

*The Influence of Miniaturization of Urban Family Structure on  
Residential Interior Space Layout in China*

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**Abstract**

The change of family structure is one of the important factors affecting the change of interior space layout of urban residences in China. Since the establishment of the People's Republic of China, the urban family structure in China tends to be smaller, which is closely related to factors such as the acceleration of modernization, changes in traditional core family models, and long-term implementation of family planning policies. The main trends in the evolution of small-sized families structures in China are the empty nest of the elderly, the DINK families, and the solitary living of young people. We have identified three core needs for interior spaces within these small families: leisure and livability; independence and efficiency; convenience and intelligence. Based on their needs, we analyze three types of small-sized families from six aspects: entrance hall; living room; bedroom; dining room; kitchen; bathroom.

Keywords: Miniaturization of Family Structure, Residential Interior Design, Residential Indoor Space Layout

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## **Introduction**

This paper provides a supplement to the research on the interior design of miniaturized residential buildings in urban China, and provides a reference for the spatial layout of interior design of miniaturized families. The research is from the China National Social Science Fund Art Project "70 Years of New China Interior Design (1949-2019)", led by Professor Song Limin of the Department of Environmental Art of the Academy of Arts and Design, Tsinghua University. And the first author of this article is a postdoctoral fellow in the Department of Environmental Art of the Academy of Arts and Design, Tsinghua University, and serves as the leader of the research group of "70 Years of New China Interior Design (1949-2019)".

With the rapid development of social economy, the size of urban households in China has undergone great changes, which is mainly reflected in the fact that the size of urban households has become smaller, and many small families have been separated. In the traditional Chinese residential culture, the concept of family is particularly important, in the dwellings we can often see a family living in groups. Modern life is constantly changing, people cannot live together from generation to generation as before, and various factors such as studying, working, and living may cause migration. New trends and lifestyles have made personalized living fashionable, coupled with people's decreasing dependence on family, young people's desire for independence, multi-generational living is no longer common, and smaller family sizes have become an inevitable trend. The traditional way of living in large families has not adapted to people's needs, and small families are generally accepted.

Residence is the carrier of material space of the family, and the layout of interior space is an important research issue in interior design. Any changes in social structure, cultural value system, and moral outlook will put forward new demands for the layout of their residential interior space. With the different family structures, the layout of residential interior space needs to be reasonably designed according to the characteristics and needs of family members to improve living comfort and functionality.

### **1. The Evolution of the Miniaturization of the Family Structure in the 70 Years of the People's Republic of China**

The changes in the family structure are the epitome of social changes, and economic changes and social development have brought about new changes in China's family structure. The miniaturization of the family structure is closely related to urbanization, industrialization, land reform, agricultural collectivization, political movements, living conditions, family planning, population mobility, and the rural contract responsibility system. In 1947, the average family size in China was 5.35 people, and in 1953, the average family size in China was 4.33 people, and in the 50s, 60s, and 70s of the last century, it was generally stable between 4.23 and 4.43 people. From the late 80s to the early 90s, with the implementation of family planning and the change of family awareness, the number of only children increased, the average family population gradually declined, and the family structure showed a trend of miniaturization. In 1982, the average family size was 4.4 persons, and in 2005 it was 3.13 persons, and the average household size decreased by 1.27 persons in 23 years, a decrease of 28.86 per cent. In 2020, the average household size dropped to 2.62 people, and the urban family structure became more miniaturized (Figure 1).

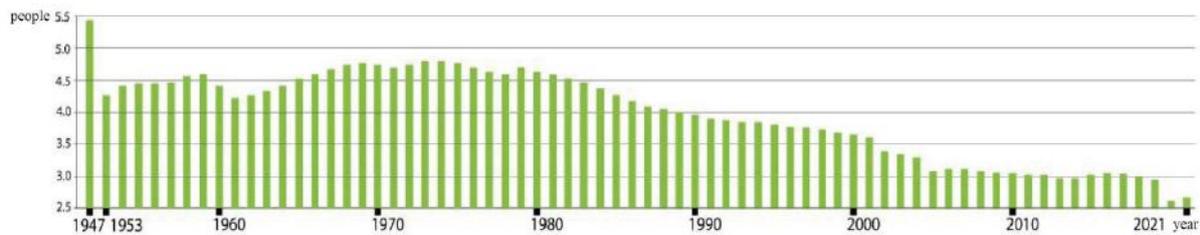


Figure 1: Trend of household size from 1947 to 2021

(Chart source: Self-drawn by the author. Data source: The data in 1947 are counted by the Population Bureau of the Ministry of Internal Affairs of the Republic of China, and the data for the rest of the years are from the official website of the National Bureau of Statistics <http://www.stats.gov.cn>)

