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Is the degrowth debate relevant to China?

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Abstract In industrialized countries, the idea of degrowth has emerged as a response to environmental, social, and economic crises. Realizing environmental limits to and failures of more than half a century of continual economic growth in terms of social progress and environmental sustainability, the degrowth paradigm calls for a downscaling of consumption and production for social equity and ecological sustainability. The call for economic degrowth is generally considered to be delimited to rich countries, where reduced consumption can save "ecological space" enabling people in poor countries to enjoy the benefits of economic growth. China, as one of the economically most expanding countries in the world, has dramatically improved its living standards, particularly along the Eastern coast, over the latest 30 years. However, China is absent from the international debates on growth. This article discusses the implications of the Western degrowth debates for China. Given the distinctive features of China's development, the paper aims to enrich the degrowth debates, which have hitherto been dominated by Western perspectives. Based upon reflections on social, environmental, and moral dimensions of economic growth, the paper argues that limited natural resources may not continuously support universal affluence at the current level of the rich countries, a level that China is likely to reach within a few decades. Priority for growth in China should therefore be given to the poor regions of the country, and future growth should be beneficial to social and environmental development.

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1 Introduction

In the latest six decades, the pursuit of economic growth has been a dominant ideology across the world. Still, in industrialized countries, degrowth debates have been going on at least since the 1950s. These debates can be separated into three periods. The period from the 1950s to 1970s is characterized by a critical discussion of environmental and social consequences of growth. This criticism culminated in the publication of a famous report from the club of Rome, *The Limits to Growth* (Meadows et al. 1972), and was strengthened by the economic crisis in the 1970s, triggered by two times trebling of oil prices. During the 1980s, the critique of growth itself was played down, as the economy regained its momentum, and was gradually replaced by the view of "decoupling" economic growth from environmental deterioration. This "decoupling" view was emphasized, for instance, by the World Commission on Environment and Development as a key strategy of sustainable development in their report *Our Common Future* (WCED 1987) as well as in a number of books and report focusing on "ecological modernization" (Huber 1985; Spaargaren and Mol 1992; Mol and Spaargaren 1993; Hajer 1995).

More recently, however, the possibility of maintaining environmentally sustainable economic growth through decoupling has been questioned by critics arguing that it will not be possible to completely decouple growth in production and consumption of every type of commodity from every kind of negative environmental impact. Decoupling will at best be partial, and if we want to avoid a steady, albeit somewhat slowed down, deterioration of the natural environment, more environmentally friendly ways of producing and consuming will have to be combined with limits to the volume of the economy. While embracing Ecological Modernization's quest for more environmentally friendly production technologies and patterns of consumption, *degrowth* proponents consider these avenues to be insufficient. In their view, the economies in the rich countries have already grown beyond sustainable levels and should undergo a process of shrinking (Schneider et al. 2010; Martinez-Alier et al. 2010; Spangenberg 2010).

This reinvigorated criticism of economic growth as primary goal for societal development has manifested itself, among others, in two international degrowth conferences in 2008 (in Paris) and 2010 (in Barcelona). The call for economic degrowth in rich countries is partly based on the moral premise that more ecological space ought to be saved for people living in poor countries, where economic growth really makes a difference. During the latest decades, rapid economic growth has actually occurred in developing countries. These countries have adopted a development path similar to rich countries, but with growth rates that are higher than their Western counterparts. China is generally acknowledged as the forerunner in economic growth among developing countries, due to a series of economic reforms since 1978. The affluence level of the more developed Eastern coastal areas of China is now comparable with some rich countries.

Although China is still a developing country attempting to catch up with the rich countries in the world, the Western degrowth debate may in our view be relevant to China for at least three reasons: (1) The wealthiest regions of China is rapidly approaching the affluence level of the rich countries. When China reaches and maybe even surpasses the rich countries, non-growth or degrowth will inevitably emerge as an issue of debate. (2)

The degrowth paradigm, as an alternative path in contrast to the dominated growth ideology to realize human progress, could provide a lens for China to examine the gains and losses of more than 30 years of high-speed economic growth. (3) China, the most populous country in the world with a rising economic and political status in the international society, has to realize its moral obligations in relation to the rest of the world, not only for altruistic reasons but also in its own long-term interest.

Despite these circumstances, China is still absent from the international debates on growth. It is no accident that the lead author of this paper was the only Chinese participant in the second international degrowth conference in Barcelona in 2010. This paper tries to fill the gap by discussing the implications of the Western degrowth debates for China. It is probably the first entrance of an explicit Chinese point of view to the degrowth debates in an international academic setting.

In contrast to the more diversified standpoints in rich countries, there has been consensus among politicians and academic researchers in China that pursuit of growth is on the top of policy priorities. Voices questioning the desirability and feasibility of continual economic growth have been rarely heard until quite recently. This lack of debates on growth can be attributed to various reasons. Firstly, the fact that China's level of affluence was at the outset very low urged the promotion of economic growth. The perceived benefits of over 30 years' commitment to economic growth underpin the belief in growth. This belief is strengthened by the general Marxist–Leninist belief in progress with technical advance and development of productive forces as main drivers. Secondly, the pursuit of economic growth in developing countries is strongly recommended and supported by the international society as part of the ideology of "sustainable development" (UN 1990; WCED 1987). Thirdly, distinct from the developed countries, where dissenting voices criticizing the general policy objective of economic growth are mainly from academia, academic discussion in China on economic growth is limited by a strong hegemonic political discourse. Even though rapid economic growth has created many visible social and environmental problems, these problems have not given rise to questioning of the desirability of growth in itself, but have rather accentuated the belief that a state in continual rapid development will be still more able to mitigate problems and ensure stability (Lewis and Litai 2003).

Although the counter discourse on economic growth is a blind spot in China, there is a long history of discussion centered on the *mode* of growth. Particularly, in the latest couple of years, a number of economists have questioned the central government's current policy of guaranteeing a stable and high economic growth in order to deal with the rising unemployment rate and social unrest caused by the global economic crisis. These critical economists do not argue against the necessity and possibility of growth, however, but only identify structural shortcomings that are likely to impede its continuance (Yu 2010; Christian 2010). Similarly, the current mode of economic growth has been questioned, even by the political leaders themselves, due to its negative environmental and social impacts. "Building up a harmonious society" and "scientific outlook on development" have become popular political slogans attempting to reconcile economic growth more with environmental protection and social equity (Fourth Plenary Session of the 16th Chinese Communist Party Central Committee 2004; 17th National Congress of Communist Party of China 2007).

The degrowth debates, on the other hand, open up an alternative potential path for achieving the overall goal of human well-being. In the following sections, we shall briefly present the key points of the Western degrowth debates, compare the trajectories of economic growth in China and rich countries, and subsequently discuss the implications of the degrowth debates for China as well as the Chinese experiences to degrowth debates.

2 Western degrowth debates in summary

The degrowth paradigm calls for an equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level, in the short and long term (Schneider et al. 2010). Degrowth cannot be understood only quantitatively in symmetry to "growth," but is a concept combining economic, social, and moral dimensions with theoretical implications (Latouchea 2010). The departure point of the degrowth paradigm is the belief that current economic growth is unsustainable. Continuation of economic growth will make it impossible to reduce the environmental impacts as much as is needed in order to stay within the biophysical limits of the planet. The degrowth paradigm, therefore, recommends a reduction in the scale of the total economy. Degrowth debaters think that human progress is possible without economic growth. The goal of human development is the pursuit of well-being, ecological sustainability, and social equity, and what happens to GDP is of secondary importance (Schneider et al. 2010). Economic growth is a means, not the end of human development.

