

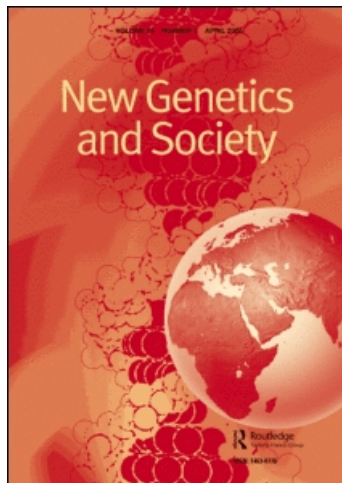
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The Chinese biopolitical: facing the twenty-first century

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Today the dominant science and technology studies (STS) story about the politics “life itself” sees an epochal shift in which the classic Foucauldian biopolitics of the population has disappeared, giving way to new forms of politics focusing on the management of individual genetic risk. With most STS scholars focusing on the politics of frontier sciences and technologies, especially in the West, the biopolitics of population collectives has received little sustained attention. Based on close study of China, this paper argues that the familiar biopolitical story is Eurocentric, and that on a more inclusive map of the world the politics of population governance remains an essential terrain of the politics of life. In China, the politics of population has been crucial to the development of capitalism and to the nation’s rise to global prominence. Responding to the challenges of a changing world economy, in the twenty-first century the biopolitics of population is mutating, becoming less econocentric and more focused on social and even human governance. Far from declining, the biopolitics of the population is becoming ever more significant, profoundly changing the way China and its people are governed. The story of biopolitics in the molecular age is more complex and collective than we had thought.

Keywords: biopolitics; bionationalism; economic governance; social governance; China

Largely ignored by students of politics, population has exceptional significance in the political domain. Some years ago, in his writings on Western modernity, Foucault described the rise since the eighteenth century of a new field of biopolitics in which human life itself, in the biological sense, has become a central object of science and governance (Foucault 1978). In his well-known scheme, biopower operated at two interrelated levels – the disciplines of the human body and the regulations of the species body, or population as a whole – and was aimed at optimizing life forces. Both were indispensable to the development of capitalism, which required “the controlled insertion of bodies into the machinery of production and the adjustment of the phenomena of population to economic processes” (Foucault 1978, p. 141). Foucault proposed that biopower – the calculated power

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over human life, especially at the level of the population – is the essential form of power in the modern political era.

Foucault engaged in scattered discussion of biopolitics but, perhaps because it took him in statist directions, never pursued the topic in any sustained way.¹ Nor did he devote much conceptual attention to the key term “population” (Curtis 2002). Despite the extraordinary interest in Foucault’s oeuvre, and the global spread of capitalism to which, if Foucault was right, biopolitics was instrumental, the politics of population governance has received little systematic attention. In an exploratory essay, Rabinow and Rose suggest that today at the beginning of the “biological century”, the concept of biopolitics, suitably historicized, is a useful analytic for diagnosing the near future, and call for the development of conceptual tools to guide empirical inquiry (Rabinow and Rose 2006, p. 197). Meanwhile, however, other, more cutting-edge domains of vital politics are garnering most of the scholarly attention.

In the early twenty-first century, many scholars of science and technology studies (STS) believe, the world is entering a novel stage of vital politics in which rationalized interventions in human life are taking on new forms and gaining added significances. Advances in the life sciences and biotechnologies, the emergence of novel forms of biological citizenship and neurochemical selves, the creation of new economies of biovalue and biocapital – all signify the growing importance of “the bio” in political life. But how is the bio remaking politics?

In his major synthesis of the new thinking, *The politics of life itself: biomedicine, power, and subjectivity in the twenty-first century*, Nikolas Rose (2007) argues that a threshold has been crossed, that we are on cusp of an emergent form of life and an associated vital politics marked by five major mutations. The first and conceptually, perhaps, most foundational is molecularization. If in the past vital politics revolved around the “molar” level of populations, bodies, and organs, now, Rose argues, biomedicine envisions life at the molecular level, in terms of its genetic inheritance. The result is a broad shift in scale within biopolitical regimes of modernity – from the management of population-level risk to the management of individual genetic risk – with crucial implications for governance, subjectivity, and ethics. A rapidly growing literature that examines the social and cultural dimensions of biomedical and biotechnological advances fills out this account by documenting the new forms of bio-identity and bio-sociality emerging around risk and disease today (e.g., Rabinow 1996, Heath *et al.* 2004, Rose and Novas 2005, Franklin 2007). Though there are variations, the story Rose tells is perhaps the dominant account of the relations between our biological existence and our political existence in the molecular age (cf. Braun 2007).