### 1.1 From the Founding of the People’s Republic of China to the Early Period of Reform and Opening Up (1949–1977): Rise-Decline(short-Term) -Rise-Decline

During the period from 1947 to 1979, the size of households decreased significantly compared with the pre-liberation period, showing a large fluctuating trend of "rise-decline(short-term) - rise - decline" (Figure 2) . In 1977, there was even a slight increase in household size compared to 1953. From the perspective of the distribution of household size, the proportion of households with 7 or more persons decreased significantly compared with that before liberation, and the proportion of households with 1 or 2 persons increased relatively. During this period, the changes in the size and distribution of household size in China were affected by multiple factors such as the collective economic system, living conditions, medical level, natural disasters, and family planning policies. The changes in the type structure and algebraic structure of the family are the result of the weakening of the family's production function and the impact on the authority of the patriarch under the influence of land reform, agricultural collectivization, and various rectification movements.<sup>1</sup>

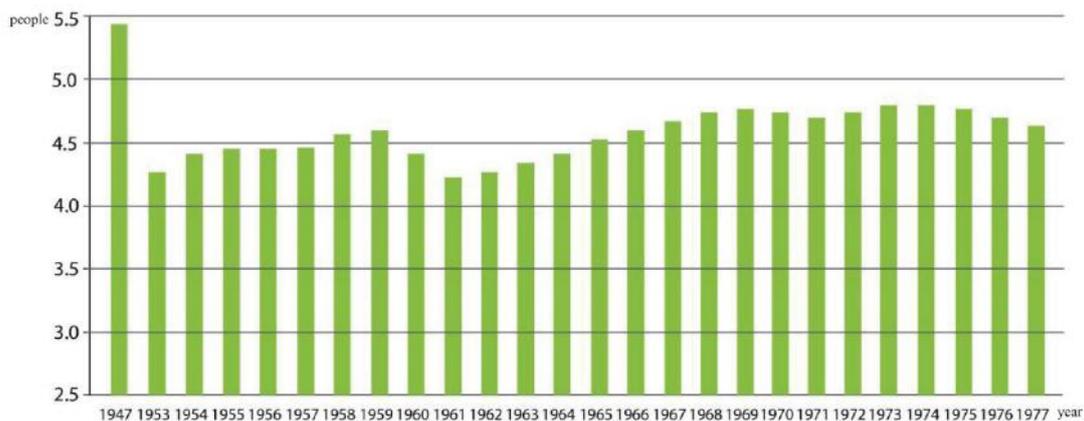


Figure 2: Trend of household size from 1947 to 1977

(Chart source: Self-drawn by the author Data source: The data in 1947 are counted by the Population Bureau of the Ministry of Internal Affairs of the Republic of China, and the data for the rest of the years are from the official website of the National Bureau of Statistics <http://www.stats.gov.cn>)

<sup>1</sup> Wang Jianhua. (2019). Miniaturization or Nucleus: Changes in Family Structure in the 70 Years of New China. *Chinese Social Sciences Review*, 02, 118-130

## **(1) The Abolition of Feudal Land Ownership**

The size of the family depends on two factors: the rate at which the family is differentiated and the rate at which the population grows. If the rate of family differentiation is faster than the population growth, then the size of the family will gradually increase; If the rate of household differentiation is roughly equal to the rate of population growth, the size of the family is basically the same; If the rate of family differentiation is slower than the rate of population growth, then the size of the family will increase.<sup>2</sup> After the liberation, the feudal land ownership system was abolished, and each member of the family was equally given a share of land and other means of production, making it possible to establish a household without worrying about the lack of means of production and the inability to establish a household. People's traditional concepts have also been improved by the impact of land reform, and the equal distribution of the means of production has made family members feel equal rights and status.

