



Population Policy: A Valid Answer to Climate Change? Old Arguments Aired Again Before COP15

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Abstract

Throughout the 20th century, population-development studies have had serious difficulties staying clear of cultural and political influences on Western intellectual thought. Since the 1950s, a “neo-Malthusian” orientation has supported the argument that a technical fix called family planning could initiate and speed fertility decline under pre-industrial conditions. A Western-financed “population control” movement carried the message to poor countries around the world, ostensibly in support of poverty reduction while primarily motivated by the perceived threat to Western interests of rapid population increase in its ex-colonies.

The “population card” surfaced in the run-up to the 2009 UN Climate Change Conference in Copenhagen. Kicked off by two contrasting contributions on the relation of population dynamics to environmental deterioration published only a few months before the conference, a scientific debate developed that mirrored the earlier neo-Malthusian arguments, where many participants saw family planning among poor communities as a cost-effective method of reducing carbon emission.

This paper traces the roots of the debate, discusses the fallacies of such arguments and concludes that we need a social science of demographic dynamics and development free from any links to the eugenic movement of the early 20th century and its neo-Malthusian successor.

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Further, for demography to make a more useful contribution to environment/development studies, its examination of the dynamics of human numbers needs to be extended to measurements of differential impacts associated with humans and their way of leading their lives.

Introduction

Concern over human influences on our global environment has lately focused on the prospects of a significant rise in global temperatures. The many visible signs reinforce commonly held expectations of drastic climatic changes during the current century. The UN Climate Change Conference in December 2009, a follow-up to the 1992 United Nations Conference on Environment and Development (UNCED) focusing on the new climate agenda, aimed to formulate serious and concrete answers to these prospects.

One non-government actor aiming to stimulate research and exchange on links between demographic dynamics and environment issues is the US-based PERN² network. During the Fall of 2009, as a member of this network, I found my mailbox filling up with numerous interventions in a debate on population change and climate change. There was little new in the debate, and the intensity could only be explained as a reflection of a meeting soon to open – the “COP15” or the UN 2009 Climate Change Conference in Copenhagen.

The debate started with the circulation of a Times article³ drawing on a scientific study by David Satterthwaite of IIED⁴. It was fuelled by a report written by Thomas Wire, a student at LSE, London. Though addressing the same subject matter, poor people in relation to global environment change, their conclusions were widely different. Compare Wire, 2009:

“From the cost-benefit analysis, it has been found that family planning (considered purely as a method of reducing future CO2 emissions) is more cost-effective than most low-carbon technologies. It is recommended that an optimum mix of carbon-reducing methods includes family planning as one of the primary methods.”

- with Satterthwaite, 2009:

“It has long been common for population growth to be blamed for a range of environmental problems, and for the usually far more damaging contributions of high consumption to be downplayed. This misunderstanding is now being applied to climate change.”

² PERN – the Population-Environment Research Network – is a US based internet activity promoting online scientific exchange among researchers from social and natural science disciplines worldwide. See its website <http://www.populationenvironmentresearch.org/>

³ The Times September 29, 2009, “Third World population controls won't save climate, study claims”

⁴ IIED—International Institute for Environment and Development, is a London based independent international research organization. See <http://www.iied.org/>

Reading the interventions that dropped into my email, I realized that this was a type of discourse I had met on and off for most of my working life. As if to confirm this, there suddenly appeared a contribution by none less than Paul Ehrlich, author of numerous books and articles on population and environment relations.

I imagine old Ehrlich today being somewhat puzzled that his “Population Bomb” predictions of the 1960s, followed by the “Population Explosion” argument coauthored with Anne Ehrlich, never materialized in that vast destruction one might expect from such a horrid weapon as a bomb. However, in this email intervention he addressed developments in the wealthier group of nations:

“can't help but add that there's a lot to be said for pushing harder on the already cheery reduction in population size in the ODCs.”⁵

This important comment left Ehrlich on the side of the main PERN debate, which remained focused on whether policies to reduce reproduction among the poor (that is the UDCs or “underdeveloped” countries) would serve also to reduce CO2 emissions.

