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EVOLUTION OF URBAN RESIDENTIAL SPACE AND FAMILY DAILY LIFE DESIGN IN BEIJING SINCE THE REFORM AND OPENING-UP.

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ABSTRACT | This study is an interdisciplinary qualitative research on the history of interior design and the history of everyday life. It examines the evolution of living spaces, interior design, and family daily life in Beijing since the reform and opening-up. The research adopts anthropological ethnography as its method, exploring materials related to design and daily life from a micro-historical perspective. Through in-depth interviews with four different types of Beijing families, it investigates their living changes and daily experiences before and after the reform and opening-up. The study finds that there has been a spatial transformation in Beijing residences from “sleep-oriented” to “multi-functional” spaces after the reform and opening-up. This transformation was due to the increase in living space and the division of spatial functions. In terms of family daily life, there emerged a “visual-audio” lifestyle centered around the living room, along with the convenience brought by the popularization and smartening of appliances. In terms of home decoration, the pursuit of personalized and holistic spatial aesthetics gradually became the mainstream.

1. Introduction

Family life practices in the process of spatial production are both the result and the material for development, mapping the macro-level social, economic, and cultural developments from the micro-level of everyday life. The reform and opening-up, as the starting point of China's modernization efforts, not only achieved leapfrog growth in the country's economic growth and urban construction but also brought unprecedented changes to the daily lives of Chinese people, especially in living spaces and family life. Zou Qichang and others have linked China's design with social changes, believing that "design is closely related to socio-economic activities, and a certain economic base determines certain design concepts and behaviors. A history of design is a history of socio-economic changes." (Zou Qichang, 2021) This reflects the marketization introduced after the reform and opening-up and the promotion of design development through the improvement of industrial production levels. In terms of housing, the reform and opening-up changed the ownership of living spaces, transitioning from state-owned and planned allocation to commodities that individuals could possess. This changed people's understanding of space, rapidly initiated the production of space, and brought changes to living spaces and family daily life. Chinese sociologist Wang Min'an believes that since the 1980s, the space and family ethical structure have been inverted: spatial relationships have replaced ethical relationships, becoming the primary concern of home management and life. In a sense, the family is the effect of spatial production (Wang minan, 2006). Past research on interior design, especially the history of interior design, mostly follows the research methods of art history, focusing mainly on representative works of interior design styles and styles (Tang xingrong, 2015). This traditional historical research method overlooks the actual feelings and life experiences of "people" as subjects in space, leading to interior design research that "sees objects but not people," lacking mutual corroboration between macro-historical materials and micro-materials.

Therefore, this article takes Beijing as an example, based on in-depth research and interviews with more than a hundred families living in Beijing for over 40 years, and selects four families with typical characteristics for analysis. The study observes the changes in family living spaces after China's reform and opening-up from a micro-perspective, based on the living experiences and oral history narrations of the interviewees, as well as spatial information and photographs of family living spaces from various periods.

As the capital, Beijing's living conditions and personnel present very distinct characteristics, namely, communities centered around work unit compounds. According to the nature of work, these compounds can be divided into residences for research institutions and colleges represented by intellectuals, government agencies represented by civil servants, military units represented by military personnel, and factory units represented by workers. Families represented by these four types of personnel occupy over 75% of Beijing's permanent households, demonstrating strong typicality (Figure1).

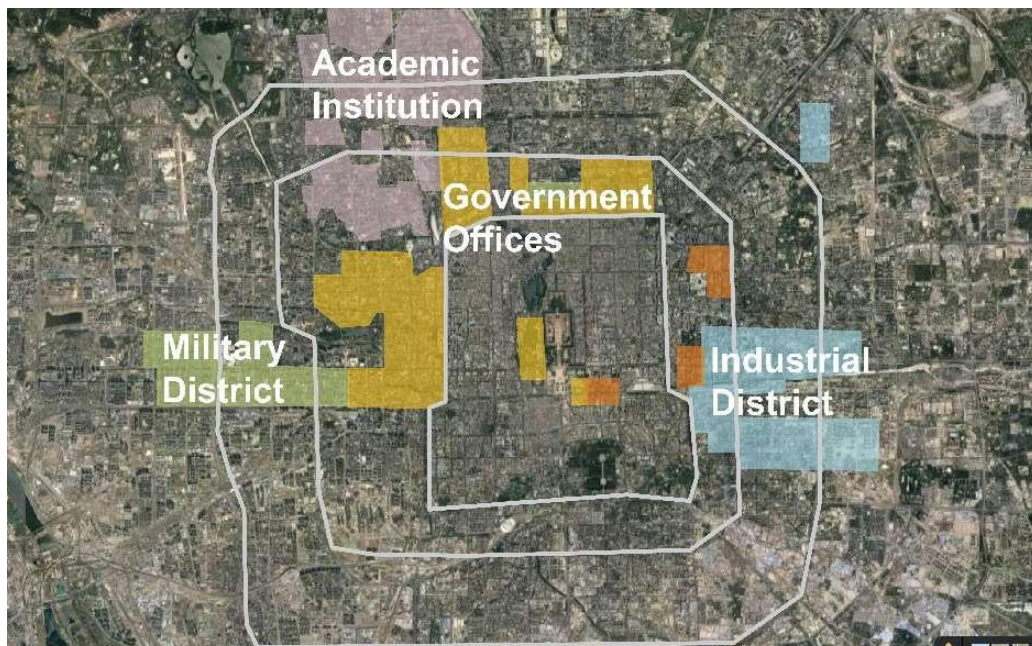


Figure 1. The four main types of work units in Beijing City. (The people working in these units constitute the majority of the population in Beijing City. They are mostly individuals who came to Beijing for study, work, and settlement after the founding of the People's Republic of China in 1949 and after the reform and opening-up in 1978.).

Therefore, this study selects families from these four types of personnel as the subjects of research. The research subject A is a retired university professor (71 years old) who came to Beijing to attend university in the 1970s, and stayed after graduation to become a university professor. Notably, he is among the first batch of university graduates in interior design after China's reform and opening-up. Over 40 years, he has not only engaged in design education but also personally led numerous interior design projects and developed a series of curriculum systems and training objectives for the interior design profession in China. Research subject B (62 years old) grew up in a military compound, joined the army in his youth, and entered a corporation after discharge. Research subject C (52 years old) is a local resident of Beijing for multiple generations, who went to work in the Capital Iron and Steel Factory after high school graduation. Research subject D (56 years old) is also a local resident of Beijing, who became a grassroots government official after high school graduation.

