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Social Impact of Urban Planning:
Challenges of the 21st Century: Shrinking Cities, Aging Societies.

Introduction

Most developed countries are confronted with two phenomena, which are both separately developing and closely linked with each other: Aging societies and shrinking cities. Especially Germany and Japan do have rapidly aging societies. This is caused firstly by growing life expectancy and secondly by falling birth rates.

In Germany public debate on aging society focuses very much on the impact on social systems such as pension schemes, health insurance and labour market. But only little attention is paid to all questions of living including infrastructure, mobility (in space and mind), "auto-mobility" (i.e. individual vs. public transport), accessibility (of public buildings as well as dwellings), personal services, organization of public space (i.e. green, density, streets, traffic lights), and, not at least, shrinking cities and sustainability. However, things are changing. In recent times more attention is paid to questions of living, and people discover the charm of new forms of living, e.g. communal residences (see the initiatives taken by local, regional and federal governments as well as by NGOs).

In Japan the era of depopulation and aging tends to be discussed in a pessimistic tone. An important reason for this is that Japan is facing another paradigmatic change: The traditional role of the family and the woman is being put in question. Especially younger women (daughters and wives) do not want to take care of their and their husband's parents anymore. However, people start to realize that there might be ways to live better in a shrinking society and it might be a key to realize sustainability (Mizuho 2005, 6)[1].

In this contribution I will try to highlight four items:

- First: Chances and limitations of urban planning from a sociological point of view.
- Second: (Brief overview of) historical development of cities and population.
- Third: Some facts and figures on aging societies and shrinking cities.
- And finally: Some common goals for Japanese-German research.

[1] The fact that prime minister Koizumi won the national elections on 11 September 2005 with the explicit demand to privatize the postal service, while his challenger Okada said "Japan faces problems of a decreasing population (and) aging society" (Japan Times, 11 September 2005, p. 1) and lost, might be taken as an indication if not an evidence of distorted sense of reality.

Chances and limitations of urban planning from a sociological point of view

Talking about a social impact of urban planning implies to a certain extend the belief that there is a social impact. Architects and urban planners tend to be convinced of their core position and their ability not only to design and to build the built environment but social life. But can we be sure about that? Sociologically speaking there is e.g. no evidence of any correlation between the built environment and the way neighbourhood works (see e.g. Häußermann, Siebel 2004 or Kronauer, Vogel 2004)[2]. Thus, we can not say, that there are better or worse types of housing. Even the mass media's unshakeable belief, that housing areas in the outskirts like the French banlieues or high rise dwellings like Gropiusstadt in Berlin create criminality and delinquent people, quite often immigrants by the way, can not be proven (see e.g. Farwick 2004, Wacquant 2004 or Häußermann, Kapphan 1999)[3].

It is, above all, a European debate, because cities in other parts of the world look different. Looking e.g. at Tokyo it is at first sight – with European eyes – hardly possible to say this is a good neighbourhood and this is not. And it is different again in the USA, where especially central districts or housing areas closed to the city centre are the lost, forgotten or abandoned parts with lots of ethnic linked discrimination, economical and cultural deficits (just as it was claimed by the so called Chicago School some 80 years ago). In Europe these housing areas with good access to the city centre, good or sufficient public infrastructure and a certain kind (or potential) of urban flair would have a good chance to enjoy a good reputation both economically and socially (as we can see in the former industrial zones and ports, which have been converted to lofts with gentrifying effects in London [Docklands], Amsterdam [Borneo and Philippinen] and even heavily shrinking Duisburg [Innenhafen]). These are only examples for the yet unanswered question if there is a unilateral link between urban planning and social life.

Of course, it would be naïve to argue that there is no impact at all. "Planning can normally be interpreted as a drive to rationalize existing situations and to have more control over developments that take place in the urban environment" (Klinkers 2003, 15). After all we do know, that it makes a difference if there is a sufficient supply of child care, public transportation, parking lots, housing or not. And we do also know that it is a big difference whether one has to live next to an express way or within a green and quiet environment. The quality of housings (space, heat insulation, sound-absorption, infrastructure, environment) has an important impact on the quality of life (see e.g. Harth, Scheller, Tessin 2000)[4].

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[2] A different opinion can be found in: Bensch 2004, and in some other UK publications (see e.g. Coleman 1985 or Newman 1996). A good theoretical approach combined with convincing empirical data can be found in: Callies 2003.

[3] The riots in the French Banlieues in October and November 2005 seem to underline the correlation between built environment and social life. But looking closer to it, this is not true. Firstly, the riots took place in those parts of the outskirts which are – regarding the quality of buildings and built environment – much better than other, mostly older parts. Secondly, the riots themselves don't prove the direction of correlation; there is much indication that social life (with a lack of individual perspectives, a lack of "good" examples and constant discrimination) was the reason for the riots. "Architektur ist ... weder das Übel noch die Rettung, sondern Brandmaterial" (Hanimann 2005, 38).

