul (as remote as this may be), on a windfall from space exploration and in general on human ingenuity of finding remedies the environmental problems. The current fears may be unfounded or at least as overblown as were the fears of the economic stagnation in the 1930s. Besides, the difference between science and fiction are easily overlooked.

Yet, we do not need to espouse apocalyptic visions about the collapse of the ecosystem, nor do we need to discount potential effective remedies to ecological stresses, to acknowledge that concerns for the health of the planet are legitimate. The deleterious side-effects of technology and the overexploitation of natural riches, the depletion and in some cases outright extinction of certain species, greenhouse gas emissions and the long-term consequences of potential global warming etc. are cases in point. Industrial pollution in developed countries is compounded worldwide as these countries, particularly such giants as China and India, not to be outdone, speed up their economic expansion and ignore or put off the application of costly antipollution measures.

With all the foresight and warning of the potential collapse of the ecosystem and world order, it would be naive to think that people will be less selfish or voracious in their consumption habits? Nor would the world be less belligerent. Yet, if at least one key factor in the environmental equation – namely, population − can be brought under control, it would be in itself a giant step forward.

Demographic concerns: fertility versus immigration

On the demographic front, the situation in recent decades has turned upside down: concerns for *ever-growing* populations are replaced with concerns for *ever-diminishing* populations. In many European countries the fertility rate is closer to *one* than to *two*- births per woman, and this does not appear to be a transient phenomenon. On the contrary, the sub-replacement fertility state has become a permanent fixture of the

demographic reality in developed countries, and possibly irreversible, if the dynamic underway is left unchecked. Here are the facts:

1. The incidence of sub-replacement fertility levels has been observed for about 50 years; many cohorts have by this time closed their childbearing cycle so there is no longer a question of potential *postponement* effect.
2. There is evidence that for many women *actual* fertility is below the *ideal* and in many cases below the *desired* family size − a clear indication that many cannot realise their maternity (and paternity) aspirations for a variety of reasons that are already well documented, among which, however, I would like to stress women's quest for *financial independence*.
3. Yet, there is also evidence that not only *actual* but also *desired* fertility is on the decline in some Western societies (Lutz, 2007) − again for a variety of reasons, among which I would like to emphasize those that could be subsumed under the term, *social devaluation* of motherhood (parenthood) in Western societies. And it is this trend that, if confirmed, is the most worrisome.

Faced with this situation, the question may be asked what is the public opinion or political elite's reaction ? It varies. But the prevailing view is that childbearing is a private business − fair enough at the individual level, but wide off the mark and hardly justifiable at the collective level when national survival is at stake. Others believe that nothing can be done by the society (government) to change individuals' attitude and behaviour. And after all, they argue, why should one be overly concerned with citizens' fertility? There are plenty of people in the world to fill the demographic gaps, so the logic goes. Indeed, some bank on immigration to make up for the birth deficit. They argue that a generous immigration policy is preferable to a pro-natalist policy, on economic and humanitarian grounds (Heer, 1972). Yet, a policy relying heavily on immigration to make up for a birth deficit rests on questionable economic arguments. Beaujot and Kerr quote the Economic Council of Canada's argument that "higher levels of immigration have consequences for the total size of the population and thus for the economy, but the per capita effects are negligible, though slightly positive" (p. 115). Denton and Spencer (2003) came to similar conclusion: increased immigration would have only a negligible effect on the growth of GDP per capita. Coleman and Trowthorn go further. In a recent study of immigration to the United Kingdom (2004) they conclude "that the economic consequences of large-scale immigration are mostly trivial, negative, or transient" (p. 579). The economic benefits, if any, have to be weighed against social and ecological costs.

Migration is in itself a problem. It is no longer an orderly movement of people across national boarders, in a manageable quantity, as it used to be. Illegal, clandestine migration gives migration a bad name. Large-scale illicit human trafficking, with all its abhorrent attendants, is a well recognised problem. The question of migration is rarely analysed in a way that is well balanced and unbiased. While the positives, mostly economic, are emphasised to the point of making out of it "a virtue of globalisation", the negatives are often overlooked. While remittances to families in home-countries is seen as a positive (and it is so in the short run), the long-term effect of the brain drain on countries of origin is no doubt utterly negative. The transfer of manpower from poor to