2. Egalitarianism and Collective Living: Residential Spaces and Family Life Before the Reform and Opening-Up

In the early years of the People's Republic of China, under the guiding principle of "production before living," housing construction was severely lagging. In 1949, the national per capita living space was 4.5 square meters. With population growth after the founding of the PRC, industrial backwardness led to a lack of infrastructure, and residential construction developed slowly, resulting in very low levels of urban family living standards. By 1956, the per capita living space of urban residents had not increased but decreased to 4.3 square meters. During the Cultural Revolution from 1966 to 1976, economic and urban construction was essentially at a standstill, and by 1978, per capita living space had further decreased to 3.6 square meters (Lv junhua, 2003). From 1949 to 1978, China's population growth rate far exceeded the rate of housing construction. After 1978, the state changed its closed population policy, adopting a relatively open policy of population mobility. As the capital, Beijing became one of the cities with the largest scale of population inflow, including people who left Beijing during the Cultural Revolution for the "Up to the Mountains and Down to the Countryside" campaign, and those who came to Beijing for higher education through the national college entrance examination after the reform and opening-up and stayed to work. The rapid population growth further exacerbated the pressing situation of housing issues, making solving the housing "debt" an urgent issue of the time. Corresponding to the severity of the housing issue, the 1950s-

1970s saw relatively monotonous residential interiors and family life: on one hand, the newly established PRC, just out of modern turmoil, was scarce in materials and lagging in industrial development. During this period, the state planned to invest heavily in the development of heavy industry, with slow development in light industry related to daily life; on the other hand, the planned economy system shifted people's focus from the nuclear family to the "collective" large family. The ideological socialist construction ideal replaced personal life's attention, and the planned distribution system for housing allocation, and furniture rationing, along with the political equality thoughts of "egalitarianism" and "decoration is a crime" meant that people did not pursue much in terms of interior decoration and daily life. In 1978, two years after the end of the Cultural Revolution, China initiated reform and opening-up, shifting the central task to economic and modernization construction. The state launched a series of economic reform measures to promote modernization and improve people's lives. The "housing problem," as the most pressing social issue, was given attention, and the state began to try reforms transitioning from welfare housing to commodity housing. To achieve the reform's goals of "affordable housing, separation of functions, and stable living," in addition to improving architectural design, the exploration of interior design also became an indispensable important part.

3. The Transformation of Family Space Structure: From Sleep-Oriented to Multifunctional

3.1 The Family Space Structure Before the Reform and Opening-Up

Before the reform and opening-up, China operated under a planned economy system, implementing a housing allocation system also referred to as "welfare housing." With the state prioritizing the development of heavy industry and adhering to the "production before living" policy, urban living standards were maintained at relatively low levels. In terms of residential design, the main reference was the Soviet standard housing, aimed primarily at controlling the cost of housing construction. Between 1949 and 1978, although the standards for housing construction and types of residential designs varied at different stages, the distribution was based on the principle of equality, not considering the rationality of family living, described as "rational design, irrational use." A typical example was the tube-shaped building, also known as barracks-style housing, characterized by narrow corridors connecting equally sized single rooms on either side, each about ten square meters, with communal kitchens and bathrooms on each floor (Figure 2). Before the reform and opening-up, a large number of work unit compounds, primarily consisting of tube-shaped buildings, were constructed in Beijing, with each compound inhabited by groups of people working in the same unit (Figure 3). Nearly all interviewees or their parents from the 70s and 80s shared similar living experiences in such housing, which became a memory of their childhood or youth.



Figure 2. The floor plan of the tube-shaped building. (The building is generally 1-3 floors, and the maximum is not more than 5 floors. The floor plan is generally rectangular or L-shaped.)



Figure 3. The tube-shaped residential buildings in Beijing during the 1950s-60s.

The allocation of tube-shaped buildings did not consider the functional needs of families but was purely based on per capita quota area, typically 4-5 square meters per person (Li dixin, 2014). The first housing of research subject A after graduating and working at the university in 1979 was in a standard tube-shaped building, measuring 12 square meters, housing the spouse, child, and nanny. Living, sleeping, storage, and dining activities were all forcibly integrated into one room, and the contradiction of small living spaces with multiple cohabitants revealed a reluctant complexity and ambiguity in the function of interior spaces. In such spaces, ensuring each person's "sleeping area" became the most important task (Yu aokun, 2022). A, leveraging his professional skills as a designer, designed and constructed a bunk bed himself: a large double bed for the couple to use, with a baby crib and ladder on the side of the double bed, and a single bed on the second level for the nanny, thus essentially resolving the living issue for a family of four (Figure 4).

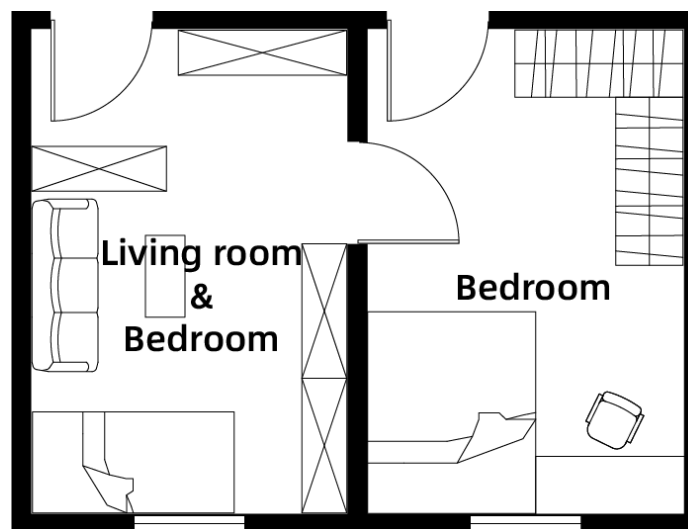


Figure 4. The floor plan of the residence where research subject A's family lives. (Research subject A is a university professor and designer who teaches interior design. The image is personally designed and hand-drawn by him.)