[4] Sociologically the concept of distinction, invented by Bourdieu 25 years ago, is of great importance as well (Bourdieu 1979).

Regarding sustainability the energy we use for living is as important: Do we prefer to live a sub-urban life as we know it from the USA with an exorbitant high consumption of energy for the reason alone to get from one point to another by car (see e.g. the movie "The End of Suburbia)[5] or do we prefer to live like most Asians still do today and the Europeans did use to do in the late 19th and early 20th century: in a densely populated city with short distances and relative high importance of public transportation (see e.g. Brake, Dangschat, Herfert 2001 or Klotz et. al. 2002)?

To give an example: Phoenix, Arizona, has had 100,000 capita in 1950; its actual population is at some 1 million capita. Thus, Phoenix is now 10 times bigger than it was half a century ago regarding the number of capita. But while 100,000 people lived on a ground of 27 square kilometres, 1 million people need 724 square kilometres, which is 26 times more (Mönninger 1999a, 11). Thus, in 1950 3,700 people lived on one square kilometre, today one square kilometre is needed for only a bit more than a third with 1,380 people.

In Hong Kong, more than 6,200 people have to live on one square kilometre (Demographia 2000). Even in Los Angeles, one of the most significant examples for urban sprawl, 3,000 people share one square kilometre (Wikipedia 2005)[6]. In the prefecture of Tokyo some 5,600 people live on one square kilometre (Tokyo Metropolitan Government 2004a). These figures would be different, if we took into account that we speak of LA City, but of the whole prefecture of Tokyo (Tokyo itself, the 23 wards, has a density of almost 13,500 people per square kilometre; Tokyo Metropolitan Government 2004b). And if you look at the specific topography of Hong Kong you know that differences are much bigger: Hong Kong's urban area has a density of almost 45,000 people per square kilometre (Demographia 2005).

Density is important but not everything (Smook 2002). High rise buildings are hardly sustainable – their energy balance is normally worse than the energy balance of a four or five storey building[7]. Furthermore, we all know that Tokyo is not a good example for a city of short distances. Its spatial organization divides business districts from housing areas, and the land prices are the higher the more central the grounds are – even after the end of bubble economy. That is a major reason for the urban sprawl and the long distances for most to get to work and back home (in average 1.5 hours – twice a day, five or six times a week). Sustainability looks different. The central districts of Tokyo (four wards: Chiyoda-ku, Chuo-ku, Minato-ku and Shinjuku-ku) are populated by some 550,000 (Demographia 2001b; see also: Mid-Tokyo 2004), while Manhattan, which has about the same size, is populated by almost 1,500,000 people (Mizuho 2005, 4).

Back to the social impact of urban planning: As we had to learn, there is a far going impact on social life (with all its aspects) if urban designers or town planners or private investors decide to develop a certain housing area or any part of a city. In Berlin and in other German cities (we

[5] But the overall dimension of urban sprawl seems not to be as big as stated (BBR 2005).
[6] Surprisingly Los Angeles is a city of high density: "Even planning professionals are often surprised to learn that the nation's most dense urban area is the very area perceived by many people to be the epitome of so-called 'urban sprawl' – Los Angeles. But it is true. Based upon the number of acres consumed by urban development, no US urbanized area sprawls less than Los Angeles" (Demographia 2001a, 1).
[7] Some reasons for this are: High rise buildings are normally stand-alone buildings, their living or usable space is relatively small compared to total space.

know comparable experiences from else where) the large urban redevelopment programs have changed the social structure and the way daily social life works. I mentioned already the gentrifying effects of conversion. Thus, there is an impact.

But the question remains: What was first? Is it the urban planning, which has a social impact or is it the development of society (technology, economy, ecology, culture, life style …), which has an impact on urban planning, which then starts the next round of bilateral impacts? Is it, therefore, correct to say: The city is built upon and with social agreements? I suspect so. "The built environment is the result of a complex combination of [an] economic, political, and sociological set of choices, influences and preferences" (Klinkers 2003, 17).

Especially in Japan – as Koen Klinkers, an architect from the Netherlands living in Tokyo, writes in his PhD thesis "Tokyo: Planning the Private City" – planning "seems marked by a negative planning attitude and a lack of a normative vision to what the city should become. Market forces, private capital, and rationalization are the more abstract defining factors in the formation of the Japanese cityscape and the more hidden drivers in the planning efforts" (ibid. 15). It is for sure not wrong to claim the same for the USA. In most European countries there is still a strong public interest of how the cities should develop; the mere interest of private capital to make profit is not yet the most important drive. But it becomes more important since global developments dominate local policies.

