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A Comparative Study of Social Housing in Britain and China

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Abstract

This paper conducts a systematic comparison on the development of social housing in Britain and China. It firstly reviews the origin and the following changes of social housing policy and practice in both countries, and then the physical features and social profiles of them will be compared. It concludes that although the social housing development in China has much shorter history than that in Britain, its historical development trajectory and some physical and social features are with similarities. By learning from British experiences and lessons, several valuable suggestions to Chinese social housing development in future are obtained, which include: not to develop large-scale low-quality social housing estates in a careless way; to develop a multi-level social housing system, to enhance tenant participation and to invest more in housing studies.

1 Introduction

Cross-national comparison has been frequently used in housing studies in recent years. Many researches have indicated that the ideas and approaches in housing policy and development in one country could have important values to others (Dickens *et al.*, 1985; Cherry, 1984; Boelhouwer and van der Heijden, 1992; Barlow and Duncan, 1994; Doling, 1997), especially when the economic, political and cultural globalisation is leading toward convergence in social policies and practice and eroding local distinctiveness. By following a cross-national perspective, research findings may facilitate better and more thorough understanding of the strategic or structural issues, and also help to identify knowledge gaps and point to possible directions that could be followed which local researchers and policy makers may not previously have been aware (Oyen, 1990; Hantrais and Mangen, 1996). In existing literature, the majority of comparative studies on social housing are between the countries within European Union. Many of them have offered innovative ideas for policy shifts and programme development in recent years. However, findings of the cross-national comparative social housing studies still seldom involve the discussions in developing countries, despite in recent years the overall social housing stock with

diverse categories are far more than those in developed countries and the policy and development are changing very fast to leave many under-studied issues.

Social housing is an important but ambiguous term in housing studies. In different context or from different perspective, the definition and involvement of social housing may be extremely diverse (Davis, 1998; Bourne, 1998; Harloe, 1995; Kemeny, 1995). In this paper, "social housing" is discussed as an umbrella term referring to all housing provision which is not from free market. This includes the low-cost rental housing owned or managed by state, the stock provided by non-for-profit organisations, and also other dwellings sold or rent to occupiers with subsidy or allowance instead of in market price. From this perspective, social housing is neither a commodity nor private asset, but similar to the public health and education service to a certain extent as a necessity for everybody to guarantee a basic life standard (Torgensen, 1987, p116). For the objectives to improve social justice and harmony, governments hereby should launch a series of policy and practical approaches trying to deliver better balance between housing supply and demand in market and ensure that "people have decent places to live" (ODPM, 2004, p12) . In many countries especially the advanced economies, social housing sector always occupies a considerable proportion of the overall housing stock. Social housing policy and development always make significant influences to the national economic and social development.

The development of social housing has a long story in both Britain and China. For the very early urbanisation, in Britain the earliest social housing policy was developed in late 19th century in order to response the serious housing problems, such as housing shortage or bad living conditions in industrial cities then. In China since the Community Party established a Socialist state in 1949, housing provision was dominantly from public agencies for a long time. In both countries, social housing policy and practice have experienced many significant reforms. For the late urbanisation process, Chinese policy-makers learned many in-time policy changes and approaches from western countries. British experiences were extraordinary influential because they were well transferred via the practice in Hong Kong.

This paper aims to make essential contribution to filling this academic gap. It will give an overview of the social housing issues in both Britain and China in a parallel structure, and analyse the similarities and differences between them. The findings will answer the following questions in both countries: When, why and how the social housing policy and projects initiate? What are the changes in following years? What are the physical features of the social housing estates? What are the social profiles of the tenants? All the findings could provide valuable implications from British experiences and lessons to Chinese social housing development.

2 Social Housing in Britain

Social housing policy and its development

The origin of social housing in Britain could be traced back to the late 19th century. After the Industrial Revolution, the population of working classes soon boomed quickly in industrial cities. The majority of them lived in the dwellings provided by private landlords or their employers. The provision of urban dwellings, drainage and sewerage could not keep pace with this billowing population with the result that people were crammed together in poor-quality, unsanitary accommodation (Tarn, 1971; Gaudie, 1974). This made "housing" a serious social problem then. As the response, The *Housing of the Working Classes Act 1890* permitted local authorities to erect "council housing" to replace the demolished slum dwellings deemed "unfit for human habitation". The authorities were expected to act developers to provide more decent houses to working class but the commercial return was limited by no more than 5 per cent (Morton, 1991, p2). But in early years, the council housing development was in very limited scale. By 1914 only about 24, 000 council dwellings were built (Merrett, 1979, p26) and about 90% households were still rented from private landlords (Lund, 2002).

After the First World War, the development of social housing in British cities was accelerated. The *Housing and Town Planning Act 1919* made it mandatory for each local authority to compile a plan to meet local housing needs, and granted central subsidies to help local finance in supporting the non-profit housing development. Large scale public housing construction projects were then initiated, including the schemes of "*Homes Fit for Heroes*" in the 1920s and booming slum clearance projects in the 1930s (Orbach, 1977; Glynn and Oxborrow, 1976). Between 1914 and 1939 there were 1.77 million houses completed by public sector or with state aid, which is 41% of overall housing completion during the period (Bowley, 1945). Also, the introduction of social housing provision had made substantial progress in improving housing conditions: Rowntree (1941) found that overcrowding in York had been reduced by two thirds since 1900, and unfit property had decreased from 26% of the housing stock in 1900 to 12% in 1936.

Despite the significant progress in the interwar years, the serious housing shortage did not disappear in British cities. The Second World War destroyed and badly damaged around 700,000 existing houses (Lund, 2006, p28). Meanwhile, Britain experienced fast population growth driven by the post-war "baby-boom": Between 1951 and 1961 the population increased by 5.0% over the decade, with an even higher growth of 5.9% in the following ten years from 1961 to 1971 (Jefferies, 2005). Moreover, the progress of slum clearance created increasing homeless working class to be re-accommodated. All these reasons gave greater pressure on public housing development. Central government hereby offered higher rate of subsidy to local authorities for public housing development than ever, so the social housing sector kept

increasing rapidly in following years. The high-speed drive of social housing boom slowed down after the late 1960s when the general housing shortage in Britain was finally reduced to a great extent. But public expenditure in housing remained in high level and more of them were used to improve the quality of existing dwellings. Until the late 1970s, though the detailed regulations shifted many times corresponding to the shift of political alternations, the basic framework of social housing provision remained unchanged (Malpass and Murie, 1999).

Public expenditure to social housing was cut off since 1976 for the financial difficulties of British government (Lund, 2006, p36). When Conservative Party came to power in 1979, the provision of new council housing significantly declined fast, meanwhile the existing stock were then privatised through the scheme of "*Right to Buy*" (DoE, 1987, p3). This scheme was introduced by *Housing Act 1980* and the *Tenant's Rights (Scotland) Act 1980*. The "secure" sitting tenants (over 3 years and later 2 years) were allowed to buy the property rights of their homes at discounted prices. Some other council housing stock was transferred to housing associations or similar voluntary organisations. These organisations were partially supported by private capital and also competed to secure grants from public finance by meeting the government's social objectives (Lund, 2006, p41). Meanwhile, the rents of council housing were pushed up to be closer to market price. Some qualified renters who were difficult to afford their housing cost could receive financial support such as Housing Benefit. In all since then, the social housing supply in Britain has shrunk and provided or managed by more flexible ways.

