of suburbs and cities

Will Galloway reports on the findings of a study on sustainability on the urban fringe in Japan that points to a need for an objective re-evaluation of suburbs and what they have to offer.

New homes in the suburbs of Toyama

Placing faith in a national policy called ‘Urban Renaissance’, governments at all levels across Japan are working to revitalise fading urban centres – to densify and re-inhabit traditional cores using the concepts of the compact city model. After years of decentralisation the explicit ambition is to attract residents back from the urban fringe by encouraging patterns of mixed land use in old centres, connecting communities with public transportation and encouraging the creation of walkable neighbourhoods with easy access to all the needs of daily life.

On the face of it there is a clear agenda to move Japan’s cities towards a more sustainable urban form, and yet the focus is almost entirely on the centres, as though suburbia was insignificant, even irredeemable. While that is not an uncommon position to take, there are a number of strong reasons to challenge that bias – not least that it is based on an incomplete vision of the modern city (i.e. one that disregards half of the urban population). Of more concern is the possibility that focusing on only one part of the city may miss opportunities to make suburbia more sustainable, and indeed miss opportunities to make entire cities as a whole more sustainable.

In Japan the bias against suburbia is not founded entirely on ideology. It is also quite rationally grounded in a reaction to what can only be described as a demographic crisis. Japan’s
population is simultaneously aging and shrinking, threatening to leave entire communities empty as the young move elsewhere and as older residents age and pass away. Over the next few decades Japan’s total population is expected to shrink by about 30 million people (a figure close to the current population of Tokyo), returning the nation to a size unseen since the 1960s. The difference is that this time around, instead of a population dominated by the young, nearly a third will be over 65 years old. This time, too, cities that were built quickly to accommodate a vital and growing population will now need to serve a much less mobile group.

Complicating the situation further, the problem is far from geographically neutral. The last several decades have borne witness to a pattern of suburban growth powered by the young, who moved ever outwards in search of affordable land and homes, leaving behind their parents and grandparents – and inadvertently producing a situation where the centres and inner suburbs of most Japanese cities are now populated in large part by its oldest citizens. Without radical transformation there is little doubt that many of these areas will become all but empty in the near future. Indeed the process has already begun. So far, the effect is most noticeable in rural parts of Japan, especially in small towns and villages, but the expectation is that the same process will transform cities across the nation.

Governments are understandably worried, and in this regard the Urban Renaissance policy is not merely a tool for making cities more walkable; rather, it is being used as a way of answering the very real question as to what shape Japan’s cities will need to take to adjust to the demographic shift. These are very serious concerns, and ones that touch entire cities and regions, not just the centres. And yet suburbs are seldom included in the calculations. In the face of the current crisis it is understandable that Japanese politicians and scholars view suburbia largely as a problem that needs to be overcome. However, if the intent is to entice suburban residents to a more compact version of urban life, then the relationship between the old centre and the new suburbs is best seen as something more intertwined than adversarial. The possibility that suburbia could be part of the solution should also be considered.

Sustainable urban forms on the fringe? In comparison with their counterparts in Europe, Japanese planners lack the authority to enforce many of their ambitions within their cities. This is
especially true when it comes to the direction and type of growth on the urban fringe, and constitutes a strong barrier to the planned development of sustainable urban form. For this reason there is a real need to find alternative paths to sustainability – ones that do not necessarily rely on the power of mandate and prescriptive regulations. To that end the research that is partially presented here was undertaken to examine the possibility that suburbia and the processes that create it might be used as tools for the creation of sustainable urban form in Japan. Intriguingly, the evidence seems to indicate that suburbia may indeed have a role to play.

The research itself took the form of a case study, designed to measure the ways in which a typical Japanese suburb is inhabited and how it changes over time. The subject of the research was a suburb in the relatively small city of Toyama (population circa 300,000), located on the west coast of Japan. Like most cities of its size, Toyama is already struggling with a rapidly emptying centre, but is also characterised by thriving suburban communities on its fringe. In response to that situation, the city is aggressively implementing Urban Renaissance policies and has initiated a number of projects intended to attract both residents and businesses to the old centre.

While it is still too soon to properly judge the impact of these projects, early results are not encouraging. As a secondary ambition then, the research was designed to examine the suburban competition, so to speak – to find out if patterns on the urban fringe might be affecting the outcome of policies designed exclusively around the city centre.

Questionnaires and morphological analysis spanning a 30-year time frame were used to build up a picture of the suburb that included not a few surprising results. Taken altogether, the research seemed to indicate, for instance, that suburbs in Japan are remarkably flexible, and may already meet several of the objectives of the compact city model, including mixed land use and the integration of social groups.

A brief introduction to suburbia in Japan

Japan's suburbs would be most familiar to a North American city dweller. They are unambiguously automobile-based, equipped with enormous shopping malls and 'big box' stores surrounded by seas of parking. They also come with near-endless strips of four-lane roads, dotted on both sides by chain-store restaurants and retail shops. Most of all, they are made up of sprawling expanses of detached homes, spreading outwards from the city centre with little control. At the regional level it is difficult to label the Japanese version of suburbia as anything other than typical 'sprawl', entirely un-sustainable. And yet the Japanese suburb is remarkably un-familiar as well, even unique in several respects.
In comparison with the North American suburb, Japan’s version of the urban fringe is not as reliant on the automobile as one might expect. For instance, commuter trains remain a common feature of many suburban communities. However, by far the most essential feature of the Japanese suburb is its lack of exclusionary zoning. Born of a different history from North America and Europe, the purpose of zoning in Japan has never been overly concerned with ensuring the compartmentalisation of functions. Instead, the laws which govern land use are performance-based, directly controlling functions only in as much as they cause problems with health or economic concerns.