A described this living experience as "living in a can, suffocating." Similar examples of room functionality combinations were common among various types of families surveyed. Family B, consisting of parents and a younger brother, thus four people in total, were allocated adjacent two rooms, allowing them to open a door on the wall between the rooms, connecting them into a two-bedroom unit and further dividing the crowded space for different functions (Figure 5).

● 12㎡的山口之家

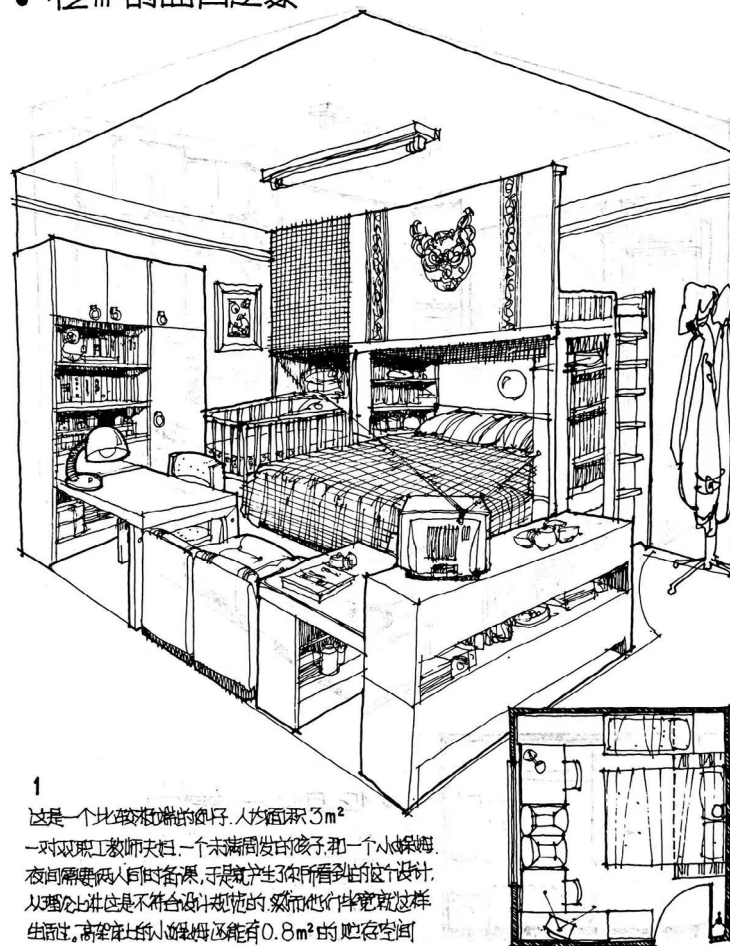


Figure 5. The floor plan of the residence where research subject A's family lives.

This separation allowed parents and children to have their private spaces, yet sleep still occupied the most significant portion of both rooms. When guests arrive, the outer room could serve as a living room, separating public and private activities. However, in tube-shaped building residences, regardless of how many rooms a family was allocated, kitchens and bathrooms were communal spaces shared by all families on the same floor, making shuttling between rooms, kitchens, and bathrooms a frequent and fixed activity route. Since residents in the same building were often colleagues from the same unit and familiar with each other, the blurring between private and public boundaries was further intensified. Although this spatial model brought some privacy concerns to each family, it unexpectedly created a tight-knit neighborhood relationship. In the oral history of research subject B, he recalled his childhood home rarely closed the door, always leaving it open or ajar, especially during cooking times at noon and evening when households would keep their doors open for easy access between the kitchen and bedroom; it allowed adults and children to freely visit familiar neighbors for dining or inviting neighbors to taste their own meals. Only at night, when it was time to sleep, would doors be closed, entering real private life. B mentioned, "At that time (70s-80s), despite poor housing conditions, there was an extraordinary neighborhood relationship. Although there was no blood relation with neighbors, it felt no different from relatives. Sometimes, when adults in the family couldn't come home on time due to work, children could naturally go to a familiar neighbor's home to do homework, play, and have dinner. In contrast, now, as living areas continually expand, the relationship between neighbors has become distant, closing one's door means entering one's own space, even neighbors across the hall would only nod in passing in the elevator, without more conversation or contact." This situation, unthinkable in today's urban life as an invasion of private space, was considered reasonable behavior in housing before the 80s due to the ambiguity brought by cramped spaces, shaping the public nature and special atmosphere of neighborhood living space (Figure 6).



Figure 6. The corridors within tube-shaped buildings and the communal living atmosphere. (Due to the limited space of each household, the corridor has become a communal space for children's activities. During the day, children play in the corridors. In real life, because the communal kitchen is too small, some families often set up simple kitchens at their own doorsteps for cooking and storing food.)

Aside from tube-shaped buildings, this period also saw a large number of relatively independent, complete set of multiunit housing, typically with two to three households per floor. "Multiunit housing" is a term unique to China, commonly referred to as "apartments" in English, and is a type of collective housing (Wang junjie, 2017). Multiunit housings are one-bedroom or two-bedroom units, each with its own toilet and kitchen. The "Baiwan Zhuang" residential area in Beijing, constructed in 1953, is a large housing complex assembled from standard units (Li hongduo, 1956). The families of research subjects C and D live in such residences. Although such housing offered more complete spatial functions compared to tube-shaped buildings, due to the design still following the area quota system and focusing primarily on meeting sleep needs, space remained limited. In actual family life, larger rooms still assumed multiple functions such as bedroom, living room, and dining room, sometimes also serving as the master's study or children's playroom, with the family's daily life largely centered in this room. The added joy brought by this composite function and uncertain spatial division is that families would periodically change the room's layout, utilizing movable furniture like sofas, cabinets, and beds to divide the room's space, meeting the family's needs at different stages or seasons, or adding freshness to family life. For instance, when A's family's child reached the age to attend kindergarten, requiring more space for activities and play, and no longer needed a nanny during the parents' work hours, the family reverted to a three-person state. At this time, A dismantled the original bunk bed and redesigned and made a low, floor-level large bed (Figure 7).



Figure 7. The arrangement of research subject A's family space after the nanny moved out.