The so called *new urban politics* are a method to organize city life in times of global competition (Cox 1993; Ward 2004, 597), which follows the logic of private capital and market forces and which links the global and the local level with each other to a "glocal" one. *Local governance* tries to connect global items with local fields of action. It is not yet answered if public interests, such as ecological, social and economic sustainability, are covered with new urban politics, local governance, the arising public-private partnerships or the privatization of public infrastructure (such as public transportation, streets, water supply, energy …). The growing social and economic fragmentation does not sound very promising.

To summarize this first topic: Urban planning does not initially build society. It is the society which is developing and which has a corresponding spatial organization. Urban planning, therefore, finds the foundations of its work laid. Of course, it then can contribute to spatial and social organization, but it is the society with its decision makers, which decides upon the way it deals with its material and immaterial resources, the way it provides goods and services, the way it treats its population. The Goethe-Institut (2005b, 4) proposes to "give up the idea of heroic city planning that marked the 20th century to such an extent. Designs are not drawn up by the planner, decided on by politicians or investors and then implemented. Rather, cities develop on the basis of social conditions in accordance with their own logic, over which we can exert a modifying influence. Urban planning is therefore not superfluous, but starts from different premises and uses different methods. First of all, it is necessary to understand how cities develop autonomously in order to be able to intervene intelligently in these processes. In this respect, we could talk of 'weak planning'. And such weak planning will increasingly make use of 'soft tools'. For often it is

less the layout of the built environment that shapes the evolution of a city than cultural developments, forms of communication or the establishment of social networks and processes". Thus, we can speak of the impact of society on urban planning, which then may create an impact on society again with all consequences ... sustainability included – if we want.

Historical development of cities and population

It is common practice to distinguish between three historical phases of urban development: the antique city, which is the archetype of all cities; the medieval city, which is the archetype of the European cities; and eventually: the post-industrial city, which is more and more the type of city we live in (see e.g. Hotzan 1997). These historical phases can be described with the different ways to prepare an egg (Mönninger 1999, 7ff): in the first phase (from antiquity to the Middle Ages) cities lay within their walls like the sheltered yolk of a boiled egg in a hard shell. From industrial revolution in the 17th and 18th century, the city enlargements in the 19th century to the large housing areas and the satellite towns of the post-war period, the cities' shape changed to a fried egg. Here the valuable yolk is framed of frayed edges. Actually, we are living in the so called post-industrial city, in which centre and periphery are becoming more and more the same. The city centre becomes the mere geographic centre, but loses its functions, while the outskirts and the surrounding region take over formerly centre linked functions. The city's shape changes to scrambled eggs, where the components are mixed with each other. Even the end of the city (the egg) and the beginning of the next one are not clear any more. Thus, the type and the shape of the city are very dynamic and they follow or interact with the development of society.

The history of cities is full of examples of both growing and shrinking cities. Human history knows lots of cities which had regional or even global importance, which do not exist anymore or which have lost most of their historical power including most of their capita (see e.g. Oswalt 2004b). In general we can say that cities have lost their historical power which was taken over by the national states. But since economic and social relationships more and more tend to be global, we can speak of a revival not of all but of some cities, which have been called global cities (Sassen 1991 and 1996). The success of cities like Tokyo, London, New York and some others does not change the difficult situation most "ordinary" cities are facing.

What we are confronted with actually is a double bipolar development with some new big players on the market and lots of losers and with the end of growing societies (regarding the number of citizens) as far as they are economically speaking developed societies and ongoing growth of developing societies. Both growth and shrinkage are part of the process of globalization for more than 20 years now.

Some say, that central industrial urban regions shrink, while peripheral regions become junctions of the world market. I myself think that there is a chance of equalization but we can not yet speak of it, although some countries (especially in Asia) have improved their economic and social situation not at least because of the process of globalization. But actually the opposite is the

case: On all levels (local, regional, national, and global) globalization provokes the deepening of differences. Urban planning, therefore, has to deal with an important, but unwished impact of shrinking: social and spatial fragmentation (see e.g. Hochstadt 2005a). Part of this impact are problems of sustainability.

Shrinking cities and aging societies: facts and figures.

Shrinking cities

Speaking of shrinking cities we have to distinguish between short interruptions of growth which can be caused by lots of external and internal reasons and coincidences (a hurricane or a war e.g.), and a real process of shrinking, which is deepening over the years and which is fundamental. In Germany the actual debate is full of exaggerating "shrinking scenarios" saying e.g. "let's make East Germany a wildlife park" (see e.g. Kil 2002a, b or 2004) or "the Germans will die out" (headline regularly used by the yellow press)[8].