The poor blamed for their poverty

In the early days, Paul Ehrlich and Georg Borgström⁶ both tried to raise our awareness about the need to slow population increase and—in our part of the world—to change consumption patterns. However, with the support primarily of US-based think-tanks, the main message reaching a broader audience excluded the latter and focused on how to contain the increase in human numbers in the Third world—consisting mainly of European ex-colonies. This modern version of the “yellow peril” was fuelled by two events: Firstly, the formulation of the “demographic transition” framework (originally by Warren Thompson⁷ and based on Europe’s demographic transitions) which found a pattern of fertility declines following upon mortality declines linked to fundamental structural and socio-economic change. Secondly, the realization that in poor countries where mortality decline primarily resulted from preventive health interventions, fertility would

⁵ ODC meaning ‘over developed countries’, in contrast to UDC—the ‘under developed countries’, see John Holdren and Paul Ehrlich, “Introduction,” p.3 in Holdren, John, and Paul Ehrlich, (Eds) 1971.

⁶ Ehrlich confronted the public with for instance *The population bomb*, W.H. Freeman, A.C., San Francisco, 1968. Borgström also published many works, of which a widely translated and read publication was *The hungry planet*, MacMillan, Nueva York, 1967.

⁷ First in an article 1929; “Population” in *American Journal of Sociology* 34(6): 959–975. In 1948 elaborated on in *Plenty of People: The World's Population Pressures, Problems and Policies and How They Concern Us*, Rev. edition. New York: Ronald Press.

remain high and long periods of population increase would seem inevitable. A series of censuses of the Indian population confirmed this prediction on the ground.

The demographic transition model did not explain the inter-relations between mortality and fertility dynamics, or how these depended on other macro-level changes. Nevertheless it was quite clear that fertility decline would follow upon decline in mortality, not the other way around. However, the European experience of urbanization, secularization, transition to compulsory education and wage employment would not easily be repeated by the ex-colonies. Thus, contrary to scientific understanding, policies for “population control”—in practice efforts to reduce fertility levels—were early adopted by the Indian government, and gradually spread to countries in Sub-Saharan Africa. In practice, this policy usually boiled down to one type of intervention—modern family planning. Western governments were generous in supporting both the message of (forthcoming) overpopulation and family planning interventions, which were supplemented by fertility-related studies focusing individual rather than societal parameters⁸ and offering ammunition to use to convince skeptical governments.

More persuasion would come through the highest authority—the United Nations—in its first ever World Population Conference held in Ceaușescu’s Rumania in 1974. Interestingly—and somewhat embarrassing to the architects behind the conference – his dictatorship was at the time violating human rights in its efforts to raise fertility levels in order to increase the population of Rumania.

We may accept on face value the arguments supporting these campaigns—that rapid population increase in poor countries would jeopardize socio-economic development and lead to “over-population” in relation to natural resources. They might carry a certain weight, in some countries and under some conditions. If the rich countries really were serious about them, they would study the lessons of the theory of the demographic transition, review all the impediments to social and economic advancement in the “Third World”, and restructure international relations in favor of sustained economic growth. But this was not the case; the “family planning” packages of contraception, abortion and sterilization were all directed to individual would-be parents, and as such only an attempt to bypass the structural changes needed to enable “organic” demographic transitions.

The “over-population” argument was not so easy to defend. It had never really taken root in European development discourse. Its exact meaning eludes most interpreters—in fact, Joel Cohen’s, 1995, impressively well researched effort to provide an answer led to the only possible conclusion; it depends.

North African social theorist Samir Amin replied in 1971 to the “overpopulation” campaign with a paper linking “Underpopulated Africa” to the

⁸ In addition to various local studies, Western governments instituted so-called world fertility surveys or WFS, later revised and called demographic and health surveys or DHS.

skewed economic development of the ex-colonies. Centre-periphery and underdevelopment theories challenged views that poverty was the fault of the poor and their reproduction. The resistance reached a peak at the 1974 UN conference, which was close to end without a final declaration. Eventually the delegates agreed on a compromise document of principle. In the end there was no time left to revise the equally important operational guidelines sections. They remained as before, stuffed with the family planning message.