2.1 Constraints on growth

The idea that the economy is an open system depending on external sources and sinks is basic in the degrowth paradigm. The human economy is a subsystem of a global ecosystem with a finite capacity. The larger the scale of the economy becomes, the greater the risk will be of destroying the long-term conditions for human life on earth. Human economic growth should not exceed the "carrying capacity" or "biocapacity," which represents the theoretical maximum supply of natural resources and ecological services that can be provided by an area (Daly et al. 1989; Wackernagel and Rees 1996; Røpke 2004, 2005; WWF 2010). If economic growth continues to be coupled with material impact like depleting non-renewable resources, generating emissions and wastes, polluting water, atmosphere, and soil, it may ultimately lead to imbalance and instability in ecosystems, undermining their function as life-support systems (MEA 2005; Steffen et al. 2005; UNEP 2002, 2005).

One indicator of the size and impact of human economy is the so-called ecological footprint, i.e., the amount of arable land used by humans. According to some estimates, the global ecological footprint occupied 70% of the global amount of arable land in 2007. If we include the so-called carbon footprint, i.e., the land needed as sink for the humanly induced surplus of atmospheric carbon dioxide, there is an ecological overshoot of 50% (WWF 2010). The estimates show that the footprints of rich countries are many times larger than those of poor countries. If all citizens of the globe were to have a living standard like the one of the upper tenth, a very radical and all-encompassing decoupling of economic growth from environmental impact would certainly be needed. Considering that even the economies of the wealthiest countries continue to grow exponentially, there is every reason to be anxious about the ecological limits to growth. The degrees of dematerialization that would be required in order to combine long-term growth with environmental sustainability would presuppose an unrealistically high degree of eco-technological efficiency increase based on almost complete control of machines, products, and impacts (Kvaløy 1985). In fact, more eco-friendly technologies only seem to postpone the point of meeting these limits rather than simply removing them.

2.2 Failures of growth

2.2.1 Social failures

Economic growth has been conventionally associated with social benefits like freedom, opportunities, tolerance, social mobility, quality of life, and social equity, including alleviation of poverty and reduction of unemployment (Friedman 2005; cf. also Sen 1982/1997, Sen 1987 for a critical approach). However, a number of studies have shown that the curves of economic growth no longer parallel those of human flourishing, no matter how this is defined, after the economy has grown to a certain point. In terms of life satisfaction and happiness, a small increase in GDP in poor countries leads to a significant rise in happiness, whereas people in high-income countries are not necessarily more satisfied than people in countries with lower average income levels (Inglehart and Klingemann 2000; Easterlin 1973, 1974, 1995, 2005; Duncan 1975; Shin 1978; Kenny 2005).

Research even shows that for countries with income growth rates above the world median, the higher the income growth rate is, the less satisfied people may actually be with their lives (Inter-American Development Bank 2008). The lack of proportionality between economic growth and human flourishing also occurs in relation to measures of life expectancy, health, and educational participation (UNDP 1990, 2010; Jackson 2009). The diminishing social returns from economic growth seem to imply that at least the kind of growth concentrating on material goals is not as decisive an element in making people in affluent nations more satisfied with life as one might expect from its high priority on the political agenda.

A "trickle-down effect" or "a rising tide lifts all boats" are widely used terms to demonstrate that economic growth sooner or later will benefit even the worst off parties and eliminate poverty both within and across countries. Economic growth during the latest decades has clearly helped a large number of people out of extreme poverty (Chen and Ravallion 2008). At the same time, however, the economic growth seems to have benefited the rich considerably more than the poor. A body of literature shows that the massive global economic growth has been accompanied by an even greater increase in the divergence between the rich and poor (OECD 2008; Stutz 2010). An OECD study on income distribution and poverty (OECD 2008) suggests that the gap between rich and poor has grown in more than three-quarters of rich countries since the mid-1980s. Relative poverty has thus become more pronounced during the decades of economic growth. This seems to suggest that economic growth helps to reduce absolute poverty, but cannot be expected to reduce income inequality. "Raising the tide" may thus not be an efficient way of eliminating relative poverty, compared with policies focusing directly on the poor. Moreover, since wealth and purchasing power are often important sources of social status and political influence, economic growth widening the gap between rich and poor may affect the possibility for low-income groups to democratically participate in decisions about the future development of society.

Economic growth in affluent countries is also assumed to reduce unemployment rates (Spangenberg 2008). Without growth, increasing levels of productivity per capita are expected to reduce the size of the workforce. However, growth does not necessarily lead to reduced unemployment. Increasing production and productivity through technological innovations rather involves a general "acceleration of society" (Rosa 2003). Adaptability to changing conditions is increasingly becoming a requirement. Employees are required to be flexible, to work at odd hours and be prepared to change tasks and affiliations more frequently (Sennett 1999). As a result, vulnerable groups have been expelled from the

workforce. In Denmark, for instance, about 800.000 persons out of a population between 16 and 66 years of age of 3.7 million are currently left permanently out of employment due to their inability to function in an "accelerating society" (Statistics Denmark 2009). In a degrowth paradigm, on the other hand, if the number of working hours decreases quicker than productivity grows, increased productivity will not result in unemployment but rather in a general harvest of free time for other activities (Jespersen 2004; Spangenberg 2008).

2.2.2 Environmental failures

Degrowth proponents argue that decoupling environmental impacts from economic growth through efficiency improvements is not sufficient to reach environmental sustainability. Gains from eco-efficiency and substitution—the two main factors in the process of dematerialization, i.e., the decoupling of economic growth from resource consumption and negative environmental impacts—have hitherto been more than offset by growth in output. This effect is depicted by the metaphor "going down an up escalator" where the escalator is the growth in the scale of economy (Stutz 2010). Even though eco-efficiency has been improved dramatically in certain areas by technological advancement (Weizsäcker et al. 1997), the effects of the "growth escalator" has offset the effects of increased efficiency, so that the total result is no reduction or even increases in absolute environmental impact. Unless the speed of going down can catch up with the growth rate of the escalator, environmental impacts will still increase and reach the global limits eventually. In the long run, it is hard to believe that technology can advance to the extent necessary to compensate for exponential economic growth (Næss and Høyer 2009). Success in resource efficiency often leads to a "rebound effect" where the use of each resource tends to rise as resource efficiency increases (Nørgaard 2009).

Environmental problems are often assumed to be dealt with in cases of continual economic growth. This has been illustrated by the so-called environmental Kuznets curve (EKC) hypothesis, according to which economic growth in poor countries usually entails environmental degradation, whereas wealthier countries spend more money on the development of environmentally friendly technologies (Barry and Paterson 2003). However, the inverted-U-shaped curve of the EKC hypothesis has mainly been found for specific pollutants at a local scale. There is no indication that it is valid for total resource throughput (Spangenberg 2001), and certain pollutants, like CO_2 emissions, have not been reduced with higher GDP (Galeotti et al. 2006). Observed inverted-U curves can at least partly be attributed to changes in international trade: pollution intensive goods are imported at the expense of environmental quality in foreign nations (Suri and Chapman 1998; Agras and Chapman 1999).

2.3 Moral premises for degrowth arguments

Economic growth affects people and other living creatures remote from us in more than one dimension, leaving us with a fairly complex pattern of potential obligations. This is illustrated in Fig. 1, showing potential moral obligations along the three dimensions of time, space, and species (Arler 2001, 2006).