When the child needed to play, the bed, serving as a sleeping space, formed an unobstructed connection with the floor, allowing the child to freely climb up and down, facilitating better interaction between parents and child. Family D would move the sofa to the south side of the room near the window for better living room lighting in winter, and make different adjustments in summer. As D grew older and needed to sleep in a separate room from the parents, a space was partitioned in the living room with a bookcase for a single bed, and a curtain was hung at the end of the bed. He mentioned, "When guests visit or my parents rest or read in the living room, the bookshelf and curtain isolate me in a relatively private space to do my own things without disturbing each other. The bookshelf was made by my dad, who later added a board in the middle, dividing the bookshelf into two parts, one side towards my bed where I could place my books and decorations, and the other side for their stuff (Figure 8)." This entirely "functionalist" design and home layout, autonomously designing living space according to life needs, reflected the design intelligence and daily life joy of families during that period. This type of small area, multifunctional, sleep-oriented housing, and family daily life was widespread before the reform and opening-up and continued until the late 1980s.



Figure 8. The floor plan of the residence where research subject D's family live.

3.2 The Family Space Structure Before the Reform and Opening-Up

After the reform and opening-up, the state began to improve people's living conditions. From a temporal perspective, the improvement of housing includes two phases: the first phase from 1978 to 1998, still adopting the welfare housing distribution model; the second phase from 1998 to the present, entering the era of commercialized housing. Specifically, regarding improvements in residential design, this can be summarized in two aspects: increasing space and rational room division. Regarding these two aspects, the 1980s was a critical period for residential development in China. Through reviewing literature related to housing, the author discovered that the 1980s experienced dense changes in housing policies, housing layout, spatial patterns, and interior design. In terms of increasing space: in the 1980s, to save land and increase residential density, Beijing began developing high-rise residences and accordingly relaxed the standards for residential space, significantly increasing the living area for families. In terms of functional division of housing, in 1985, the "suite concept" was proposed in the "China Technical Policy Blue Book" issued by the state, promoting residences composed of living rooms, bedrooms, kitchens, toilets, corridors, or living rooms for single-family use, equipped with corresponding facilities such as showers, gas, and heating (Lv junhua, 2001). The promotion of the suite concept led to homes built in the late 1980s gradually having complete and mature daily living functions (Zhao guanqian, 1999). In "The Discovery of Dwelling," the Japanese housing scholar Ryue Yosizaka proposes the "three types of living," categorizing human dwelling behaviors into three classes. "First living" involves actions to sustain physiological and vital needs; "Second living" covers activities such as production and consumption that support the first living; "Third living" encompasses art, entertainment, and intellectual activities (Zhang hong, 2002). It is precisely because of the increase in residential areas and the rationalization of spatial functions that family living has been able to move towards completeness. The four families surveyed in this article also moved into

residences with larger areas and more rational functional zoning in the late 1980s to the mid-1990s: a single room no longer needed to serve as both a bedroom and a living and dining room, members of different generations had their own private rooms, and kitchens and bathrooms no longer needed to be shared among several families. The separate kitchen and bathroom are integrated into the household, encompassing the basic aspects of family life (Zhang Qinyi, 1995). In the mid to late 1980s, kitchens and bathrooms in residential layouts were no longer bundled together but were adjusted based on functional needs. The number of appliances inside kitchens and bathrooms increased, and their layouts became more detailed. The usable area of the kitchen was increased to 5-7 square meters (Lao Yuanyou, 1983), and storage space also began to expand: overhead cabinets made of concrete slabs were installed on kitchen doors, niches for storage were set up on the side walls, cabinets were mounted above the stove, and storage space was also created under the countertop (Bai naipeng, 1985). During the same period, the functionality and space of bathrooms in residences were also improved: to reduce interference between different functions, separations between areas such as the sink, bathtub, and toilet began to appear. Family life is clearly separated from communal living by the threshold of the door, with domestic functions becoming gradually more refined. Research subject C recalled moving in 1994, saying, “At that time, feeling that we could live in a house that was all our own, without having to share kitchen and bathroom facilities with neighbors or go to a public bathhouse for showers, felt incredibly blissful. It was like moving into our own happy paradise” (Figure 9).