rich countries is by no means a *win-win* situation, particularly when the transfer involves well-qualified workers. For example, according to various United Nations statistics, 75% of medical doctors from Mozambique, 56% from Ghana and 51% from Kenya are working abroad. The brain drain from developing countries to rich countries is real, and is particularly painful for Africa and Eastern Europe. Nor are the purely human concerns, such as family disruption, given due attention. The hundreds of thousands of women from Eastern Europe, many with medical degrees, working in Western countries in domestic and similar trades, who left their children with husbands prone to alcohol, are pathetic to those who care to look beyond statistics into the real life situation of individual families. Nonetheless under mounting public pressure and evidence of intractable social problems, the reappraisal of immigration is underway in many countries. Governments are trying to tighten immigration rules and adapt less lenient approaches to economic asylum seekers. It remains to be seen how far this reappraisal will go and how effective it will be.

Studies aiming at assessing the impact of certain assumed levels of migration on the size, age structure and ethnic composition, have been many. (Coleman. 2006; Espenshade, Bouvier, and Arthur, 1982; Mitra and Cerone, 1986**;** Lachapelle, 1990 ; George, and Romaniuc. 2003; Ryder, 1997; Sauvy, 1976 ; United Nations, Population Division, 2000;). A United Nations study, *Replacement Migration*, purports, as the name suggests, to estimate the level of net migration required to forestall population implosion in highly industrialised countries like Europe, North America, Japan and Korea. For example, in Europe's case, it is estimated that in order to maintain a constant population at the current level over the period 2000-2050, a total number of migrants needed to fill in the gap would amount to 95,869,000 over that period. As for insuring a stable age structure at the current (2000) level, and implied therein a constant ratio of working age (15-64) to elderly population 65 and over, an astronomical number of migrants would be called for: 1,356,938,000 (!). This is to say that the numbers of migrants, while contributing to the size of population in a predictable manner, have practically no impact on age. Frank Trovato (2008:428) referring to the UN *Migration Replacement* studies and some others, has concluded that "immigration can only prevent population aging at unprecedented, unsustainable, and increasing levels that would generate rapid population growth and eventually displace the original population from its majority position. It seems doubtful, therefore that increased immigration in Japan and the rich countries of western Europe can be viewed as viable remedy to demographic aging".

Another matter is the impact of the migration on countries' ethnic make-up. David Coleman (2006) has done some prospective estimates for various European countries of the expected changes in the ethnic mix. For example, in Germany the proportion of foreign-born population will jump from 9.90 in 2000 to 23.56 % in 2050. For those of non-Western origin, the percentage will jump from 6.57 to 18.16 respectively. In England and Wales the non-Western component stands at 8.7 and 24.5 respectively. To steer clear of the prospect of such radical transformation of Western societies, David Coleman advocates the moderation of the present immigration policy. I would go further. While moderating the influx of migrants, Western countries have to boost current fertility rates, bringing it closer to generational replacement level.

I have done as well some simulations for Canada to determine the number of immigrants required to achieve certain targets of annual population growth and certain

targets of population size, over the period 1980 to 2050. Of particular interest in Canadian context is the assumption that calls for *one percent per annum population growth,* a figure that is often being referred to in government circles as unstated policy goal. Now, in order to achieve this *one percent per annum* growth, assuming the current total fertility of 1.5 births per woman to prevail over the projected period, the required number of immigrants stands to rise progressively from 300,000 in 2000 to about 700,000 in 2050. These are huge numbers for a country of about 33 million inhabitants (2006 Census). Even under a no growth scenario, to keep the population at its current level, a still substantial number of immigrants of about 250,000 annually would be required.

The impact of immigration on the ethnic make-up of Canada is already indisputably clear. Within just one generation (since about 1980), this country's founding nations − British, French and Aboriginal inhabitants − have gone from being dominant to rapidly loosing that position, and stand to become a dwindling minority in the foreseeable future, should the current sub-replacement fertility and high immigration persist. The so-called "visible minorities" of about of 4.7% in 1981 went up to 13.4 % in 2001 and it is projected to reach 20 % by 2016 (Day and George, 1996). In the two largest cities of Canada, Toronto and Vancouver, they represented in 2001, 36.8 and 36.9 % respectively.