Today Rose and many others in STS are charting the important transformations underway in the vital politics of individual bodies and selves, but few have studied contemporary transformations in the politics of life at the aggregate level. Indeed, based on the experience of the advanced liberal nations of the West, Rose maintains that we have witnessed the virtual demise of population and, by implication, its

underlying sciences of vitality (demography, epidemiology, urban planning, and so on), as arenas of vital politics. Although state-sponsored projects of population management – most notoriously, the eugenics projects of the early twentieth century – were important in the past, he argues, today the norm of population quality has been replaced by that of individual health and quality of life. “Biopolitics today no longer operates in a problem space defined by population, quality, territory and nation” (Rose 2007, p. 64).

Rose’s sweeping generalizations about “the vital politics of our century” (2007, p. 3) might be appropriate for the advanced liberal societies of “the West” (though even there we should exercise caution), but the world of the twenty-first century may no longer find its center in the West. When we consider the rest of the world – which includes four-fifths of the global population, the rising global powers of China and India, with their very different histories and political rationalities and their more collectivist mentalities, and the ongoing reorganization of power at transnational and global levels – a different conclusion seems warranted.² On this more inclusive map of the world, population appears to be a crucial field of vital politics today. Indeed, the north–south distribution of the global population suggests that, for most people in the world today, the politics of population-as-a-whole is the life politics that matters most. Asia is a case in point.

In China and other advancing Asian nations, the politics of population as an aggregate has been, and still is, the essential terrain of the politics of life. In the twenty-first century, the biopolitics of the population as a whole is mutating to meet the challenges of an ever-changing global economy. Far from declining, the biopolitics of the population is becoming ever more significant. In places like China, the frontier biosciences and biotechnologies are growing in importance, but unlike the politics of population, which affects the life of every Chinese citizen, frontier biopolitics tends to address the desires of only a small, privileged part of the population. Moreover, in many cases the rise of these newer fields of life science, technology, and governance was stimulated by developments in the older fields. In China, for example, the post-1980 rise of genetics was spurred by the demands of the one-child policy for “quality” offspring. The earlier and more recent fields of vital politics are thus deeply interconnected. The PRC state’s project on population forms the essential historical context in which these newer forms of life politics have developed.

In *Governing China’s population (GCP)* (2005), political scientist Edwin A. Winckler and I adapted some of the conceptual tools of the governmentality perspective to examine vital governance in China. With its 1.3 billion people, and its radical experiments in demographic engineering, China is home to the world’s largest population and one of history’s most significant cases of population politics. Drawing on field research conducted over many years, we traced the birth, transformations, and broad social and political effects of Chinese biopolitics over the half-century 1949–2004. We argued that China’s late twentieth-century population project, inaugurated at the very time China re-entered the capitalist world economy,

provides the world's most striking contemporary case of the rapid development of power over the production and cultivation of life itself.

We document the rise since around 1978 of an ever-more encompassing field of vital politics in which human biological life itself – its production, cultivation, and security – is at stake. The centerpiece of this new domain of biopolitics is the state's project on population. Far from mere population control, that project has aimed to quantitatively trim and qualitatively upgrade the Chinese populace in an effort to create a globally savvy, competitive labor force that would both facilitate and symbolize China's emergence as a global power. In China, then, biopolitics operates in a "problem space" defined *precisely* by "population, quality, territory, and nation". The significance of that project on population can hardly be overstated. It has helped to biologize Chinese politics, giving rise to new bio-logics, -bureaucracies, and -legalities, which in turn have created new kinds of subjects and ethics. These developments have reshaped not just China's society, but also the party, state, nation, and country's place in the world. Much is at stake in the question of whether the collective politics of life has fallen into desuetude, as Rose's analysis might suggest, or expanded exponentially.

GCP documents not only the rise of a biopolitical regime in the 1980s, but also the shift from a Leninist biopolitics in the 1980s dominated by the state, to an increasingly neoliberal biopolitics in the early 2000s. Under that latter regime, the power to regulate the production and cultivation of human life is shifting from the state to the professional disciplines, the market, and self-governing individuals. Whereas the Leninist regime of biopolitics governed through subtle and not-so-subtle forms of coercion, an increasingly neoliberal regime of biopolitics has governed through (carefully delimited) individual freedom. Chinese biopolitics shares elements with the vital politics of population elsewhere, yet it remains distinctive in the still-strong role of the party-state and in its grounding in an unusual hybrid form of population science that views population processes and their management through the lens of systems science and engineering.

