

# **Cooling Conflicts:**

## **Intergenerational Negotiations of Air Conditioning Use in Chinese Families**

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Doctoral thesis submitted in fulfilment of the  
requirements of the Research Degree in Science,  
Technology, Engineering and Public Policy

January 2025

## **Signed declaration**

I, Wanhao Zhang, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis. The thesis is an original work, but I acknowledge the use of ChatGPT as a tool for language proofreading and refinement during the writing process.

## Abstract

This study delves into the intergenerational dynamics of air conditioning (AC) use in urban Chinese households, focusing on how cultural values, material conditions, and social interactions shape energy practices. Using Shenzhen as a case study—a city emblematic of China’s rapid urbanization and socio-economic transitions—this research adopts a qualitative approach grounded in social practice theory, enriched by an emphasis on interactions to explore the interplay between culture in practice and culture in interactions. Semi-structured interviews and participant observations were conducted across multi-generational families, allowing for a nuanced understanding of household cooling practices. Findings reveal that Confucian values, particularly filial piety, hierarchical respect, and notions of family duty, deeply inform intergenerational negotiations around AC use. Older generations, influenced by historical periods of economic scarcity, emphasize sufficiency, moderation, and frugality in cooling practices. Younger generations, shaped by urbanization and modern lifestyles, prioritize comfort, efficiency, and productivity, integrating AC into their daily lives as a necessity rather than a luxury. These divergent values are actively negotiated within families, where cultural norms both constrain and facilitate compromises, leading to hybridized practices that blend traditional values with modern needs. This research highlights the critical role of intergenerational interactions in shaping sustainable energy practices, offering insights into the socio-cultural mechanisms underpinning energy consumption in rapidly urbanizing societies. By situating the findings within broader theoretical and practical contexts, this study demonstrates the relevance of its conclusions not only for other Chinese urban centres like Shanghai and Guangzhou, but also for culturally analogous regions in Southeast Asia. The integration of cultural and relational dimensions into social practice theory provides a robust framework for understanding sustainability transitions in culturally diverse contexts, offering actionable insights for policymakers aiming to design culturally resonant energy interventions.

## Impact statement

This research offers significant insights into the intergenerational dynamics of air conditioning (AC) use in Chinese families, reflecting broader socio-cultural shifts in energy use, family structure, and societal expectations. By exploring the intersection of modern cooling technologies with traditional values like filial piety, this study contributes to several key academic fields, including energy studies, cultural anthropology, family sociology, and public policy. The primary academic contribution of this research lies in its nuanced examination of how generational differences in Chinese families influence decision-making around AC use. Previous studies on energy use have focused predominantly on technical, economic, and environmental factors, often overlooking the critical role of family dynamics. By utilizing qualitative methods, including in-depth interviews, this research uncovers the complex negotiations that take place within households regarding cooling practices, revealing how cultural expectations, generational preferences, and practical needs are balanced in the everyday lives of Chinese families. This offers a more holistic understanding of energy use that transcends traditional analyses focused solely on technology or economics. Practically, the findings of this study have important implications for energy policy in China and other rapidly urbanizing nations facing similar challenges. With the increasing adoption of AC units contributing to higher energy demand and environmental stress, understanding the cultural drivers behind cooling practices becomes essential for designing effective and socially acceptable interventions. By highlighting the role of family structures and intergenerational negotiations in shaping AC usage, this research provides a framework for policymakers to develop more targeted and culturally sensitive energy-saving programs. For example, campaigns encouraging energy efficiency can be tailored to resonate with traditional Chinese values, such as respect for elders and frugality, while still promoting modern energy practices among younger generations. Additionally, this study offers broader contributions to global discussions on sustainable energy use and the social dimensions of climate change mitigation. As countries worldwide grapple with increasing demand for cooling technologies in a warming climate, the findings underscore the importance of addressing the social and cultural contexts in which energy use occurs. By emphasizing the importance of intergenerational dialogue and family dynamics in energy practices, the research provides valuable insights for developing policies that balance comfort, family harmony, and environmental responsibility. Finally, the insights gained from this study are not confined to China. As many other societies undergo demographic transitions and shifts in family structures, the issues raised—such as the negotiation of modern conveniences against traditional values—are likely to become increasingly relevant. This research, therefore, contributes to a growing body of work that seeks to integrate cultural, social, and behavioural factors into the global pursuit of sustainable energy practices.

## Acknowledgements

As I pen these words, my heart is heavy with grief, yet filled with immense gratitude. This dissertation is not just the culmination of years of research and study, but also a testament to the unwavering guidance of my late supervisor, Professor Russell Hitchings. Russell was not only an exceptional scholar but a supervisor of unparalleled patience, encouragement, and wisdom. From the earliest stages of topic selection to the final revisions, his steady support and insightful feedback were my constant companions. It is with profound sorrow that I acknowledge Russell's sudden passing due to a heart attack, leaving behind a void in my academic journey and the lives of all those he touched. As I revisited the notes he left on my chapters, I often found myself overwhelmed with emotion, tears welling up as I felt his presence still guiding me. In these moments, I realized how much I had learned from him, not just about research, but about the kind of teacher and person I aspire to be.

I often think about how I will guide my own students in the future. If I were to supervise someone who, like me, struggled to find their way, how would I lead them? It is now, in Russell's absence, that I know the answer. I will strive to follow his example: to lead with compassion, patience, and an unwavering commitment to their success. I will carry his spirit with me as I move forward in my career, hoping to become a supervisor who inspires others, just as he did for me. I am also deeply indebted to my supervisory team, who, in the wake of this great loss, supported me through my most challenging moments. Their genuine care and encouragement helped me navigate the difficult path of completing my dissertation while coming to terms with Russell's passing. Over these four years, they have not only shaped my research but have guided me in discovering my own academic interests and trained me to become an early-career researcher. For that, I will always be profoundly grateful.