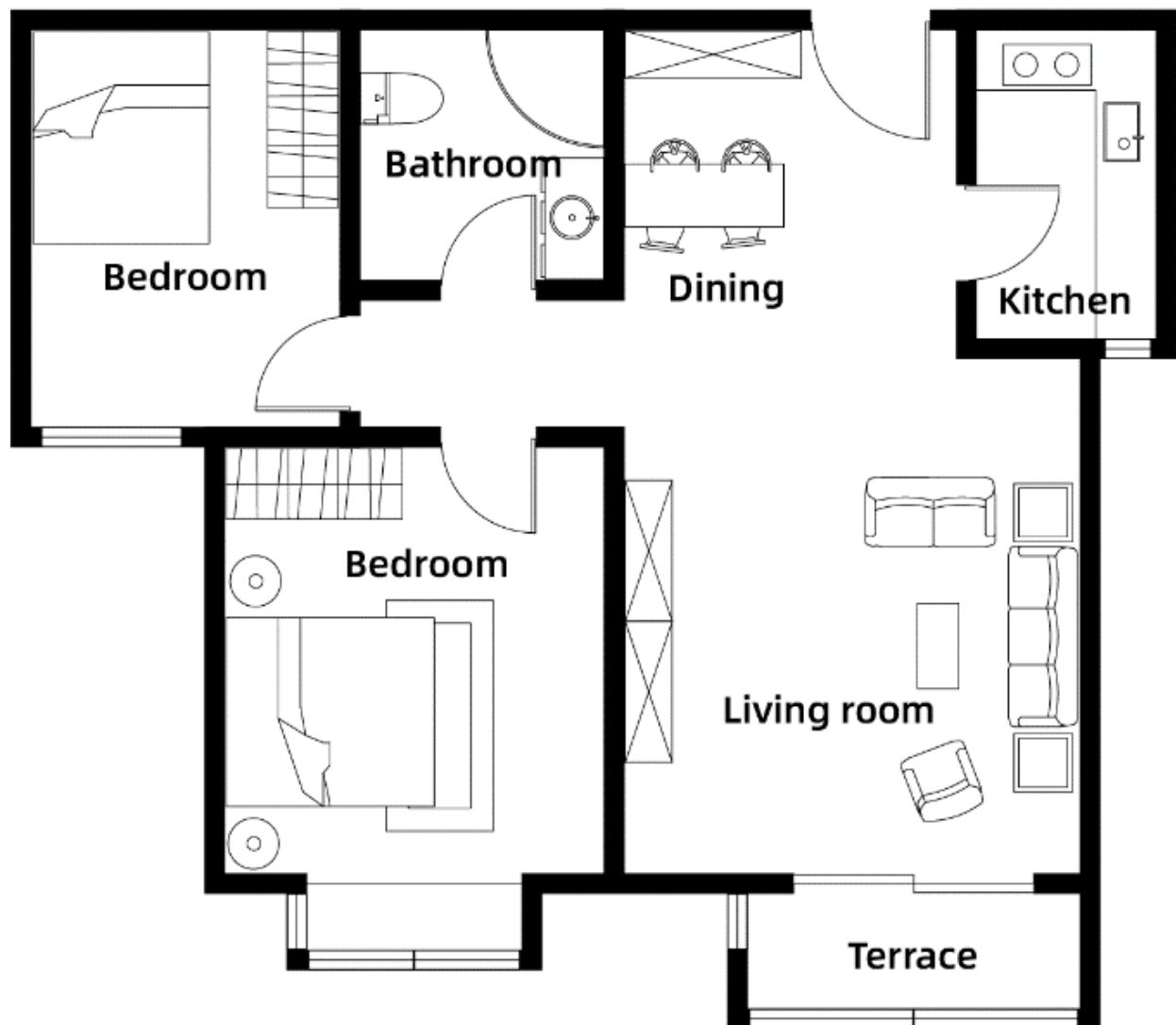


Figure 9. The floor plan of research subject C's family residence in 1994.

Research subject A moved into a two-bedroom apartment, allowing the couple and their growing child to have their own independent rooms. The increase in space and separation of functions also impacted family life: A could continue working at home after work without worrying about disturbing others. After some time, A used a modular cabinet to divide the bedroom space into a work area and a rest area, making the room more suited to actual needs (Figure 10). A mentioned, “Being able to work from home, I could spend more time at home instead of having to finish my design drawings before returning. I also had more time and space to spend with my daughter. She always watched me finish my design drawings when I wasn’t busy and asked me to teach her how to draw. It was then that she developed an interest in art and decided to become a designer when she grew up.”



Figure 10. The housing of research subject C's family in the 1990s(The photo shows the workspace separated by cabinets in A's bedroom, used for drawing design plans and preparing lessons.).

By 1998, China officially ceased the welfare housing distribution system, advocating for housing purchases through loans, with houses being fully introduced to the market as commodities. As products designed to meet people's purchasing needs, residential spaces began to be designed larger, with further rationalization of functional zoning to meet the area and usage needs of different families. Segmented spaces such as studies and bedrooms equipped with private toilets began to emerge. The average living space per capita for urban residents in China increased from less than 4 square meters in 1978 to about 9 square meters in 1997. In Beijing, a first-tier city, the average living space per capita reached 14.36 square meters (Li Yan, 2009). According to the author's research, from this time on, the majority of the research subjects' families no longer only owned one set of housing but began purchasing additional properties to acquire higher quality living spaces and family life. Research subject D mentioned, “Our family's living no longer needs to be cramped together, and as family members age, each member has more space needs.

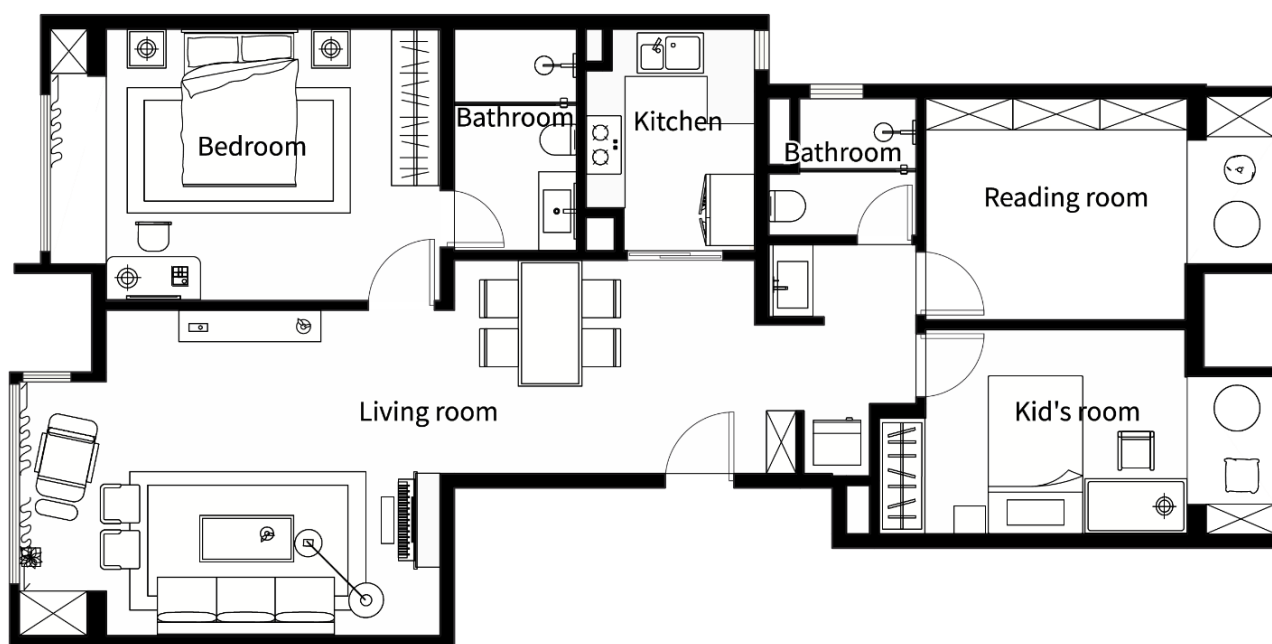


Figure 11. The housing of research subject D's family in the 2000s. (This housing unit is 128 square meters in size, which is twice as large as the previous residence of the D family.)

When we didn't have a living room, we wanted a house with one; after getting a living room, I started to want my own study to read and work at home; and as my child grew older, she also needed a larger and more independent personal space. Such changing needs prompted us to keep thinking about buying more houses (Figure 11)." Compared to the 80s and 90s, the increase in space not only satisfies the functions of living and daily life but has also become a property that adds value to the family. According to the research summary, starting from 2000, most of the Beijing families researched would purchase a set of housing within 5-10 years to improve their family housing conditions. As of 2020, the per capita housing area in Beijing reached 33.7 square meters, a tenfold increase from 1978.