Picking up where *GCP* left off, in this paper I diagnose some critical shifts in the vital politics of population in the PRC since around the turn of the millennium. I understand *biopolitics*, or vital politics, as a field of politics concerning the administration and optimization of the vital attributes of human life (fertility, mortality, quality), particularly at the aggregate level of the population or nation as a whole. Biopolitical governance, or *biogovernance*, is aimed at the management of the vital characteristics of human populations and exercised in the name of optimizing individual and collective life, health, and welfare. A governmentality perspective focuses attention on several defining features of projects of biogovernance: their underlying knowledges, problematizations (defined just below), strategic aims, governmental techniques, modes of subjectification, and (intended and unintended) effects (see, for example, Dean 1999). Given space limitations, I confine attention to three features of biopolitical governance in China: the core social issues or problems treated under the rubric "population", together with

their solutions (the question of problematization) and the strategic aims and effects of population governance. The problematizations embedded in governmental projects on life have not received much attention, but they have great diagnostic potential. By following changes in the issues bundled together as “population problems requiring management”, for example, we can trace changes in the nature and scope of the larger field of biogovernance in China today. Although today non-state actors are increasingly important agents of Chinese biopolitics, the party-state remains the leading force, defining what counts as a population problem, how it is to be addressed, and for what ends. For that reason this paper focuses on the biopolitical work of the PRC regime, relying primarily on official documents and state-supported social research for its empirical evidence.

I argue that the biogovernance of population, because it has been harnessed to the regime’s larger bionationalist projects of transforming China into a prosperous modern power, has been essential to the development of Chinese capitalism and to the nation’s rise to global prominence. As the regime’s overarching strategy of reform has shifted from labor-intensive to more knowledge- and human-capital-intensive growth, the problem of population has shifted from one of economic governance aimed at rapid fertility decline and GDP growth to one of social and even human governance aimed at creating a quality society made up of self-governing, self-enterprising quality Chinese. Population optimization – especially the development of population quality and human capital – will remain a central project of the PRC regime in the decades ahead. This paper deals with developments as of early 2009. Whether these new directions in biogovernance will be deflected by the economic recession that began in late 2008, and for how long, remain to be seen.

Population governance as economic governance: the long 1980s

In popular and scholarly perception, China’s vital politics has been equated with the highly contested project of drastic fertility reduction through the state planning of births. Yet the field of biopolitics in China is much bigger than that. In this section I examine how the problem of population and its solution have actually been framed in official discourse and practice. I begin with the central place of population governance in the regime’s overarching strategy of transforming China into a wealthy modern global power. To illuminate the important transformations underway today, I provide a brief summary of the problematization of population in the first phase of economic reform, before turning to the ways population governance has been changing since the turn of the millennium.

Population governance: a bionationalist project of global advance

From the outset of the reform era (1978–1979), the management of China’s population has been a key plank in the regime’s strategy of capitalist-style development and global ascent. The population project was *biopolitical* to the core, involving

governing the biological body of the nation through science and technology. The post-Mao state defined the core constructs in starkly biological terms (Dikotter 1995, 1998). Population was represented as a biological process of reproduction of individual organisms aggregated into a larger whole. Race, often conflated in the Chinese discourse with nation (*minzu*), was construed as a biological entity to be eugenically enhanced to promote fitness and competitiveness of the national “organism” in a social Darwinist world of inter-racial and international competition.³ The use of these biologized constructs permitted the state to represent these forces of great potential – and of great threat – as impersonal processes “in nature” that had to be “objectively” investigated and managed by the state “in the interests of the nation as a whole”. Through the use of modern population science and reproductive technology, the regime would take control of these domains, fashioning a population of optimal size and attributes that would both facilitate and symbolize China’s status as a growing force in world affairs. Population thus formed the centerpiece of the regime’s bionationalist project of capitalist modernization and global advance. (For another example of bionationalism in the region, see Gottweis and Kim 2009, this issue.) Throughout the reform decades, population has remained a state-led project directed to nationalist ends. Over the years, as the regime’s larger strategies of development and globalization have shifted, the approach to population governance has been transformed. These transformations can best be seen by tracking changes in the specific problems (and solutions) that have been handled under the rubric “population”.

Quantity and quality: population as a problem of economic governance in the quest for rapid, labor-intensive growth

In the late 1970s, the new reform regime of Deng Xiaoping finally abandoned class struggle in favor of rapid economic growth and entry into the global capitalist system. With rapid population growth threatening Deng’s larger agenda of quickly restoring China’s greatness in the world, in 1979–1980 the demographic problem was framed in virtually Malthusian terms as a demographic-environmental-economic crisis of modernization that was ruining China’s chance of achieving the “four modernizations” (of agriculture, industry, science and technology, and national defense) by century’s end. Based on the research of some high-profile defense scientists, the regime declared that “the only solution” was to limit all couples to one child beginning immediately, regardless of the social costs. (For the science behind the one-child policy, see Greenhalgh 2008.) The policy was enforced nationwide through mobilizational campaigns – that is, party crackdowns – from 1980 through the early 1990s, with wrenching human effects. This regime of governance was in effect until around 1993.

From the beginning, the issue of population *quantity* was linked to that of *quality*. China’s people had backward bodies and backward minds, making them uncompetitive in the global economy and unfit for citizenship in a modern state.