But indeed, for some years now, urban planning has been having to deal with the phenomenon of shrinking cities. Shrinking and aging first of all sound quite normal. "Okay, then we are shrinking. So what?" But we are so fixed on growth, which we have learnt to be normal over ages, that we really do have considerable difficulties with this scenario. All our accesses and means rely on the assumption of growth (Oswalt 2004a). Our current understanding of the city and urban development is being put in question. This is the reason why the cities, the states, the experts of planning, labour market and economy do have so many difficulties to develop alternative ideas, how to qualitatively deal with the fact of quantitative shrinking (Goethe-Institut 2005a). It is ambitious but correct to say: "Cities are cultural expressions of our society and, at the same time, platforms for cultural production. As such, they are of central significance to our understanding of ourselves. The drastic changes in our cities caused by their shrinkage therefore represent not just an economic and social challenge, but also a cultural one. It is hardly possible to manage the impact of shrinkage in terms of urban planning, and it creates a large number of problems. New types of cities are arising and we have neither precise concepts with which to describe them nor any idea about how, and by whom, they could be used. … Shrinking cities are a cultural challenge. They put our current values in question, they generate new urban cultures and demand innovative models for action. They are potentially the breeding grounds for new ways of life" (Goethe-Institut 2005b, 4).

In the last 50 years most of the shrinking cities were those in the Western developed countries (see for the following examples of shrinking cities: Oswalt 2004b).

[8] This headline refers to a conservative (if not extreme right-wing) position, in which terms like flooding or foreignization are used (Butterwegge 2005, 11). On 23 February 2003 the Börsen-Zeitung titled „Die deutsche Wirtschaft unter dem demographischen Fallbeil" (ibid.).

- Number one are the USA (despite the fact that the USA are still a growing society): Detroit serves as the example of shrinking cities with a decline of 50% of its population within the city area (from 1.85 Million in 1950 to 920,000 in 2003; p. 227).
- Great Britain has seen shrinking cities as well: The cities of Liverpool and Manchester have lost almost every second inhabitant (Liverpool: from 857,000 in 1931 to 441,500 in 2002; Manchester: from 766,000 in 1930 to 422,000 in 2002; p. 403).
- In Germany shrinking cities used to be a phenomenon especially in the East and in the old industrial regions, such as the Ruhr Area; in the East the process of shrinking has not started but accelerated hard since the German unification in 1990; in little more than one decade many cities have lost a forth or more of their population (Halle: 322,000 in 1990 to 240,000 in 2003; -25%; p. 627); especially smaller, less known cities have lost their population (Wolfen, which belongs to the same region as Halle, Leipzig and Bitterfeld: 46,000 in 1989 to 27,400 in 2003; -40%; ibid.). Shrinkage becomes a general trend in most German cities, only very few are still growing. Most cities lose people due to high mortality rate, to low birth rate respectively and to ongoing trend of suburbanization.
- But also Japan is confronted with shrinking cities: Osaka has lost 560,000 inhabitants between 1965 and 1995 (-18%; p. 82); in the near future Kitakyushu may slip below one million capita and become the first "former million city" in Japan (Mizuho 2005, 3). Since the late 19th century more Japanese cities have lost their relative importance[9]. In Japan there are 220 cities with fewer than 50,000 inhabitants – cities (-shi), not villages - which are very often shrinking cities and sucked up by regional larger cities as a result of straw effect. In the coming era of drastic depopulation many of the cities around 50 to 100,000 inhabitants will lose capita and become very aged cities (ibid. 4; see also Fujii 2004, 97f). Through the examination of the decline in urban populations in both capital and provincial cities, we can see that the problem of depopulation and shrinking cities is by no means a new one in Japan (neither in other countries as we have seen), and that in fact much of the pre-war urban planning was dedicated to combating this decline. Examining past responses to this question may help shed new light on its current situation (Phillipps 2005).

Worldwide we know three reasons for shrinking (see e.g. Müller 2004):

- First, de-industrialisation with Manchester, Liverpool and Sheffield in Great Britain, the Ruhr Area in Germany, Gunkanjima in South West of Japan and other areas of heavy industry (coal mining, shipyards, steel; but also car manufacturing) as examples: those industrial cities very often relied on one or two core industries. With the disappearance of these traditional industries the process of shrinking was started, combined with a loss of the cities' position in the domestic and global competition.
- Second, transformation (or post-socialism) with the cities in East Germany and other former socialist countries as examples: in the former socialist countries cities were newly founded. These cities were typically industrial cities depending on one or few industries just like the Western cities mentioned before. With the started shrinkage the economic situation worsened furthermore, so that people move away where the jobs are.