I would also like to express my deepest gratitude to my parents. Their unwavering support throughout my life and especially during the emotionally turbulent times of these past four years has meant the world to me. From across the distance, in China, they would always be there for me, video calling to lift my spirits whenever I struggled. Their positivity and optimism have always been an inspiration. Even though my family has faced many challenges over the past two years, their courageous and hopeful outlook has kept us all going, helping us move from darkness toward light.

Finally, a special thanks to my beloved dog, Hu Hu, my faithful Greyhound companion for over ten years. Though she only stays by my side during holidays when I return to China, she still manages to bring me comfort from afar. Even when I'm not home, seeing her adorable face whenever I miss her has been a great source of solace. Her presence, whether near or far, has helped me find calm and focus throughout this journey, making her my treasured companion and, without a doubt, the Greyhound who has kept me company during the most thesis-writing hours.

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# Chapter 1: Introduction

## 1.1 Why does Cooling Matter?

Cooling actions constitute one of the less discussed but most critical categories of routinized energy usage. As global temperatures rise due to climate change, the demand for cooling, particularly through air conditioning (AC), is set to increase exponentially. 'Comfort cooling' has emerged as a significant contributor to climate change risks because it often heavily relies on electricity from power plants that emit greenhouse gases. Already in many of the world's largest cities, air conditioning accounts for 40-60% of peak electricity demand (Kalanki, 2019). The use of cooling, especially ACs in residential buildings, is projected to raise global temperatures by more than 0.5 °C by 2100 (Rocky Mountain Institute, 2018). The environmental impacts of this surge in cooling demand are profound, both globally and locally. Globally, the increased use of ACs significantly contributes to greenhouse gas emissions, exacerbating the very problem it seeks to mitigate. The reliance on fossil fuels for electricity generation means that higher AC usage often directly translates to higher carbon emissions. While in many areas with high AC usage, renewable energy sources such as solar can contribute to electricity generation, the effectiveness of these sources can be diminished by factors like cloud cover. Additionally, even renewable energy sources have their own environmental and social impacts, which complicates the challenge of mitigating climate change. This vicious cycle of increasing temperatures leading to greater AC use, and in turn contributing to further warming, remains a formidable challenge to climate change mitigation efforts.

Locally, the concentrated use of ACs during peak times can lead to electricity blackouts due to sudden surges in demand. These blackouts disrupt daily life and pose severe risks to vulnerable populations, such as the elderly and those with health conditions that make them susceptible to heat. Additionally, planning for peak electricity use associated with ACs places a significant burden on the electricity grid. The grid must be capable of handling peak loads that occur sporadically, which requires substantial infrastructure investments and operational adjustments to maintain reliability and prevent outages. This strain is especially evident during heatwaves, when the simultaneous use of ACs can overwhelm the grid's capacity,

leading to power outages and economic disruptions (Colelli et al., 2023). In a warming world, the necessity and desire for cooling solutions are becoming increasingly urgent. Climate change is leading to more frequent and intense heatwaves, making cooling not just a matter of comfort but a public health necessity. The increased need for cooling solutions is particularly evident in urban areas, where the urban heat island effect exacerbates high temperatures. Both air-conditioning and fuel-based cars contribute to more heat in an already heated built environment. Air conditioners release excess heat into the surrounding environment through their cooling process, contributing to the urban heat island effect. As more people move to cities and urban populations grow, the demand for cooling is expected to rise dramatically.

This issue is not confined to any single region but is a global challenge (Pavanello et al., 2021). For example, in the United States, especially in the South and Southwest, air conditioning is essential due to extreme heat. During heatwaves, cities like Phoenix and Houston experience massive spikes in electricity demand, often pushing the grid to its limits (Baniassadi, 2019). The increased use of AC during such periods can lead to power outages, as seen in California, where rolling blackouts have become more common in recent years (Andresen et al., 2023). In India, rapid economic growth and urbanization are driving increased AC adoption, with significant impacts on the electricity grid and the environment. Cities such as Delhi and Mumbai face frequent power outages during peak summer months, with the surging demand for AC being a major contributing factor (Srivastava et al., 2021). The rising middle class in India is leading to greater adoption of air conditioning, putting additional pressure on the already fragile electricity infrastructure. In the Middle East, where temperatures can soar above 50°C, air conditioning is not only indispensable for daily life and economic activities but also reflects cultural practices (Howarth et al., 2020). For instance, it is common for AC systems to be set at very low temperatures, creating indoor environments where winter clothing can be comfortably worn, highlighting a cultural preference similar to the practice observed in some Western countries where indoor heating in winter allows for lighter attire (Khovalyg et al., 2023). The high energy demand for cooling in this region results in substantial greenhouse gas emissions, despite efforts to invest in more sustainable energy sources. Europe, traditionally less reliant on air conditioning, is also experiencing a growing trend

towards increased AC use due to rising temperatures and more frequent heatwaves (Randazzo et al., 2020). Countries like France and Germany, which historically had minimal need for air conditioning, are now seeing a surge in demand, challenging their electricity grids and raising environmental concerns.