National identity concerns

It is patently clear that large-scale immigration to a country whose native population no longer reproduces itself, is bound to radically change its cultural and ethnic make-up with potential negative consequences for its social cohesion and national identity, and all this in a historically short time frame. Yet this is not readily recognised and admitted as a problem, for several reasons. First of all it is in keeping with the professed ideal of the transnational state, as articulated by proponents of the critical theory and postmodernism, such as Derrida (2002) in France and Habermas (2000) in Germany. Second, the adherence to the principles of equality − the Charter of Human Rights, and more generally to the Western liberal tradition (Fukuyama, 2007) − makes it difficult to discriminate migration by colour, religion or nationality. Third, there are economic forces at work globally: the insatiable want for workers in an ever-expanding economy, the tremendous gap between the *have and have not* countries, this combined with communication facilities for ideas and peoples. Fourth, political parties of Western democracies are competing for the support of minorities by playing on their sentiments. Last but not least is the devaluation of national values and the nihilistic mind-set in the Western world towards its national history.

Minorities in Western countries are not only rapidly growing in numbers but they tend to form ghettos. Is the latter a transient configuration of the first immigrant generation, or a phenomenon here to stay ? The latter is more likely, given the strong cultural attachments of certain immigrant groups. Multiculturalism, after some initial resistance, took hold in Canada as an ideological and political credo. Canada's multiculturalism has its own interesting history. Noteworthy is that it was not one of the founding nations – English or French – but the Senator Paul Yuzyk of Ukrainian origin, who is credited with being the father of multiculturalism in Canada (see *A Better Canada,* 1964) Today multiculturalism has become the official policy in most liberal democracies. But as is often the case with noble intentions, multiculturalism has today

litte to do with culture and a lot to do with nation building. Under the guise of multiculturalism *new* "instant, artificial societies" are erected purely on the basis of citizenship, thus superseding the notion of historical nations that took centuries to evolve into a nationally conscious community of peoples. As it was with historically multinational countries, so it is today with multiethnic countries − they are difficult to manage, to say the least (Paquet, 2008). As well, time and again, politically-motivated legislations are being resorted to in order to cope with ethnic and race relations.

Debates on the subject are by no means trouble-free. They are clouded by misconceptions. We tend to confuse *individual* and *collective* attitudes and behaviours towards *alterité.* Whereas a thoughtful person would transcend colour and credo to see in the depth of a human being just that, human being, and act accordingly, at the collective level the dynamics at work are very different, and we as individuals have practically no control over it. Likewise we tend to ignore the power of nature, you close one loop, and nature breaks out through another. The attachment of migrant minorities to national, ethnic, religious or cultural values remain strong for generations, particularly if such populations come from a culture that is alien to that of the host country. These minorities tend to cultivate their uniqueness and eventually become assertive as they reach a critical mass. No amount of talk about *inclusion-exclusion* will help to overcome the problems of integration in situations where millions of people of a unique cultural background and political aspirations are transferred within one generation onto foreign soil. Also we tend to confuse a Eurocentric vision with a World vision, forgetting that Western World is no longer the epicentre of humanity. It is being progressively dwarfed in the face of this *otherworld,* which is growing in size and vitality, with no inclination for Western experimentations in nation building − albeit some of them are confronted with a complex multiethnic make-up inherited from their colonial past or earlier conquests. Twentieth Century Europe has a disastrous historical track record with failed attempts to create *instantaneously man-made* new types of societies. For all the differences in rhetoric and motivations they, along with the ongoing nation building experimentation in the Western world, have one thing in common: the construction of *instant, artificial* societies, divorced from history and in ignorance of human nature.

For demographers trained to stay aloof of value judgments (hardly possible in policy matters), the ideas expressed in the above paragraph may sound moralising, if not out of place. But they are not. They are putting things in their proper perspective. While singling out national identity as an issue no intent is implied therein of elevating nationhood to the sacrosanct to be forever locked and frozen in time, nor in closing the gates to the transnational movement of people. Nor does this author lack empathy for immigrants and (legitimate) refugees. He is one of them. Not all is wrong with multiculturalism. Respect for another's culture is a virtue in itself. Diasporas, in many cases, can play a positive role in interstate relations, and in mutual enrichment through cross-fertilisation. The drumbeat over the virtues of *diversity* is more about political expedience or political correctness than about a sober analysis or a deeply felt conviction. The matter is not all-or-nothing, but that of proportionality. It all boils down to the question of what the French humanist, writer and philosopher, Albert Camus, encapsulated in two words: *"mesure et démesure"*.