## **(2) Improvement of Medical Standards**

After 1953, the standard of living also improved compared with the early period of liberation, and the government gradually paid attention to medical and health care, which greatly reduced the mortality rate of the population, and the population growth rate continued to increase. According to statistics, in 1957, the birth rate of the whole country was 3.40%, the death rate was 1.08%, and the natural growth rate was 2.23%; In 1965, the corresponding data were 3.81%, 0.86%, and 2.85%; In 1975, they were 2.31%, 0.73% and 1.58% respectively; in 1979, they were 1.79%, 0.62% and 1.17% respectively. During this period, political turmoil continued, economic development was slow, and the people's living standards were low, but the overall family size expanded compared with the early days of liberation. After 1974, the size of China's households began to decline gradually. The family planning work, which began in the 70s, played a key role in controlling the birth level and household size in urban areas.

## **1.2 After the Reform and Opening Up (1978–2000): Gradually Shrinking and Showing a Downward Trend**

After the reform and opening up, the decrease in the size of the household is closely related to the decrease in the birth rate (Figure 3). In 1979, the second session of the Fifth National People's Congress proposed the policy of "encouraging a couple to have only one child". The strict implementation of the family planning policy reduced the birth rate during this period and suppressed the growth of the urban population; The rapid development of industrialization and urbanization has led to the migration of population, the separation of family members of the floating population, and the increase in the number of young people starting their own families, which has further led to an increase in the proportion of empty-nest families and single-person families in rural areas. In the context of the improvement of education level and the status of women, the concept of marriage and childbearing has also changed, and the willingness to have children has declined. The statistics released by the State Council in the fourth quarter of 1983 showed that small families consisting of two husbands and wives or parents and their children were gradually replacing the traditional large families, and the distribution of household sizes was

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<sup>2</sup> Song Ping. (1998). Analysis of the trend of family size miniaturization in China and its impact on consumption. *Journal of Demography*, 03, 27-30

concentrated in two-person and three-person households, accounting for about 70 percent of the total number of households in the country. It is an indisputable fact that China's family structure tends to be nucleated and miniaturized.<sup>3</sup> From 1982 to 1990, the main trend of change in the nuclear family was towards the nuclear family of both parents. The total number of families with three or more generations is 17%, which is the most important type of family after the nuclear family.<sup>4</sup>

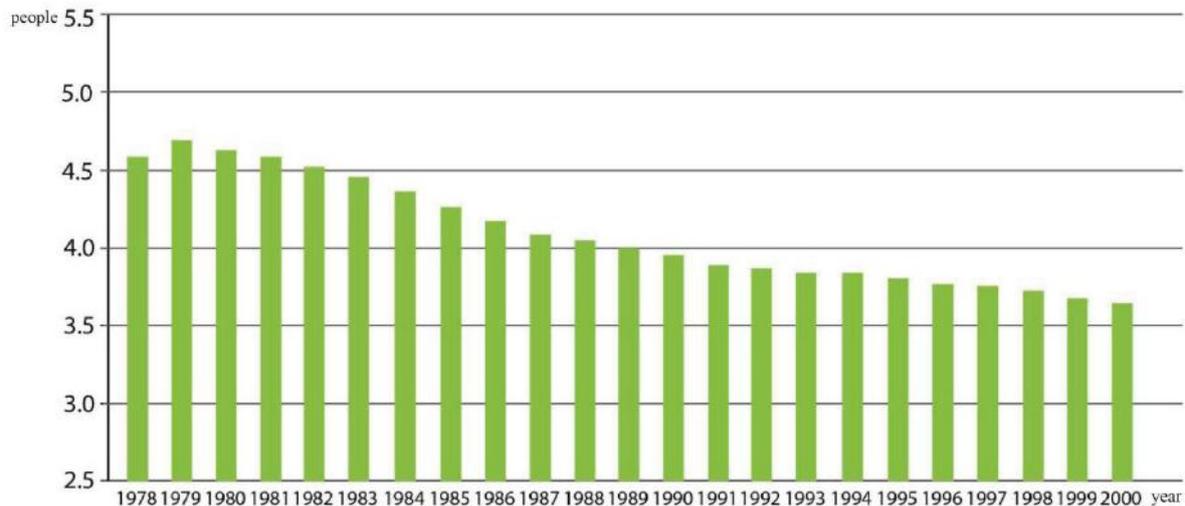


Figure 3: Trend of household size from 1978 to 2000  
 (Chart source: Self-drawn by the author Data source: Official website of the National Bureau of Statistics <http://www.stats.gov.cn>)