Amid this global backdrop, China stands out both for the scale of its cooling demand and its pivotal role in the global AC market. China, as the world's largest producer and consumer of room air conditioners, has experienced rapid economic development and urbanization, leading to a dramatic increase in household AC use. China not only leads the world in sales volume of AC units but also has the highest number of installed units. Projections suggest that by 2050, China's household AC installations and cooling capacity (GWe) will account for a quarter of the world's total (Rocky Mountain Institute, 2018). Despite government efforts to improve energy efficiency through incentives and policies, China's energy demand for room ACs is expected to double to 910 TWh by 2050 (Rocky Mountain Institute, 2018). This surge in energy consumption places additional strain on an already burdened power grid, heightening the risk of grid overload and power outages during periods of extreme heat. A notable example of these challenges occurred since the summer of 2021 in Shenzhen, a megacity of 10 million in southern China with a subtropical monsoon climate. The city experienced an unprecedented rise in cooling demand due to high temperatures, compelling the regional government to implement peak-shift electricity policies for industries to secure residential electricity supply. Shenzhen, one of the key cities in the Pearl River Delta, has undergone rapid growth for over three decades since China's economic reforms. The city's massive surge in cooling demand offers a valuable case study for understanding the broader implications of rising AC use for any country or region undergoing dramatic socio-economic change.

Reflecting on the historical and cultural context of cooling in China further highlights the significance of this shift. Traditionally, Chinese cooling practices were deeply rooted in cultural and environmental adaptations. Ancient Chinese architecture incorporated design elements such as courtyards, high ceilings, and strategically placed windows to enhance natural ventilation and cooling (Chen et al., 1997; Knapp, 2012). These architectural features were not only functional but also reflected a deep understanding of and harmony with the natural environment. The use of handheld fans was widespread, serving as a personal cooling method that was both efficient and

culturally ingrained (Davies, 2019). Additionally, the consumption of cooling foods and beverages, such as herbal teas and cold dishes, played a significant role in traditional Chinese practices for mitigating heat (Koo, 1984). Modern China, however, has seen a rapid transition towards mechanical cooling solutions like air conditioners, driven by technological advancements and economic growth. As incomes have risen, more people have gained access to cooling technologies that were previously unavailable. This shift not only reflects an increase in technological adoption but also marks a significant transformation in daily life, work environments, and social interactions. Air conditioning has become closely associated with modernity and economic progress, representing improved living conditions. The ability to control indoor climates has reshaped daily routines, altering the rhythms of activities such as work, rest, and leisure. This shift has not only extended working hours but also redefined comfort by decoupling it from external weather conditions. These changes in cooling practices are not static; rather, they reflect the dynamic interplay of material, cultural, and social factors that continuously evolve in response to technological advancements and shifting societal expectations. Exploring the daily collisions and negotiations between different cooling practices—such as generational preferences—reveals the complex drivers behind these transformations. However, research on the cultural drivers and consequences of these shifts remains limited. Without a deeper understanding of the dynamics underpinning these changes, policies and interventions risk overlooking critical cultural dimensions. Therefore, future research should focus on uncovering the nuanced mechanisms of these evolving practices to inform strategies that address climate change while enhancing quality of life.

## 1.2 Why Family Matters in AC Cooling?

Family dynamics are likely to play a crucial role in the use and management of air conditioning (AC) within households, a factor that existing research has largely overlooked. While technological advancements and economic factors are often emphasized, it is plausible to consider that the ways in which families interact, make decisions, and prioritize their needs could significantly influence AC usage. This consideration is particularly relevant in cultures undergoing rapid transformation,

such as China, where traditional values intersect with modern lifestyles, suggesting that family dynamics might be an essential yet understudied aspect of energy consumption. In many cultures, decisions regarding household energy use, including AC, are influenced by family structures, generational interactions, and cultural norms (Hitchings and Lee, 2008; Henwood et al., 2016). In countries experiencing rapid urbanization, economic growth, and evolving family structures, such as China and India, these dynamics present a valuable area of study. In contrast, the United States, where AC adoption is already widespread, provides an example of the potential consequences of unchecked AC usage, where household decisions often reflect individual preferences, sometimes leading to excessive energy consumption (De Cian et al., 2019; Davis and Gertler, 2015). This experience suggests the importance of understanding and addressing these dynamics in other countries, to avoid replicating the same challenges.

China presents a particularly compelling case for examining the interplay between family dynamics and AC usage. Over the past few decades, China has undergone significant social and economic transformations that have dramatically altered family structures (Li et al., 2020). Traditionally, Chinese families were multi-generational, with elders holding significant influence over household decisions (Li, 2021). This collective decision-making approach often extended to the use of household resources, including AC. Elders, prioritizing frugality and traditional values, might limit the use of AC to save on costs and energy. However, modern Chinese families are increasingly shifting towards nuclear family structures characterized by smaller household sizes and more individualistic tendencies (Shen et al., 2021; Yan, 2021). Younger generations are asserting their preferences and autonomy more than ever before, influenced by modern lifestyles, higher incomes, and greater exposure to global cultural norms (Yan, 2020). This shift may significantly impact how families negotiate the use of AC, balancing comfort, cost, and energy efficiency, although this remains an underexplored area. It is plausible that young adults, driven by a desire for comfort and productivity, could advocate for more frequent use of AC, while older family members might prioritize cost-saving and energy conservation. However, prior to my research, there is little concrete evidence on how these socio-cultural changes in China specifically impact AC use with a consideration for family dynamics. Most existing studies focus on technological, economic, and environmental dimensions,

often neglecting the intricate roles of familial relationships and intergenerational power dynamics. Addressing this gap, my research seeks to illuminate these culturally and socially embedded practices, offering insights that can inform more nuanced and context-sensitive policy interventions.

In a typical Chinese household, resource consumption, including decisions on AC usage, is often guided by parental control, particularly during early childhood. These decisions are shaped by parents' assessments of their children's comfort, health needs, and household financial constraints, reflecting deeply rooted cultural values such as frugality and collective well-being. However, as children mature into adolescents and young adults, they begin to assert greater autonomy, leading to negotiations that involve balancing the cultural expectations of elder family members with the individual preferences of younger generations. These negotiations often reveal tensions between traditional values that prioritize cost-saving and energy conservation and modern attitudes that emphasize comfort and convenience.