The solution was to foster quality persons, understood as global persons, who fit the highest international norms on health, education, and ethics. China's new generation of singletons were to be superior (*yousheng*) children and, in time, workers and citizens. Initially the effort was primarily eugenic – preventing defective births through medical and legal means. Later, as the notion of quality expanded to include health, education, and childrearing more generally, all social forces were encouraged to promote the rearing of high-caliber youngsters, who would grow into a high-quality labor force.

From labor-intensive to human-capital-intensive development

Throughout the 1980s and early 1990s, a globalizing China sought to maximize economic growth at any cost based on the exploitation of cheap labor. Population governance was aimed at boosting the per capita gross domestic product (GDP) by lowering the growth of the denominator – the number of people. China's official problem of population was framed as one of economic modernization: too many Chinese of too poor a quality put intense pressure on China's economic and environmental resources, hindering China's development and global rise. Population governance, in short, was a matter of economic governance.

In the 1990s the labor-intensive model was beginning to reach limits. As the decade wore on, problems of social polarization, social protests, environmental degradation, and many more were becoming more pronounced. The regime's concern to preserve “social harmony and stability” – essential to sustaining the legitimacy of the ruling Communist party at a time of wrenching socio-economic change and the development of Chinese capitalism – deepened. With the global shift toward a knowledge economy, in which knowledge is the new source of the wealth of nations and the foundation of national strength, it became clear to China's leaders that in order to sustain growth, meet the demands of a highly competitive global economy, and consolidate the global gains made so far, it was imperative to start laying the foundations for a shift to a knowledge-based economy. China's reform leaders had already laid the groundwork for that shift in successive waves of policies aimed at supporting modern science, technology, and education. Building a new knowledge economy involved, according to World Bank advisors to the Chinese government, the formation of an institutional regime, information infrastructure, and innovation system supporting the creation and effective use of new knowledge (Dahlman and Albert 2001, p. 4). It also involved strengthening the nation's human capital. Indeed, human capital – capital embodied in humans in the form of health, education, skills, talent, savvy and, most generally, the ability to create and use knowledge effectively – is the very foundation of a knowledge economy, the factor that – again according to World Bank advisors – will determine China's competitive edge (Dahlman and Aubert 2001, p. 69). The biopolitical project on population – which had been designed precisely to create a lower quantity, higher quality populace – was harnessed to this urgent new task.

In the 2000s, as China's overall reform strategy has shifted to ameliorating the social problems caused by the focus on rapid economic growth at any cost, and to creating a higher quality population to spur the development of a knowledge-based economy, the governance of population has shifted. From largely an economic problem focused on quantity of people, population has become a social and human problem centered on the quality of China's people. Older economic concerns continue to claim attention, yet newer social problems are moving center stage. These shifts, only partly in place today, are evident in two important documents: the Eleventh Five-Year Plan for National Economic and Social Development (2006–2010) and the January 2007 Party and State Council Decision on fully enhancing the population and family planning program and comprehensively addressing population issues (Decision 2007). In what follows I draw on these two documents, as well as a large number of supporting policy statements, speeches, and conference reports (only some of which I can cite here), to trace mutations in the nature of and scope of "the population problem".

Population governance as social and human governance (c. 2000–)

In the early 2000s, economic problems of population quantity continue to command official attention. Although China has completed the demographic transition and now boasts fertility far below replacement level (1.8 according to official figures, 1.5–1.6 according to demographers), quantity problems – fertility, population growth, and population size – remain prominent concerns. As the Decision explains, population growth exerts heavy pressure on economic development, social construction, and resources/environment. Population growth exhibits "unprecedented complexity" (that is, it varies by location and group), fertility is "at realistic risk of rebounding", and three population peaks are coming (in population size, labor force, and the aged). The solution is to "stabilize the low fertility level" by enforcing the one-child policy for at least the next 10 years – a controversial approach, given the escalating social costs of that policy.

Since the mid-1990s there has been a growing emphasis on new problems of social governance. Gaining preliminary control over the so-called fertility crisis gave population officials the political space to begin addressing the social and human costs of the intense focus during 1980s and early 1990s on drastic population control at any cost. The initial emphasis was on rural women's bodies and reproductive health, which had been badly damaged in the rushed campaigns to reach urgent population control targets. Spurred by new thinking in the international population community, which rejected target-centered approaches in favor of a new concern with women's reproductive health and rights, in the mid-1990s China began reorienting its birth program, gradually phasing out coercive campaigns while adding a new emphasis on women's health and quality of care to the older concern with demographic goals (Winckler 2005).

Addressing the social dislocations caused by rapid change

Under the Hu Jintao-Wen Jiabao administration (2003 to present), the population problem is being reframed as one of social and even human development. Moving away from Deng's emphasis on rapid economic growth at any cost, the current regime focused first on the social dislocations caused by China's rapid entry into the global economy. For its part, the population field began directing much of its energy to resolving the dire social problems caused, or worsened, by its earlier stress on pushing fertility down as fast as possible. While not addressing the human trauma and social suffering that had been imposed on China's rural people by the coercive campaigns of the past, it did seek to lessen two major distortions in the social structure.