4. The Changes in Family Living Spaces Brought about by Household Appliances and Home Facilities

4.1 The Family Public Life Centered around the Television and Living Room

After the reform and opening-up, the legitimacy of modernization was initially established within people's physical sensations. According to Zhang Xudong, at that time, Chinese people had many doubts about whether China was considered a modern country and whether they were considered modern individuals, which were actually rooted in these physical sensations. Inherently, there was a collective historical impulse to embrace, possess, and create a truly modern life as quickly as possible (Zhang Xudong, 2014). For families, objects, especially household appliances, were at the core of this modern life imagination. In the 1980s, China's economy saw a significant uplift, and the reform and opening-up led to a leap in family consumption. From the 1950s to the 1970s, the "Four Big Items" were the dream of many families, symbolizing the standard of living for families. The "Four Big Items" were "sewing machine, bicycle, watch, radio," colloquially known as "three rounds and a sound." By the 1980s, the new Three Big Items were "black and white TV, single-tub washing machine, single-door refrigerator"; by the late 80s, they became "color TV, twin-tub washing machine, double-door refrigerator." Before the reform and opening-up, due to China's limited industrial production capacity, televisions needed to be supplied by plan and ticket, and only families with purchase tickets could buy televisions from state-owned stores. Research subjects A and C's families each purchased a 14-inch black and white television in the late 1970s. According to C's

description, "At that time, families owning a television were very rare. Although it was just a black-and-white TV, the screen was very small, and the TV programs were very limited, it was more like a decorative piece in the house. But every time it was turned on, the house would be filled with neighbors, and several households would bring their children to watch TV. In summer, the TV would simply be moved to the corridor for everyone to watch together." Although the primary function of family residences at that time was for sleeping, the emergence of audio-visual household appliances like the television began to change the family's space and way of life—the audio-visual centered family life became an important feature of residential interior spaces after the reform and opening-up. As the national economy began to marketize, household appliances like televisions rapidly became popular in families. According to statistical data, in 1978, the number of televisions per hundred urban households in Beijing was 1.3, increasing to 24.3 by 1985, and rapidly to 145.5 by 2000 (Figure 12).

Ownership of major consumer durables per 100 Beijing households

Data Sources: Beijing Municipal Bureau of Statistics

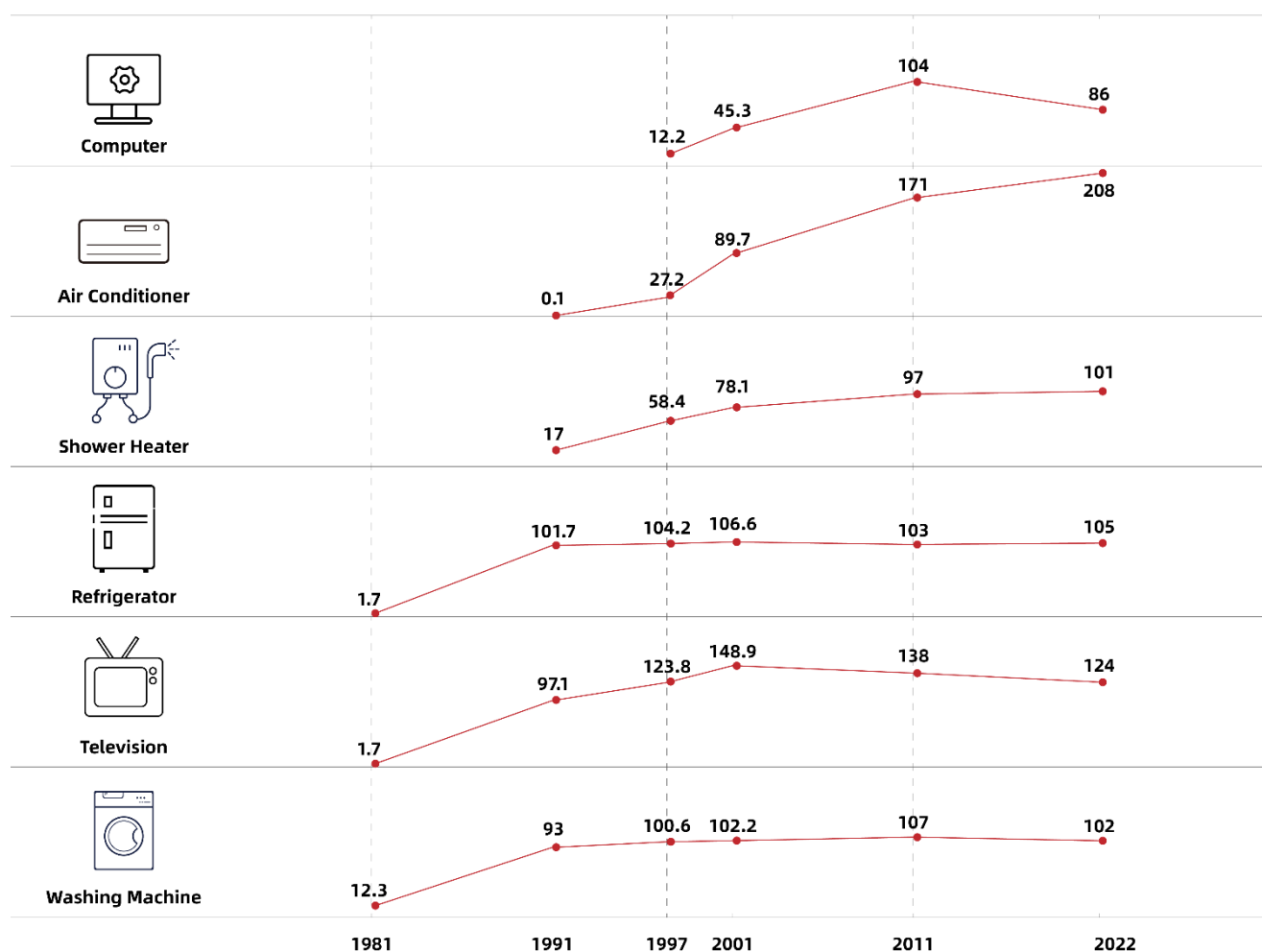


Figure 12. The changes in the number of major electrical appliances owned per hundred households in Beijing families from the 1980s to the present.