The system is performance-based in the sense that elements that define urban form, such as building heights and setbacks, are decided by a group of interconnected formulae rather than explicit limits. The system is also cumulative, meaning that land uses are arranged hierarchically from most controlled to least controlled, with functions allowed in ‘higher’ zones automatically also being allowed in ‘lower’ ones. This is perhaps more easy to see in Fig. 1, which shows the 12 zones used to control land use for all of Japan. In this example, zones progress from exclusive residential use at the top towards commercial and industrial uses at the bottom. Each step down in the zoning chain indicates a step towards more freedom in possible activities that can be applied to a particular area.

Ironically, while the names applied to each zone often include definitive terms such as ‘exclusive’, and ‘residential’, the types of activity possible within each category clearly show that the titles are in fact more convenient than descriptive. In practical terms, what this means is that while there is a legal...
framework to control land use through zoning in Japan, the distinction between one area and another is often difficult to see on the ground, as the regulations are, by design, profoundly inclusive.

What zoning can do
Lack of planning authority has led inexorably to classic sprawl on the urban fringe in Japan—leapfrog development and ad hoc growth is entirely common (see Fig. 2 – stills taken from an animation sequence documenting the growth of the study area from 1974 to the present). However, a closer look shows that as a result of the open zoning system, geography does not equal destiny. For instance, Fig. 3 shows the nominal zoning subdivisions for the case study area used for the research project. In the entire area only two very clearly defined pieces are zoned for commercial use, and yet Fig. 4 reveals that commercial land use is in reality sprinkled generously throughout the community.

It seems that while planners are not able to impose mixed land use on residents of Japan, the residents themselves are quite content to introduce the idea on their own. This effect is significant, and not limited to commercial land use. Small medical clinics can be found dotted throughout suburban tracts, along with small shops and retail stores. Similarly, income groups share communities in complete freedom, and indeed it is not uncommon for expensive detached homes to sit alongside multi-family and even transient housing (see Fig. 5).

Fig. 6 adds even more detail to this picture. Taken from Federal Census data, it compares the degree of access that residents have to basic daily needs in the case study suburb, as well as the centre of Toyama. Although there are instances where one part has better access than another (for example the suburban area understandably offers better access to green space), the differences are remarkably small. In this regard at least, the ambitions of the compact city are already consistent with the reality of the Japanese suburb.

The importance of a closer look
Although it is beyond the scope of this brief article to elaborate overly much, the research project in Toyama revealed that while mixed land use appears to be a normal presence in suburbia today, the actual activities on any given property are far from static. In fact, measured over a 30-year study period the research showed a constant background of changing land use in residential areas. The amount of change was not large by any means—no more than 1-2.5 per cent of properties changed function each year. And yet this is not a small number at all—houses became parking lots, clinics became homes, and shops transformed into apartment buildings. Year to year, this may be barely noticeable, but taken over

Figs. 5 Mixed land use and income groups in a suburban neighbourhood
Top row: Apartments and a typical detached home
Bottom row: Restaurant, a chiropractor’s office, and a shopping mall

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a time span of decades the character of a
neighbourhood can change radically. And yet without
taking the time to look closely at the suburbs the
process would remain entirely hidden from view,
especially if the viewer looked only at the larger (and
static) picture that is all too common when examining
urban form. At that level the clearest picture available
is the one shown in Fig. 2: sprawl, and little else.

It is not possible to argue that Japanese suburbs
are sustainable in their current form. Dependence
on automobiles and the wasteful use of land as a
result of ad hoc development make that plain.
However, the prevalence of mixed land use patterns
as well as an existing process of constant change
suggests they could be transformed at least as
easily as the centre.

Although the examples shown here are from a
single case study area, it seems that the role of
suburbia may need to be reconsidered if the Urban
Renaissance is to have any effect. For instance, the
fact that accessibility to daily needs is barely
improved by moving to the centre from the suburbs
(including health care, an important consideration in
an aging society) suggests that it will be difficult to
entice residents to move from one area to another.
It is clear that the image of suburbia that is being
used to set policy in Japan is incomplete. A closer
look is required.

Lessons for the West?

Because every country is unique it is difficult to
take direct lessons from the Japanese example and
apply them to other nations. And yet the example
discussed here serves as a cautionary tale. Suburbia
does not always fit the assumptions that have grown
up around it, and it is well worth taking the time to
examine suburban areas more closely. It is possible
that the very tools that will make future cities more
sustainable may be found there, rather than in
traditional notions of what a city should be. Without
in any way making excuses or offering support for
the negative effects of suburban life, if the ultimate
goal is to create sustainable urban form, it seems
that an objective re-evaluation of suburbs and what
they have to offer is worth undertaking.

The research introduced here also offers some
insight into the importance of zoning. In the
Japanese example culture certainly plays an
important role, and yet the openness of the zoning
system can also be seen to have contributed to the
creation of a suburban typology that easily accepts
mixed land use, relatively high accessibility, and the
mixing of peoples from various income groups. It is
entirely possible that the problem may not be
suburbs in general, but instead the rules that
regulate them.

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graduated with a PhD from the University of Tokyo. He is
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Notes

1 Tokyo is a notable exception. While many cities and
towns are expected to lose as much as 25 per cent of
their current population in the next few decades, Tokyo
is projected to lose only 1 per cent over the same
period. Like most world-class cities in relation to the
rest of a nation's cities, Tokyo is not a good
representation of the future of the rest of Japan

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