The impacts of privatisation process were disproportionate. Most previous council houses bought by private owners were the better-off stocks, for example detached houses rather than flats, or the ones in favourable locations rather than the ones with poor accessibility. The remaining public-owned houses became more "residual" in housing market with decreasing reputations (Forrest and Murie, 1983). The tenants of them had to suffer much lower living conditions than others. Thus in following years, the betterment of the unpopular housing estates became more important tasks for British governments. After 1997 when New Labour government came to power, more public expenditure has been invested in the most disadvantaged housing estates. New attempts have been launched trying to reduce the gap between social housing and the properties from market, which include the encouragement of mixed tenure, increase accessibilities to decent and affordable social service, the enhancement of tenant participation in neighbourhood management and so on. By these ways, social housing provision and management has been through diverse and dynamic systems so that they can better meet the long-term housing needs in a sustainable way (Table 1).

Table 1: Housing in the UK (2004)[1]

	England	Scotland	Wales	N. Ireland
Population (million)	49	5	2.9	1.7
Tenure (%)				
Homeowners	71	65	73	70
Private rental	10	6	9	8
Local authority or	11	20	14	19
Housing Executive				
Housing association	8	7	4	3
Social housing in total	19	27	18	22
Unfitness (%)	4	1	8.5	4.9
Overcrowding[2] (%)	2	3	3	3.8

Source: Adapted from ONS (2005), Northern Ireland Housing Executive (2003)

Physical Features

In Britain most social housing properties are easy to recognise. The exception is the early council housing projects completed before the Second World War, which looked similar to the private properties in the same age. While for the post-war social housing schemes which occupied the majority of all stock, their general physical appearance was very distinguished to their surrounding neighbourhoods because of the following features.

The first feature is that great quantities of social housing estates were usually located outside of existing urban areas or even very far from city centres. Especially for the large-scale estates, the most popular location choice was either the periphery of the towns and cities, or separated from the city by "green field" or wasteland. In some areas particularly the large industrial cities, social housing demand was extremely high while less land stock was controlled by local authorities. As the result of the fragmentation of local politics in Britain, every local authority had to meet the social housing demand by new construction in their own territories rather than relocation to surrounding rural areas (Dunleavy, 1981). Therefore many public housing estates had to be constructed in worse places, sometimes just around the derelict land or abandoned industrial land, without good accessibility to city centres.

The second feature is its high density. The high-rise was very popular in the public housing projects in the 1950s and 1960s. The introduction of new construction technologies and increased state subsidy for high-rise were the major reasons for the boom (Zhang, 2000; Dunleavy, 1981, p37). The peak time of the subsidised high-rise development was the middle years of the 1960s. In every year from 1958 to 1969, over 10% newly completed housing units were in high-rise blocks (defined as 6-storey and over) and between 1963 and 1967, the proportion was higher than 20%.

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[1] Data of Northern Ireland are up to 2003.
[2] Below 1 room per capita.

In 1967, the year with highest proportion, the number of completed dwellings of high-rise housing reached about 39,300 (in England and Wales), which was 29% of all public housing stock, compared with only 3% in 1953 (Gittus, 1976). In later years, most of the high-rise flats were not sold to private and occupied a considerable proportion of remaining social housing stock.

The third feature is the wide application of repeating design principles, of either the layout of buildings, or the exterior and interior design of the housing units (Dekker *et al.*, 2005). Most projects were completed by wide use of prefabricated components, pre-cast concrete panels produced by the "housing factories". Scale merit (economics of scale) was successfully achieved through repeating production of the uniform components and following fixing work by tower cranes. The "international style" housing design created huge boxes as either slabs or towers, almost always with lack of decoration and amenity (Figure 1, 2). The launch of a series of minimum standard for public housing conditions, for example Parker Morris standard and the application of Housing Cost Yardstick which specified expenditure ceilings, also helped to increase the standardised housing design (Ministry of Housing and Local Government, 1961). The result was that, "*first, Parker Morris standards soon ceased to be minima but became maxima to be aimed at within limited resources, and second, in order to escape the pincer some most unsatisfactory design solutions were produced to what was highly artificial problem*"(Malpass & Murie, 1999, p62).

Figure 1: Park Hill estate at Sheffield, a typical case of high-rise social housing in the 1960s
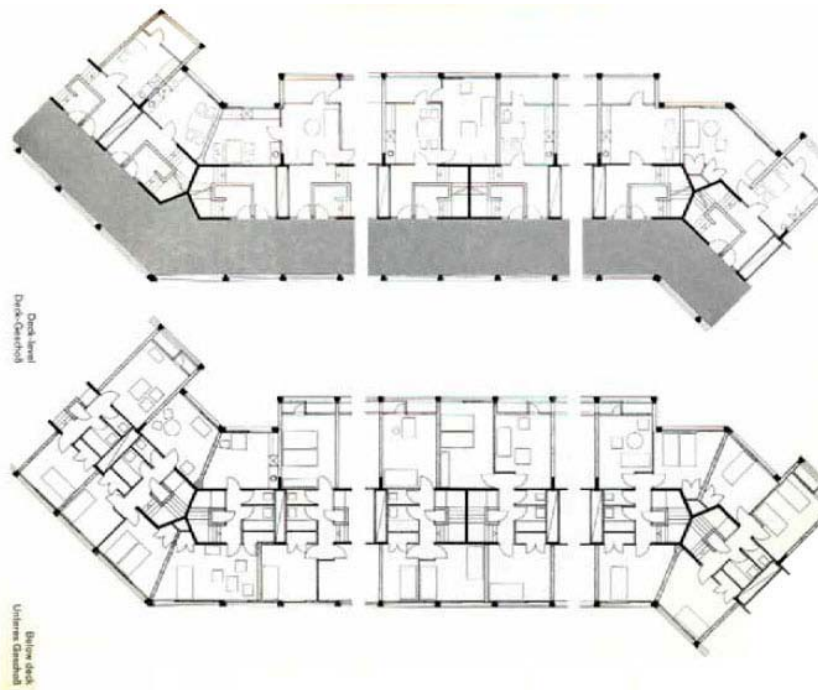*Source: the author*

Figure 2: Layout of Park Hill estate at Sheffield

Source: http://www.artandarchitecture.org.uk

Another feature was that most infrastructure and neighbourhood facilities were allocated by master plans in a rational way. The schools, clinics, pubs, clubs, libraries, retailing units, and playgrounds for children, plus the transformer substation, parking spaces, rubbish collecting points were almost all constructed by the support of public fund. The initial plans of many projects usually had very high standards to allocate the facilities, but in reality the facilities were almost always completed far behind the schedule. Also the universal allocations are usually without local identification and mismatch the real needs of local community.

Since the late 1970s the physical conditions of most social housing estates declined significantly. Water penetration, poor functioning of lighting systems, defects in heating systems, leaking roofs and crumbling plasterwork were the most common problems. Many parts of the collective properties, such as the corridors, lifts, stairs and other infrastructures, which should be critical to local life quality, were much more under-maintained than the dwellings themselves. The cause of the poor physical maintenance might be attributed to the lack of experience of relative service provision at the early years, but after the 1970s the cut of public financial support for housing maintenance made the situation worse. Also as some researchers argued, in most high-rise social housing blocks the under-monitored collective spaces, invisible corners, stairs and underground garages, may truly provide convenience to the occurrence of criminal or anti-social behaviours (Newman, 1972; Coleman, 1985). Later the poorly maintained social housing properties became residual in housing market, and then the increasing number of empty units provided more uncared spaces or attracted squatters (Figure 3, 4).