[9] E.g. Kanazawa, which is Japan's 30th largest city today, but which was number five at the dawn of the Meiji Era; or Tokushima, today number 77, but number 10 at that time (Mizuho 2005, 1).

- And third, suburbanization, for which Detroit stands for but with many cities all over the world which suffer from it. This problem is a result of the trend for people to move out of urban areas. Obviously space, and over and above that private space has an outstanding position in the people's process of weighing whether to live in an area of high density of population with good access to urban infrastructure or to live in an area of low density of population with bad or no access to urban infrastructure. Even in countries which are taken as prime examples for public life (e.g. France, Spain and Italy in Europe), space which is exclusively restricted to private use increases – at public space's expenses. Despite the discovery of such urban people like the yuppies (young urban professionals) in the eighties, the new urbanites in the nineties and the woopies (well-off older people) today, most people prefer to live in suburbia. Transportation facilities, the telephone and television have increased the level of suburbanization (see e.g. Wegener, Bökemann 1998). Mobile phones, the internet and generally given access to all kind of information will increase it furthermore.
- Additionally the fact of an aging society becomes a most important reason for shrinking. In East Germany e.g. there are smaller cities which have lost a third ore more of their population due to bad economic conditions. Especially the young and mobile ones move to the South and South West of Germany to find work. The weak and the old ones remain in their autochthonous city (see e.g. Kil 2002a). Thus, the average age in these regions has sharply increased in the last 15 years. Since the young people don't come back because the general economic situation did not and probably will not improve, it is a question of time until these cities will more or less disappear. (Should we rethink the suggestion to make East Germany a wildlife park?)

The process of shrinking can not be seen as a continuous development looking like an incline. It is more like a staircase, in which we can see the stairs as generations: Every generation that has a low birth rate makes the next generation becoming smaller (Birg 2004). This is the reason why we only now start to realize the consequences of a process which has started already 30-35 years ago (ibid. 112f).

This process of shrinkage has an important impact on sustainability: First, it goes together will lowering density, because the number of people living in the city becomes smaller but the number of buildings keeps the same. Since the beginning of the 20th century in Germany, big cities' central districts have lost between half and two third of their population in average, while the number of buildings and the floor space haven't changed significantly. In Germany every single person has got almost 42 square metres living space in average actually[10] – a bit less in bigger cities and in East Germany, a bit more on the country side and in the outskirts (Statistisches Bundesamt 2003). One reason for this is the overwhelming trend to one-person-households not only in Germany, but in all developed countries. In big cities the singles are the most important group. The smaller the number of people living in one household and the more important private space

[10] This is some twelve to fourteen square metres more than the Japanese average (where the average living space per person was 28m² at the beginning of the nineties). Taking the fact that the level of urbanization in Japan is significantly higher than in Germany and taking into account that individual living space in big cities is smaller than in smaller cities and on the country side, this difference is not as spectacular as (maybe) expected.

is for the people the larger becomes the living space per person (Häußermann, Siebel 2000). In Asia it is still different, but the trend is the same. Since every single square metre of living space can be equated to an equivalent of energy (first to be built and second to be maintained) it is very difficult to put this together with sustainability. But of course we have to accept this decision first. People decide to live alone, they decide to spend more time at home and they decide not to depend or rely on public infrastructure. To cocoon is not only a conscious decision, but a result of social development (Hochstadt 2005b). The Germans love Southern European countries because of the street life, but in Germany they all have their own Espresso machine at home.

Globally speaking total population is still growing with some 6.5 billion people actually to some 9.1 billion people in 2050 (United Nations 2005a, 5). It is likely that the global population then will start to shrink to some 8.3 billion and remaining at this level for quite some time (as far as we can forecast this development already[11]; Rieniets 2004, 33; PRB 2005). Not only total population is growing more or less exclusively in developing countries with 95% of total growth (PRB 2005, 2)[12], but also the share of people living in cities is still growing – above all in the developing countries; and right now there are more people living in cities than on the country side – for the first time ever; in the year 2030 this share will reach 60% (Rieniets 2004, 21). In the European Union four out of five inhabitants do live in cities (regarding official statistics, in which every community with 5.000 inhabitants or more is defined as a city). This development is closely linked to the fact that cities in the developing world are still what they used to be in the old world ages ago: a promise for a better life.

As Georg Simmel did show impressively a century ago, living in a city is not just living in another neighbourhood than on the country side, but very much a certain way of life. Rationalism instead of tradition, free choice of friends instead of family-links, money and goods instead of feudal positions – all these reasons to move in a city are still valid. And they are more important than things like insufficient supply of drinkable water, criminality, unacceptable living conditions (slums, favellas), or diseases, which is still reality for most of the (new) city dwellers. Thus, the world's urban population will grow from less than 3 billion in 2000 to some 5 billion by 2030 with some real gigantic agglomerations.