Intergenerational negotiations around AC use are not merely isolated household-level phenomena but are indicative of broader shifts in family dynamics and societal values. As younger generations advocate for practices more aligned with modern lifestyles, elder members may resist changes that challenge traditional norms. This dynamic reflects how cultural meanings both operate within and exert external pressure on cooling practices in the family setting. Despite the central role of family in shaping energy practices, current literature offers limited insights into how these negotiations unfold or how they impact sustainable cooling practices. Most existing studies focus on technological, economic, and environmental dimensions of energy consumption, often overlooking the relational and cultural factors that influence household decision-making. As a result, the nuanced ways in which evolving family structures and generational roles impact AC usage remain underexplored.

China's rapid social and economic transformation underscores the importance of understanding these dynamics. Changes in family structures—shifting from multi-generational households to nuclear families—have altered the locus of decision-making within households, amplifying the role of individual autonomy. Yet, traditional cultural norms persist, creating a layered and often conflicting set of influences on resource use. This evolving context presents a critical gap in knowledge



about how family dynamics mediate the intersection of cultural values, energy consumption patterns, and sustainability goals.

In summary, the study of family dynamics and AC usage in China provides a unique lens to examine the intersection of culture, family structures, and energy practices. By focusing on how cultural meanings are negotiated and contested within households, researchers and policymakers can gain deeper insights into the social dimensions of energy use. Addressing this gap can inform the development of more nuanced and culturally sensitive strategies for promoting sustainable energy consumption. Existing research has predominantly relied on quantitative methods, which, while valuable, often fail to capture the intricate, context-specific nature of family interactions and cultural influences. Without this understanding, current policies may inadequately address the real-life practices and decision-making processes that underpin household energy use, thereby limiting their effectiveness.

My doctoral research seeks to bridge this gap by exploring how family dynamics in China shape AC usage, focusing on the interplay between cultural values, generational interactions, and household decision-making processes. By applying a qualitative approach, this study aims to uncover the complexity of these practices, offering an understanding of how cultural and social factors influence energy consumption. The findings will contribute to the design of more effective and culturally appropriate energy policies that address the realities of family life, fostering broader public engagement and support for sustainable cooling practices.

### 1.3 Research Objectives and Questions

The primary objective of this research is to understand how intergenerational negotiations within Chinese families – focused on Shenzhen – shape air conditioning (AC) use, and to assess their broader implications for sustainable cooling practices and energy policies. This study seeks to uncover the underlying cultural values, generational perspectives, and household decision-making processes that shape AC usage in Chinese families. By adopting a qualitative approach, the research aims to capture the nuanced, context-specific details of these interactions, providing insight into how family dynamics influence not only AC use but also the broader sustainability of energy practices within households.

The key research questions guiding this study are:

**1. What are the generational differences in cooling practices within Chinese families?**

This question seeks to identify and analyse how different generations approach and use air conditioning (AC) within Chinese households. By examining generational variations, the study aims to uncover distinct patterns, preferences, and values in cooling practices, illustrating how social, cultural, and material changes have transformed AC use over time.

**2. How do intergenerational negotiations around AC use unfold across different life stages?**

This question investigates the dynamics and processes of decision-making and interactions related to AC use within families, focusing on how these negotiations evolve across various life stages. It examines the roles, strategies, and compromises involved during phases such as childhood, adolescence, adulthood, and eldercare, highlighting how family members adapt their practices and reconcile generational differences over time.

**3. What cultural factors shape intergenerational negotiations about AC use?**

This question explores the cultural norms and values that influence family discussions and decisions about AC use. It examines how deeply rooted cultural frameworks, such as Confucian principles of filial piety and frugality, impact intergenerational dynamics and inform each generation's approach to cooling practices, providing insights into the underlying social and cultural pressures at play.

**4. What are the implications of intergenerational negotiations for sustainable cooling practices?**

This question considers how the findings from intergenerational negotiations can inform broader discussions on sustainability. By analysing the tensions between modern convenience and traditional values, it explores how family-level interactions can contribute to or mitigate the environmental challenges

associated with the normalization of AC use, offering practical and cultural insights for promoting sustainable cooling practices.

To address these questions, this study employs qualitative methods, including in-depth, semi-structured interviews and thematic analysis. Interviews conducted with family members across generations provide a rich narrative dataset that captures personal experiences, attitudes, and perceptions regarding AC use and family negotiations. Thematic analysis allows for a systematic exploration of these data, identifying recurring patterns and extracting key themes that illustrate the broader implications for family dynamics and energy consumption. This approach is especially suited to understanding how cultural values and family interactions shape energy practices, offering a comprehensive view of the complexities involved in negotiating AC use. By emphasizing the intricate details of family life, this research contributes to developing culturally sensitive, socially inclusive energy policies aimed at promoting sustainable energy use within households.

## 1.4 Significance of the Study

This study has significant theoretical and practical implications for understanding family dynamics and energy consumption, particularly concerning sustainable air conditioning (AC) use within Chinese households. By linking family dynamics and intergenerational negotiations to household AC use—a relationship often overlooked—this research fills an essential gap in the existing literature. The study's significance can be examined from three main perspectives: theoretical contributions, practical applications, and policy implications.

### **Theoretical Contributions:**

This study provides a significant theoretical contribution by employing social practice theory as a foundational framework to analyse intergenerational dynamics in air conditioning (AC) use within Chinese households. Social practice theory (Shove et al., 2012), with its focus on materials, meanings, and competences, offers a robust structure for understanding how energy practices are shaped and maintained.