Figure 3, 4: Declined social housing estate with closed shops and empty/damaged housing units

Source: the author

Social Profiles

British local authorities used to be the owner of most social housing stock when they were just completed. At that time, the authorities also held the right to select tenants from the application list. The principle of the selection was to ensure, first, that the help from public subsidy should benefit the families who really needed it but were financially excluded by the housing market and, second, the target tenants would be "respectable" and able to pay their rent and well look after public properties. Usually the married working class couple with secured jobs were the prior group to move in, while single people and recently settled migrant workers received the lowest priority (Turkington, 2004). As the result, the social profiles of the initial tenants in social housing were highly homogenous. A high proportion of them were young, married and employed families. In some slum clearance projects, neighbours in the past were re-housed next door to each other so the strong cohesion of original community could be preserved.

But when the general housing shortage was eased after the mid-1960s, the social profiles of these estates began to change downwardly. The better-off tenants then purchased their homes with good locations, facilities and maintenance in market and moved out of the social housing estates. The launch of "Right to Buy" scheme accelerated the change. Most buyers of previous council houses were younger, better-educated and with secured incomes. However the worse-off social housing stock was still owned by public which became residual stock in market difficult to sell. The unsold social housing properties were usually located in some unpopular areas, with higher concentration of vulnerable groups, including the elder, single-parent, disabled, unemployed or low-income people (Power, 1993; Dunleavy, 1981; Forrest and Murie, 1983; Murie, 1983; Malpass, 1990). Figure 5 show clearly the changing trend that fewer and fewer social housing residents were employed, within which the change just after the launch of "Right to Buy" is most significant. Figure 6 compares the employment status for the tenants in social rental sector, mortgaged households and all, which also reveals the gradually downward social restructuring for the

remaining social housing tenants. As the result, the social housing estates were initially dreamt of creating egalitarian shelters and classless communities to house the homogenous working class and other mainstream social groups; however, what happened later was that more mainstream households had owned better homes from housing market while most remaining social housing tenants have become various kinds of vulnerable social groups.
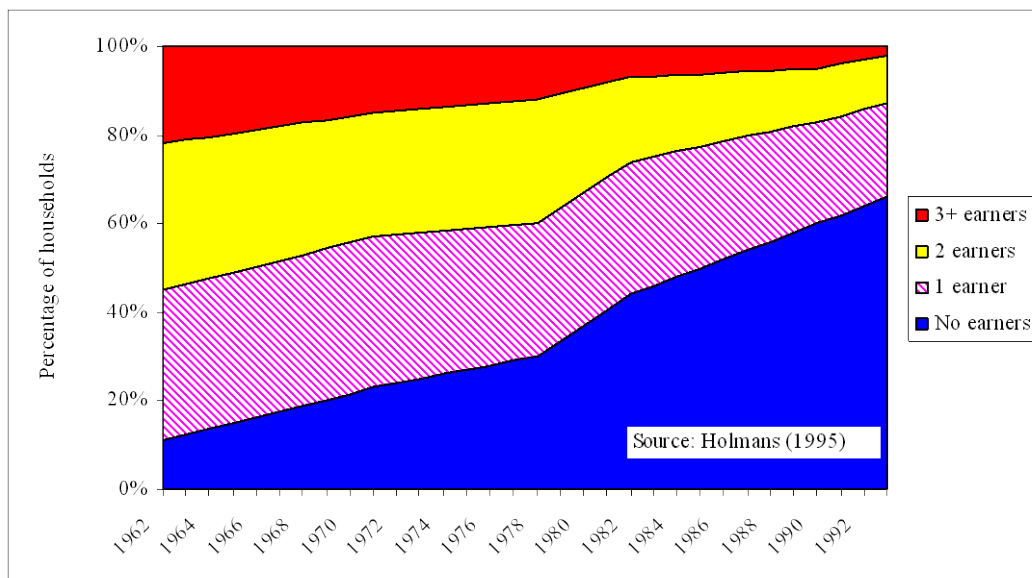

Figure 5: Council tenants by number of earners in the household, 1962-93
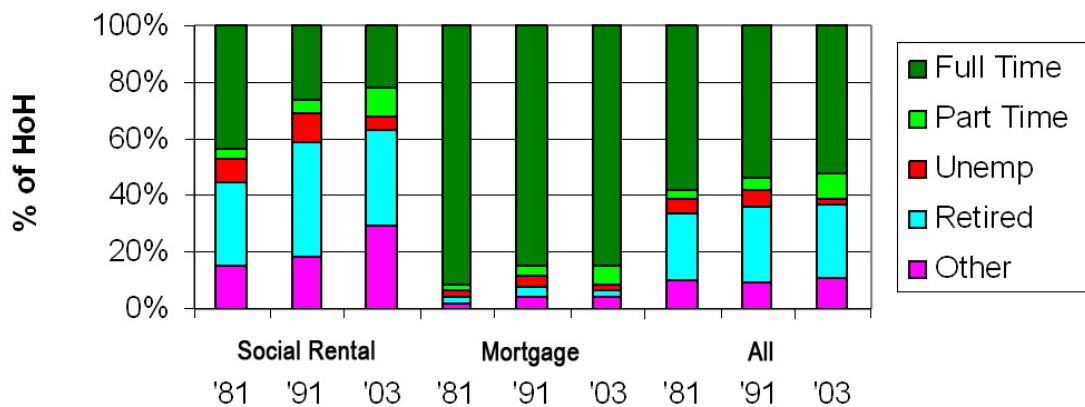*Source: Holmans, 1995*

Figure 6: Employment Status of Household Head by tenure (1981-2003)
Source: Wilcox, 2005

3 Social Housing in China

Social housing and its development

The social housing development in China emerged much later than that in Britain and

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other Western countries for its late industrialisation and urbanisation. Until the early 20th century most Chinese cities were still formed by traditional neighbourhoods where households live in own or private rental dwellings. In the 1920s and 1930s central and some local governments launched very ambitious master plans for some large cities (such as Nanjing, the national capital and Shanghai, the largest city), which comprised some slum clearance and public housing schemes. However for poor public finance and later wars, none of the schemes became into reality.

The large-scale public housing development started after CCP established the Socialist state in 1949. According to the Socialist ideology, housing was no longer seen as a commodity but a type of social welfare treatment provided by the state (Chu & Kwok, 1990; Wang & Murie, 1999; Zhang and Wang, 2001). Thus the existence of private developers and housing market was no longer permitted. The majority of properties owned by big landlords were then nationalised. For the remaining private-owned houses, their disposal and rent setting were greatly restricted. (Wang, 1992) New housing provision was all from public sector. Obviously in following years, more properties were owned by public. By the end of the 1970s, private sector housing had declined to about 10% of the total urban housing stock (Chen, 1994, p24; Whyte and Parish, 1984).

There was not a unitary mechanism for public housing provision in China. Usually, municipal housing authorities and the employers (work units or *Danwei*) were the two major providers (Wang, 1995; Wang and Murie, 1999). For the municipal housing projects, the cost of housing development and maintenance came from state fund directly. The cost of work unit housing development was also from public fund but normally the employers have autonomy to decide how to use them. For both ways, the public fund paid almost all cost of the whole process: i.e. land acquisition, housing construction and its maintenance after completion. The tenants only needed to pay nominal rents.