The first distortion stems from the strong sex preference exhibited by Chinese couples in a reform environment that has not been especially friendly to women. From 108.5 boys per 100 girls in the early 1980s, the sex ratio at birth has risen to 120.2 in 2007 – the highest in the world (China Daily 2008). After remaining publicly silent for years, in 2000 party leaders finally placed this issue on the agenda of the birth establishment. Since then, the anxiety surrounding this issue has intensified. Facing a rapid near-term rise in the number of poor, rural men unable to marry – unless things change, officials warn, by 2020 one in five young boys will be unable to marry – population officials have created a narrative of impending demographic crisis and political violence that may threaten the social stability of the nation (Decision 2007, sections 6 and 7, Chen and Hu 2007, China Daily 2008). The solution is to mount comprehensive efforts to address both the current problems (in particular, the widespread practice of prenatal sex determination followed by sex-selective abortion) and their underlying causes (the most general being the low social value accorded women and girls). In attempting to reduce the distorted sex ratio at birth, the population establishment is at the same time working to optimize the structure of the population, one of its historical duties.

Rapid fertility decline has also accelerated the aging of the China's population. In 2005 a relatively low 7.6% of China's people was 65 and older; by 2050 that is projected to be 20%, 24%, or 28%, depending on future fertility (Caldwell and Zhao 2004, pp. 283–284). In a context in which few enjoy public forms of social security and health insurance, and sons are becoming ever less filial, the care of the elderly has become an acute social problem, one the population establishment began seriously to address in the early 2000s. The long-term solution, being addressed by several government agencies, is to gradually develop and improve the old-age security system. For its part, the population and birth commission is “pro-actively respond[ing] to population aging” by introducing various sorts of old-age benefits to reward people who have followed state rules on childbearing (Decision 2007, sections 10 and 11).

Population and reproductive insecurity

Globalization has clearly intensified the Chinese people's exposure to many risks. A second new objective of population governance is to alleviate selected risks.

A society whose risks are well managed is more likely to be a “stable, harmonious society”, a major goal of a regime whose legitimacy remains fragile. The severe acute respiratory syndrome (SARS) crisis in 2003, combined with the growing HIV/AIDS epidemic, put a new issue on the agenda of the population field. The Population Minister Zhang Weiqing (service 1998–2008) introduced a new framing, “population security”, explaining that “a country’s overall power and national security [should] not suffer harm because of population problems” (Greenhalgh and Winckler 2005, pp. 169–171, Decision 2007, section 2). The solution was to extend population work to include health work, including defending against the threats of STDs and HIV/AIDS, particularly among adolescents.

A second problem of risk, identified in 2007, is the “reproductive insecurity” faced by couples who heeded the call to have only one child, but then suffered the serious injury, disability, or even death of their single child. The one-child couple is now designated a special type of family that is “weak in resisting risks”. The solution is to help couples in such circumstances who have not had an additional child through birth or adoption by providing economic assistance (monthly subsidies from age 49), spiritual comfort, and care in solving life problems (Zhu and Wang 2008, Decision 2007, section 3).

A quality population for a knowledge-based economy: health, education, genetics

Today, with the effort to shift from a low-cost, labor-intensive economy to a higher cost, knowledge-intensive economy, the quality of the nation’s workforce has taken on added emphasis. For all the human suffering it has produced, China’s biopolitical project has succeeded in important ways in its major goal of producing an increasingly modern society with the demographic, educational, and health profile of a global power.

As we saw earlier, fertility is an ultra-low 1.55, virtually the same as the average of 1.58 for the more developed regions (UNFPA 2007, pp. 90–93). China’s infant and under-five child mortality, now 30 and 41 per 1000 births (for males and females, respectively), remains high relative to the levels of the most developed countries (10 and 9), but is less than half the levels of the less developed regions (87 and 85) (UNFPA 2007, pp. 90–93). Life expectancy at birth, a good measure of overall health, is an extraordinary 72.5 years, closer to the level of the high-income countries (79.2) than that of the low-income countries (60.0) (UNDP 2007–2008, pp. 229–232). The proportion of primary, secondary, and tertiary school-age children that are enrolled in school is 69.1%, with small differences between boys and girls. That proportion is 92.3 in high-income countries and 58.3 in low-income countries (UNDP 2007–2008, pp. 229–232). Adult literacy in the PRC has reached a remarkable 90.9%, with 86.5% of women and 95.1% of men able to read. Chinese literacy levels are far above the average of 60.2% for low-income countries (UNDP 2007–2008, pp. 229–232).