Population science suffered no lack of funding, as long as it accepted the role of supporter to policies aiming at fertility reduction. The high-status professional body the *International Union for the Scientific Study of Population* or IUSSP (in consultative status with the UN), at this time saw no problems with that role. Grown to money and fame in the shadow of the early 20th century eugenic movement, whose ideology still colored its constitution as late as the 1970s⁹, IUSSP in those years spent most of its resources on family planning-related research activities.

The US demographer Paul Demeny, 1994, in an article on social science and population policy found good reason to remark that “The [population] industry, in effect, has sought to assign to social science research on population issues the role of handmaiden in family planning programs.” (p. 466)

Key challenge—the demographic transition

Soon after Independence, Indian demographers had realized the problems that would come with distinct mortality declines not followed by declines in fertility. India took on board the message from the US to solve this problem with modern contraceptive technology primarily targeted at women. Results were slow in coming, which in the mid-1970s led the Indira Gandhi government to opt for forced sterilization of millions of men, usually from poorer communities. The protests to the use of such force were strong, and the strategy of forced sterilization was one of the reasons why she lost the elections in 1977.

China’s population had suffered heavily from dismal industrialization policies in the 1950s—between 20 and 30 million excess deaths over a few years—and the Mao government officially stuck to a pro-natalist position right through the mid-1970s. Meanwhile, analyzing population projections based on the demographic transition model, Chinese demographers saw good ground for measures to enforce fertility decline in order to prevent the population from eventually increasing to more than 2 billion.

India as well as China envisioned the problems of long-term exponential growth in human numbers in relation to natural resources such as water and land. Rapidly growing numbers in every new cohort would also be difficult to manage in

⁹ Findings from a Swedish government commissioned evaluation of IUSSP I carried out with Eva Bernhardt in 1977/78.

terms of health care, education and labor market expansion. For those poor countries which did not have their own energy sources, the so-called oil crisis in the mid-1970s put an end to a World Bank-promoted development package based on credits and imports. When the UN called for another “population conference”, this time in Mexico City in 1984, the resistance to contraceptive technology had faded away. Pressure and money spread from rich to poor.

But contraceptives are also good for people. When the third UN conference, held in Cairo in 1994, was underway, the feminist movement(s) stepped in with claims that reproductive [and sexual] health and rights should be the key issues, rather than the old catchword “population”. Another important change was the introduction of the term “development” in the conference title. In effect, macro-demographic dynamics and its relation to development was hardly dealt with by the conference, while negotiations over the final conference document were stifled by inflamed debates over how to relate to “reproductive rights” of individuals (esp. women), and over abortion.

Again, with the Vatican, neo-conservative US-Americans and Islamists nailing debates to those issues, conference days passed with little or no change in the operational guidelines to steer money flows and donor policies. “Sustainability” was included in the same sentence as “economic development”, with no elaboration of the linkages between (women’s) reproductive rights, demographic dynamics and sustainable development.

This—the last so far of the UN conferences on “population”—paved the way for more contraception (and less abortion), leaving the international debate open on important issues such as environmental change and imposed migratory movements, the consumption lifestyles of a growing global middleclass, and – of course – Paul Ehrlich’s concern that we the super-consumers ought to be fewer, considerably fewer.

Meanwhile, a growing body of studies confirmed that fertility levels had been falling in many parts of the world. In Europe they were down to below replacement level not only in GDR and other east European countries, but also in catholic Italy and Spain. East Asian countries experienced extremely rapid falls in fertility at par with those in China but without the tough birth control measures applied there. Similar trends were observed in poor societies in South Asia and Latin America, and in some countries in Sub-Saharan Africa. The processes behind these trends were found to be complex (see e.g. Egerö and Hammarskjöld, 1994).

Due to its size, the downward trend in China in particular influenced UN projections of the future population of the world, where a leveling out at around 9 billion was now presented as the most likely projection.¹⁰ A systematic review of

¹⁰ In spite of several inquiries with the responsible UN body, the Population Division, I have failed to find any specific assumptions on future economic and social developments in the different world regions behind the projections. Extrapolations of observed trends appear to be the main method at work.

responses would very likely record a sigh of relief within the “population community” that things have gone the way it wanted. Psychologically understandable, such a reaction is completely untenable from a scientific point of view; this global average hides a growing disparity between countries with negative growth rates and those where fertility and rates of increase remain high (Egerö, 2003). The implications for socio-economic development, future demographic dynamics and environmental change remain vital areas of concern for research as well as politics.