[11] There are other expectations: The German Federal Institute for Population Research expects the world population to increase for the next 200 years, when 11 billion people will live on this globe (BIB 2004, 73).

[12] The population of less developed regions is projected to rise steadily from about 5.3 billion persons today to 7.8 billion persons by 2050 (medium variant). The population of the more developed regions, currently estimated at slightly more than 1.2 billion persons, is anticipated to change little until 2050 (United Nations 2005a, 5).

The Largest Urban Agglomerations

1970: Population in Millions			2015: Prognosis of Population in Millions		
1.	Tokyo, Japan	23.3	1.	Tokyo, Japan	36.2
2.	New York, USA	16.2	2.	Mumbai (Bombay), India	22.6
3.	Shanghai, China	11.2	3.	Delhi, India	20.9
4.	Osaka-Kobe, Japan	9.4	4.	Mexico City, Mexico	20.6
5.	Mexico City, Mexico	8.8	5.	São Paulo, Brazil	20.0
6.	Buenos Aires, Argentina	8.4	6.	New York-Newark, USA	19.7
7.	Paris, France	8.4	7.	Dhaka, Bangladesh	17.9
8.	Los Angeles-L. Beach, USA	8.4	8.	Jakarta, Indonesia	17.5
9.	Beijing, China	8.1	9.	Lagos, Nigeria	17.0
10.	São Paulo, Brazil	7.6	10.	Calcutta, India	16.8
11.	London, United Kingdom	7.5	11.	Karachi, Pakistan	16.2
12.	Moscow, USSR	7.1	12.	Buenos Aires, Argentina	14.6
13.	Chicago, USA	7.1	13.	Cairo, Egypt	13.1
14.	Calcutta, India	6.9	14.	Los Angeles-L. Beach, USA	12.9
15.	Rio de Janeiro, Brazil	6.6	15.	Shanghai, China	12.7

United Nations 2004, 121 and 123.

Aging societies

In all developed countries we can detect a similar development: Firstly people get older than ever. In the year 2000 in the European Union for instance men had a statistical life expectancy of 75.3 years (compared to 67.4 years in 1960; nearly + 12%); women even could expect to live 81.4 years (72.9 years in 1960; almost + 12%) (Europese Gemenschapen 2004, 14). In Japan people live as long as in no other country. Japanese men have an average life expectancy of 78, women of 85 years (Flüchter 2004, 83).

Life Expectancy at Birth (in years; last line: years / percent)

	Africa	Asia	Latin America and Caribbean	Europe	North America	Japan	Germany
2000-2005	49.1	67.3	71.5	73.7	77.6	81.9	78.6
2045-2050	65.4	77.2	79.5	80.6	82.7	88.3	83.7
2050/2000	+ 16.3 + 33.2	+ 9.9 + 14.7	+ 8.0 + 11.2	+ 6.9 + 9.4	+ 5.1 + 6.6	+ 6.4 + 7.8	+ 5.1 + 6.5

United Nations 2005b, 10, 72 and 74; own calculations.

Secondly the average birth rate has dropped dramatically. In Japan it has dropped from 2.23 in 1967 to 1.33 in 2002 and 1.29 in 2004, which is even less than in Germany, where this figure is

below 1.4 actually (ibid.). Since a birth rate of 2.1 is needed to keep the number of people stable without immigration (in developed countries – in developing countries the number is higher due to higher mortality), those societies are losing inhabitants. Although most countries are expected to have an increasing fertility until 2050 (see table below), it will in most cases not be enough to keep population stable (it is not to be discussed here, how realistic these expectations are).

Total Fertility by Country (children per woman)

	Germany	Japan	China	France	Poland	Spain	USA
1970-1975	1.64	2.07	4.86	2.31	2.25	2.86	2.02
2000-2005	1.32	1.33	1.70	1.87	1.26	1.27	2.04
2015-2020	1.48	1.51	1.85	1.85	1.34	1.49	1.91
2030-2035	1.69	1.72	1.85	1.85	1.55	1.70	1.85
2045-2050	1.85	1.85	1.85	1.85	1.76	1.85	1.85

United Nations 2005b, 67ff.

Japan will go from 127.8 million people to some 100 million in 2050, which is a loss of more than a fifth. Germany will go from 82.5 million people to some 75 million, which as a modest loss of less than 10%. But it is not only the total loss of people which creates problems for countries concerned. It is the share between younger and elder people, with all the consequences to health and social security, but also to the built environment (ibid.; Oswalt 2004b, 82)[13].