To be remarkable, the social housing system in China existed in urban areas only. Since the "*Hukou*" system was introduced in 1958, rural populations were strictly limited to work and live in cities (Chan, 1996; Goldstein and Goldstein, 1994). That means the public housing provision was only accessible to the registered urban residents (about 12%-18% of national population from the 1950s to 1970s). Even to the registered urban households, inequality of housing provision was apparent (Zhou and Logan, 1996; Walder, 1986). For municipal housing, the level of funding depended in part on the bargaining ability of regional leaders with the central planning and housing ministries (Struyk, 1996). Similar, the distribution of public fund for work unit housing was not egalitarian: usually the "key" work units for example the advanced enterprises of favoured industries or the higher-ranked governmental institutes could receive more public fund and other additional resources (for example the use right of extra land) (Wu, 1996, p1607). As the consequence, the better-off public houses were allocated disproportionately to elites among party

leaders, government officials and managers of state-owned enterprises. The provision to workers or other underclass was far behind the schedule in almost all Chinese cities. Also, the quality of public housing significantly varied to show the levels of their tenants.

Although social housing development in Chinese cities was just in limited scale, the poor public finance could still not support sufficient supply to meet the real housing demands. The first national housing survey conducted in 1985 revealed that over 28% of urban households experienced housing problems: 870 thousands were classified as homeless[3]; over 3 millions lived in inconvenient conditions with the whole family in one room or two families in one room; another 3.5 millions had less than 4 m^2 average floor space per person (State Statistics Bureau, 1989). Facing this almost insurmountable problem, Chinese policy makers began to search for alternative ways trying to increase housing supply immediately.

Since the late 1980s a series of experimental housing reforms were introduced in several cities. Reform policies included rent increase in the public sector coupled with the sale of public housing (Wang and Murie, 1996). The publication of *Implementation Plan for a Gradual Housing System Reform in Cities and Towns* by the State Council (1988) confirmed the success of the experiments and required the reform to be carried out in all cities. This led to the large-scale sale of existing public housing at very low prices in a very short time. In 1991, the housing market in Chinese cities was legally re-introduced. By then private capital including foreign investment was encouraged to contribute to new commercial housing development in order to help tackling the severe housing shortage. In 1994 new policies were issued with the aim to establish a new urban housing system. The system was formed by a unique dual-track housing provision system, in which social housing supply continuously existed (despite in reduced scale) to house middle and low income households while high income families can purchase commercial housing from private developers (Housing Reform Steering Group of the State Council, 1994).

The milestone document of further housing reform was introduced in July 1998, named *Notice of Further Deepening Housing System Reform and Speeding up Housing Construction* (No 23 Document) (State Council, 1998). This ended the public housing distribution by all work units. Instead, new social housing development should be universally by local authorities. Approximate 70% urban households were expected to buy Economical Comfortable Housing (ECH) (*jingji shiyong fang*) which would be developed with public financial support. 15% low-income families could apply to rent Low-Rent Housing (LRH) (*lianzu fang*) which together with ECH formed a new social housing system. The 15% higher income urban households were encouraged to obtain high standard commercial housing through the market (Wang, 2001). However in later years in contrast to the overheating commercial housing market, the establishment of the new government support social housing system was

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[3] No home after marriage, living in non-housing buildings or living with relatives.

seriously delayed in most cities. The nation-wide provision of ECH was always in low proportion, and the rate kept dropping down (Table 2). In Shanghai city there was no ECH programme at all until 2006 and in Guangdong province the ECH housing was only 0.5% of overall housing supply (2006) (Wang *et al.*, 2009). In Beijing, the proportion dropped from over 16% in 1999 to just approximate 6% in 2006 (Zhang and Li, 2009).

Table 2: Housing units built 1999-2006 in China

Year	All housing units built (1000)	Government supported ECH built	
		Units (1000)	As % of all housing
1999	1,946.4	485.0	24.9
2000	2,139.7	603.6	28.2
2001	2,414.4	604.8	25.0
2002	2,629.6	538.5	20.5
2003	3,021.1	447.7	14.8
2004	4,042.2	497.5	12.3
2005	3,682.5	287.3	7.8
2006	4,005.3	338.0	8.4

Sources: China Statistical Yearbook 2007 (Table 6-42), www.stats.gov.cn

The over-marketised housing system made the initial target of 1998 reform very unrealistic in implementation. By the radical privatisation process, the proportion of social housing stock in Chinese urban housing system was greatly reduced. In 1981, over 82 percent of urban housing was in public ownership (53.5 percent owned by work units and 28.7 percent by municipal housing authorities); and private housing was only about 17.8 percent (Almanac of China's Economy, 1983, p.IV-103). By 2003, over 82 percent of urban housing has been private-owned (Liu, 2003). More urban households now are excluded from commercial housing supply for the rising housing price and few of them got essential help from the insufficient new social housing supply. Housing inequality and affordability have become most urgent problems in contemporary Chinese society (Wang, 2001; Wang and Murie, 2000). As the response, on 20 December 2008, another major housing policy document was published by the General Office of the State Council (2008), named as *Some Suggestions on Promotion of the Healthy Development of Housing and Property Market*, which aimed to re-enhance social housing development with stronger support of public finance.

The central government promised to increase its contributions to social housing and slum redevelopment programmes. Local governments were required to follow the central advice and increase social housing supply and to ensure land supply for social housing project. Commercial banks were encouraged to increase their lending to social housing development projects. A new ambitious plan has been issued to accelerate social housing development in future three years (Table 3). By

re-emphasising the role of social housing sector, a new balanced housing system is expected to be formed.

Table 3: State Council's social housing development plan (2009 to 2011)

	2009	2010-2011	Total
Low-Rent Housing: (million units)	3.4	6.47	9.87
Economical Comfortable Housing: (million units)			1.30
Total number of household benefited			11.17

Source: General Office of State Council, 2008

Physical Features

In China the locations of many old social housing estates differed to the British projects and were normally not far from city centres. The majority of work units would like to construct public housing estates for their employees just near their workplaces. The residential areas together with the offices and workshops were usually enclosed by wall to exclude outsiders and facilitate internal management. The municipal public housing was usually not in too large scale, frequently associated with the redevelopment projects of some worst traditional residential areas. Public housing estates of the renewal projects were constructed on site to accommodate original residents. Some residents were relocated, but the new municipal housing estates were usually just beside city centre to avoid too long infrastructure connections. In later years for the expansion of urban areas, the locations of most old social housing estates became more favourable and with better accessibilities to city centres. However after 1998 most new social housing projects universally developed by local authorities began to repeat previous British practice. In order to acquire cheaper land, most large-scale social housing projects located in far periphery with quite a distance to existing urban areas. Many were also very inconvenient to access urban public transport system. Figure 7 show such cases in Beijing.