Sorting out the key questions

To understand the progression of the demographic transition under different conditions is not only of scientific interest. In the context of environmental deterioration and global climate change, it can be argued that societies—nations, regions and the global community—must reach the end of the transitional period of population increase, indeed that they must enter a period of reduction in human numbers. This imperative is strongly reinforced by the tendency of capitalism to strive for an ever-growing per capita consumption.

Searching for an answer to the question of our global system’s carrying capacity, Joel Cohen, 1995, systematically scanned historical scientific efforts to provide an answer. Interestingly, the answers he could document turned out to grow more and more disparate as he got closer to the present day; where true believers in technological fixes appear to see no need for a limit, others opt for only a fraction of today’s 6-7 billion.

Cohen’s own final answer to “how many people”; “it depends”, contains a reference to both the material consumption itself and all that is involved in making this consumption possible and in handling the residuals. To summarize the many different impacts of human activities around the world on local and global ecosystems in a formula would be extremely complex. An often quoted expression called the IPAT relation¹¹ is in reality far from achieving this. It says very simply; fewer consumers mean less environment impacts, and the less the consumers consume, the better.¹²

Clearly, the logical conclusion is that if human numbers should be reduced, more wealthy consumers would have to go first. Continued growth in the number of US citizens carries far more weight than a similar increase among poor people in

¹¹ The letters stand for, respectively, E = Environment Impact; P = Population (numbers or increase or both); A = Affluence (or material consumption per capita); T = technology applied to enable consumption. The expression could be regarded as a reminder of the three parameters, not a formula or an expression of relations. Paul Harrison (1992) nevertheless tries to quantify the expression, whose father he variously names Barry Commoner (p.238) and Paul Ehrlich (p.307).

¹² Satterthwaite (2009) questions the value of the expression: “...it is very simplistic and misleading to apply the “ $I = P \cdot A \cdot T$ formula” ... to GHG emissions when a large part of the world’s population generates such a tiny proportion of total GHG emissions, and a very small part generates such a large proportion of total GHG emissions.”

poor countries. The already quoted study by Thomas Wire (2009) is not explicit about this aspect, but appears to focus on countries where contraceptive use is less common.¹³ His argument would gain strength if it were applied to rich countries such as the US, known to have higher rates of natural increase than Europe. This way he would add substance to his notion that “Some cultures, with or without family planning, may have higher birth rates” (idem p.12).¹⁴

Satterthwaite, 2009, p.564f, is clearer about this:

“It is ... misleading to compare growth in emissions per person without separating those people below and above the “fair share” level. However, it serves a range of interests to do so, especially those individuals with high consumption lifestyles /.../ it also serves the governments of those nations with high current and historical contributions to human-induced GHGs in the atmosphere; and it serves those nations that keep down the GHG emissions ascribed to them by importing most of the goods whose fabrication and materials inputs have high GHG emissions.”

Although Satterthwaite does not explicitly address the consumption/fertility relation, he is absolutely clear that the issue relates not to human numbers as such but to consumers and their consumption: “... it is not the growth in the number of people, but rather the growth in the number of consumers and the GHG implications of their consumption patterns that are the issue.” (p. 564). The PERN debate brings up one interesting dimension of this issue, namely the role of migration from poorer to wealthier nations and its relation to the CO2 implications of population increase.

Is migration an issue?

A study by Kolankiewicz and Camarota, 2008, estimates that, on average, immigrants to the US can be expected to adjust their life styles so that they over time quadruple their CO2 emissions, compared to average levels in their countries of origin. Some of these immigrant groups are likely to have higher fertility levels than average, thus adding some weight also to the growing number of US Americans. Their contribution as workers to economic growth, which generates more pollution from industries and other sources, was not part of the analysis in this study.

¹³ His study was commissioned by the *Optimum Population Trust* (OPT), a UK environmental charity and think tank. OPT “believes that Earth may not be able to support more than half its present numbers before the end of this century, and that the UK’s long-term sustainable population level may be lower than 30 million” (quoted from its website).