Share of People 60+ of Total Population by Country (in %; medium variant)

	Germany	Japan	China	France	Poland	Spain	USA
2005	25.1	26.3	10.9	21.1	16.8	21.4	16.7
2050	35.0	41.7	31.0	33.0	37.9	39.7	26.4
2050/2000	+39	+59	+184	+56	+126	+86	+58

United Nations 2005b, 53ff; own calculations.

In Germany, the share of elder people (65+) has risen significantly from 10% in 1960 to 19% and it will rise to some 30% in 2050. In Japan there is a similar development with a slightly higher proportion of elder people (19% today and 36% in 2050) (Flüchter 2004, 83). Specific to Japan is its speed of aging. It took Japan only 24 years to double its elderly population to 14%. European countries reached to 14% level in 1970s earlier than Japan, but it took 40 years for Germany to double to 14%, 47 years for UK, and 85 years for Sweden (Mizuho 2005, 2). One of the reasons for this enormous speed of aging is the lack of immigration; immigration slows down the speed of aging in Germany significantly (and speeds up the process of urbanization).

[13] The United Nations expect Japan to shrink by 12.4% from 128 million people in 2005 to 112 million in 2050 (medium variant). Germany is expected to shrink only by 4.7% from 83 million to 79 million. Regarding quantitative dimension of shrinkage Japan ranks 17th in the developed world, Italy follows on 18, Germany on 21. From rank 1 to 16 and on 19 and 20 there are exclusively Central and East European countries (including Russia). From rank 21 to 25 there are only West European countries (United Nations 2005b, 51).

Herwig Birg, an eminent scientist in the field of demography, expects Germany to shrink harder (see Birg 2004, 112ff):

- the number of people of 60 years of age and older will grow by 10 million until 2050,
- the number of people between 20 and 60 will shrink by 16 million,
- the number of people younger than 20 will shrink by 8 million,
- so that the total shrinkage will be at 14 million until 2050;
- in East Germany the shrinkage is bigger than in the West (28% compared to 15%) for the reason that the birth rate is lower (some 1.1 compared to 1.4) and the ongoing East-West migration,
- the number of people between 20 and 60 will shrink by 40% in the West and by 50% in the East;
- the number of people of 80 years and older will rise enormously from 3 million in 1998 to 10 million in 2050;
- the number of immigrated people will rise due to the excess of births over deaths and the excess of immigration over emigration (estimated 170,000 every year) from 7.4 million to 19 million. Their share of the total population will rise from 9% (in 1998) to almost 28% in 2050.

Share of People 60+ of Total Population by Region – Scenario II (middle birth rate; in %)

	1950	2000	2050	2050/1950	2050/2000
Africa	5.3	5.1	10.2	+ 92	+ 100
Asia	6.8	8.8	22.6	+ 232	+ 157
Europe	12.1	20.3	36.6	+ 202	+ 80
South America	5.9	8.0	22.5	+ 281	+ 181
North America	12.4	16.2	27.2	+ 119	+ 68
Oceania	11.2	13.4	23.3	+ 108	+ 74

United Nations, Population Division (www.learn-line.nrw.de); own calculations.

Although we tend to discuss aging as a phenomenon of developed societies it is even more present in the developing world, where the birth rates have dramatically fallen. The only reason why these societies are not aging as the developed ones do is that the birth rates are still higher than needed to keep population stable. But while birth rates in the developed countries have dropped by 44% within 50 years, birth rates in the developing countries have dropped by 50%. Additionally life expectancy grows faster in the developing countries, so that the share of elder people and the average age grow faster, too. The age quotient's level (number of people of 65 and more compared to people of 15-64 years of age) will double in the industrial countries half way through the century, but triple in the developing world. Thus, demographic aging is not restricted to the developed countries, but relates to the world population in total.

Ten Countries or Areas with the Oldest Populations (median age; medium variant)

	1950		1975		2005		2050
Austria	35.8	Germany	35.4	Japan	42.9	China, Macao	54.4
Channel Islands	35.7	Sweden	35.3	Italy	42.3	R. of Korea	53.9
Belgium	35.6	Latvia	34.8	Germany	42.1	Martinique	53.0
Germany	35.4	Channel I.	34.6	Finland	40.9	Italy	52.5
Luxemburg	35.0	Luxemburg	34.4	Switzerland	40.8	Japan	52.3
United Kingdom	34.6	Hungary	34.2	Belgium	40.6	Singapore	52.1
France	34.5	Belgium	34.1	Croatia	40.6	Slovenia	51.9
Sweden	34.3	Estonia	34.1	Austria	40.6	Ukraine	51.9
Switzerland	33.3	Bulgaria	34.0	Bulgaria	40.6	Slovakia	51.8
Norway	32.7	UK	33.9	Slovenia	40.2	Lithuania	51.7

United Nations 2005b, 58.