Although the health and educational advances have been unequally distributed, with the urban population benefitting much more than the rural and the coastal areas more than the hinterland regions of western and central China, overall they have been impressive. Working with other policy efforts, China's grand national project of societal modernization has helped produced that young, healthy, relatively capable workforce that is widely considered a major engine of China's astonishing record of GDP growth to date.

Despite China's enviable stock of human capital relative to the developing world, China's leaders and their international advisors agree that the nation's labor force remains uncompetitive on a global scale (Dahlman and Aubert 2001, p. 40). Many of China's workers, official documents complain, are unable to meet the challenge of global competition in the new knowledge-based economy due to the low quality of their health and low level of their education. In a contemporary framing, the unacceptable quality of the workforce is seen as detrimental to the "efficiency of resource use" and the "comprehensive competitiveness" of the Chinese nation, a phrase we return to below (Hu 2007). The solution is to further upgrade the health and education of the Chinese people and foster indigenous talents and lifelong learners, through a combination of enhanced state investment in education and health and training of individuals to become self-enterprising, self-cultivating agents of their own lives.

In the early 2000s, a sharp rise in the number of "defective infants" has led to a renewed concern about the biological "quality" of the next generation. According to data from the nation's birth deformity monitoring center, of the 20 million babies born each year, birth defects now affect 800,000 to 1.2 million, a 40% increase since 2001 (Hu 2007). The causes are many but include persistent poverty in some areas, growing environmental pollution, and widespread use of coal for energy (coal mining areas tend to have high levels of birth defects). The rise in birth defects not only burdens families and society at large, the official story claims, it undermines the project of creating a biologically optimal population and of improving human capital more generally. As a top population official put it, this trend "directly affects China's comprehensive national strength, its international competitiveness, [and] sustainable socioeconomic development, as well as the realization of our strategic vision to construct a full-scale well-off society" (Hu 2007; also Chen and Hu 2007, China Daily 2008). The solution – now a major priority – is to proactively prevent birth defects by various means of genetic "engineering" that involve upgrading women's health services and universalizing prenatal genetic screening, counseling, and diagnosis (Decision 2007, sections 4 and 5).

Promoting human development, human quality, human capital

As we have seen, in the past, attention to the core problems of population (quantity and quality) was justified solely on economic grounds. No longer. The larger goal

of this new, more social field of biopolitical governance of population is to promote “human-centered development” or “all-round human development”. In the regime’s language, the goal is to construct an “all-inclusive harmonious socialist society” through the implementation of a “scientific concept of development”. These elusive yet multivalent terms, introduced by Hu Jintao in the early 2000s, signal broad shifts in China’s strategy for reform and modernization. A “scientific concept of development”, one prominent intellectual has explained, means “human-centered development” (China.org 2005, p. 3). According to a commentator on the Eleventh Five-Year Plan, policies that adhere to a scientific concept of development are policies that “consider people’s feelings, respect people’s rights, [don’t] ignore people’s needs, and take people’s freedom and all-round development as the ultimate aim” (China.org 2005, p. 3). From now on, economic growth is to be only the means to the larger end of developing the human potential of the Chinese people (China.org 2005, p. 5). With this new emphasis on the people at the heart of the development process, China is attempting to switch gears “from over-reliance on a cheap labor force, [limited] funds, and natural resources”, to a growing dependence on a well-educated labor force, advanced science and technology, and human resources (China.org 2005).

These official explications are interesting in themselves, yet two points bear further commentary. First, with its stress on fostering the health, education, and social security of the people, and on promoting gender equity in society, the population field is actively promoting the development of China’s people and the quality of China’s society. Both are key elements of the “human capital” that forms the foundation of a knowledge economy. A caveat might be useful here. Although these shifts are often justified in the language of economics – the PRC regime remains Marxist, after all – it would be a mistake to interpret them as merely shifts in how the economy is conceived and managed. In my reading, the new thinking represents a shift in biopolitics itself. In good part for political reasons – boosting the status of the Chinese nation, securing the legitimacy of the CCP – the regime is being pressed to re-conceive the population as an arena of governance in its own right whose members have desires, feelings, needs, and even rights. Cultural pride is important too in the rise of social governance. In part as a matter of national pride, the leadership wants to cultivate superior people and demonstrate its own ethics to be civilized and worthy of emulation.

Second, because human capital is embodied in people themselves, its accumulation requires initiative on the part of the people. The government cannot force people to be high quality. It can only provide good education and health services and foster the development of the types of people who will take advantage of them. In fostering “human development”, the regime and its population officials are trying to induce people to become self-governing, self-enterprising persons who will take charge of their own lives and work to advance their own health and education, and to make learning a lifetime endeavor.