From very early, the multi-storey style was very popular in Chinese social housing construction. Until the 1980s, however, high-rise housing was always developed in a very conservative way. The *Technical Provision of Housing Construction* (Ministry of Construction, 1985) clearly stipulated that urban housing should primarily follow the multi-storey (no more than 6 storeys and without lift) style and the construction of higher-rise housing blocks should be under strict control. The higher-rise housing buildings were permitted only in some special designated sites in cities to further land saving when adequate technical equipment is provided (Zhang, 1990). Thus between the 1950s and 1980s, 3-6 storey flats were the most common social housing products. Nevertheless, the density of new generation of social housing after 1998 increased radically. The housing block with lift was introduced and widely applied to form "concrete-made jungles" in order to ensure the faster growth in quantity. Further, high-rise housing always formed very large-scale housing estates without mixed land use. In Shenzhen city up to 2004, 98.1% social housing tenants live in the large

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estates with a construction area over 10,000 m^2, and 67.0% live in huge estates with a construction area over 100,000 m^2 (Shenzhen Land and Housing Bureau, 2005). In Beijing, the largest social housing estate Huilonguan was planned to accommodate 230,000 populations in total.
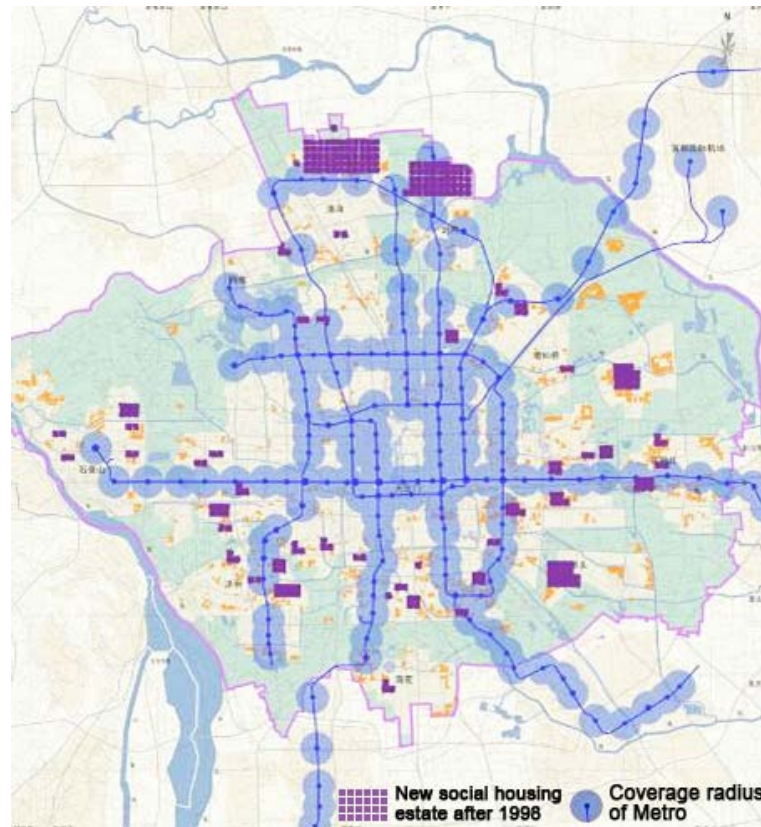

Figure 7: Locations and accessibilities of social housing estates after 1998 in Beijing
Source: Adapted from Beijing Municipal Government, 2006

The standardised housing design was also widely applied in Chinese social housing development. In the era of planned economy, public housing distribution was regarded as a kind of welfare treatment for individuals, so the housing standard included several grades for different target groups respectively (Table 4). The maximum floor space, the number of rooms in each unit and standards of interior facilities was strictly restricted. Although the national standard just provided a basic framework to direct public housing design and encouraged diversification, in practice the restriction of time and cost forced the designers have to choose the "most typical" layouts. Thus thousands of families had to share the same layout of homes, no matter what their family structure and lifestyle might be. Relatively, the housing standard was in quite low level from the 1950s to 1970s, and after the 1980s the standard was improved many times together with rapid economic growth. However for the new generation of social housing projects after 1998, there was no longer a new national standard. Many housing units were constructed in high standard. In 1999 to 2007, the average floor space in the newly completed social housing in Beijing is approximately 110 m^2, which is very near the commercial housing then (Zhang and Li, 2009). But in

every housing project, one or some "typical" layouts were still frequently repeated. In contrast to the highly diverse commercial housing estates with many architectural innovations, the appearance of social housing estates was much more monotonous and boring (Figure 8).

Table 4: National public housing standard (1981)

Targeted household	Maximum floor space
Families of employees of factories and mines	42-45 m^2
Families of ordinary cadres	45-50 m^2
Families of intellectuals with intermediate academic title and of principal heads and deputy heads at a county government level	60-70 m^2
Families of high-ranking intellectuals and cadres at bureau director level	80-90 m^2

Source: State Council, 1981

Figure 8: Huilongguan as a typical large-scale social housing estate
Source: the author

There was also a very detailed national standard for the allocation of neighbourhood facilities in Chinese social housing projects in a long time. These planned facilities were believed to fully cover all basic daily needs of local community and included seven categories: education, health service, economic service, leisure and sports, shopping, community management and infrastructures. The standardised requirement was presented by the "thousand-person-indicator" (Table 5). After completion, most of the social services were managed by public agencies. But after the economic reform in the 1980s, most neighbourhood service provision was commercialised and operated by private agencies except education and health care. For the favourable locations and high population density, the private service provision was satisfied. In the new social housing estate after 1998, the "thousand-person-indicator" was still as compulsory references for planning. However in practice the completion of many important facilities was seriously delayed especially the education and health care

facilities which were still run by insufficient public investment. Figure 9 and 10 show the insufficient allocation of kindergartens and primary schools in Huilongguan which only cover very limited neighbourhoods of the huge residential area.

Table 5: The required neighbourhood facilities per 1000 residents (1980)

		Amount per thousand person	Construction area (m²/thousand person)	Land use area (m²/thousand person)
Education	Nursery	8-10 seats	32-60	
	Kindergarten	12-15 seats	72-120	144-210
	Primary school	175-270 seats		490-900
	Middle school	80-100 seats	280-400	960-1500
	Total		559-850	
Health	Hospital	3-3.5 beds	129-169	240-300
	Clinic	14-15 seats	18-22.5	27-33.8
	Total		147-191.5	267-333.8
Economic	Bank branch		14-15	
	Post office		25-30	40-50
	Total		39-45	
Leisure and sports	Cinema	36-37.5 seats	56-72	90-114
	Museum	18.5 seats	60-62.5	
	Youth club		20	60
	Sports ground		136-154.5	
	Total			200-300
Shopping and daily service	Department store		40-50	
	Book store		8-10	
	Pharmacy		10	
	Food shop		18	
	Grocery		7-8	27
	Restaurant		15-16	
	Fast food shop		7.5-14	
	Ready food shop		6.5-12	
	Food open market			22.5-24
	Photo shop	3-3.2 seats	40-45	
	Hair cutting	1.9-4.4 seats	4	
	Public bathroom	1.6-3 seats	5	
	Laundry		25	
	Taylor shop		2-3	
	Accessory fixing		6-8	
	Recycling centre		5	10
	Coal shop		2.5-3	20-25
	Total		389-535	
Community management	Management committee		20	
	Housing management office		20-25	
	Total		40-45	
Infrastructure	Transformer substation		12-14	
	Public toilet		3-6	
	Rubbish station			1.5-2
	Total		15-20	
Total			1019-1472.5	

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Figure 9: Kindergartens in Huilongguan   Figure 10: Primary schools in Huilongguan

Social Profiles

The tenants of Chinese social housing before 1998 reform were selected in the same top-down way to British social housing in the past. But the social profiles of them were totally different. First of all for the existence of *Hukou* system, only registered urban households could be qualified to be social housing tenants. In such a populous and poor China, the government use this way trying to strictly restrain the increase of urban population and control the public financial burdens for housing development. This resulted in all rural population, which was always over 80% from 1950s to 1970s, were definitely excluded from the social housing system then. Second, the upper class in cities always had priority to get better-off homes. The distribution of better housing was usually as an award for the senior people who were regarded making greater contribution of the society. This was directly reflected by the grades of housing standard mentioned above. However in every social housing estate, the micro-scale social structure was usually highly homogenous. Whatever in municipal or work unit housing, the employees of the same institute become neighbours in the same building, or the households living in one building could share the same or similar jobs. Some housing estates were even directly called "professor buildings", "teacher villages" or "doctor mansions". Residents could communicate easily in the neighbourhood and workplaces. They held similar ideas and it was often easy for them to find some public interests. Many formed the gated specialised community which always had higher cohesion and fewer troubles in public affairs.