The Feasibility of stationary population and the means of achieving it

It follows from the above discussion that the virtue of stationary population is that it avoids, on the one hand, the prospect of demographic saturation in a finite space with all its ecological and political attendants, and, on the other, the prospect of population implosion, demographic attrition going exponentially. While population growth creates its problems, protracted population decline is not a desirable prospect either for economic and national security reasons. Reduced and better-targeted immigration under the stationary scenario would allow for a more complete integration of immigrants into mainstream society and greater social cohesiveness, and thus alleviate concerns over national identity. Hence, stationary population stands out to be the *optimal* choice.

But, even if the arguments laid out above are sound and that stationary population is a desirable configuration, the question remains: is it doable and by what means? In attempting to tackle this question we enter a highly complex field of investigation. All we can afford at this preliminary exploratory stage is to identify some of the variables. They ought to be regarded as working hypotheses to be explored.

Know-how versus body movement

In the era of great technological advances in communication many of the skills and much of the knowledge that once could only be obtained through the displacement of actual bodies, can now be obtained by means of low-cost wireless transfers (Sowell, 1996). The flipside of transferring *knowledge* is job outsourcing from highly industrialized to developing countries. There is a great deal of debate about job outsourcing, primarily in the USA. Many regard it with trepidation as a cause of job losses and weakening of national economic security. Likewise, concerns have been voiced about the transfer of knowledge in sensitive areas having potential military applications, from USA and Western democracies to Asian countries, China, in particular, the latter being seen as a potential security treat to Western (American) interest. These might indeed be valid concerns. But it also remains true that the transfer of knowledge and the outsourcing of jobs place altogether a lesser premium on the transfer of people, first by lessening the necessity to out-migrate as more jobs can be found domestically and second by improving people's well-being in poorer countries.

Labour-saving automation

Technological developments in labour-saving automation, while lowering production costs, also increase productivity. My focus in discussing this topic is foremost on the most advanced versions of automation − robots as surrogates for human toil. Though still in its infancy, the application of robots is on the rise. Japan, not surprisingly with all its ingenuity, is in the lead. Jobs that require speed, accuracy, reliability or endurance can be performed far better by robots than by humans. In the next two decades robots will be capable of replacing humans in many manufacturing and service jobs, and economic development will be primarily shaped by the advancement of robotics, according to Marshall Brain (2004), a notable student in the field. Machines are being constructed in the USA that could perform the tedious, labor-intensive task of fruit

picking that currently employs thousands of migrant workers (many illegal) from Mexico. In the health sector, robots could replace nurses by performing jobs like dispensing drugs, taking temperatures and cleaning wards. Even with domestic tasks, most notably in geriatric care, robots may find an application − an important point in regards to the growing elderly population − thus lessening the reliance on helpers currently coming from developing and eastern European countries. To put it bluntly, the world is moving decisively into the era of pervasive robotics technology.

Marshall Brain predicts that by 2030 robots will take over approximately 50% of the jobs in the U.S. economy. Jeremy Rifkin (1995) goes as far as predicting the *end of the work* era, the advent of a nearly workless society. Now, these are predictions, not facts. Let's recall that similar apprehensions were voiced, and quite violently, when machines were first introduced in the textile industry; it was then feared that human labour could become redundant. It didn't happen. On the contrary the labour force expanded as the economy grew, and the population with it, beyond anything anyone could have imagined. It is more likely that automation, rather than contracting, will expand the economy by introducing new modes of production and by opening new investment opportunities world-wide.

If there is anything to be concerned with, it is not so much in the way of economics, but in the way of sociology. Humanity may stand at the threshold of an era of radically new technological discoveries that even the historian of the future, H.G. Wells, or the ingenious science-fiction writer Jules Verne, could not have anticipated. Some of these innovations could have potential social and psychological ramifications, antithetical to human freedom, much like Aldous Huxley imagined in his *Brave New World*. But that is another matter, not of our concern here.