Bio-governance and China's comprehensive national power

I've argued that China's state-led project on population has undergone crucial shifts, but that it has always been bionationalist – managed by the party “in interests of the nation as a whole”. For China, what is at stake in the rise and transformations in this form of vital politics is not only such things as subjectivities, bioethics, and bodies, though these are important enough. Also at stake are the collective fate of the nation, China's place in the world – and the nature of the world in which the PRC is assertively taking its place. These large-scale power issues are at stake because the state management of population and reproduction has been a critical part of the post-Mao regime's overall strategy for boosting China's standing and power in the world (and of course for ensuring the party's continued hegemony). Moreover, even as that strategy of biopolitical governance has produced untoward micro-social effects, it has succeeded brilliantly in achieving its macropolitical goals.

The contributions of the population optimization project to China's global rise are everywhere in evidence these days. The display of human performative and bodily virtuosity at the 2008 Beijing Olympics, and the successful launch of the manned Shenzhou VII spacecraft in September 2008, which produced the nation's first spacewalk, among other contemporary developments, attest to the centrality of the population project to China's emergence as a global cultural and technological power. (Of course, the failures of vital governance are equally visible. One thinks, for example, of the collapse of many schools in the May 2008 Sichuan earthquake, or the contaminated milk scandal unfolding in early 2009.) Yet the contributions of population governance to China's national power can be – and are being – measured more precisely.

CNP

In the late 1970s and early 1980s, when China was driven by an economy-first mentality, economic goals dominated the choice of population policy: adopting the one-child policy was deemed the surest, fastest way to boost per capita living standards and, in turn, transform China into an economic powerhouse. Today China no longer measures its global greatness in such simple economic terms. Since the mid-1980s Chinese thinkers have developed a broad-based measure of national power, known as “Comprehensive National Power” (*zonghe guoli*, or CNP), that includes security, political, economic, ethical, and population/social factors. This concept reflects serious concerns about the international security environment – in particular, the perceived accelerating competition among nations, especially the big powers, in an era of economic globalization (Hu and Men 2002, p. 2). and a widely shared belief that to keep from falling behind and eventually to achieve its national destiny as a rich and powerful nation, China must respond with massive and unremitting efforts to boost its own power in the international sphere. Beijing's strategy is to get along with Washington while quietly though relentlessly building up the

nation's military, economic, and ideational power. While focusing its energies over the next decade on internal growth and stability, the overall goal is to boost China's CNP, making the PRC an ever more important and influential actor on the world stage (Lampton 2008, pp. 20–25).

CNP: This marvelous tool of scientific governmentality appeals to Chinese researchers and opinion-makers because it enables them to quantitatively assess China's relative power by combining a variety of numericized indices into a single number. It also allows them to see how much each factor has contributed to China's CNP to date, and how each might be manipulated through state policy to ensure an optimal national power and security environment in the future. It is of particular interest to us because population – framed as population size and human capital – plays a significant part in these assessments of China's power. Whatever the measure's scientific limitations (methodological problems are numerous) – and perhaps scientific pretensions – it is critical to understand, because it figures importantly in the strategic calculations and policy thinking of political and intellectual leaders in Beijing.⁴ Indeed, raising the CNP is the ultimate goal of much of Chinese development and international relations policy (Leonard 2008). Increasing China's CNP is now an explicit objective of China's population and human development strategy, legitimizing efforts to keep population growth down and to continue raising health, education, and other dimensions of population quality.

Although there are various models of CNP, virtually all recognize the existence of two kinds of power, soft power and hard power. Soft power is a nation's influence, its ability to win the hearts and minds of others around the world. Hard power, which is closer to conventional notions of national power, is measured quantitatively. In the model of “tangible strategic resources” developed by the influential Beijing-based scholars Hu Angang and Men Honghua, there are eight main factors and 23 indicators (Hu and Men 2002). The main factors are: economic resources (GDP), human capital (working-age population and education), natural resources, capital resources, knowledge and technology resources, government resources, military resources, and international resources. Hu and Men's research shows that, although the United States remains the world's superpower, with a total CNP of 22.274 in 2003, between 1980 and 2003 China's CNP increased the most, from 4.736 to 9.991, for a total gain of 5.255 (in contrast to the US's net loss of 0.211 points). China has risen from fourth position in 1980 (behind the US, Japan, and Russia) to become the second world power. And the gap between China and the US has narrowed: in 1980 the US had 4.7 times the CNP of China; by 2003 the American advantage had shrunk to 2.2 times (Lampton 2008, p. 23).

Biogovernance and China's global greatness

In these models, the biopolitical enhancement of population has contributed significantly to China's global rise. Of the eight factors making up hard power,

improvements in the economy and in human capital/population accounted for the greatest part of the overall increase in China's CNP. Between 1980 and 1998, the extraordinary rise in economic performance (the GDP) contributed 46.4% to the rise in the CNP, while improvements in human capital made up 21%. Of that latter, the rise in educational level (related to the quality project on population) accounted for 54.8%, while the change in working-age population (related to the quantity project) contributed 45.2%. Both quantity control and quality enhancement thus contributed to the dramatic improvement in China's CNP.