However, this study extends the framework by emphasizing social interactions (Halkier, 2020) as a crucial perspective to better capture the relational and dynamic

nature of household practices. Through a focus on intergenerational negotiations, this research highlights how interactions within families mediate and transform cooling practices. These negotiations reveal how differing generational priorities—such as elders valuing frugality and younger members prioritizing comfort—are actively contested and reconciled. Interactions, therefore, emerge as a critical mechanism through which cultural meanings are negotiated, material elements are utilized, and competences are adapted to evolving household contexts. This attention to interactions complements social practice theory, enriching its capacity to explain how practices evolve in response to relational and generational dynamics. By combining social practice theory with the relational insights provided by interactions, this study bridges a key gap in existing research. It demonstrates how everyday family interactions serve as sites where broader cultural and social shifts are reflected and enacted. In doing so, it expands the applicability of social practice theory to settings where relational dynamics are particularly influential, such as multi-generational households. This theoretical integration offers a more comprehensive understanding of how energy practices are shaped, contested, and sustained within complex social environments.

### **Practical Applications:**

The study's practical significance lies in its potential to inform policies and interventions aimed at promoting sustainable AC use. Policymakers can leverage the insights from this study to design interventions that resonate with real-world family structures and dynamics. For example, energy-saving programs can be tailored to address the specific needs and preferences of different generations within households, recognizing the role of intergenerational negotiations in sustainable energy use. This culturally sensitive approach ensures that interventions are not only technically feasible but also socially adaptable, increasing their effectiveness and acceptance across generational lines.

### **Policy Implications:**

The findings of this study have policy implications, particularly in China, where rapid urbanization and economic growth have contributed to increased energy consumption. For energy conservation policies to be effective, they must be culturally relevant and widely accepted by the public. This study underscores the importance of considering cultural values and family structures in policy design. For instance, campaigns

encouraging energy-efficient AC use could be crafted to resonate with traditional Chinese values, such as frugality and respect for elders, while also appealing to the modern aspirations of younger generations. By tailoring approaches to align with generational preferences, policies become more targeted and have a higher likelihood of success. One key finding of this study is the importance of intergenerational dialogue in shaping sustainable AC use, suggesting that policies encouraging these conversations within families may have long-term benefits for household energy conservation.

## 1.5 Structure of the Thesis

This introduction establishes the foundation by presenting the research problem, objectives, and significance, outlining the key research questions, and explaining the critical importance of understanding family dynamics in the context of AC use. Chapter 2 reviews existing literature from four perspectives: comfort as a cultural product, intergenerational transmission and differences in energy practices, social negotiation and energy consumption, and home comfort and family dynamics. This review identifies gaps in the literature and situates the current study within this context, establishing the necessity and relevance of the research. Chapter 3 outlines Shenzhen's urban development, energy supply changes, cooling technology adoption, climate conditions, and evolving family dynamics, providing context for family interactions in the study. Chapter 4 outlines the research design, data collection, and analysis methods, using in-depth interviews and thematic analysis to examine family interactions and power dynamics. Based on social practice theory (SPT), it explores how material elements, competences, and meanings shape intergenerational cooling practices and family dynamics, while discussing the cultural elements embedded in these practice interactions. The chapter ensures scientific rigor through measures to maintain validity, reliability, and ethical standards.

Chapter 5 analyses the intergenerational changes in cooling practices through the lens of practice elements, highlighting the transformation of factors influencing these practices over time. Chapter 6 explores how parental influence shapes children's initial AC usage habits by examining the interplay of practice elements, emphasizing

how cultural norms and parental authority are enacted and reproduced in early energy behaviours. It also investigates adolescence as a transitional period, focusing on how teenagers assert independence in AC use, with family conflicts and negotiations serving as key sites of evolving practices and shifting meanings. Chapter 7 investigates how young adults challenge and reshape family AC norms as they establish new households, focusing on how moving out of the family home transforms their energy practices and redefines cultural expectations around cooling. Chapter 8 analyses the changing family dynamics as parents age and rely more on adult children, exploring how caregiving responsibilities and shifting power dynamics influence AC usage, highlighting the cultural elements embedded in these evolving practices. Chapter 9 synthesizes the main findings, integrating them with existing scholarship to provide deeper academic insights into the dynamic interplay of practices, culture, and family energy use. The final Chapter 10 concludes the study by summarizing key findings, reflecting on policy implications, and suggesting future research directions, underscoring the importance of understanding family dynamics and "culture in practice" for sustainable AC use and energy consumption.

# Chapter 2: Literature Review

## 2.1 Introduction

This chapter undertakes a comprehensive examination of the cultural, generational, and social dimensions that shape energy consumption practices, with a particular focus on thermal comfort and household dynamics. The literature review is organized to systematically explore how these factors influence energy behaviours, revealing the complex interplay between societal values, technological advancements, and intergenerational transmissions. The chapter begins with an exploration of thermal comfort as a cultural construct, challenging the traditional view of comfort as a purely physiological or technical condition. Drawing on historical and sociological perspectives, this section illustrates how the concept of comfort has been culturally produced and transformed over time, particularly through technological innovations such as air conditioning and heating systems. By tracing these developments, the review highlights how comfort is deeply embedded within specific historical and cultural contexts, serving as a reflection of broader societal shifts and technological progress. Building on this foundation, the chapter then turns to the intergenerational transmission of energy practices, recognizing that generational cohorts, shaped by their unique historical and social environments, exhibit distinct attitudes and behaviours toward energy consumption. This section synthesizes both quantitative and qualitative research to uncover the underlying social, cultural, and behavioural mechanisms that drive these generational differences. By doing so, it underscores the importance of considering these intergenerational dynamics when developing policies aimed at promoting sustainable energy practices. The discussion then transitions to the role of social negotiation in energy consumption, emphasizing how energy practices are not solely individual decisions but are often the result of complex negotiations within households and workplaces. This section explores how cultural norms, gender roles, and intergenerational dynamics influence these negotiations, particularly in the context of managing thermal comfort. The review considers how these social dynamics shape energy consumption patterns, revealing the intricate ways in which energy use is embedded within everyday social interactions. Finally, the chapter addresses the concept of home comfort, delving into how energy use is intertwined with the symbolic, psychological, and social meanings of "home." This

section examines the role of family dynamics in shaping energy consumption, highlighting how the pursuit of comfort within the home often leads to increased energy use. It also explores how family members negotiate their differing energy needs and preferences, considering the impact of power dynamics and cultural values on these negotiations. By synthesizing insights from various disciplines, this chapter provides a nuanced understanding of the factors that influence energy consumption practices. It argues that to fully grasp these practices, it is essential to consider the cultural, generational, and social contexts in which they are situated.