Intergenerational equity is a main moral concern when judging the plausibility of degrowth arguments. From an environmental perspective, intergenerational equity can be interpreted in its most basic form as an obligation to leave future generations living conditions comparable with those we inherited ourselves (Arler 2001, 2003, 2006; Weiss 1990). This obligation to preserve the quality of our planet will constrain present

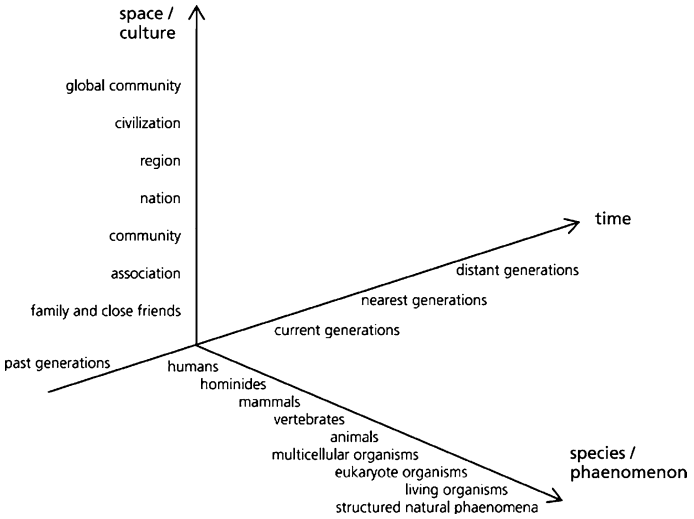

Fig. 1 Three dimensions where obligations may become relevant (Arler 2006)

generations' actions in exploiting and using resources. Continuing current levels of growth will result in higher risks of undermining the capacity of succeeding generations to create well-being. Even though depletion of natural resources may lead to a number of the substitutions that defenders of "weak sustainability" rely on (Solow 1974, 1993; Beckerman 2002; Beckerman and Pasek 2001), substitution opportunities are not without limits. Some fundamental functionalities of nature are critical in the sense that they are impossible to live without and may be irreversibly lost once destroyed (Ekins 2003; Ekins et al. 2003). Other goods are unique in the sense that they cannot be substituted for due to their moral or cultural significance (Arler 2003).

The spatial or cultural dimension of moral obligations extends the traditional scope of ethical concerns by including moral responsibility toward population groups beyond one's specific community or nation. In terms of environmental justice, some populations or regions may face greater risks from exposure to environmental hazards or lack of resources than others. It seems unfair to let certain groups of people suffer significant environmental hazards simply because they live far away from the polluters. Another consideration of equity is related to sharing the world's ecological space. In 2007, high-income nations with only 15% of global population accounted for 35% of the total ecological footprint. Sixty-one percentage of this was due to imports (WWF 2010). The average ecological footprint per person in high-income countries was about 5 times as large as that of low-income countries (using World Bank income thresholds from 2007) (WWF 2010). Although a shift to environmentally sounder technologies may provide some breathing space, continual consumption increases in rich countries will sooner or later have to be balanced by consumption reductions in poor countries. With a limited biocapacity, substantial cuts in resource consumption and waste generation in rich countries are required, if more ecological space is to be left for poor nations.

The overload of ecological footprints burdening the Earth's biocapacity not only brings conflicts within the human species across regions, cultures, and classes, but also means that less ecological space is left for other organisms. It thus raises concern in the third dimension of human moral obligations: the respect we owe to organisms from other

species. Even though there are conflicts over the issue whether other species or organisms have some sort of intrinsic value (or inherent worth) committing human beings to preserve and protect them (Næss 1973, 1993; Taylor 1986; Attfield 2003; O'Neill 1993) and to what extent humans should be allowed to displace or interfere with other organisms' lives, ethical reflections with respect to other species can at least be seen as vaccinations against hubris. Whatever the specific arguments may be, many people tend to believe that they have a duty to conserve various natural features, for example richness and biodiversity of ecosystems, and to leave spaces for non-human species living in the wild.

3 China's explosive growth

Figure 2 provides information on economic growth drawn from and developed using data provided by World Databank (2011). We mainly introduce this figure to illustrate the rapid economic growth in China since the open door policy in the late 1970s. If this fast growth continues, China will in a few decades catch up and exceed the affluence level of the rich countries. Following the World Databank (2011), the term "rich countries" here refers to the OECD countries. The figure shows the trends of economic growth in a "business-as-usual" scenario and an alternative illustrating a hypothetical non-growth economy in the rich countries.

As shown in Table 1, during the latest two decades (1990–2009), the pace of economic growth in the rich countries has declined compared with that of the previous period 1980–1990. However, the size of the output per capita in these countries was large already in 1990. With this high starting point, the declined growth rate in the following years still generated a big change in the GDP per capita PPP (purchasing power parity). In China, economic growth took off in the 1950s and has accelerated since the late 1970s. Through the years 1980–2009, the growth rate has been much higher than among the rich countries, in particular in the latest 20 years (cf. Table 1). Even though the starting point of China

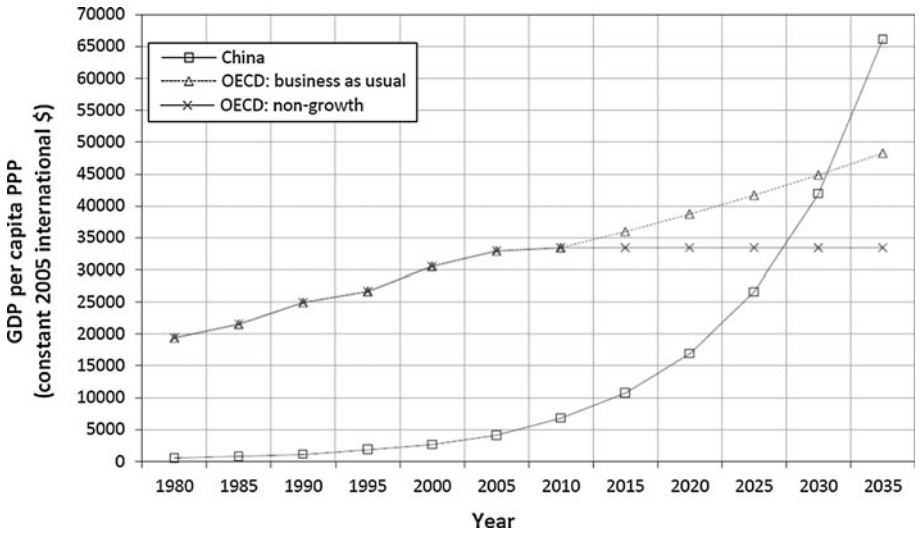

Fig. 2 Comparison of economic growth between China and OECD countries

Table 1 Annual growth rate of GDP per capita PPP (%)

Region	1980–1990	1990–2009
OECD	2,53	1,48
China	7,71	9,53

Source World Databank 2011

was quite low, the high growth rate has brought about a big increase in the individual affluence level. The impact on the increase in the consumption level will be amplified as the size of the economy is becoming larger if the growth rate remains high.