The proliferation of televisions made the "large living room" and "small bedroom" a trend in family spaces. When describing their living conditions around the year 2000, all four sample families mentioned "living room size" as an important standard by which they measured satisfaction with their housing. Research subject A mentioned, "At that time, every family wanted an independent living room, because the living room was not only the public space for family members but also a place for receiving friends and connecting with the outside world, like a front stage that could be seen by anyone who came to the house." The living room, as a public space within the family and a transitional space to the social space outside the family, became the center of the entire residence. The television and corresponding audio-visual equipment became the focus of this center, with every family beginning to consider the placement of

audio-visual equipment. As the audio-visual equipment itself has a high degree of technical beauty and a sense of the times in terms of shape, size, color, and texture, apart from achieving the best audio-visual effects, it also has a display and decorative function. The style and personality of the living room became the visual center of the entire family and the display stage to the outside (Figure 13).



Figure 13. The living rooms of research subjects C and A's families in the 1990s and the 2010s.

As a place for rest, entertainment, and conversation, family life centered around the television and the living room also unfolded here. In interviews about the living room, it was found that almost all public affairs related to the family occurred in the living room, especially during TV watching, discussions, and resolutions; the family's emotions were also enhanced in the coexistence of living room audio-visual life. For example, after dinner, when the whole family watched TV, the living room often served as a space for internal family meetings to discuss family expenses, children's education and interest development, family outings, etc.; at the same time, when watching TV programs of mutual interest, exchanges would start, and personal views and opinions would be shared. Parents' understanding and discipline of children were also generated here, making the living room a place that accommodates the commonality of family members.

4.2 The Convenience Brought to Family Life by Electrification and Smart Home Appliances

Consistent with the television, from the mid-1980s, white goods such as washing machines, refrigerators, and air conditioners gradually became popular in urban residences, ushering in an era of electrification in family life. The increase in household appliances led to an expansion in the usable area of residences, making an increase in auxiliary space inevitable. Correspondingly, the use of auxiliary home appliances also provided convenience for family life, changing family habits. Taking the kitchen and refrigerator as examples, in the author's interviews, all four respondents unanimously chose the refrigerator as the appliance that has had the greatest impact on family life since the 1980s. The refrigerator not only changed the way food was stored but also affected eating habits, kitchen space design, and usage. Research subject B emphasized the impact of the refrigerator on family life, especially in terms of food storage and preservation: "My family bought a refrigerator in 1987. The biggest change after having the refrigerator was that we could buy more meat in the summer. Because my home and workplace were far from the market, it was troublesome to go there, and in the summer heat, the meat bought back would spoil quickly if left outside. With the refrigerator, we no longer had to worry about meat spoiling if we bought too much." Research subject C mentioned: "My father and I are both sports fans. In 1990, when we got a refrigerator, it was the year of the Asian Games in Beijing. That summer, my father bought a lot of beer, and after dinner, we'd start watching the Chinese team's games with chilled beer and snacks from the refrigerator. I was just 18 then, and it was the first time he allowed me to drink. I remember many nights we'd drink and talk about the games, and life. It was the happiest summer I had with my father."

Interestingly, initially, the refrigerator in Chinese homes was not placed in the kitchen but in the dining room. One reason was the small size of family kitchens in the 80s and 90s, only enough to accommodate a sink, countertop, and stove; the second reason was that the refrigerator, as a relatively high-end household appliance at the time, had a certain display function and was thus often placed in a more conspicuous position in the home. After 2000, the electrification of kitchens further increased: microwaves, rice cookers, exhaust hoods, induction cookers, ovens, and other small kitchen appliances and equipment gradually became popular, making cooking behaviors and procedures more complex, and allowing for larger and expanded kitchen spaces. To make the cooking process smoother, some families with large kitchens began to place refrigerators in the kitchen, considering the refrigerator and cabinets as a whole in the design and layout of kitchen space, to balance convenience and aesthetics (Figure 14).

the commonly used household appliances	Household A	Household B	Household C	Household D
Air conditioner	○	○	○	○
Air purifier	○		○	
Air quality monitor			○	
Bathroom heater	○	○	○	○
Clock	○	○		○
Curtain motor	○		○	
Camera	○	○	○	○
Dehumidifier				
Dishwasher	○		○	○
Electric heater	○		○	○
Electric kettle	○	○	○	○
Fan	○		○	○
Fresh air system	○		○	
Humidifier	○		○	
IPTV set-top box		○	○	○
Lamp/light	○	○	○	○
Kitchen hood	○	○	○	○
Massage chair			○	
Microwave oven	○	○	○	○
Pet feeder				
Projector			○	
Refrigerator	○	○	○	○
Running machine				
Rice cooker	○	○	○	○
Robotic vacuum cleaner			○	
Smart mirror				
Smart bed				
Television	○	○	○	○
Temperature and humidity sensor			○	
Video doorbell	○		○	
Washing machine	○	○	○	○
Water purifier	○		○	
Water heater	○	○	○	○

Figure 14. The kitchen arrangement of research subject A. (The left image shows a refrigerator from the 80s-90s, which can be seen placed outside the kitchen, serving a certain display function. Nowadays, refrigerators are more often placed in the kitchen, forming a kitchen layout closely linked to cooking activities.)

In recent years, with the emergence of small smart home appliances with more refined functional divisions, thanks to the development of mobile internet and smart IoT, these smart home appliances have begun to more deeply integrate into daily family life. The interconnectivity of home appliances facilitated by IoT technology and smartphones further brings convenience to family life, while also effectively reducing the energy consumption of appliances (Figure 15). For example, research subject B purchased a smart air conditioner and humidifier for the family, which can set the ideal temperature and humidity on a smartphone. When the temperature and humidity are not within the ideal range, the air conditioner and humidifier will automatically start working and stop after adjusting. Additionally, the use of smart vacuum robots and dishwashers significantly reduces the cleaning tasks for family members, especially the elderly, allowing them more time for rest or leisure activities.