### (1) Implementation of Family Planning Policies

In September 1982, the 12th National Congress of the Communist Party of China (CPC) established family planning as a basic national policy in China, which was written into the Constitution in December of the same year. Late marriage, late childbearing, fewer births, and eugenics were promoted, thus systematically controlling population growth. With the reform of the economic and political systems, the decentralization of economic power caused by population mobility and widespread employment has laid a material foundation for family differentiation. The advancement of women has also led to new changes in the relationship between family members. The most prominent is the relationship between mother-in-law and daughter-in-law, which is often the main factor that leads to the division of large families into small families. A series of factors, such as differences in values and lifestyles between the younger generation and the elderly, have accelerated the pace of family differentiation.<sup>5</sup> In May 1991, the CPC Central Committee and the State Council issued the Decision on Strengthening Family Planning Work and Strictly Controlling Population Growth, aiming to further implement the family planning policy and strictly control population growth. In 1979, the household size was 4.65 persons, which dropped to 4.51 in 1982, 3.93 in 1990, and 3.59 in 2000. The factor leading to the decline in household size is, first and foremost, family planning.

<sup>3</sup> Mu Guangzhong. (2002). *Challenging Loneliness-Empty Nest Families*. Shijiazhuang: Hebei People's Publishing House

<sup>4</sup> Zha Ruichuan, Zeng Yi, Guo Zhigang. (1996). *Analysis of the data of China's Fourth National Population Census*. Beijing: Higher Education Press

<sup>5</sup> Song Ping. (1998). Analysis of the trend of family size miniaturization in China and its impact on consumption. *Journal of Demography*, 03, 27-30

## **(2) Female Education Level Increased and Fertility Intention Decreased**

With the further improvement of economic living standards, the improvement of women's education level and the change of values, the willingness of Chinese people to have children is also decreasing.<sup>6</sup> Under the combined effect of strict family planning policies and Chinese people's fertility intentions, China's birth rate continued to decline during this period.<sup>7</sup>

## **(3) Rural Household Contract Responsibility System**

After the reform and opening up, although the reform of the rural household responsibility system for the production of goods has partially restored the production functions of peasant families, the rapid expansion of industrialization and urbanization has played a role in weakening the agricultural production and income distribution functions of traditional large families, and has further promoted the separation of the floating population from the rural families.<sup>8</sup>

### **1.3 The Period of Deepening Reform and Opening Up (2000–2021): Decline-Steady Development-Decline**

Since the beginning of the 21<sup>st</sup> century, China has joined the WTO, and China's reform and opening up has been further intensified. People's living standards and education levels are constantly improving, regional population movements are accelerating, and values are constantly diversified. During this period, household sizes were still decreasing (Figure 4). During this period, the population movement led to a large increase in the phenomenon of empty nests and living alone, and the change of people's concept of marriage and childbearing in modern society led to an increase in the proportion of single-family and couple nuclear families, a decrease in the proportion of standard nuclear families, and a decrease in the size of family households. The volatility in 2005 was the result of a combination of economic, social, demographic and institutional factors. There was no further development after 2010.

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<sup>6</sup> Hou Jiawei. (1989). Changes in fertility intention in the Chinese population: 1980-2011. *Social Sciences in China*, 04, 78-97

<sup>7</sup> Wang Dewen. (2007). Changes in labor supply and demand in the stage of low fertility and China's economic growth. *Chinese Population Science*, 01, 44-52

<sup>8</sup> Wang Tianfu, Wang Fei, Tang Youcai, Wang Yangyang, Pei Xiaomei. (2015). Land collectivization and the structural transformation of the traditional extended family in rural areas. *Social Sciences in China*, 02, 41-60