In the business-as-usual scenario, both the rich countries and China keep their growth rates experienced over the period 1990–2009 in the following years. As a result, China will reach the average affluence level of OECD countries in 2031. The second scenario assumes non-growth in the rich countries from 2010 on. If the economy stops growing in rich countries,[1] while China keeps growing at the same rate as in the years 1990–2009, the time span for China to overtake the rich ones will be shorter, in 2028 as predicted in Fig. 2. The coastal provinces in China will catch up with the rich countries before the predicted time, since these regions have higher growth rates and are at the outset much richer than the inland areas (Yao and Zhang 2001; Kanbur and Zhang 2005).

The most important motivation for developing countries to continue growth is to narrow the gap with developed countries. The rich countries function as a reference group, and "reaching the Western standard" is an implicit goal embedded in policies of developing countries. Comparison of the trajectories of economic growth between China and the rich countries shows that China, in particular the coastal region, will achieve the Western affluence level within two decades if subsequent growth keeps the same rate as currently. Degrowth defenders argue for degrowth in the affluent countries as an option to face ecological crisis and seek social progress while showing a sense of responsibility on behalf of rich countries for the human beings in the world. When China converges with the rich nations, as a country claiming itself to be responsible, non-growth is likely to emerge as an issue of debate. An early awareness of a forthcoming economic non-growth can make people better prepared and thus make the change less difficult.

4 Implications for China

The implications of degrowth debates for China are twofold. For one thing, the paradigmatic proposition of degrowth for social equity and ecological sustainability in rich countries could inspire reflection on the economic growth of China as a whole. Moreover, the large geographic scale of China and the substantial regional differences within the country make it face challenges similar to the problems at the global level. Therefore, the implication of the degrowth paradigm also applies to the regional level within the borders of China. This two-tier implication will in the following sections penetrate our reflections on China's economic growth in terms of social development, environmental consequences, and morality.

[1] In a degrowth economy as proposed by degrowth proponents, the economic growth in rich countries is lower than zero-growth. This paper still adopts zero-growth as an illustration of an alternative trajectory for rich countries since the extent of degrowth is difficult to project.

4.1 Reflections on social development

Clearly, over the latest 30 years, economic growth has brought stunning social progress in China, measured against a number of indicators. Increased wealth has tremendously broadened individual choices of consumption and satisfied private preferences. Other social aspects, like life expectancy, penetration of education, and medical care, have been improved on average for the whole country. Generally speaking, economic growth has greatly advanced the quality of life of many of the 1.3 billion Chinese. However, China's economic growth has not been matched by a similar degree of improvement in some other social aspects. According to the Human Development Report, China ranks first in economic growth since 1970, but seventy-ninth of 135 countries in improving education and health. What is more, the school enrollment ratio has declined compared with that in 1970 (UNDP 2010). According to UNDP (2010, p. 105), this gap between economic growth and social progress is attributed to China's "single-minded pursuit of economic growth." Distinct from the widely held assumption, shared by traditional growth advocates as well as by many degrowth proponents, that economic growth may contribute to human prosperity when the affluence level is low or moderate, the experience of China where the affluence level is only around one-fourth of that in the rich countries calls into question whether rapid income-based economic growth is necessary to further human development when the levels of affluence are low or moderate.

The lack of proportionality between economic growth and subjective well-being when the economy has grown to a certain point is an important justification for the degrowth argument in rich countries. However, most researchers would agree that rising economic incomes at a low living standard can increase happiness significantly (Easterlin 1973, 1974, 1995, 2005; Duncan 1975; Shin 1978; Kenny 2005). In this sense, one would expect the Chinese to have become happier over the last 30 years since the astounding economic growth has dramatically increased the average material living standard. Nevertheless, in contrast to this expectation, several studies have concluded that people's life satisfaction has fallen compared with that in the 1990s for the country as a whole as well as for various income groups, including the richest part of the Chinese population (Appleton and Song 2008; Brockmann et al. 2009).

According to Brockmann et al. (2009), the declining life satisfaction in China can mainly be attributed to increased relative deprivation, which means that growing inequality makes an increased portion of population fall below the country's mean income. As a result, many people feel disadvantaged when they compare themselves with other groups despite absolute increase in their incomes. The tendency of comparison with rich groups is facilitated by the fast development of media, internet, advertisements, TVs, movies, etc., in urban China. This could partly explain why the urban Chinese are less happy than the rural people who tend to confine their reference groups to their village, where income levels are generally lower than in the urban areas (Knight et al. 2009). The transition from planned economy to market-based economy has augmented the importance of money in daily life. In the planned economy, most of the things were allocated by government, while in a market economy, commodification, and privatization make money crucial for obtaining commodities. Therefore, even though Chinese are richer than before in absolute terms, the unhappiness due to increasing inequality appears to outweigh the happiness brought about by the growing purchasing power.

A main argument of neoclassical economics in favor of growth is that it can increase people's ability to fulfill their preferences. However, in the Eastern region, where people are wealthy, their preferences are changing, fueled by advertising and influences through

the media, as more expensive and luxury commodities become available on the market. There is thus always a gap between aspirations and the power to purchase these items. The feeling of lacking purchasing power increases and thus the growth fails, measured against its own promises.

Increased income inequality is another trend accompanying economic growth in China. The Gini coefficient—a measure of overall inequality—increased from 0.29 to 0.44 over the period 1981–2004, basically presenting a constant increase (Cheng 2007). For 2009, the coefficient has been estimated to be close to 0.5, which puts China among the top of the most unequal countries in the world. Consistent with the inequality existing between different income groups in rich countries, as pointed out by the Research Group of Xinhua News Agency (2010), the income gap in China between the highest 10% and the lowest 10% has increased by a factor of 23 from 1988 to 2007. More wealth has been concentrated and polarized in the hands of a small proportion of a large population. What is more complex in China than in the rich counties is the marked regional income disparity between inland and the Eastern coast and between rural and urban areas due to imbalanced development since the economic reform. Overall, these divergences have been growing, particularly between rural and urban areas (Kanbur and Zhang 2005; Cai et al. 2002).

Resources of education and healthcare are also unevenly distributed across rural and urban areas and between inland and coast, leading to high illiteracy and infant mortality rates in the rural and inland areas. These inequalities have risen substantially since the reforms began (Zhang and Kanbur 2005). Apart from the direct influence on the levels of individual education and medical care, such inequality directly triggers other social issues specific for China, e.g., the phenomenon of "National College Entrance Examination (NCEE) Migration."[2]

The causes of the generation of inequality have their historic root strongly related to the development strategy adopted from the beginning of economic reforms in 1978. Initiated by Deng Xiaoping, the core notion of development policy is to encourage a proportion of population and regions to become rich in the first place and then let other regions catch up later on (Yao and Zhang 2001). This can be summarized as a "trickle-down" policy. By channeling the country's limited resources and growth-stimulating measures into special economic zones along the Eastern coast, significant improvements in the living standard have been achieved in this part of China. On the other hand, after 30 years of reform, the rest of the population has failed to catch up. Instead, the divergence has enlarged.

The inequality issue has become a current area of concern from government and academia and is blamed to cause widespread discontent and social unrest (Chang 2002). However, as some researchers worry, it is difficult to reduce inequality and simultaneously achieve high growth rate in the East because resource allocation from the east to the rest of the country may undermine future growth in the East (Yao and Zhang 2001).

[2] Due to insufficient educational resources and thus on average poor study performance of high school students in Western China, universities usually lower the entrance line of NCEE for those student as a compensation for the regional disparities. This policy has attracted students from the Eastern provinces, where competition is fierce between a large number of candidates and entrance line is high, to immigrate to the less developed provinces the year before the NCEE. Benefiting from their good education background, their chances of being enrolled by universities are greatly increased. Because "easterners" who go to West China only for a short time to benefit from the lower entrance line occupy vacant quota places at the cost of the native young people of Western China, immigration for NCEE further worsens the inequality in terms of education. The root cause for this phenomenon is the unequal availability of educational resources across different regions (Lai and Wu 2003).