Seen from the vantage point of a stationary population, a policy in pursuit of greater automation commends itself to our attention for three reasons. First, while replacing or displacing workers, it creates new job opportunities, but of different kinds. Robotics require more highly-skilled work-force and fewer unskilled workers. On balance the trade-off between unskilled and skilled, between quantity and quality, may result in a lower demand for foreign workers. Presently the bulk of immigrants are comprised of low paid unskilled workers. Second, and more to the point in the context of this study, automation gives the government some leverage in lessening the dependency on foreign workers. It can impose limits on immigration, if it is deemed that the "social costs" outweigh the "economic benefits", and seek more resolutely to replace human work by automated appliances. Finally, the third reason: the spread of automation, further down the road, may lessen the pressure for a bigger population, the residual nation's "populationist instinct", and thus make stationary population a well-sought goal.

Elderly people: an untapped human resource

The aging population is the nearly only one proper demographic issue that preoccupies the body politic nowadays. Yet there is not full realization that what is called "aging" is the combination of two totally independent factors: one has to do with the deficit of births; the other with gains in human longevity, or what may be called "bottom up" and "top down" aging. While the first may evoke concerns (depending on the point of view), the latter should be unabashedly celebrated, as the

triumph of human progress (McDaniel, 1986). In what follows we shall deal with the latter component of aging.

For economically advanced societies, the growing well-educated elderly segment of the population stands to be an asset rather than a liability (McDaniel, 1986; Loriaux, 1995). Elderly people become not only proportionally more numerous, but also more healthy. The facts are well known. The average age of longevity has soared to about 74 for males and 81 for females in Western Europe. One lives not only longer but qualitatively better. The duration of invalidity, incapacitation and suffering at the terminal stage of life have been significantly reduced. According to a survey in Canada in 1996/7, more than three-quarters of seniors living at home viewed their health as good, very good or excellent, while only 6% reported their health as poor. This is true for all senior age groups; good health was reported by eight out of ten seniors aged 65 to 74, and seven out of ten seniors aged 85 or more (Lindsay, 1999; Health Canada 2007)). The gains in vitality are ascribable not only to spectacular achievements in curative and preventive medicine – and more is expected to come on this front from such technological advances as organ transplantation and genetic engineering – but also due to changes in lifestyle like physical exercise, diet, abstinence from tobacco and alcohol, and better handling of stress.

Thus it may be fair to conclude that the demographic and epidemiological conditions are met for tapping, for productive purposes, into the elderly human reservoir. The obstacles are rather institutional, political and social. First, the elderly are not at all in any dire need of money to make ends meet. The proportion of elderly below the poverty line has been drastically reduced over time. According to a Canadian government report (2002), accounting for the effects of inflation, the average income of seniors rose 22% between 1981 and 1998, compared to only 2% for Canadians aged 16 to 64. In 1996, 93% of all seniors resided in private households. Second, there are qualitative work requirements that the elderly, otherwise healthy, may not meet in today's knowledge-based economy. In view of experts, the aging of the workforce is taking place as Canada is shifting to a knowledge-based economy, where a constant renewal of skills is necessary to keep up with rapid changes in knowledge, technology and information. Third are legislative obstacles. Legislation regarding the age of retirement was enacted many years ago, reflecting the prevailing demographic regime of that time. Even so, nowadays, more people opt for an early retirement, albeit some of them are doing so to take another job while benefiting from their former job pension.

Yet with all that has just been said, the potentials for seniors' employment opportunities are there. Voluntary services are growing in size and impact. Greater flexibility in the workforce is a possibility as well. Jobs performed today by unskilled, sometimes clandestine immigrants for a low wage, could appeal to some elderly nationals, if more attractive salaries are offered, and more so if allied with automation to makes job performance physically easier. Incentives to stay longer on the job, after the age of legal retirement, may be worked out to ensure the Pension Funds' long-term sustainability. The coming of age of baby boomers may make it all the more urgent. Fiscal, social and technological responses to aging are being taken seriously in economically advanced countries. While an upward realignment of age at retirement is seen as the most effective way of fighting the negative economic effects of aging, studies are being carried out to probe into whether they can not be mitigated via greater work

flexibility over the individual's lifespan, by optimizing the trade-offs between the time allocated to work, leisure, education and care giving. To what extent would the choice to work later in life in exchange for more such flexibility over an individual's lifespan result in greater health and well-being? To what extent would more time devoted to life long learning increase productivity…? Or to what extent would more flexibility in time devoted to caring/volunteering over a person's lifespan result in better individual and collectives outcomes…? Such are some of the questions addressed in a study being carried in Canada by the Policy Research Initiative (PRI, 2004). Similar studies are being carried out elsewhere in countries faced with aging problems, including, in particular, OECD countries. There is indeed a growing realization that in the era of *demographic maturity* the vital human capital that results from the good health of elderly people deserves due attention as a research topic and as a public policy issue. From the particular vintage of the present study, the ultimate question is how to convert a sizeable segment of the elderly into an effective, productive workforce, with the expectation that this will in turn entail a lesser reliance on immigration while releasing segments of the female (and male) population to assume their parenting pursuits, without seriously jeopardizing the nation's productive capacity.