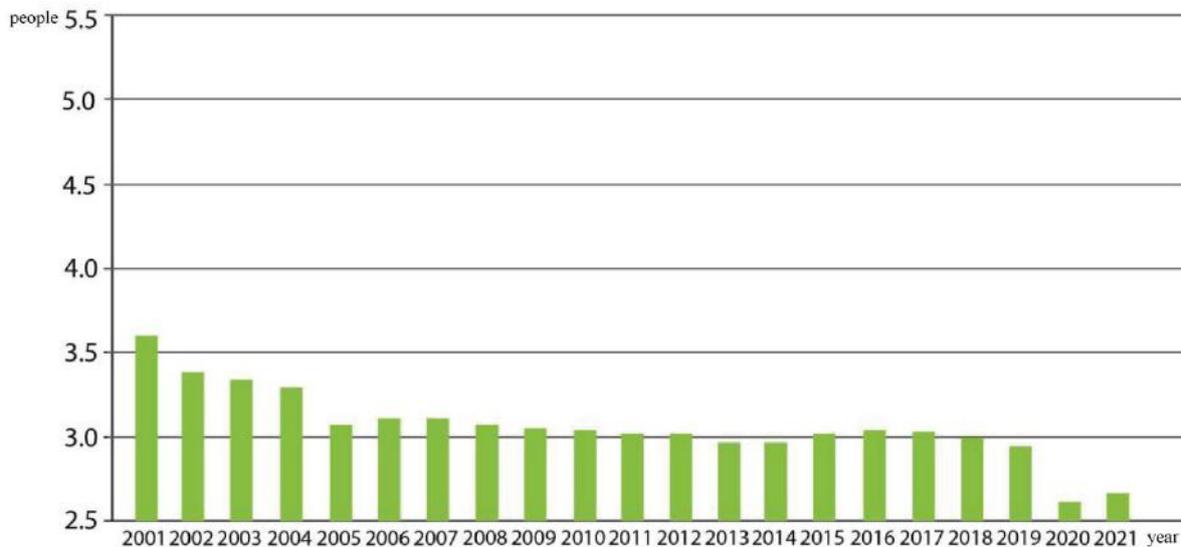


Figure 4: Trend of household size from 2001 to 2021  
 (Image source: Self-drawn by the author Data source: Official website of the National Bureau of Statistics <http://www.stats.gov.cn>)

### (1) Sustained Development of the Economic Level

From the perspective of economy and society, China's economy continues to develop, and people's lifestyles are constantly changing. The education level continues to increase, the pressure brought about by urbanization, the fertility rate is decreasing, and the concept of marriage and childbearing is diverse. The proportion of single-person households and couples in nuclear households has increased, resulting in a decrease in household size.

### (2) Continuation of the Family Planning Policy

The long-term family planning policy "encourages a couple to have only one child", and these children are more likely to live with their parents and form a direct family. This is because today's only children face the need to buy a house and raise children after they start a family. The increase in the proportion of direct family members indirectly promotes the growth of household size. Population migration also has a great impact on changes in household size, and the separation of family members and the economic independence of children brought about by population migration will lead to an increase in empty nest families and single-person families. It was not until 2011 that China launched the policies of "two children for two children", "two children for a single child" and "two children for all", that the decline in the birth rate was alleviated, which had an impact on the size of households.

### (3) Population Movement

During this period, the number of single-person households and couples nuclear families increased, and the standard nuclear families decreased significantly, reflecting the changes in people's concepts and choices of marriage and childbearing in the process of modernization and urbanization. Large-scale population movements in the context of urbanization have also led to the growth of single-person households, couple nuclear families, and intergenerational households. Compared with 2000, the total proportion of households with three persons and one household increased in 2005, while the proportion of households with four or more persons decreased. In 2010 and 2015, compared with the data of the 2005 survey time, the

proportion of one-person, two-person, six-person or more households increased, and the proportion of one-person households in 2015 decreased compared with 2010, and the proportion of three-person and four-person households decreased. This is related to the family planning policy and the floating population, which has grown up to be the only child 10 years after the implementation of the family planning policy, and faces the need to buy a house and raise children after starting a family. Migrants returning to their hometowns or moving their families to large cities have promoted the growth of the number of households to a certain extent.