The homogenous social structure began to alter since the housing reform towards privatisation. Many richer households then purchased higher-quality commercial properties and moved out. They then sold or rent the old properties in market. Thus the following downward social restructuring was inevitable. However in details, the change of social profiles of tenants in different estates varied greatly. The units of

some high-quality estates which used to be developed for high-level people, were still very competitive in housing market, and many middle class households choose to reside here and enjoy the good locations and sufficient facilities. But for the older estates with lower housing standards, most new tenants were from low-income groups, who cannot afford to buy their own homes in the market. Some others may be newly-coming migrants, who are "floating population" in large cities, only with temporary jobs or still looking for jobs. Their family structures, economic conditions, jobs, life styles and personal preferences differ greatly from those of their neighbours. In dealing with many public affairs, they do not trust each other and it is difficult for them to find a common understanding. In these estates, many signs of declining community cohesion and threats of crimes or social unrests have emerged.

The launch of new social housing schemes after 1998 initially followed similar ideas to the development of British social housing in the past. It aimed to provide egalitarian houses to not only the low-income but also the mainstream social groups who cannot afford the housing price in market. But for the lack of effective and detailed regulations on the applicant's qualification, many units were sold to richer people. In Beijing, 49% buyers of ECH had other private properties, and 26% buyers were in fact from high-income groups (Zhu, 2000). On the contrary, 52.7% households in Beijing who were difficult to afford commercial housing were still excluded from social housing system (Zhang and Li, 2009). As the result, the current tenants of the new social housing estates include considerable high proportions of governmental staff, while collars, doctors, teachers and other middle class. Up to now, a large part of low-income and vulnerable groups are still excluded from the social housing provision. Usually, they have to live in the low-quality private rental houses or informal temporary shelters, suffering much lower living conditions below the average.

4 Comparison

The history of social housing development in Britain is about one century longer than that in China. However, they follow a similar development trajectory. In both countries, social housing initially emerged in purpose to reflect the left-wing political ideology: decent and affordable housing should not be seen as private asset and commodity but the basic necessity for all people; thereby the power of governments must be used to develop non-for-profit housing projects. In early years, the public authorities controlled the development process in a top-down way so that the quantitative growth of social housing could be achieved in a short time. After several decades, social housing had occupied quite high proportion of all housing stock.

In recent years the role of social housing became sidelined in housing system in both countries. Experienced a series of reforms, more and more existing public housing stock was transferred to be owned by private or voluntary organisations and new social housing provision shrunk greatly. The reform resulted in significant

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improvement of living conditions for many better-off households, but housing affordability and inequality emerged as new problems at the same time. In recent years the new crises became more ignorable and widely regarded as potential threats to cause social unrest. Hence, the role of social housing was re-emphasised with the intention to re-enhance social equity again.

However the details of this zigzag development trajectory are with many differences between Britain and China. Relatively, the shifts of social housing policy in China followed more extreme ways. Experienced about 50 years (1920s-1970s), social housing in Britain increased from below 10% to about 30% of total housing stock, and after 1980s the proportion gradually dropped to below 20%. In China, the communist authority just used about 20 years to nationalise private properties and social housing increased from very few to over 80%. Then just after 20 years of privatisation, more than 80% urban housing stock now became private-owned. Such sudden changes may help to cover some urgent housing problems in a short term, but greatly affected the stability of housing market and the sustainability of housing system in a long term. As the result, the government has to re-expand the social housing sector just about 10 years later than the radical housing reform initiated in 1998.

Besides, in Britain the distribution of social housing product was always in an egalitarian way to all. Although the regional or demographical inequality existed, the gaps were never very huge. While in China the benefit of social housing development was seldom equally distributed. In a long period, social housing provision was only accessible to urban population, not the whole society. Among the social housing tenants, the institutional inequality caused by the fragmented housing provision was everywhere. In the universal provision of new social housing after 1998, the inequality was still significant for the lack of effective regulations to define the real qualified beneficiaries. Usually the elite groups gained more and the most vulnerable groups were excluded from social housing distribution. This greatly reduced the contribution of social housing in enhancing social equity. Fortunately in recent years, the nature of social housing has been re-thought in China. After the issue of No 24 documents, named as *Some Suggestions to Solve the Housing Problems of Urban Low-income Families* (State Council, 2007), social housing has been expected to better meet the housing demand of low-income and vulnerable families.

Physical features

Many British social housing estates, especially the ones developed in immediate post-war years, reflect the image of an ideal urban environment proposed by architects and planners at that time. They include 1) spacious flats in multi-family blocks with large public green space around them; 2) wide application of standardised housing design; 3) residential areas placed far away from workplaces and 4) service centres and other facilities rationally allocated nearby. This may well meet most requirements of the target households when the estates were just completed, but

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several decades later, these peripheral large-scale housing estates with countless monotonous box-like buildings and without mixed land use lost their attractions to the new generation of tenants. The previous physical features have become one significant reason for the residualisation of the remaining social housing estates.

In China the standardised housing design was also very popular in almost all social housing projects. But for the projects developed before the 1990s, some differences were really significant when comparing with British social housing products in the same period. For the fragmented housing provision system, the large-scale projects were not so many. There were not many housing estates in far periphery and most of them especially the ones developed by work units were very close to the tenants' workplaces. Also for many of them were developed for elite groups, the infrastructures and neighbourhood facilities were installed in a very sufficient way. Therefore, these physical features ensured that the previous social housing estates did not experience very radical residualisation process after privatisation.

However, more physical features of previous British social housing were inherited by the new social housing estates developed after 1998 in China: the peripheral locations, very large scale without mixture, insufficient facilities and poor accessibility to workplaces and social services. Many surveys in the typical large-scale peripheral estates such as Huilongguan in North Beijing have show that the features have greatly affected the living condition of local households (Zhang *et al.*, 2006). But it is pity that the British lessons seem still being repeated in current Chinese practice under the great pressure to achieve quantitative growth of new social housing provision.

Social profiles

Social housing development in both British and Chinese cities aimed to create classless communities with strong local cohesion in early years. However the target tenants of them differed. In the booming years of British social housing, most tenants of them were working class families, who were the most populous and homogenous social group in post-war British society. While in China, most target tenants were the elite groups of the society: usually well-educated administrators or professionals. And for the leveller of housing standards the homogeneity of community was only in small scale.

After the privatisation process since the 1980s, the tenants in the old social housing estates were then transformed significantly. Generally speaking, in both countries the social profiles of these tenants experienced a downward restructuring: better-off households got better homes from market and moved out, while more lower-income households moved in. But the significant differences existed as well. In Britain almost all remaining social housing stock have become the most unpopular choice for tenants as the last basic safety net for their life; while in China the downward restructuring process was not obvious in many estates up to now. The concentration of vulnerable groups just existed in limited number of previous social housing estates.