Other numbers can be readily mobilized to back up this aggregate conclusion. International data on human capital (measured as the proportion of working age people [those 15–64 years of age] in the world's total and the average years of schooling) show that, between 1980 and 1999, China's share of total global human capital grew from 17.6% to 24%. As Hu and Men put it, "China has become a No. 1 big power in terms of population but also in terms of total human capital. This is the biggest advantage in its national strategic resources" (Hu and Men 2002, p. 27).

Estimates of the "demographic dividend" to economic growth provided by changes in fertility and, in turn, age structure also suggest a positive impact. Economic demographers have calculated that some 15% of economic growth between 1982 and 2000 can be attributed to the demographic dividend provided by a temporary surplus of productive adults (Wang and Mason 2004). (Unfortunately, the burden of a rapidly aging population is likely to slow growth from here on, but that is another story.)⁵

Of course, these numbers on CNP should not be taken very seriously. It does not matter much if the contribution of biogovernance of the population to China's overall power is 17% or 27% or 37%. What should be taken seriously is that population change has made a very substantial contribution to the overall rise in China's national prowess, and Chinese intellectuals, decision-makers, and ordinary people are well aware of that.

What matters now is what conclusions China's policy-makers draw from numbers such as these and what directions they map out for future social policy. As noted earlier, China's population work is currently being realigned with the new emphasis on overarching national power. Equally important, population is being equated with human capital and redefined as a newly positive factor in China's increasingly knowledge-based development and global ascent. The aim of the Eleventh Five-Year Plan (2006–2010) is to use the scientific concept of development to promote all-round human development. The new plan stresses people's development rather than simply measures of material increase such as the GDP. From now on, growth is to be considered only the means of development, not its end. The larger aim is to transform China's population, for decades deemed a major obstacle to the nation's modernization, into a positive resource for advance. Population is to be treated as an asset, a form of human capital that will improve citizen health and education, boost China's sustainable social and economic

development, reduce absolute poverty, and enhance the nation's comprehensive national power, ensuring its continued rise in international power rankings. What this means concretely is that there will be increased investment in population quality, or human capital, in all its manifest forms – health, education, genetics, ethics, and so on (Lampton 2008, p. 24). All indications are that population will remain a key object of state investment and administration and vital politics will remain a central arena of governance for a long time to come. As PRC governance more generally shifts from economic to social governance, aimed not at growing the economy, but at enhancing the nation's human resources and capital, the bio-governmental management of the population will play an even larger role in how China is governed.

Biopolitics beyond China: concluding thoughts

This brief review of Chinese biopolitics today makes clear that any announcement of the demise of biopolitics in the twenty-first century is premature. The fate of biopolitics matters. Although I have not been able to fully develop all these themes here, a close study of biogovernance in China reveals the centrality of life politics at the collective level to the development of capitalism, the continued power of state, and the global rise of China. The stakes in the question of the rise or fall of biopolitics are high indeed.

The politics of collective life remains robust not just in China and other parts of Asia, but at the global level as well. For example, transnational projects to manage terrains labeled “population and environment”, “reproductive health and rights”, “transnational migration” and “biosecurity” all signify the importance of biogovernance and biopolitics in today's world. By thinking more globally about biopolitics, and by broadening our study of science, technology, and life politics in the twenty-first century to include the management of human collectivities, we are likely to uncover new forms of science, rationality, subjectivity, and ethics that are forming around the management of life, and novel ways in which the individual and aggregate domains of life politics are being co-constituted today.

Notes

1. Foucault's 1978–1979 lectures titled *The birth of biopolitics*, for example, focus almost exclusively on the rationalities of liberal and neoliberal government, a topic he considered analytically prior. Biopolitics itself is treated only in passing. He also briefly discussed the topic in his 1975–1976 lectures at the College de France (esp. Foucault 2003, pp. 239–263).
2. Of the world's total 2007 population of 6.6 billion, 16.6% lived in “the West”, a region including Europe (728 million), North America (337 million), and Oceania (34 million). Computed from data in Commission on Population and Development 2007, p. 5.
3. Gender – the instrument of reproductive modernization – was also defined biologically. Gender difference was understood as biological difference in reproductive structure and function, with women being by nature the primary reproducers.

4. Like all such measures, including similar indexes developed outside China, this one suffers from methodological difficulties, including problems of measurement, data accuracy, and data comparability (see Lampton 2008, p. 22).
5. A key question, of course, is how much of the fertility decline is due to the birth program. Program claims to have averted 400 million births are wildly exaggerated. Especially since the early 1990s, changes in family organization and child economics sparked by intensified globalization have been at least as fundamental as program efforts in spurring fertility decline. For more, see Greenhalgh and Winckler (2005, chap. 7).

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