Balancing out allocation of resources between production and reproduction

Even in his wildest dream Malthus would not have foreseen the race between *production* and *reproduction* turning out the way it did. Who would have expected fertility to come down as low as it did, and that Ireland, traditionally a country of emigration, would turn into a country of immigration, as would the whole of Western Europe for that matter, and that production would grow exponentially to the point of becoming ever more people- and natural-resource hungry? We are faced with a growing imbalance between these two forces – economic and demographic – in the Western world, and potentially in the more or less distant future elsewhere in the world, though demographic giants China and India can put to rest this concern for quite some time.

Wealth and economic growth are very human and socially cultivated virtues (sometimes predicaments). However, in recent times – with what may be called post-industrialism, postmodernism, the culture of consumerism, the global village, you name it – wealth and growth have received tremendous impetuses from different forces at work. The global expansion of the economy is gaining momentum as barriers to international trade are removed or weakened, and communication facilities are speeding up the exchange of ideas, know-how, goods and people. The underdeveloped regions of the globe are increasingly caught in the growth spiral, as they try to catch up with the most developed countries, helped in this by the transfer of technology and deployment of their abundant cheap domestic labour. So does the demand for new goods as advertising reaches the most remote corners of the globe. Consumerism is in full swing, supported by advertising and the availability of credit making superior goods and ever new-brands on the market more affordable to the masses. To quote Galbraith, "wants are increasingly created by the process by which they are satisfied" (1958: 128). And there is a strong aversion to any antithesis to growth. Any impediment – the smallest setback in the aggregate economic growth, such as the first signs of a recession – send alarm bells across all spectrums of economic activities, nationally and internationally. (Note: this paper has been written well before the current worldwide financial crisis). As Homer-

Dixon puts it, "Our societies and economies – as currently set up – need constant growth to maintain social and economic stability" (2006: 192). While devouring natural resources at unheard speed, the economic growth also devours *human* resources, and it does so unwittingly in a pernicious though subtle way. It does so by radically changing the childbearing calculus.

The inverse correlation between economic growth (that is, wealth) and fertility is statistically well-established at both the macro (national or social groups) and the micro (individual) levels. The motivations and mechanism by which reproduction is lowered as society grows in wealth are still not fully comprehended with all the plethora of statistics and theorising, but it is generally admitted that modernisation's twin engines – *technology* (productivity, mass consumerism and contraceptive efficiency) and *ideational mindset* (secularism, rationalism and individualism) – combine to bring couples to lower their propensity for childbearing. The most potent factors are purely economic. Job opportunities are wide open to women, as they should be, but to keep up with rising living standards earning a salary is a necessity for many women. In a society where marriage is no longer the stable institution it once was, where about half of all marriages end in a divorce before reaching their second or third anniversary, where single motherhood is willingly or unwillingly the lot of so many women, women's financial independence, in the opinion of this author, is a major consideration in decision making regarding their life course. Opportunity cost and parenting/work incompatibility have entered the childbearing calculus in a decisive way, as has consideration of women's financial security.

Family support programs in many countries are of a *welfare* kind, a minor addendum to family budget, not really designed for the purpose of the realisation of parental aspirations. "The cash transfer to parents may be too small to make any difference in the budget of households especially in view of large cost of children", according to Anne Gauthier's analysis of welfare benefits in Canada (2008, p.26). At any rate they are patently insufficient to reverse the trends in a sustainable way, as this has been again and again documented (Gauthier and Philipov; Botev; Lutz, 2008). At best their effects are transient. The pro-family incentives offered are just far too weak to modify the prevailing childbearing calculus.

Is there anything that can be done to bring about a change in procreative behaviours? What is needed, it seems to me, is rather a radical shift from *welfare* type of maternity assistance paradigm to a paradigm that places the issue of family/fertility squarely into the economics of resource allocation between *production* and *reproduction*. More specifically, what is needed, I would dare to say, is a more balanced apportionment of national resources between *production of goods and services* and *reproduction*, that is, *conceiving, bearing and raising children*. But how this can be done is an open question.