## **2. Types of Homes With Miniaturized Structures**

The proportion of households with smaller structures is increasing. "In both capitalist and socialist industrial societies, the small family is the defining feature of all Second Waves".<sup>9</sup> With the shift in family functions and traditional concepts, the nuclear family, which was once the standard of the modern age, is a minority form. Coupled with the acceleration of the process of modern cities, the change of the traditional nuclear family model, the prevalence of the pursuit of self-worth, the change of the concept of marriage and love, and other factors, all kinds of small families abound. In addition, the continuous expansion of the size of various small family groups has become a common topic at present. New trends of thought and different lifestyles have made personalized living fashionable.

### **2.1 Empty Nest Families in the Elderly**

Deterministic trends such as shrinking family size and increasing life expectancy have led to population ageing becoming a fundamental feature of global population development.

According to the data of the seven population censuses on the official website of the National Bureau of Statistics, it can be seen that the proportion of the population aged 65 and above in the total population is 4.4%, 3.6%, 4.9%, 5.6%, 7.0%, 8.9% and 13.5% respectively, showing an upward trend(Figure 5). The National Health Commission predicts that the proportion of the elderly population in China will reach 34.9% in 2050. China is one of the countries with a relatively high degree of population aging in the world, with the largest number of elderly people, the fastest aging rate, and the heaviest task to cope with population aging.

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<sup>9</sup> Alvin Toffler. (1996). *Creating a New Civilization: The Politics of the Third Wave*. Shanghai: Joint Publishing House

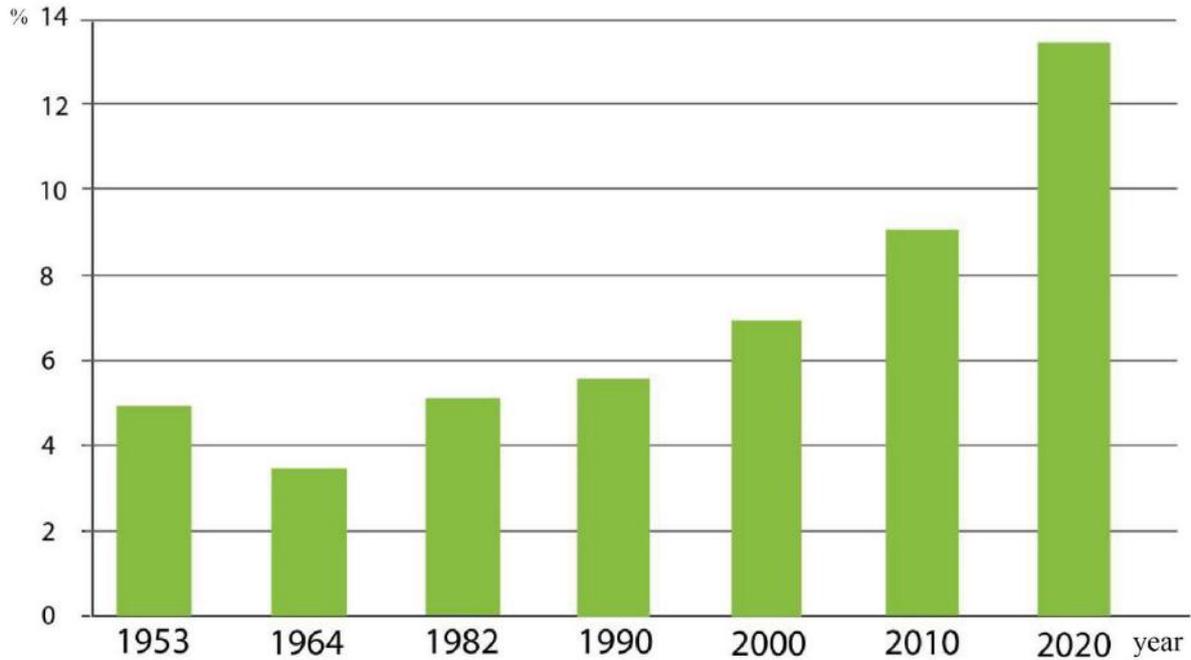


Figure 5: The trend of the proportion of the population aged 65 and above in the total population in the seven censuses in China

(Chart source: Self-drawn by the author. Data source: Official website of the National Bureau of Statistics <http://www.stats.gov.cn>)

In recent years, empty-nest elderly families have also shown a trend of younger age, and a large number of middle-aged and elderly couples have entered the empty-nest period early due to the fact that their only child is studying, working, and getting married. The miniaturization of the family structure is also the reason for the increase in the number of empty nesters. Compared with the traditional perception of empty nesters, young empty nesters have a higher level of education and more cultural backgrounds. You don't have to help your grandchildren, so you have more free time; There is a retirement salary, there is a more stable economic foundation, and there are also higher requirements for residential space.