## 2.2 Comfort as a Cultural Product

The concept of thermal comfort refers to the state of mind that expresses satisfaction with the surrounding environment and is traditionally associated with physical well-being. However, its significance extends far beyond mere physicality, as it is intricately interwoven with evolving cultural practices and socio-technical systems. Many disciplines, including environmental science, engineering, and cultural studies, have contributed to the understanding of thermal comfort, making it a multifaceted concept. This section focuses on the cultural dimensions of thermal comfort, exploring how it has been shaped by and has influenced societal values and technological developments. Historical research provides valuable insights into the evolution of thermal comfort, particularly when examined through technological and cultural lenses. Ackermann's work (2010, 1996) offers a pivotal cultural history in this context. Her exploration of America's cultural embrace of air-conditioning illustrates how this technological innovation transformed not only physical spaces but also cultural and social perceptions of comfort, luxury, and modernity. Ackermann traces the rise of air-conditioning from its industrial beginnings to its ubiquitous presence in residential and commercial settings, highlighting significant periods such as the energy crisis of the 1970s and the Chicago heat wave of 1995. Her narrative reveals how air-conditioning has been simultaneously celebrated as a symbol of progress and criticized as a sign of excessive consumerism and environmental neglect. Furthermore, Ackermann delves into the role of public health experts, academics, and engineers in linking ideas of imperialism, progress, race, and climate, thereby constructing a narrative where cooling is synonymous with civilization.



Similarly, Brewer (2000) offers insights into the transition from traditional fireplaces to modern cookstoves, uncovering the intricate relationship between technological change and the domestic ideal in America. Brewer's narrative explores the divergent methods of achieving thermal comfort in early America, emphasizing how technological advancements like the cookstove not only altered the means of achieving warmth but also transformed the very concept of thermal comfort within the household. Her work highlights how cultural ideals around warmth and the aesthetics of domestic space evolved with the adoption of new technologies. In particular, Brewer's analysis underscores the cultural ambivalence towards the adoption of stoves among Anglo-Americans, who had inherited an English preference for open hearths. She documents the cultural shift from valuing the draftiness and visibility of fireplaces to recognizing the efficiency and convenience of stoves. Furthermore, Brewer's study extends to the symbolic aspects of technology, highlighting how figures like Nathaniel Hawthorne and Henry Thoreau lamented the loss of the open fire's moral and social influences.

This cultural shift from equating home and family with the open hearth to the acceptance and adaptation of cookstoves reflects a significant transformation in the cultural construction of thermal comfort. Brewer's work highlights how technological advancements, such as the cookstove, redefined domestic ideals and reshaped the very concept of comfort within American households. Similarly, seminal works from Gail Cooper and Raymond Arsenault on the adoption of air conditioning in America further illustrates this dynamic interplay between technological innovation and cultural perceptions of comfort. Arsenault (1984) and Cooper (1998) explores how air conditioning became entrenched in American life, not merely as a means of cooling but as a symbol of modernity, convenience, and economic status. She emphasizes how air conditioning was marketed and perceived as essential to the American way of life, shaping not only consumer expectations but also architectural design and urban planning.

Following these historical insights, social practice theory offers a way to understand how everyday behaviours are shaped by the interaction of materials, meanings, and competences (Shove et al., 2012). Rather than focusing on individual choices or broad social structures, social practice theory emphasizes how these elements work together to shape collective behaviours. For example, the widespread use of air conditioning is

not just a result of technological advancements but also reflects cultural ideals of modern comfort and the material design of urban environments. As these elements change, practices evolve, adapting to new social, cultural, and technological contexts. Building on the work of sociologists like Giddens (1984) and Bourdieu (1977), scholars such as Reckwitz (2002) and Shove (2003) have shown how practices are not static but constantly reshaped. Elizabeth Shove's research, in particular, highlights how energy-intensive behaviours like cooling become normalized through the interaction of cultural meanings, materials, and competences. This perspective helps explain how practices become entrenched and offers insights into how they might be shifted toward more sustainable alternatives. Shove (2003), in *Comfort, Cleanliness, and Convenience*, challenges the traditional notion of comfort as an objective state, emphasizing its inherent subjectivity and variability as a cultural construct shaped by societal norms and expectations. The later special issue *Comfort in a Lower Carbon Society* organized by Shove et al. (2013) was a landmark in demonstrating the value of looking at comfort as an outcome of evolving cultural practices. Shove et al. (2013)'s exploration underscores the significance of cultural evolution in shaping our understanding of what comfort means. The special issue brings to the forefront how modern societies have constructed a concept of comfort that is heavily reliant on energy-intensive technologies, such as air conditioning and heating, reflecting a specific cultural trajectory of convenience and standardized living conditions. This construction is a direct outcome of a series of cultural shifts: from valuing open-air and natural ventilation to prioritizing controlled, homogenized indoor climates. In highlighting the unsustainable energy demands of maintaining these standardized comfort conditions, they emphasize that our current understanding of comfort is not an inevitable or fixed state, but rather a result of specific cultural and technological developments. This realization opens up possibilities for redefining comfort in ways that are environmentally sustainable and culturally sensitive, suggesting that a lower-carbon society requires a radical rethinking of comfort that aligns with changing environmental realities and cultural values.