¹⁴ Wire mentions “obstacles to birth control”, but only in the sense that political and cultural obstacles in implementing family planning may represent *additional* costs (op.cit. p.9).

Migration to the US is by and large a one way exchange that apparently contributes to keeping its levels of CO₂ emissions record high. It could be argued that some of those who emigrate from poor countries by withdrawing their competence and labor also contribute to holding back on development in these countries, thus reducing their contribution to global CO₂ emissions. On the other hand, the migrant remittance flows do impact on consumption back home.

It may be argued that this discussion carries little meaning, unless of course it is intended to strengthen already highly protective policies for instance in the EU. What should come in its wake should be an analysis of whether and how migration from poorer to wealthier nations serves to reduce or amplify already glaring differences between the poor and the rich nations of the world. Development is important: If the Environmental Kuznets Curve hypothesis¹⁵ holds in respect of CO₂ emissions, successful efforts to bring weak resource-poor economies to higher levels would enable these economies to pay the necessary attention to environment impacts. I would add that (the right kind of) development is the best recipe for fertility decline and an end to population increase.

Inequality is not only what characterizes rich versus poor nations. Internal inequality within a nations matters at least in regard to recorded biodiversity losses. Today's migration from poor Sub-Saharan African countries to Europe lands the immigrants (many of them illegal) at the very bottom of the economy. So far, immigration and integration policies have disregarded the worsening inequality that follows.

A recent study based on statistical data from 50 countries found that a model that included "both economic footprint and inequality was the best predictor of threatened species. It significantly outperformed population density alone..." (Holland et al, 2009). Inequality was found to be a significant predictor of biodiversity loss.¹⁶ The results confirmed the importance of socioeconomic inequality as a factor behind biodiversity loss.¹⁷

¹⁵ Kuznets (1955) found that economic inequality increases over time while a country is developing, then after a certain average income is attained, inequality begins to decrease. This trend has been found to apply also to environmental impact and economic affluence. Important drivers might be changes in governance and technology that go hand in hand with socio-economic evolution.

¹⁶ Compare the message in *The Spirit Level: Why More Equal Societies Almost Always Do Better* by Richard Wilkinson and Kate Pickett, 2009: Less inequality is more wellbeing among rich as well as poor, more well-functioning society and – my interpretation – better conditions for meeting and managing the problems with environmental change.

¹⁷ Fredrik Moberg, in a comment in the PERN email debate, refers to this study and adds: "many now see the ongoing extinction of species as one of the most important environmental threats today. We all benefit from the diversity of plants and animals for medicines, food, fibers, and other ecosystem services, such as climate stabilization, water cleansing, crop pollination and flood control. Moreover, several recent studies have concluded that the major beneficiaries are the billions of the world's poor."

From impact to adjustment

According to many climate researchers, global temperatures are already rising, with visible effects on glaciers and river systems. CO₂ emissions must be brought down considerably, only to reduce further drastic rises in temperature. Before they can be made to decline, the world needs to find the means to halt the still growing CO₂ emissions, a difficult challenge that requires very different other answers than simply policies which seek to put an end to the inevitable population increase built into the demographic transition. The infamous Chinese birth control policies are the most drastic, and the most successful, of such policies, still the momentum of growth built into the Chinese age pyramid makes its population go on increasing still some decades —together with the virtually explosive increase in consumption that now accompanies China's entry into the global market.

Aside from the climate issue, other environmental changes are on record as already forcing millions of people to move or seek drastic adjustment measures. Adaptation or adjustment is a challenge at all levels from the household to the nation and the region. It has been estimated that a one meter rise in sea levels would cost Bangladesh 25% of its land, forcing millions to leave for higher grounds in a country already extremely densely populated.

The most common answer to this predicament—money—addresses only a small part of the problem. Inevitable migration requires that new areas be found for the migrants to settle, if necessary in other countries. To tackle this issue requires international consensus to share land and living space according to needs. Research on land, carrying capacity etc. should be expanded and should influence political exchange in the UN and elsewhere.