The new social housing development was more like repeating the story of British social housing in the past. In the new era, the target tenants of Chinese social housing were no longer for the elite groups, but many mainstream and vulnerable social groups. Nevertheless in practice for some defects of current policy, many richer families were benefited more than the vulnerable groups. A considerable number of urban people were still excluded from the new social housing system, although which was originally designated as the basic safety net for all.

5 Conclusions and implications

Comparing with the long history in Britain, the development of social housing policy and practice in China is still in a very initial stage. Although in the Socialist planned economy period almost all urban housing provision came from the public-led non-profitable projects, it just provided decent and affordable housing for a small group of urban elites. This means under such a circumstance, the nature of social housing provision was in fact the award to the elite groups, rather than a safety net to ensure the basic living condition of all. In later housing reform when the majority of public housing was privatised in a radical way, the better-off households gained more benefits. This led to the rapid polarisation of housing distribution in Chinese cities. Thus after 1998 the new round of social housing development became urgently in need. Just like what happened in Britain several decades ago, the quantitative growth was almost the only priority of the public-funded housing projects. Many evidences have show that not only the policy framework but also the physical features of British social housing have been copied to Chinese context to a great extent. The rapid development may therefore leave a great number of social problems in future. Most of these challenges are fresh to Chinese policy-makers, but they have existed for years in British context and been well solved. Hence, the value of international experience through cross-national comparative research is very obvious. Through this systematic comparative research, the following suggestions could be valuable.

At first, the development of too large-scale peripheral social housing estates should be very cautious. The standardised design should be avoided being used too wide and the mixture of land use should be recommended. In current China, too strong desire for quantitative growth could affect the living quality of new social housing. Many middle class families may have to live in these huge peripheral estates because they do not have other choices when the general housing affordability is low, but in foreseen future the richer households will be very possible to move out and find new homes with higher quality in other places. The concentration of mass vulnerable groups will then be inevitable and many social problems will follow, which is just the largest difficulties the managers of British social housing have to face now. Therefore to Chinese policy-makers, the balance between quantitative growth and qualitative improvement should be found as early as possible.

Second, more flexible ways should be used to develop new social housing projects. Recent British experience revealed that in the current fast changing society, voluntary groups, local communities and even private developers should also be involved to develop different kinds of social housing projects to meet the requirements of diverse target groups. In China, the development of housing association or other cooperative organisations should be encouraged in particular. Nowadays a great number of Chinese young while collars were hard to afford market housing, but they still had good incomes and did not want too low living condition. Thus the self-help development approach with limited public aids could be realistic to tackle the housing shortages for this emerging social group.

Third, public participation should be enhanced in decision-making of social housing policy and its implementation. In the fast changing Chinese cities, the requirements of the target group of social housing must be highly diverse and dynamic. Hearing more voices from the target tenants can effectively avoid that public-funded projects mismatch the tenants' real needs. The participation process will also enhance the community interaction and local cohesion which are very critical in reducing the threats of social problems in future.

Fourth and more important, more research work should be done in the areas of social housing policy and development. Comparing with Britain, housing development in China is much faster, the policy changes are more frequent, while the team of housing researchers is much smaller. To improve China's social housing development, China needs to invest more in housing research. In this paper, several implications from British experiences and lessons have been proposed through a systematic comparison, but each them can be discussed in details so that more valuable ideas for practice could be achieved.

Acknowledgements

References

Almanac of China's Economy, *1981* to *1990*, compiled by the Editors Committee of Almanac of China's Economy and published by Beijing Economic Management Publishing House.

Barlow, J. and Duncan, S. (1994) *Success and Failure in Housing Provision: European States Compared*, London: Pergamon.

Beijing Municipal Government (2006) *Housing construction plan of Beijing (2006-2010)*.
(http://www.bjghw.gov.cn/capinfo_product/NC_Admin/NCAdm-Media/uploadFile/2006930161747.doc)

Boelhouwer, P. and van der Heijden, H. (1992) Housing Systems in Europe: Part I a comparative study of housing policy, Delft: Delft University Press.

Bourne, L. S. (1998) Social Housing, in: Vliet, W. V. (ed.) *The Encyclopedia of Housing*, Thousand Oaks, California: Sage Publications.

Bowley, M. (1945) *Housing and the State 1919-1944*, London: George Allen and Unwin.

Chan, K.W. (1996) Post-Mao China: a two-class urban society in the making, *International Journal of Urban and Regional Research*, 20, pp. 134-150.

Chen, G. T. (1994) The Housing Question of China, in: Chen, G. T. and Choko, M. H. (eds) *The Challenge of China's Urban Housing*, pp.9-28, Beijing: Beijing Science and Technology Press.

Cherry, G. E. (1984) Problems in cross national research: An East European perspective, in: Masser, I. (ed.) *The Study of Planning in Other Culture. Department of Town and Regional Planning*, The University of Sheffield, Working Paper (TRP), No. 47, pp. 5-10.

China Statistical Yearbook 2007 (Table 6-42), www.stats.gov.cn

Coleman, A. (1985) *Utopia on trial: Vision and reality in planned housing*, London: Shipman.

Davis, J. E. (1998) Housing Tenures, in: Vliet, W. V. (ed.) *The Encyclopedia of Housing*, Thousand Oaks, California: Sage Publications.

Dekker, K., Hall, S., van Kempen, R. and Tosics, I. (2005) Restructuring Large Housing Estates in European Cities: An Introduction, in: van Kempen, R., Dekker, K. Hall, S. and Tosics, I. (ed.) *Restructuring Large Housing Estates in Europe*, Bristol: The Policy Press.

Department of the Environment (DoE) (1987) *Housing: The Government's Proposals*,

London: HMSO.

Dickens, P., Duncan, S., Goodwin, M. and Gray, F. (1985) *Housing, States and Localities*, London: Methuen.

Doling, J. (1997) *Comparative Housing Policy: Government and Housing in Advanced Industrialized Countries*, Basingstoke: Macmillan.

Dunleavy, P. (1981) *The Politics of Mass Housing, 1945-1975: A Study of Corporate Power and Professional Influence in the Welfare State*, Oxford: Clarendon Press.

Forrest, R. and Murie, A. (1983) Residualisation and Council Housing: Aspects of the Changing Social Relations of Housing Tenure, *Journal of Social Policy*, 12 (4) pp. 453-468.

Gaudie, E. (1974) *Cruel Habitations: A History of Working Class Housing 1780-1918*, London: Allen & Unwin.

General Office of the State Council (2008) *Some Suggestions on Promotion of the Healthy Development of Housing and Property Market*, Documents of the General Office of State Council, No. 131, 2008.

Glynn, S. and Oxborrow, J. (1976) *Interwar Britain: A Social and Economic History*, London: George Allen and Unwin.

Goldstein, A. And Goldstein, S. (1994) Permanent and Temporary Migration Differentials, in: Day, L.H. and Xia, M. (ed.) (1994) *Migration and Urbanization in China*, Armonk, New York: M.E. Sharpe, pp. 43-88.

Hantrais, L. and Mangen, S. (1996) Method and Management of cross-national social research in Hantrais, L. and Mangen, S. (eds.) *Cross-National Research Methods in the Social Sciences*, London and New York: Pinter.