According to some critics, the rapid economic growth since the reform in China has been accompanied by a surge of other social problems—such as social stratification, rampant corruption (Lewis and Litai 2003), a rising unemployment rate (Giles et al. 2005), a considerably increased crime rate (Deng and Cordilia 1999), and demoralization driven by passion for money. Encouraged by the government's maxim of "development is the hard truth," commitment to economic growth has been present for decades in China. However, conflation of "development" with "growth" is misleading and represents a kind of tunnel vision since "development" is not simply a matter of economic growth but more generally about prosperity and progress. The social problems confronted by China at present are signs of the predicaments on the way of pursuing future prosperity.

4.2 Reflections on environmental consequences

Compared with the "pollution first and treatment after" trajectory of dealing with the relationship between economic growth and environmental protection typical for the history of developed countries, the Chinese state began to address environmental problems relatively early. Following China's signature of the UN Stockholm Declaration on Human Environment in 1972, i.e., long time before the economic reforms, environmental protection was on the agenda of government policies. In 1983, environmental protection was declared as one of the basic national policies. In the subsequent years, the role of environmental protection was highlighted in the political slogans of sustainable development and more recently harmonious development. Along with the emphasis on the importance of environmental protection in China's development, the environmental administration and legislation have gradually been established and developed. According to Beyer (2006), China's present environmental protection regime is quite comprehensive. At least in principle, China has adopted a development strategy that addresses environmental protection in the process of economic growth.

However, these principles are difficult to put into force. In practice, strong aspiration of economic growth has shifted the conception of the relationship between economic growth and environmental protection from coordinated development to priority of the economy at the local level (Liu and Diamond 2005). In practice, environmental sustainability has a subordinated position compared with economic growth. This has led to failures in the environmental protection and accelerated environmental deterioration in the reform era, even though some efforts have been made. Environmental complaints by citizens and environmental conflicts have rapidly increased during this period. The range of environmental problems confronting China is wide, including air pollution, water pollution, desertification, deforestation, biodiversity loss, soil erosion, cropland losses and, not the least, greenhouse gas emissions. Arguably, therefore, China's challenges in environmental protection are more extensive than in the developed countries. In spite of growing environmental awareness and the introduction of an increasing number of measures to promote environmental sustainability, economic growth in China still tends to coincide with escalating environmental impacts.

This conclusion can be supported by the results of studies testing the EKC hypothesis in a Chinese context. Both at the national and local level, the relationship between income growth and environmental quality is more complex than the hypothesized inverted U-shaped curve (Shen 2006; Diao et al. 2009). A U-shaped curve, a linear relationship as well as an N-shaped curve have also been observed for some pollutants in China. Moreover, research shows that economic growth is not the decisive or only factor in the improvement of environmental quality. Other factors, like environmental policies, play an

important role. Had the environmental polices not been implemented on the way of pursuing economic growth, the environmental degradation would have been severer in China. The fact that the overall environmental quality has become worse than before implies that the positive effects of environmental policies have been outweighed by the negative effects of economic growth. Part of the failures of these policies is attributed to the poor implementation at the local level (Beyer 2006). However, even with full implementation of these policies, efficiency gains would be counteracted by increasingly intensive development activities, rapidly growing consumption levels, and large-scale industrial production. China is thus lurching between accelerating environmental degradation and accelerating environmental protection.

The strategy adopted by China to tackle environmental problems is in line with the ecological modernization theory, where decoupling of economic growth from negative environmental impacts is a key element. Improving eco-efficiency is the major endeavor to realize this target. Thanks to the development of advanced technologies, energy conservation, and shift from energy-intensive heavy industry to less intensive light industry and service sectors (Liu and Diamond 2005), China's energy intensity has, as Fig. 3 shows, been falling considerably since the late 1970s. In 2008, China was almost as energy efficient as the developed countries. However, despite the large reduction in energy intensity compared with the developed countries, Fig. 4 demonstrates that this reduction is less significant compared with the economic growth during this period, leading to more than tripling of total primary energy supply in 2008. Relative decoupling has been obtained but absolute environmental impacts continue growing. The prospects for the future are even more frustrating because energy efficiency may not continue to increase as fast as in the previous period. Seen in light of the experience of the developed countries shown in Fig. 3, the pace of decline in energy intensity is relatively slower when the starting point is low than that when the starting point is high, like the case of China. If China's economy keeps on growing exponentially as quickly as in the previous period, combined with a

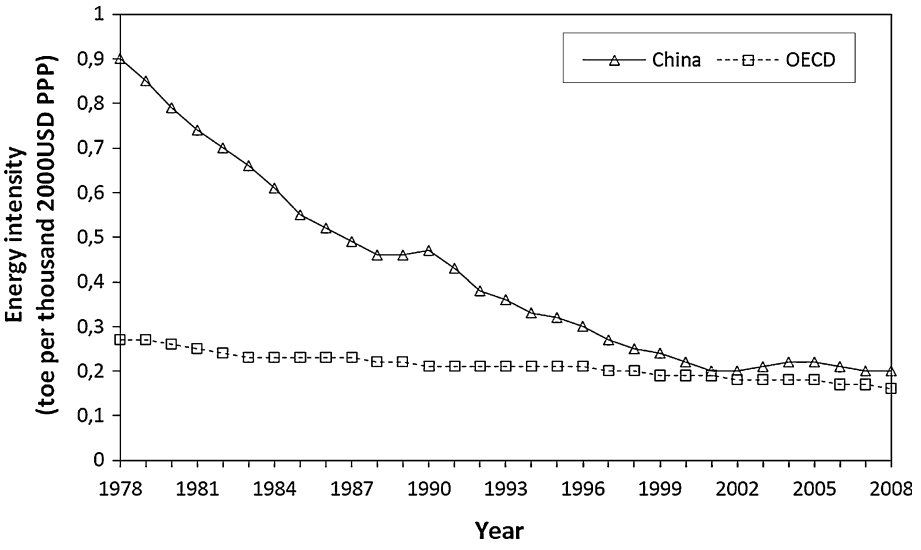

Fig. 3 Improvement in energy efficiency in China and OECD countries (based on data provided by IEA 2010)

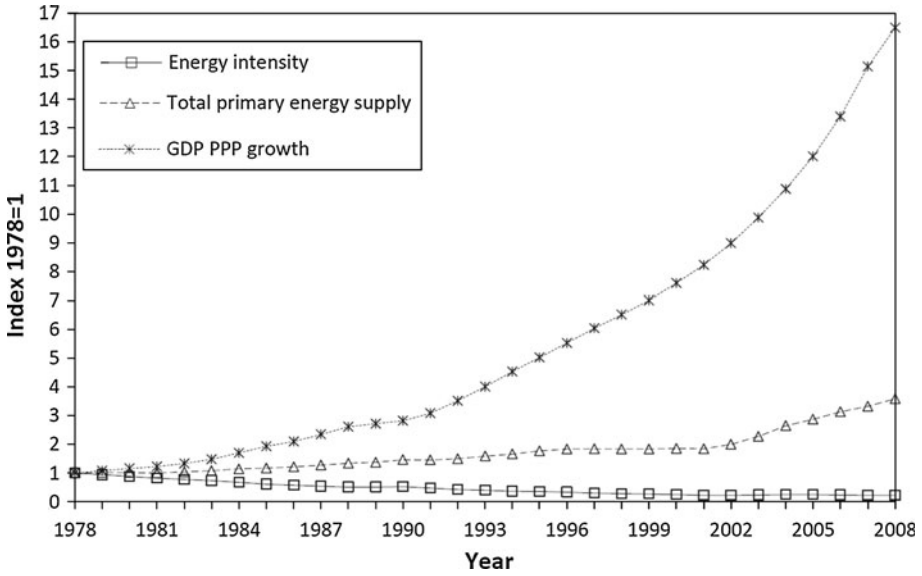

Fig. 4 Energy intensity, total primary energy supply, and economic growth in China (based on data provided by IEA 2010)

declining pace of improvement in energy efficiency, the total energy consumption will increase much faster. China may exceed the United States and become the largest energy consumer. However, the point is not who is the largest energy consumer in the world, but if the finite global resources could support such a rapid growth.