Facing challenges such as these, it should be no surprise that many governments of the so-called Least Developed Countries see continued increase in human numbers as problematic. Bryant et al (2009) have analyzed 40 National Adaptation Programmes of Action reports submitted by governments of least-developed countries to the Global Environment Facility for funding. They found references to the interaction between demographic trends and the effects of climate change in over 90% of the reports. One such reference was “heightened human vulnerability to extreme weather events”, primarily understood as environmentally enforced migration hitting mainly poor communities and leading to further impoverishment. The authors use the findings to suggest that efforts should be made to improve access to contraception among those seen as the most vulnerable, “poor communities in least-developed countries”. While they emphasize that this approach is only directed to the welfare of poor communities affected by climate change, their choice of “family planning services” as the solution reaffirms their belief in vertical fertility reduction programs as rational answer to environmental threats. Certainly, even these scientists are aware of the built-in momentum of growth in a population experiencing a transitional gap between fertility (adding only newborn, future parents) and mortality (hitting very young and very old).

In a contribution to the PERN debate, Colin Butler (coauthor Bryant et al. 2009) again waved the “population control” flag: “The Millennium Assessment scenarios working group ... concluded that a delayed demographic and technological transition in developing countries is the worst of all futures for the climate. The incremental greenhouse gas contribution from an enormous, largely coal-burning population in the Global South that provides the straw that then precipitates runaway climate change (say in 2075) will only be irrelevant if we have already crossed the threshold of dangerous climate change before then. That would be cold comfort.” Unfortunately, he does not provide any view on how, given the ever widening disparity between wealth and poor (countries as well as people) the demographic transition should be influenced to effect a more rapid progression. However, there are plenty of empirical studies supporting the view that much more than contraceptive services are required, that they alone will not “do the job”. The Millennium goals are an indication of what is required, and they will certainly not be met by 2015.

The “family planning trap” needs, in this as in other similar arguments on population increase, to be replaced with a much broader perspective on development and demographic transition. The UN 1994 population conference went as far as adopting “reproductive health and rights” to replace “fertility reduction” as guides for WHO and other actors. In the context of responses to environmental change and rising global temperatures, only a development orientation that brings more resources to exposed communities (material as well as non-material) would serve to enable the adaptations that will be necessary. In the field of reproduction, the concept of reproductive justice¹⁸ should be a good guide to development policies.

Population studies as a social science¹⁹ has a methodological challenge in expanding its study of human numbers to embrace the impact dimension of human life and activities on society and habitat. Beyond basic needs satisfaction, what people extract from non-renewable and renewable resources, and the impact on local and global environments, varies extremely from the global level to that of local communities. What is called globalization entails not only economic exchange but also the spread of consumption patterns from wealthier to less wealthy countries, and within them from more to less wealthy inhabitants – all strongly patterned by profit seeking capitalist interests.

The concept of poverty reflects real differences in access to consumer goods and the way life styles are hung up on such access. When today an estimated over 40 million US Americans live below the poverty line, we cannot conclude that all

¹⁸ The term "reproductive justice" was coined in 1994 by the US Black Women's Caucus at a national pro-choice conference sponsored by the Illinois Pro-Choice Alliance in Chicago, USA (Source Wikipedia).

¹⁹ In Sweden, demography is regarded as applied statistics, and thus in the university hierarchy separated from social science. This offers a strong argument for the field of ‘population/development studies’ to be incorporated into the social sciences.

these people lack a car or a TV, two consumer goods only recently regarded as luxury goods in the west. This means that studies of people as consumers must depart from their actual way of living and consuming. In addition, “consumption” has to go beyond the simple ownership dimension to incorporate the dimensions linked to the “ecological footprint”²⁰ analysis of impacts both before a person accesses a certain consumer item and impacts during her use as well as disposing of this item.

There is no readymade way to switch from human numbers to “consumer numbers”. To make headway, demographers need to add differential consumption powers to their conventional age/sex analysis. A further step could be to add a life-cycle analysis of impact inspired by the “ecological footprint” approach. Obviously a rather complex road to embark on, but one that would give substance and meaning to human numbers in relation to environment and environment change.