## 2.2 Dink Families

Changes in social stratification and mobility have accelerated changes in individual lifestyles and changed family patterns. The fertility willingness to raise children to prevent old age is weakening, the traditional concept of marriage and childbearing has changed, and many families choose not to have children, and this kind of family is called Dink family. The Dink family began to appear in the more economically developed areas of China in the 80s. Most of them are composed of middle-aged couples with higher education, who pay more attention to their careers and personal emotional life, and voluntarily do not have children. They have higher incomes and no burdens, can afford higher housing prices, and have higher requirements for living environment and residential space. The large size, rapid development trend and proportion of this type of family cannot be ignored. According to the data of the seventh national census in 2020, the current size of the Dink group in China is 187,555,100, accounting for 37.95% of the total number of households (494,157,400).

## 2.3 Youth Living Alone in Households

According to data released by the National Bureau of Statistics, the preliminary forecast is that by 2030, the number of people living alone may reach 150-200 million, and the rate of living alone may exceed 30%, of which the number of young people aged 20-39 living alone may increase from 18 million in 2010 to 40 million to 70 million in 2030, an increase of about 1-2 times. As can be seen from Figure 4, the average household size of the 2020 Seventh Population Census decreased by 0.48 compared to the 2010 Sixth National Population Census. According to the "New Era of Living Alone" report released by the Shell Research Institute, the composition of people living alone has changed significantly, and "urban youth living alone" has been added to the previous "lonely widow living alone". In 2010, the proportion of young people living alone in 20-49 years old was as high as nearly 5 percent, and the number of people living alone in cities increased rapidly, nearly 4 percent of the people living alone lived in cities, and nearly 3 percent of the people living alone were concentrated in the top 20 cities of the number of people living alone. By 2030, the number of people living alone may reach 150 million to 200 million, and the rate of living alone may exceed 30%.<sup>10</sup>

## 3 The Impact of the Miniaturization of Family Structure on the Layout of Residential Interior Space

The core needs of the above three types of miniaturized families for residential interior space are: leisure and livable, independent and efficient, convenient and intelligent.

### 3.1 The Influence of Elderly Empty-Nest Families on the Layout of Residential Indoor Space

We are focus on the core needs of leisure and livable elderly empty nest families, and exploring the design and application of residential interior space layout:

The demand for interior space in elderly empty nest households is mainly reflected in comfort, convenience, and safety. They need a spacious, bright, and quiet living environment to meet their living and spiritual needs.



Image 1: Entrance hall, Image 2: Living room, Image 3: Bedroom, Image 4: Dining room  
(From left to right)

(Image source: <https://www.xiaohongshu.com>)

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<sup>10</sup> <https://research.ke.com>



Image 5: Kitchen, Image 6: Bathroom 1, Image 7: Bathroom 2  
(From left to right)

(Image source: <https://www.xiaohongshu.com>)

**Entrance hall:** Entrance hall should be designed to be spacious and bright, making it easy for the elderly to enter and exit. The ground should be flat, non slip. And entrance hall also need equipped with shoe stools and armrests to facilitate the elderly to change shoes and avoid tipping over (Image 1).

**Living room:** Elderly empty nest families have a greater demand for living room use. They will have hobbies such as singing, dancing, painting, calligraphy, and so on. In the living room, most of these kind of families choose to configure a slightly harder sofa cushion, which protects the waist of the elderly. Tea tables should avoid sharp edges and corners, and calligraphy tables, flower racks, and so on. should be set up according to the different hobbies of the elderly (Image 2).

**Bedroom:** The bedroom should set with handrails, emergency call systems, and night lights at the head of the bed to ensure the safety of the elderly (Image 3).

**Dining room:** The dining room should be equipped with comfortable dining tables and chairs, and also need the cabinet for easy storage (Image 4).