Social practice scholars have made critical contributions to understanding comfort as an outcome of evolving cultural practices, particularly as demonstrated in the works featured in this special issue. Brown and Walker (2013) examined how social and contextual factors influence the vulnerability of elderly individuals to heat waves in

residential care homes. Their qualitative study reveals that beyond physiological factors, institutional norms and practices significantly affect how residents cope with heat, often leading to increased dependency on staff for heat management. This finding illustrates the broader social implications of comfort, particularly in institutional settings where cultural and social dynamics play a crucial role in shaping individuals' experiences of comfort. Parkhurst and Parnaby (2013) provide an analysis of mobile air conditioning (MAC) in European transport, showing how comfort perceptions are influenced by cultural norms and societal expectations, which vary across regions and evolve over time. Their research highlights the importance of considering both qualitative and quantitative factors in understanding how comfort is perceived and experienced in different contexts. The study underscores that comfort standards are not static; rather, they are shaped by a complex interplay of individual experiences, regional climates, and specific use contexts. Healy (2013) delves into the complex relationship between air conditioning and societal control, arguing that air conditioning, while initially introduced to provide physical comfort, has evolved into a tool that standardizes indoor environments and enforces uniform productivity. This shift, Healy (2013) suggests, diminishes traditional human connections with natural cycles like time, weather, and seasons. His application of Foucauldian perspectives sheds light on how thermal comfort standards have been utilized to condition societal norms and behaviours, ultimately reinforcing certain power structures. Furthermore, Healy (2013) discusses the homogenization effect of air conditioning, where its widespread adoption has led to standardized approaches to climate control that often overlook regional and cultural differences. This perspective highlights the broader implications for cultural practices, environmental interactions, and societal expectations. Extending these insights, scholars such as Jiat-Hwee Chang and Marlyne Sahakian explore the cultural specificity of thermal comfort in Asian regions with distinct climatic and historical backgrounds (Chang, 2016; Sahakian & Steinberger, 2011; Sahakian, 2014; Sahakian et al., 2020). Chang's (2016) research on tropical architecture and comfort in Southeast Asia illustrates how colonial histories and local climatic conditions have influenced the development of cooling practices. His work emphasizes that these practices are not merely technical solutions but are deeply embedded in the cultural and historical fabric of the region. Sahakian (2014), on the other hand, examines how social practices in urban Asia shape comfort, particularly in densely populated areas where energy-intensive technologies are

prevalent. She highlights how the pursuit of comfort in these settings is closely tied to societal norms and energy consumption patterns, reflecting broader cultural trajectories. These studies converge on the idea that modern societies have constructed a concept of comfort heavily reliant on energy-intensive technologies, such as air conditioning and heating. This reliance reflects a specific cultural trajectory toward convenience and standardized living conditions, often at the expense of environmental sustainability. These researchers argue that this construction of comfort is not inevitable and advocates for redefining comfort in ways that are both environmentally sustainable and culturally sensitive. They emphasize that such a redefinition is essential, particularly as societies face increasing environmental challenges that demand a more sustainable approach to living.

These investigations signalled a profound shift in understanding comfort – no longer a neutral, objective state, but a cultural product deeply embedded within social practices. Recently, an increasing number of research projects are now focusing on the idea that comfort is more of a cultural artifact. The study by Mazzone and Khosla (2021) provides a comprehensive and multi-dimensional perspective on understanding cooling needs and thermal comfort. Their research integrates insights from various fields, including psychology, neuro-architecture, sociology, and anthropology, to challenge the traditional, technology-centric view of thermal comfort. By focusing on human physiological interactions with space, culture, and society, the authors aim to broaden the understanding of what shapes people's preferences for cooling and thermal comfort. The paper begins by acknowledging that space cooling is increasingly recognized as essential for health and wellbeing. However, the prevailing research on this subject tends to focus mainly on technical aspects, such as climatic conditions, technological efficiency, and temperature-based assessments. Mazzone and Khosla (2021) argue that this approach overlooks the complex interplay of social, cultural, and personal factors influencing thermal comfort. To illustrate the multi-faceted nature of cooling needs, the authors reference various global practices. For instance, they describe how the Bedouins use black robes for cooling, demonstrating an adaptive strategy that counters intuitive understanding. In France, altering sleep patterns has been shown to reduce heat stress. Sahakian et al. (2020) approach the indoor microclimate as a complex and contested cultural artifact, deeply embedded in daily life and social practices. They emphasize its cultural importance and material

presence, moving beyond a purely technical perspective to incorporate the effects of societal norms and personal preferences on indoor temperature and thermal comfort. The study revolves around a challenge to households to reduce energy use by lowering indoor temperatures to 18°C, underscoring how such environmental adjustments are closely linked with daily routines, social interactions, and wider lifestyle choices. This initiative presents the indoor microclimate as a tangible, significant aspect of domestic life, shaping and being shaped by everyday activities, and reflecting cultural patterns. The researchers also investigate the relationship between private and public spheres, noting how changes in domestic microclimates can influence behaviours in public spaces, thus highlighting the interconnection between personal living environments and societal norms. Additionally, they analyse the microclimate in the context of commodities and power dynamics, uncovering the various actors and influences involved in shaping indoor environments, and highlighting the complex power relations involved. Through this lens, the study demonstrates the potential for individuals to deepen their understanding and control of their indoor climates, fostering active involvement and adaptation. This contributes to a larger conversation about sustainable energy practices, positioning the indoor microclimate at the forefront of reevaluating and challenging conventional approaches and assumptions in home heating and energy use. These examples highlight that cooling needs are not just about technological solutions but also involve behavioural adaptations and socio-cultural practices. The paper dives into the sociocultural influences on cooling needs. It explores how societal norms, advertising, and material culture shape our perceptions and needs for cooling. The authors discuss how the concept of comfort and the need for air conditioning have been socially constructed, often influenced by political and economic agendas. They emphasize that human experiences and subjective perceptions play a critical role in shaping our cooling preferences. Mazzone and Khosla (2021) also discuss the impact of embodied norms, materials, and the relationship between the body and its environment on thermal comfort. They point out that personal history, sensory experience, and cultural ideology deeply influence physiological sensations. Furthermore, the study explores how aspects like a view from a window can impact perceptions of thermal comfort, demonstrating that individual preferences can significantly affect energy consumption and decarbonization efforts. The paper's main contribution is its comprehensive view of thermal comfort, emphasizing the need to understand cooling beyond just technical