As the most populous country in the world, China is facing a dilemma. For one thing, the low per capita consumption level for China as a whole gives the country reasonable ground for commitment to economic growth. For instance, China's per capita use of energy in 2008 is less than one-third of the average among OECD countries. The per capita ecological footprint of China is below the world average (WWF 2010). Nevertheless, when it comes to aggregate consumption, China always ranks high owing to the large population size. Slight increase in per capita consumption would lead to a large increase in the aggregate term, and this will pose enormous environmental impact on the world. For instance, according to Liu and Diamond (2005), an increase in China's per capita consumption of four major industrial metals (steel, aluminum, copper and lead) to the present standard in developed countries would approximately double the world's use of these resources. If, as stated by WWF (2010), human ecological footprint already occupies 70% of the world biocapacity (and overshoots it by 50% if the so-called carbon footprint is included), would it then be possible for the physical resource and environmental conditions to bear a global affluence level where China has reached the rich countries? Even if the consumption levels of the rich countries stop growing, such a consumption level in China would put enormous strain on the global ecosystems and natural resources.

Take land consumption for residential development as an example. Over the past two decades, most Chinese cities have experienced rapid expansion. According to Liu et al. (2005), in the 1990s, urban land of China increased by 30%, among which 80% were converted from cultivated land. In China, farmland is a very scarce resource. China's per capita arable land is less than 0.1 ha, less than half of the world's average. The severity of

arable land shortage has been exacerbated by growth in population as well as per capita food consumption and continued arable land loss. According to the National Bureau of Statistics of China (2000, 2009), a total farmland area of nearly 10 million ha was lost in the years between 2000 and 2009, i.e., over 1 million ha per year. The tension between land preservation for agriculture and land demands for urban growth has been long-standing since the economic reform.

Apart from population growth, the boom of real estate market is a crucial contributor to urban expansion. Per capita residential floor area of the urban population has increased fourfold from 6.7 m^2 in 1978 to 27.1 m^2 in 2006 (National Bureau of Statistics of China 2009). As the per capita residential floor space is still considerably below average floor space levels in the developed countries, there is a general expectation of further growth in the housing stock to fulfill the demand of citizens for larger per capita living space. If land for housing-related infrastructure and other related economic development are also taken into consideration, more farmland will have to be converted to built-up areas. In addition, economic growth has tended to be accompanied by higher demands for private outdoor space. Even though China has a long historical tradition of compact urban development, leading to higher land utilization efficiency in Chinese cities compared with that in American and European cities, currently land use efficiency in Chinese cities shows a decreasing trend (Xue 2011; Feng 2009). If developmental densities continue to decrease, the land consumption will be higher, aggravating the situation of farmland shortage.

If China's urban economy is now property led as some researchers argued (Wang 2003), the land loss for economic growth will be likely to continue increasing. This phenomenon will be more serious in the Eastern coastal areas due to the higher population density and faster economic growth. Urban development and economic growth will encroach on more farmland in this region where most fertile and productive croplands are located in China. The decline in agricultural productivity due to the farmland loss in these areas cannot be compensated by reclamation of the same areas in other parts of the country.

Chinese leaders are aware of the limited availability of land resources and have tried to tackle it, for example, drawing demarcation lines around the minimum farmland protection areas and establishing policies to forbid the construction of villas and spacious dwellings. In early 2009, the Ministry of Land and Resources launched a national scheme of "Guaranteeing economic growth, Guaranteeing farmland area" with the purpose of increasing land use efficiency to allow for economic growth without taking up the farmland in the protection areas. However, increase in the already quite high land use efficiency in China's cities has very limited capacity in ameliorating the scarcity of land resource and supporting an attainment of the affluence level of rich countries. One can hardly in practice avoid converting undeveloped land to accommodate growth in the building stock no matter how efficiently the land is used.

The emphasis on the construction of concentrated types of dwellings to save land is perhaps raised by the realization that land scarcity for housing development (understood as land where construction can take place without depleting scarce farmland resources or causing other unacceptable environmental impacts) is a domestic issue and cannot be solved by import as other resource-based commodities. Historically, when economic growth in one country has faced domestic resource limits, this has most often been "solved" by global trade. When ecological space or natural resources can be imported from abroad, the feeling of limitation is weak and sometimes the issue is ignored. However, at the global level, the limit still exists. This is only a matter of transferring the pressure from its own country to other regions of the world.

To use the estimates of the WWF (2010), if the Chinese ecological footprint per capita increases to the average level of the high-income countries in 2007, then the total humanity's footprint will increase by 20% and make up 84% of the global bio-capacity (carbon footprint not included).[3] However, the bio-capacity within the borders of China would only be able to support 43% of the Chinese demand. This means that 57% would have to be provided by the rest of the world. Thus, the environmental impact resulting from China's growth (cf. Fig. 2) extends beyond China's borders and has become a problem for the rest of the world too. Stutz (2010) argues that in order to keep the global CO_2 emissions in 2030 at 2003 levels, not only should income in rich countries be kept at the 2003 level, but growth rates in the poor countries should be reduced below the level of business as usual. Within such a scenario of reduced economic growth in the poor countries, the priority for growth should be given to poor regions and population groups. In China, the inland regions and rural areas are those places where growth makes more sense, seen from such a perspective, than that in the coastal regions.

4.3 Planning for degrowth in China

The present patterns of resource consumption in the rich Western countries are environmentally unsustainable, particularly if they are imitated by the rest of the soon to be 9 billion inhabitants of the globe. As discussed in Sect. 2, degrowth proponents consider technological improvements and changes in the patterns of consumption insufficient to reduce the resource consumption of rich Western countries down to an ecologically sustainable level as long as the volume of production and consumption continues to grow. Hence, they call for shrinking the volume of the economy.

We have seen in the previous section that within a few decades, the resource consumption in China may reach levels comparable with the present level in the rich Western countries. If the call for degrowth makes sense in a contemporary Western context, it will also be relevant to China within few decades. The social tensions and inequalities resulting from China's present growth trajectory are additional reasons for this. But how can degrowth be achieved in a country geared strongly at growth? This question has been addressed to a much lesser extent than the question of whether growth should continue. Some debaters seem to rely heavily on lifestyle changes toward "voluntary simplicity," often depicted as a result of awareness-raising and deliberations in decentralized eco-communities. However, if the surrounding society is one where strong economic agents try to persuade the population to consume more through intensive advertising, there is a risk that voluntary simplicity will remain a marginal phenomenon.