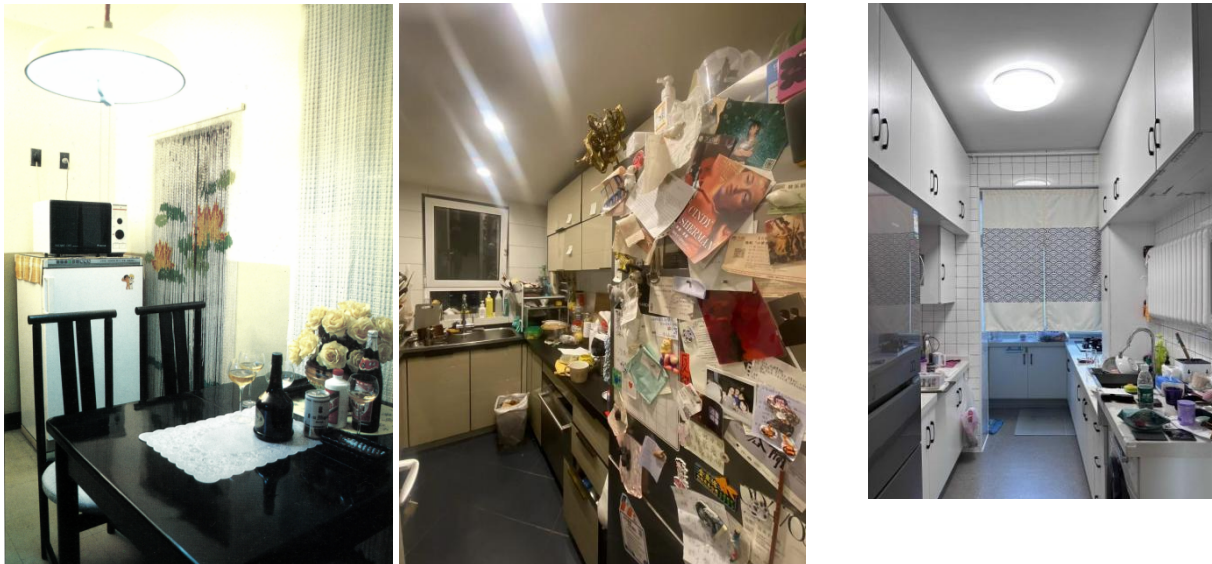


Figure 15. The types of smart appliances currently owned by the four surveyed households.

5. Characteristics of Changes in Home Decoration

5.1 From Standardization to Personalization

During the planned economy period, urban residents' home decoration tended toward standardization. This design approach was partly to save economic costs and, on the other hand, to reflect the equality of people's social status through standard home decoration. The arrangement of facilities within the room could also collectively display the socialist political characteristics of the space. From the 50s to the 70s, the interior furnishings of ordinary families were very simple, consisting only of essential furniture for daily life such as beds, chairs, tables, and cabinets. As for decorations, walls in the rooms were usually adorned with portraits of Chairman Mao. After the reform and opening-up, the concept of the family as an "individual" rather than a "collective" began to emerge. Marketization, bringing a rich variety of products, made people not only pay more attention to the practicality of home layout but also break away from standardized interior furnishings to show individuality, creating a family living atmosphere became the need for most families. Design scholar Hang Jian, based on the overall social situation in China and the general level of design awareness, argued that China's "modern design" began in 1978, pointing out that only a society that realizes the best development of industrial civilization is through design to improve life, can echo the spirit of design at all levels, and by choosing design through consumption, thereby achieving the highest good of mass behavior (Hang Jian, 2018). In terms of home layout, in the 80s and 90s, there were no professional interior design companies and designers in Beijing yet. Many families' walls, floors, and ceilings were treated very simply, mainly using combination furniture of different shapes and sizes to divide and plan family space. This furniture was usually made based on the ideas and needs provided by the family, asking furniture makers to produce them. Research subject A mentioned, "At that time, all the furniture in the

house, from cabinets and tables to sofas, were created based on my design drawings, and then I had a carpenter make them for me, and most families did the same. If you had no ideas, the carpenter would offer suggestions based on their own experience." After the new century, with the furniture market maturing, people could choose ready-made furniture or customized furniture according to their aesthetic preferences. In recent years, the concept of "minimalist decoration, emphasis on adornment" has gained popularity, with simple interior decorations filled with personalized home decor becoming the choice for many families when doing interior design. In the current home of research subject A, one can see the display space specially designed for his favorite ornaments, showcasing his personalized collection of hobbies and aesthetic taste.

5.2 From Intricate Decorativeness to the Integrity of Space

After 2000, professional interior designers and construction personnel began to be active in the market, and home decoration tended more towards personalization: walls, floors, ceilings, and other interior space interfaces were decorated and processed, and people paid more attention to the coordination of lighting, furniture, and furnishings. Interestingly, between 2000 and 2010, some families were keen to imitate and draw inspiration from the decoration style of hotel rooms: wooden wainscoting, multi-layered ceilings, and patterned wallpaper became the main elements of the space. Unfortunately, in terms of furniture and furnishings coordination, most families lacked an overall aesthetic awareness, leading to discordant home spaces, such as "Baroque" style wallpaper matched with Chinese-style furniture. After 2010, under the influence of internet media, the Scandinavian minimalist style of "IKEA," the modern design concepts from Italy focusing on wholeness and materials, and the impact of "environmental consciousness," led to a home interior design philosophy that began to emphasize the integrity of space: simple spatial interfaces, harmonious color atmospheres, unified style furniture, personality-showcasing furnishings, and decoratively functional fresh green plants became the aesthetically pleasing decoration choices favored by families (Figure16).



Figure 16. The current interior appearance of the homes of research subjects A and B.

6. Conclusion

This study aims to showcase and reveal the changes in interior spaces and family life of urban households in Beijing since China's reform and opening-up. Utilizing methods of literature analysis and anthropological ethnography, this research combines historical documents as objective materials with oral facts from family surveys. Based on interview data from four types of families, it outlines the changes in Beijing's family interior spaces over the past 40 years. Accordingly, the conclusion of this paper is that after the reform and opening-up, the spatial structure of households has transitioned from sleep-oriented to multifunctional: the increase in area and the rational division of spatial functions are the main reasons for this change. In terms of family life, the prevalence of televisions has shaped an "audio-visual" life centered around the living room; the popularization of household appliances, electrification, and smart technologies

have made modern family life more convenient. In terms of interior decoration, there has been a shift from standardization before the reform and opening-up to showcasing the personalization of family life; from focusing on intricate decorativeness to emphasizing the aesthetic integrity of space.

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