Although our estimations depend on models which are used to forecast the development of population we can be pretty sure that there will be shrinkage as well as aging of population. Not at least because of a simple truth: Those who weren't born in the last 30 years won't become parents (Birg 2004, 112). But those who were born will become older. The models therefore all show the same basic development, they differ merely in the quantitative distinctness.

Japanese-German research: Common goals

Apart from some subordinate political action we can't change the demographic development[14]. We are and we will be confronted with the fact of shrinking and aging. Despite the still existing sharp differences between the various cities and between developed and developing countries, it is a global process we have to accept. Since we know quite a lot about the reasons of this process – not enough of course, it should be our aim to look for consequences of it (and I have the distinct feeling that these consequences are still heavily underestimated) as well as for answers and solutions. I am only able to highlight few of possible fields of action, which are only examples and which don't cover all aspects not even a systematic part; I propose to work on this issue together. Not at least because both Japan and Germany are both aging and shrinking societies, it would be wise to look for common goals.
There are a few things we should think of[15]:

[14] This sounds harshly, but indeed, demographic development is the result of a deeper process, which can be called civilization and which is linked as well with growing level of knowledge as with growing level of emancipation. The higher the level of education the lower is the number of children. Thinking e.g. that in times of HIV even fundamentalist states can't avoid the use of condoms by their people, we can the world population expect to shrink.

[15] More fundamental the Goethe-Institut (2005b, 4) raises some questions with "some of the social principles that have an impact on the evolution of shrinking cities reveal their questionable aspects in this context. What are we to think of property laws that prevent desirable urban developments? What are we to think of immigration laws that contribute significantly to the problems connected with a demographic time bomb? What are we to think of

- How are we going to organize mobility? As we can't change people's wish to move around, we have to think of how to organize mobility regarding firstly sustainability. Here the colleagues from Dortmund University have done already some important work[16]. Public transportation in this respect is more sustainable than private one which is normally done by car. Secondly age has an important impact on the way mobility works. Thus, we should think of how to organize public transportation: Are underground networks really worth to be extended? Shouldn't we spend more time on developing alternatives?
- How are we going to organize space? Since we know that most people prefer to live in quiet housing areas we should think of how to organize a respective supply within the cities instead somewhere in the outskirts. Especially young families do move out for the reason to raise the children in a homogeneous neighbourhood. We should give them the chance to find an appropriate place in the city. I mentioned already the woopies – the well-off older people, who obviously rediscover the advantage of urban infrastructure. We should use this trend to strengthen the position of the city. We can do that because cities do have and before that will have enough space to offer high quality living areas.
- How are we going to organize accessibility? As we know the share of people of 80 years of age and more will increase very much. It is this group of people, which has physical handicaps. Therefore, we need to think of technical aspects of buildings – elevators, wheelchair doors, bath- and restrooms. But accessibility is as important regarding public space: Is there the chance to get in the park? Are there enough chairs on the playing ground? Is the street material even and trap free?
- How are we going to organize distances? Elder people do want to keep mobile, but there are restrictions regarding the distances. It is hardly possible anymore to go to a supermarket at the other end of the town in order to get something to eat. It makes sense to localize daily infrastructure with personal services available, with chat rooms in a café next door.
- How are we going to organize living? We do know that most people tend to live in a homogeneous neighbourhood. Regarding the shrinkage of cities this underlines the trend of spatial and social fragmentation, since those households, who have the economic and social capital to decide on their neighbourhood do move away from "difficult" districts and leave back all those who don't have any alternative. But we do know that elderly people do not want to live apart. They prefer to live within a lively neighbourhood with good material and immaterial infrastructure. Therefore we should think about the possibility to design both homogeneous and heterogeneous micro and meso-spaces to satisfy the contradictory wish to feel save in a homogeneous neighbourhood and the chances a heterogeneous city can offer.

These are only examples of things I think we should work on. Much more examples are easily to be found. But what we do not know yet for sure is how? To produce good solutions we should

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subsidies for mobility and new suburban building when they result in existing resources falling out of use and cities fragmenting? What are we to think of social structures within which, despite serious problems, there is a lack of courage to tread new paths?"

[16] Especially the works Michael Wegener and his colleagues have done on the people's decision to move away from the city centre and its connection with public transport infrastructure, telecommunication, new forms of work organization and social structure are important in this regard.

work jointly as architects, urban designers, town planners, economists, administrative experts, geographers, sociologists – to name only some. I am convinced that Japanese-German cooperation would give us the chance to learn a lot from each other.

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