**Kitchen:** The kitchen worktop should be spacious enough to prepare and place food (Image 5).

**Bathroom:** Bathroom should use anti-skid bricks to ensure the flatness of the ground. The shower area should be spacious, with safety components such as toilet handrails and bathroom folding stools (Image 6&7).

### 3.2 The Influence of the DINK Family on the Layout of the Interior Space of the House

We are focus on the core needs of independent and efficient for DINK families, and exploring the design and application of residential interior space layout:

The demand for interior space in residential areas by DINK families is mainly reflected in diversification, comfort, and quality. They are more inclined to create a comfortable home environment that suits their lifestyle and have higher requirements for the quality of interior space.



Image 8: Entrance hall, Image 9: Living room, Image 10: Bedroom  
(From left to right)  
(Image source: <https://www.xiaohongshu.com>)



Image 11: Dining room&Kitchen, Image 12: Bathroom  
(From left to right)  
(Image source: <https://www.xiaohongshu.com>)

**Entrance hall:** Entrance hall can be designed as a storage function, providing storage space such as coat racks and shoe cabinets (Image 8).

**Living room:** Work and study occupy a large proportion of the life of DINK families, and the study has become an important space for their residential use. Most DINK families choose to integrate the functions of the living room and study, achieving efficient space utilization and making the space transparent and flexible (Image 9).

**Bedroom:** Bedroom design places greater emphasis on comfort and privacy (Image 10).

**Dining room:** The dining room should be designed as a multi-functional area, which can be used for family dinner, work or leisure, and has strong flexibility (Image 11).

**Kitchen:** The utilization rate of kitchens in DINK families is relatively low. And simple, open style kitchens are more popular (Image 11).

**Bathroom:** Bathrooms place more emphasis on comfort and practicality, and some DINK families may place two toilets to meet the need for separate use at the same time (Image 12).

### 3.3 The Influence of Young People Living Alone on the Layout of Residential Interior Space

We are focus on the core needs of convenient and intelligent the solitary living of young people, and exploring the design and application of residential interior space layout:

The demand for interior space in young solitary families is mainly reflected in intelligence, multifunctionality, and personalization. On the basis of showcasing individuality, it is necessary to ensure the functionality and flexibility of the space, such as adjustable partitions and multifunctional furniture.



Image 13: Entrance hall, Image 14: Living room, Image 15: Bedroom, Image 16: Dining room (From left to right)

(Image source: <https://www.xiaohongshu.com>)



Image 17: Kitchen, Image 18: Bathroom (From left to right)

(Image source: <https://www.xiaohongshu.com>)

**Entrance hall:** Entrance hall can highlight personalized design, such as decorative paintings, decorative items, to showcase the personal taste of solitary residents (Image 13).

**Living room:** The living room can be designed as an open space, reducing furniture decoration and releasing space functions with smart homes. It can be used for small gatherings or efficient office work, meeting different scenarios use (Image 14).

**Bedroom:** The design of bedroom should pay more attention to sound insulation and creates a quiet and private resting space (Image 15).

**Dining room:** The dining room can serve both dining and work functions, improving space utilization efficiency (Image 16).

**Kitchen:** The kitchen is equipped with basic cooking facilities and storage space to meet the daily cooking needs of solitary residents (Image 17).

**Bathroom:** On the basis of meeting cleaning needs, the bathroom can be equipped with intelligent toilets and bathtubs. Under the pressure of busy work, the bathroom has gradually become the favorite home space for young people to release their pressures (Image 18).

## Conclusion

Whether it is the elderly empty-nest family, the DINK family or the young family living alone, it is the expression of everyone's understanding of life, the reflection of values and the ideal vision of home. The layout of these three types of families in the entrance hall, living room, bedroom, dining room, kitchen, and bathroom can be differentiated according to their specific needs and lifestyle. Only by deeply understanding the reasons and needs of each type of household, and effectively reducing the gap between designers and users in environmental

awareness, can we continuously improve the environment and quality of residential indoor spaces.

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## **Resources**

Data sources are from official website of the National Bureau of Statistics:

<http://www.stats.gov.cn>

"The New Era of Living Alone Report" by Beike Research Institute: <https://research.ke.com>

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