There is reason to believe that market mechanisms cannot secure environmental sustainability when left on their own (Daly et al. 1989). The volume of the economy as well as the distribution of wealth is the parameters that need to be determined exogenously (outside the system) in order to solve allocation problems efficiently. These issues should be subject to political regulation. Authors like Daly and Cobb insist that the regulations necessary to obtain a steady-state do not rule out continuation of capitalist market economic measures. However, unless various kinds of voluntary restraints make it possible to reduce resource consumption radically over the coming decades, the need for regulations to control the volume of the economy as well as the distribution of wealth may turn out to be so extensive that the room for market measures will be more limited than Daly and Cobb expect (Næss 2006; Næss and Høyer 2009).

[3] If the carbon footprint is included, the overshoot will be more than 90%, according to WWF.

In this case, China's long tradition for central political power may give it certain advantages in relation to growth control and degrowth. It is most likely that the central government will have to intervene in order to control the volume and distribution of wealth. In a shrinking total economy, there is a risk that low-income people will be locked in continual or even worsened poverty. Redistribution of wealth from rich to poor population groups will be necessary, if degrowth shall be socially sustainable and gain public support (Martinez-Alier 2009; Spangenberg 2010).

The emphasis on governmental control does not mean that we recommend China to resort to a style of government characterized by top-down decrees with little scope for local and democratic discussion. Planning for a sustainable, non-growth or degrowth society must be oriented toward long-term goals and utilize knowledge about the environmental and social consequences of different solutions, but should not be based on a simplified means-ends rationality (Næss 1994). Communicative processes during the preparation and implementation of plans are necessary in order to give legitimacy to the plans. There would also be a need for "advocacy planning" (Davidoff 1965) as well as for various kinds of "counter discourse," both in order to protect the interests of minority groups and because the perceptions of officials in charge need corrections.

4.4 Moral themes in Chinese traditions

Both the current growth paradigm and the degrowth debate have developed in a Western tradition, and one could ask how well each of them fits in with traditional and modern Chinese values and whether Chinese philosophy includes moral arguments comparable with those occurring in the Western growth and degrowth debates. Is the degrowth debate likely to be welcomed or expelled by Chinese culture? Before dealing with these questions, it is worth remembering that a Marxist–Leninist worldview has been capable of dominating Chinese thoughts for more than half a century. This is a strong indication that philosophies are seldom tightly sealed systems resisting all intrusions from the outside, but rather develop along with the circumstances. It is also a clear signal that cultures are always inhomogeneous to some extent and encompass contradictory forces. Foreign ideas are far from doomed to lose in the Chinese setting, even though they are likely to be transmuted into local versions.

If we start looking at the ideas of growth and productivism that dominate the current development in China, it is obvious that Marxist–Leninist ideology has been very influential. A basic thought is that the human species develops through a number of stages defined by the relations of production and that technological progress is a main driver. Social justice and belief in continuously improved conditions for future generations have been crucial elements in this philosophy, too, but often at the expense of environmental considerations and solicitude toward other species. The surrounding nature has seldom been considered to be of much interest in itself; its destiny is to be conquered and transformed from an originally dominating force into means of fulfilling still more refined or liberated human ends. Resource limits do occur, but are expected to be overcome through technological innovation. Labor and technological ingenuity remain the true causes of value creation, not only in capitalist societies.

Marx himself did now and again utter worries about contemporary industry's devastating influence on its surroundings, particularly on the fertility of the soil, thus threatening the "conditions of life required by the chain of successive generations" (Marx 1894/1993). Friedrich Engels underlined this even stronger, first of all in his description of the conditions of the working class in the great towns of England in 1844 (Engels 1844/2009). But

both quickly related environmental destruction to the uncontrolled influence of blind market forces in capitalist society and anticipated a more consciously planned development in future post-capitalist society. When humans finally jump from the "realm of necessity" into the "realm of freedom," they become true and refined masters of nature and will no longer accept wasteful, ugly, and unhealthy conditions.

It is far from obvious to what extent this "realm of freedom," i.e., socialism or communism, was expected to encompass continuous material growth, but degrowth has never been an issue in traditional Marxist-Leninism. How about the Chinese philosophy that was taught before the Marxist–Leninist regime took over after World War II? Is this tradition, consisting of various branches of Confucianism and Taoism with a certain influx of Buddhist ideas, more in line with the degrowth debate?

First of all, it is quite obvious that considerations about nature and the "natural way" have always been an integral part in traditional Chinese philosophy. A core principle of Taoism is that nature has its own harmonious and balanced way. *Tao*, or the "law of nature," is the basic principle of the universe, and it organizes and structures everything in a way that leads to some kind of balance. This fundamental "law of nature" is also considered to be the best criterion for human behavior. What human beings should do is *wu-wei*, literally "non-action," suggesting that one should never take actions conflicting with the law of nature. Together, *tao* and *wu-wei* encourage humans to respect existing natural rhythms and avoid interrupting natural processes that by themselves lead to harmonious states.

A kindred idea in traditional Chinese philosophy is the emphasis on the "unity of heaven and humanity" or the tripartite cooperation of heaven (*tian*), earth (*di*), and humans (*ren*). The "way of nature" is also the "way of heaven." This idea has been interpreted in a number of ways (Lai 2003), but in the recent debate, it has primarily been seen as envisaging an integration of humans within nature leading to respectful interaction and reciprocity between humans and (the rest of) nature (Tu 2001; Shi 2002).

It is never easy to translate such general ideas into modern policy recommendation, and one should be cautious about modern recoverings of ancient, ecological wisdoms including ideas that turn out, after some interpretative effort, to be surprisingly similar to those occurring in modern, global discourses (Pedersen 1995). In the Chinese case, traditional conceptions have been reintroduced by some authors with the explicit purpose of giving support to modern degrowth positions' demands for limited intervention, limited scale, inartificial methods, and non-invasive technologies (Jenkins 2002). The degrowth demands appear to be seamlessly consistent with traditional views and can be contrasted with economic growth protagonists' view of nature as a useful external source in need of control.

The allegedly traditional wisdom of a balanced interconnectedness of all things works well, too, with degrowth theorists' analogous insistence that the human economy is only part of a larger ecological system and that economic expansion could threaten balances crucial for ecological functions. Similarly, in traditional moral teaching, "frugality" is regarded as a moral virtue, reminding people that humans will finally suffer if they cannot control their aspirations. Applied in a modern setting, an obvious interpretation is to warn against overconsumption, which may lead to the collapses in the ecological systems. The organic holism in traditional conceptions implicitly seems to reject reductionist values inherent, for instance, in economic accountings that exclude social and environmental externalities (Jenkins 2002). Commitment to economic growth without any account of non-monetary aspects of human well-being thus appears foreign to traditional Chinese worldviews, wherefore terms like "efficiency," "wealth," and "development" need to be

redefined from a more comprehensive approach that includes more than material accumulation.

Even if interpretive caution is needed, it remains true that traditional Chinese philosophy does emphasize an aim of harmonious integration of different elements within the universe (Tucker 1991; Tu 2001). Harmony is not only recommendable within the human world, but also in the relationship between humans and nature as a whole. A basic tenet in this is self-cultivation (*tao* in the Confucian tradition), i.e., a heart-and-mind expansion proceeding in concentric circles from oneself at the center to family, community, nation, and eventually to all humanity. Each shift leads into a new stage in a continuous self-cultivation transcending egoism, parochialism, and chauvinist nationalism and inspires a sense of responsibility to other communities, regions, and finally the globe in total (Tu 2001). The Confucian idea of self-cultivation is traditionally confined to human society, but inclusion of some basic Taoist traits would make it possible to see environmental problems as interruptions of an even larger harmonious order (Tucker 1991; Lai 2003).