Just by raising this question alone prompted me to think about Gary Becker's theory integrating family and childbearing into economics whereby these, as other human behaviours, are reducible to rational choice, utility maximization and forward looking assessment of individual decisions (1991). I was asking myself whether his theory can be in any way inspirational to my work, or on the contrary let me believe that an increase in fertility, I am advocating, will defeat the very purpose of human capital building, the central theme of many of his writings. One of his thesis, particularly relevant in this context, is that "societies with limited human capital chose large

families…; those with abundant capital do the opposite. This leads to stable steady states. One has large families and little capital; the other has small families and perhaps growing human an physical capital" (1990). Conceivably by paraphrasing this statement in reverse logic of the argument, one could say as well that the less children, the more human capital and the more children, the less human capital. Obviously we need not stretch the logic to extremes that would end in absurdity. Under the stationary scenario, we speak of a minimalist childbearing norm. (Though familiar with the main arguments of Becker's theory, I didn't pursue the matter to the point of finding some helpful linkages, if any, between what I am proposing here and his theory. Any way at this stage of my exploratory work that is a little bit premature to do. Besides, and this is an important point, my approach to family and childbearing does not leave everything to individuals alone; the society, through its governing branches, has also a role to play at macro-level that in turn can influence individual choices).

Before even discussing policies, as a very first step, one would need to set up a matrix of the variables along two axes − *production* and *reproduction* − and bring them within a framework that can be operationalised to demonstrate the resulting trade-offs under different scenarios. This alone is a mammoth task, not for a single individual, but for a team of experts from different fields of competence. Identification and conceptualisation of the various equation variables is a difficult task in itself. When does a *reproduction* variable become a *production* variable and vice-versa? Simulations by means of suitable econometric models would be required to assess the impact of trade-offs to come up with some optimisation.

Once the purely technical problems of the kind mentioned above have been solved, can the allocation between *production* and *reproductio*n be properly addressed in policy terms. What I am trying to drive home at this juncture is the realisation that to induce higher fertility, even at the generational replacement level or near to it, not only is a much greater effort, particularly financial, called for, but also the need to put into question some of the very tenants of the liberal economy. Motherhood, in the words of great thinkers like British historian Arnold Toynbee and Japanese Buddhist philosopher Ikeda Daesaku (1981), is the "most noble and highest of all professions, and that it should be accordingly rewarded and its standing in the society restored" (quoted from a French text). These kinds of statements may not sit well with Western individualistic philosophy. I have advocated a salary-equivalent, or something of that kind, for women who choose to pursue motherhood (Romaniuc, 1998). Politically, the project might be a formidable challenge. Yet as challenging as it is technically and politically, the task of balancing out production imperatives and reproduction goals to ensure the renewal of the generations as a long-term policy deserves an honest attempt. Let's repeat, under stationary conditions the demand for children is much less than under the population growth scenario.

Let's now assume that a much greater transfer of resource from *production* to *reproduction* can be effectuated with reasonable success and that fertility as a result will rise to the generational replacement level or close to it. Then the question is this: what shape is the birth parity distribution likely to take? Two likely scenarios come to mind.

First scenario: *a uniform increase in women's fertility*. Under this scenario we may not need to push financial incentives for maternity to the point of competing with employment wages to achieve the desired goal. The Scandinavian experience suggests

that childbearing programs can work when they reach a certain impact level. Fertility in these countries, though fluctuating and still remaining below the replacement level, is nevertheless consistently higher than in other European countries (Andersson, 2008; Rønsen and Skrede, 2008). To achieve a *sustainable* fertility rate at about replacement level, a more robust support is needed. Nevertheless Scandinavian experience shows the direction to go. Many surveys have demonstrated that under present conditions the *actual* family size falls short of the *desired* family size by about 0.5 fraction. One can hypothesise that the portion of 0.5 birth might be highly sensitive, or to use economic terms, might have a high elasticity propensity to incremental changes in maternity benefits. Obviously that has to be tested. But one can make a reasonable claim that the accrued maternity benefits, combined with advancements in reproductive technology designed to deal with involuntary infertility, could make up for the current fertility deficit of 0.5 birth.