Concluding comments

At the time of writing these comments, the shock-wave to the US bank system (with Lehmann Brothers going bankrupt) brought about by financial capital has gradually been transformed into more deep-going cracks also in European financial and economic systems. “Overspending”—by governments and consumers—are moving whole nations into economic stand-still or even decline, threatening national social and political stability. With all the ensuing dangers, this crisis gives us all a golden opportunity to reconsider an untenable system that has created the super-elite of exceedingly rich people with considerable political clout whose interests drive the global market to further the exploitation of resources and consumers.

In a very basic sense, governments today act under the mercy of international capital. Issues of sustainability have disappeared from public debate under the concern over financial and economic meltdowns where economic growth has taken the position of a never questioned goal for national policies. For social scientists, indeed academics at large, the challenge of today should be to catch this “golden opportunity”, reflect on long-term answers in the political and economic organization of nations and on short-term replies to the political difficulties where hard times meet an electorate socialized into ever-rising consumption power.

Those specialized in population/development studies have an obligation to free their discourses from the century-long shadow of the eugenics movement and the “yellow peril” interpretations of population increase in non-European societies. A global world requires global cooperation on the problems of growing human numbers and poverty there, growing numbers of wealthy people here. The discourse would do well in leaving the numbers game of *population dynamics* to demographers and focus on the dynamics of change in the world of *consumers*.

²⁰ See for instance http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_basics_overview/

It is as consumers that we impact on the ecological systems we all are part of. The structural conditions and power relations behind market forces driving us to over-consumption, the relative capability of political systems to change these relations, are all important themes on the scientific agenda. An agenda that inevitably moves science into confrontation with the same vested interests it depends on for its funding.

I see only one answer to that dilemma; a closer approximation of social science to people, to those popular forces that attempt to mobilize in order to bring sustainable change to an unsustainable order. There are many such movements and organizations around the world.²¹ Indeed civil society appears all the time stronger as an agent of influence on states and governments as well as of private sector enterprise. The ways to bring about a closer cooperation with social science, to the benefit of both parties, is however an issue beyond the scope of this paper.

References

- Amin, S. 1971. *Underpopulated Africa*, paper to the First African Population Conference, Accra December 1971
- Bryant, L., L. Carver, C. D. Butler and A. Anaged. 2009. Climate change and family planning: least-developed countries define the agenda. *Bull World Health Organ* 2009; 87: 852–857
<http://www.who.int/bulletin/volumes/87/11/08-062562.pdf>
- Cohen, J. 1995. *How Many People Can the Earth Support?* New York: W. W. Norton
- Demeny, P. 1988. Social Science and Population Policy. *Population and Development Review* Vol. 14, No. 3 Sep., pp. 451-479
- Egerö, B. 2003. Global Disorder: An Important Agenda for 21st Century Population Studies. *Population Review* vol. 42, no. 1-2, pp. 23-35
- Egerö B., and M. Hammarskjöld (Eds). 1994. *Understanding reproductive change: Kenya, Tamil Nadu, Punjab, Costa Rica*. Lund Univ. Press
- Harrison, P. 1992. *The third revolution: environment, population and a sustainable world*. London, Tauris
- Holdren, J., and P. Ehrlich, (Eds) 1971. *Global Ecology*. New York: Harcourt Brace Jovanovich
- Holland T. G., G. D. Peterson & A. Gonzalez. 2009. A Cross-National Analysis of How Economic Inequality Predicts Biodiversity Loss. *Conservation Biology*, 23 Nr 5, p.1304-1313

²¹ Among them green parties, organizations such as the European Degrowth Movement and the US based Transition Movement, and growing numbers of think-tanks outside the university world.

Kolankiewicz, L. & S. A. Camarota. 2008. *Immigration to the United States and World-Wide Greenhouse Gas Emissions*.

<http://www.cis.org/articles/2008/back1008.pdf>

Kuznets, S. 1955. Economic Growth and Income Inequality. *American Economic Review*, vol. 45, no. 1, pp. 1-28

Satterthwaite, D. 2009. The implications of population growth and urbanization for climate change. *Environment and Urbanization* 21; 545 (also available at <http://eau.sagepub.com/cgi/content/abstract/21/2/545>)

Wire, T. 2009. *Fewer emitters, lower emissions, less cost*. London School of Economics. Available at

www.optimumpopulation.org/reducingemissions.pdf