In effect, this kind of thinking seems altogether compatible with the moral premises of the Western environmentalist and degrowth debates calling for obligations along the dimensions of time, space, and species, not only in the so-called deep ecology movement (Næss 1989; Fox 1990) but also from an environmental justice perspective (Wenz 1988). Again, one ought to be cautious about overinterpretations, but the very fact that a number of interpreters see ancient ideas as at least kindred to modern conceptions occurring in the degrowth debate underpins the thesis that nothing in the traditional worldviews obstruct the introduction of these conceptions. The traditional views may actually contain some conceptual sources that do not simply work as distant echoes of current thoughts, but which are original enough to lead the modern debate in new directions.

Since 1949, when a Marxist–Leninist worldview was installed, nature has mainly been regarded as external and subordinate to human beings who have conquered it through the use of science and technology (Ho 2001). This way of thinking has begun to change slowly at least since the 1970s along with the accelerating awareness of the environmental damage that has become still more visible during the latest decades of fast economic growth. The high growth rates have partly been caused by a deliberate reintroduction of market mechanism, but the old belief that only capitalist societies suffer from environmental damage has definitely been altered. Similarly, traditional moral thinking is currently being reexamined in China. These changes are at least partly reflected in the requests for a more "scientific outlook on development" and for "a harmonious socialist society" that the Communist Party proposed as national development strategies in 2003 and 2004 (cf. p.3). The call is for a comprehensive, balanced, and sustainable development that apart from democracy, equity, and justice, even includes visions of "harmony between humans and nature." One may have doubts about how much these general ideas actually influence day-to-day policies, but they do at least indicate a conceptual change of mind among state leaders.

5 Conclusion

Is the degrowth debate relevant to China? At first sight, it may seem strange, inappropriate, and unconvincing to talk about moral considerations leading to degrowth recommendations in a country like China, where people have been longing for decades to catch up with the richest countries without reaching the goal. And it is certainly true that the average affluence level, per capita resource consumption, and pollutant outputs are still much lower

in China than in developed countries, so it could easily be argued that China still has a moral right to develop.

The Western degrowth debates can inspire reflections on China's growth in many respects, though. The lessons mainly relate to three aspects: growth for how long, growth for whom, and growth for what. There are three main reasons for this. (1) Chinese consumption levels will reach the OECD countries within a couple of decades if present growth rates continue. The limited natural resources may not support such a global affluence level, however, since technological improvements cannot develop fast enough. (2) The richest parts of China will reach OECD levels much sooner than the rest. If China shall continue to have a moral right to economic growth, priority for growth should be channeled to poor regions in inland China and low-income population groups. (3) Instead of single-minded commitment to economic growth, future growth should be carefully assessed, and only accepted to the extent that it is beneficial to social equity, improvement in education and health care, social stability, and other dimensions of human development.

The challenge of living on a limited globe is not only for developed countries but also for poor countries. It may seem difficult to convince current people in developing countries to begin to talk about future prospects of degrowth, but no-one can escape the duty to act in accordance with moral standards that can be defended even to future people. Realizing that growth cannot continue eternally ought to encourage Chinese leaders and citizens to maximize well-being from the growth that still is morally acceptable and to strengthen decoupling strategies in order to conserve resources and reduce pollutions as much as possible.

Quite similar to the situation at the global scale, economies are unevenly developed in China. If one argues that growth should be channeled to poor countries like China, one cannot coherently stop halfway and deny poor regions priority of economic growth within the country. Giving priority to the worst off regions would be an appropriate response to the fact that resources are limited. It is worth noticing that in contrast to global scale politics, where there is no overarching authority to allocate resources and redistribute wealth, China does have the advantage of a central political power that is capable of redistributing within its own borders. These advantages of political power are weakened, though, when power is decentralized to local authorities or even privatized as is the case in some of the developed provinces.

Giving priority to the least developed populations is not only recommendable from a moral point of view. Even from a more selfish point of view, there is much sense in doing this. One should remember that the potential for devastating conflicts over distribution of resources is much higher on a planet of finite resources than in a world without limits, and the faster the economy grows, the sooner the limits will be reached. Grave inequalities are also potential threats to China's social and political stability that sooner or later will cause trouble to everyone. Moreover, if we take the ancient Confucian lesson about the expanding self seriously, selfishness will be still more inclusive as people mature, and selfish people may thus end up being almost as bothered by lack of consideration of their least prosperous fellow citizens as by attacks on themselves.

It will not be an easy task to respond politically to upcoming demands for zero-growth or degrowth. Trying to put an end to growth in the rich regions of China may aggravate the tensions between regions. On the other hand, if continuous growth ends up as a permanent struggle for more resources, it will be annoying for everybody, and poor people and regions are almost bound to become losers. Similarly, if growth-promoting policies lead to an increasingly unsafe and unhealthy environment that erode future possibilities for food supply, poor people are likely to suffer to a much higher extent than affluent people.

Previous economic growth in China has been accompanied with costs in other dimensions that are also likely to be become potential threats for future prosperity. Escalating environmental and social problems will not automatically be solved by further economic growth. Single-minded pursuit of growth needs to be substituted by policies that can maximize social and environmental benefits from economic growth for the majority of the population. There are reasons to believe that less emphasis on growth in the already relatively rich regions is quite essential in order to devote more attention to the potential of changing institutional settings and governance and to ensure a balanced social and economic development.

It is worth to notice that for the first time in China's modern history, the twelfth and latest (2011–2015) five-year plan for economic and social development does not mention a specific GDP growth rate as the main goal. Instead, developmental goals like changing economic structure, improving people's livelihood and reducing energy consumption and carbon emissions are put high on the agenda. This is a significant sign that the state attempts to adopt a more comprehensive and diversified development strategy.

By contrast, local governments are still very keen on pursuing high growth rates. Most provincial governments have set double-digit annual growth rates in their local twelfth five-year plans. The strong enthusiasm for growth at the local level is augmented by the fact that the local leaders' political and economic performances are evaluated by the pace of economic growth in the locality. This strong impulsion for growth is criticized by the National Development and Reform Commission as ignoring the carrying capacity of the environment including energy and other resources (National Business Daily 2011a). This is also regarded as potential threats to the achievement of the national development goals (National Business Daily 2011b).

Even though there is still room for growth in China, the degrowth debate is certainly relevant here as well. Developing countries cannot ignore their responsibilities in relation to future human development. Responsibilities toward challenges of humankind like climate change and loss of biodiversity remain *common*, even when they are *differentiated* in accordance with means and capabilities (UN 1992). In rich countries, responsibility inevitably entails transition to long-term non-growth after shrinking of oversized economies. In developing countries, responsibility means preparation for long-term non-growth after a period of growth leading to a point placed safely within the planet's ecological capabilities.

This is the converging point for rich and developing countries. To achieve this objective, there is an acute need for a widespread realization that endless economic growth is neither necessary, possible nor even desirable. Needless to say, this is a huge challenge. The developing countries cannot continue to ignore it. They need to face and stand up to the challenge, but they certainly do have a legitimate claim, too, when they call for the affluent countries to set a good model to follow.

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