Second scenario: *the have and the have-not children.* This scenario assumes that some couples may have large families by modern standards, three or four, others one or none. The former take advantage of financial compensations, accrued from the parenthood pursuit, combining extra parental, personal and social pursuits; the latter stick to their guns in the pursuit of a professional career irrespective of how large maternity financial incentives are.

So much for *reproduction*. As for *production*, all I can say, to make it short, there is nothing immutable or sacrosanct in the liberal economy that cannot be challenged to make room for social concerns, including the renewal of generations, without falling into the trap of a centrally planned command economy. How far growth can go, may be a fit philosophical question. Is there any end to the growth inferno – I mean the material and not the immaterial civilisation – about which John Stuart Mill was pondering a century and half ago?

"*It is scarcely necessary to remark that a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living, and much more likelihood of its being improved, when minds ceased to be engrossed by the art of getting on…. Only when, in addition to just institutions, the increase of mankind shall be under the deliberate guidance of judicious foresight, can the conquest made from the powers of nature by the intellect and energy of scientific discoverers become the common property of the species, and the means of improving and elevating the universal lot"*.(Mill, 1848:751).

Now, this quote − superbly penned by a great thinker, remarkable for his foresight − in substance and tonality is from another époque but its message still resonates today. Mill's message may sound far too idealistic. Yet, his humanistic vision of the stationary state may be a worthy antidote to a world moved by self-perpetuating, ever-expanding consumption, where profit and growth are paramount. Mill's admonishment to his fellow citizens in regards to their uninhibited appetite for yet more wealth, his call to temper the growth impulse by redirecting the human effort toward less materialistic, more creative goals, did no go unheeded; it is gaining adherence (Herman Daly and John Cobb, 1989). Community-building aspects of human activity is one example thereof. An all-out humanitarian, technical and developmental assistance to poor

countries in order to enable them to overcome poverty with all its unwelcome attendants, would be yet another instance of redirecting human energy and creativity.

Concluding comments

I have indulged in this paper in *prescriptive* demography. It may not sit well with *descriptive* standards prevailing in our demographers' profession. I also tried to overcome the language barrier. I used straightforward lingo, naming things as they are or as I see them, without trying to dodge issues that, as divisive as they may be, are real to me. A case in point of avoiding naming things by their name is the European Commission Report (2006) on the *Demographic Future of Europe.* As some commentators of the Report have pointed out, not without irony, the discussion of fertility evolved under the veiled name of "demographic renewal"; the word "fertility" itself was hardly used (Lutz, 2006; Grant and Hoorens, 2006). This in itself speaks volumes about the ideological correctness in the highest political circles of the European Union. Strange! For, if there is a factor that is the most determing for the survival of a national collective or a civilisation, that factor is fertility. This is clear at the individual level, for childless couples. And this should be clear enough for those who have even the most remote knowledge of how demographic metabolism works at the collective level. This avoidance of clear language in demographic policy discourse is regrettable. It does not advance the dialogue about real issues.

I am offering one vision, one policy option for consideration by colleagues interested in population policy. I have argued that a stationary population as policy option is an optimum resolution of the problems, such as environment, national identity and social cohesion, faced by the world, particularly the Western world, not to mention my home country, Canada. I discussed the means of achieving *stationarity* in the long run, namely: through the use of labour-saving automation; by promoting movement across international boarders of knowledge and out- and in-sourcing of work rather than that of people; through the better use of productive potentials offered by the growing elderly yet healthy segments of the population; and above all using a more balanced resource allocation between *production* and *reproduction* to sustain fertility at the replacement level.

Other people may offer different options, one of a growing population, or − why not? − one of a smaller population, by reducing immigration, the birth rate being already under generational replacement levels. Still others may opt for the *laissez faire* approach, arguing that any population policy is pointless, particularly in the global economy, and that not only should the government keep its hands off childbearing decisions by individuals, but also all barriers to migration should be removed. All options should be on the table for uninhibited debate.

Any discussion about population policy calls for a broader theoretical framework, for some vision of the future and finalities. The finalities may vary. One offered here is a demographic configuration verging on the stationary state in the long run. It is also understood that the vision proposed cannot be legislated. But an approximation thereof can be constructed through public debates geared towards larger identifiable goals, public consensus, specific government actions and legislative initiatives bent on producing incremental effects towards the realisation of stated goals. It is in this way that many policies and institutions came into being in liberal democracies.

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