Harloe, M. (1995) *The People's Home? – Social Rented Housing in Europe and America*. Oxford: Blackwell.

Holmans, A. (1995) *Housing Demand and Need in England, 1991-2011*, York: Joseph Rowntree Foundation

Housing Reform Steering Group of the State Council (1994) 'The decision on deepening urban housing reform', in: Housing Reform Steering Group of the State Council (ed.) *Urban Housing System Reform*, Beijing: Reform Press.

Jefferies, J. (2005) The UK Population: Past, Present and Future, in: National Statistics, *Focus on People and Migration*. pp.6

Kemeny, J. (1992) *Housing and Social Theory*. London: Routledge.

Liu, Z. F. (2003) *Promote Healthy and Sustained Development of Housing and Real Estate - Speech at the 2003 Annual Housing and Property Conference*. Wuhan, 13 January 2003.

Le Corbusier, C. E. J. G. (1933) *The Athens Charter*, CIAM.

Lund, B. (2002) *Understanding State Welfare*, London: Sage Publications.

Lund, B. (2006) *Understanding Housing Policy*, Bristol: The Policy Press.

Malpass, P. (1990) *Reshaping Housing Policy: Subsidies, Rent and Residualisation*, London: Routledge.

Malpass, P. and Murie, A. (1999) *Housing Policy and Practice (5th edition)*, London: Macmillan.

Merrett, S. (1976) *State Housing in Britain*, London: Routledge & Kegan Paul.

Ministry of Construction, P. R. China (1985) *The technical provision of housing construction.*

Ministry of Housing and Local Government (1961) *Homes for Today and Tomorrow (Parker Morris Report)*, London: HMSO.

Murie, A. (1983) *Housing Inequality and Deprivation*, London: Heinemann.

National Construction Committee (1980) *Interim Regulation of Rational Indicators in Urban Planning.*

Morton, J. (1991) *Cheaper than Peabody: Local authority housing from 1890 to 1914*, York: Joseph Rowntree Foundation.

Newman, O. (1973) *Defensible Space: People & Design in the Violent City*, London: Architectural Press.

Northern Ireland Housing Executive (2003) *Annual Report 2002/03*, (http://nihe.gov.uk/publications/reports/AR2003.pdf)

Office for National Statistics (ONS) (2005) *Regional Trends 38 – 2004 Edition*, (available from http://www.statistics.gov.uk)

Office of the Deputy Prime Minister (ODPM) (2004) *Office of the Deputy Prime Annual Report 2004*, cm6206, London: The Stationery Office.

Orbach, L. (1977) *Homes for Heroes*, London: Seely Service.

Oyen, E. (1990) The imperfections of comparisons, in: Oyen, E. (ed.) *Comparative Methodology: Theory and Practice in International Social Research*, London: Sage, pp. 1-18.

Power, A. (1993) *Hovels to High Rise: State Housing in Europe since 1850*, London and New York: Routledge.

Rowntree, S. (1941) *Poverty and Prgress: A Second Social Survey of York*, London: Longman.

Shenzhen Land and Housing Bureau (2005) *Shenzhen Real Estate Statistical Yearbook 2005*, Shenzhen: Haitian Press.

State Council (1981) *Regulations on the Design Standards of Workers' Housing and Supplementary Regulations.*

State Council (1988) *Implementation Plan for a Gradual Housing System Reform in Cities and Towns*, Document No. 11, 1988.

State Council (1998) *The Notice on Further Reform of Urban Housing System and Speeding up Housing Development*, Document N. 23, 3 July 1998.

Struyk, R. J. (1996) The Long Road to the Market, in: Struyk, R. J. (ed) *Economic Restructuring of the Former Soviet Bloc: The Case of Housing*, Avebury: Aldershot.

Tarn, J. N. (1971) *Working-Class Housing in 19th-century Britain*, London: Lund Hampshires.

Togensen, U. (1987) Housing: the wobbly pillar under the welfare state, in: Turner, B., Kemeny, J. and Lundqvist, L. (eds) Between State and market: Housing in the Post-industrial Era, Stockholm: Almqvist and Wiksell, pp. 116-26.

Turkington, R. (2004) Britain: High-rise Housing as a "Doubtful Guest", in: Turkington R., van Kempen R. and Wassenburg, F. (eds.) *High-rise Housing in Europe: Current Trends and Future Prospects*. Netherlands: Delft University Press, pp. 147-164.

Walder, A. G. (1986) *Communist Neo-traditionalism: Work and Authority in Chinese Industry*, Berkeley: University of California Press.

Wang, Y. P. (1992) Private sector housing in urban China since 1949: the case of Xian, *Housing Studies*, 7, pp. 119-137.

Wang, Y. P. (1995) Public Sector Housing in Urban China since 1949: The case of Xian, *Housing Studies*, 10(1), pp.57-82.

Wang, Y. P. and Murie, A. (1996) The process of commercialization of urban housing in China, *Urban Studies*, 33, pp. 971-989.

Wang, Y. P. and Murie, A. (1999) *Housing policy and practice in China*, London: Macmillan.

Wang, Y. P. and Murie, A. (2000) Social and spatial implications of housing reform in China, *International Journal of Urban and Regional Research*, 24(2), pp. 397-417.

Wang, Y. P. (2001) Urban housing reform and finance in China: a case study of Beijing, *Urban Affairs Review,* 36(5), pp. 620-645.

Wang, Y. P., Shao, L. and Cheng, J. H. (2009) Continuing Housing Reform in China: Managing Affordability and Market Stability, paper delivered to *International Symposium on Housing Affordability and Market Stability*, 24-27 March, Tsinghua University, Beijing, China.

Whyte, M. K. and Parish, W. L. (1984) *Urban Life in Contemporary China*, Chicago: University of Chicago Press.

Wilcox, S. (2005) *UK Housing Review 2004/5*, London: Charted Institute of Housing.

Wu, F. (1996) Changes in the Structure of Public Housing Provision in Urban China, *Urban Studies*, 33(9), 1601-1627.

Zhang, J. (2000) Housing Conditions in Post-industrial Period in Britain, *World Architecture*, 5, pp. 16-20.

Zhang, J. and Li, L. (2009) Ten-Year Housing Development in Beijing: 1998-2008, presentation in *International Symposium on Housing Affordability and Market Stability*, 24-27 March, Tsinghua University, Beijing, China.

Zhang, J. & Wang, T. (2001) Housing Development in the Socialist Planned Economy from 1949 to 1978, in: Lv, J. H., Rowe, P. G. & Zhang, J. (ed.) *Modern Urban Housing in China, 1840-2000*, Munich, London and New York: Prestel.

Zhang, K. J. (1990) Multiple-floor or High-rise: Controversy on High-Density Housing Construction. *Journal of Architecture*, 2, pp. 2-5.

Zhang, W. Z., Yin, W. H., Zhang, J. Q., Meng, B. and Gao, X. L. (2006) *A Study of Livable Cities in China (Beijing)*, Beijing: Social Science Academic Press (China).

Zhou, M. and Logan, J. R. (1996) Market Transition and the Commodification of Housing in Urban China, *International Journal of Urban and Regional Research*, 20 (3), pp. 400-421.

Zhu, F. (2000) Forecasts, Analyses and Suggestions on the Economical and Comfortable Housing in Beijing, *Real Estate* (12), pp. 12-17.