parameters. The authors argue that a deeper exploration of the social, bodily, spatial, and cultural aspects of cooling needs is crucial for creating sustainable and effective cooling solutions. This approach could lead to strategies that go beyond just technological innovations, addressing the socio-cultural roots of cooling consumption.

In summary, the body of historical and social practice research discussed herein highlights the importance of understanding comfort not merely as a physical or technological attainment but as a dynamic outcome of evolving cultural practices. Studies such as Ackermann's examination of air conditioning in the US and Brewer's exploration of the shift from fireplaces to cookstoves provide compelling evidence of how technological advances and societal shifts intertwine to redefine our concepts of comfort. These historical perspectives set the stage for social practice scholars like Elizabeth Shove, who delve deeper into the subjectivity and cultural conditioning of comfort, unravelling its ties to societal norms and expectations. The research by scholars like Healy (2013) further extends this exploration, emphasizing the intricate relationship between technology, societal narratives, and everyday practices. Collectively, this body of work illustrates that comfort, particularly in thermal environments, is profoundly shaped by and reflective of the cultural, technological, and social contexts in which it exists. These studies underscore that our understanding and pursuit of comfort are far from static or universally defined; instead, they are in constant flux, shaped by an array of socio-cultural factors. Recognizing comfort as a product of evolving cultural practices is crucial not only for deepening our understanding of human behaviour and societal norms but also for fostering sustainable and environmentally conscious approaches to living and technology use.

## 2.3 Intergenerational Transmission, Differences in Energy Practices

Understanding intergenerational differences in energy practices is crucial for developing effective and sustainable energy policies. Generational theory suggests that age cohorts, shaped by their unique historical, social, and technological contexts, develop distinct attitudes and behaviours toward energy consumption and conservation (Howe and Strauss, 2000; Twenge, 2007; Parry and Urwin, 2011; Inglehart, 2020). Mannheim (1952, 2005) emphasizes that generations are not merely

age groups but collective entities whose social and historical contexts significantly influence their cognitive and behavioural patterns. Sociological theories by Giddens (1984) and Bourdieu (1977) deepen our understanding of these dynamics by asserting that everyday practices, such as energy consumption, are ingrained in societal structures and cultural capital. These practices shape, and are shaped by, broader cultural and societal dynamics, suggesting that shifts in energy consumption patterns across generations are both a cause and a consequence of evolving cultural norms. Past research on intergenerational energy practices generally falls into three key areas: quantitative analyses of intergenerational energy consumption, which also encompass studies of transmission mechanisms and differences; and qualitative investigations specifically focused on uncovering the dynamics behind practice transmission and identifying the social drivers of intergenerational differences.

Quantitative studies focusing on intergenerational differences in energy consumption provide empirical data through longitudinal studies or large-scale surveys, reporting trends and differences in consumption behaviours across generations. These studies offer insights into evolving consumption patterns and their implications for energy policies and markets. Although the age of individuals is widely accepted as a crucial factor influencing energy demand (Menz & Welsch, 2012), recent scholarship increasingly recognizes the significant role that generational cohorts play in shaping cooling demand patterns (Zhu et al., 2024). Traditional economic models often assume a linear trajectory, whereby individuals of different generations exhibit similar energy consumption behaviours as they age (Browning et al., 1985). However, this assumption overlooks the nuanced differences that emerge from distinct generational experiences, which significantly affect energy use. Scholars such as Hansen (2018) explores the deep-seated influence of early life experiences on adult energy consumption behaviours. Through an analysis of a Danish cohort tracked from childhood (1981) to early adulthood (2000), and then to their current energy practices (2010-2015), the study assesses how previous experiences with household and house characteristics, such as economic resources, educational levels, house construction year, and heating systems, shape later energy consumption. Hansen (2018) quantitatively demonstrated the "stickiness" of energy practices across a person's life. It finds that that early exposure to higher economic means and more modern or efficient heating systems correlates with higher energy consumption in adulthood,

suggesting that early life conditions contribute to forming habits and expectations regarding energy use. The analysis further suggests that these patterns are not merely habits but are also embedded within the individuals' understanding of comfort and resource use, shaped by their upbringing in households with varying levels of resources and educational backgrounds. The research points to the necessity of incorporating personal historical context into energy policy and planning, emphasizing that past experiences significantly influence current and future energy demands. This perspective is crucial for designing interventions that are not only technologically efficient but also socially informed, addressing the varied lived experiences and energy expectations of consumers, which are shaped by their personal histories and socio-economic backgrounds. Hansen and Jacobsen (2020) advance the understanding of intergenerational transmission of energy consumption practices in Denmark by using innovative research methods. Departing from traditional studies that rely on self-reported data, they utilize actual metered energy consumption data, enhancing the accuracy and reliability of their findings. They also employ an extensive longitudinal panel dataset spanning 2010-2015, involving over 128,000 participants, allowing them to observe intergenerational effects over time rather than just cross-sectionally. Hansen and Jacobsen (2020) meticulously control for variables such as building characteristics, household composition, and socio-demographic factors. They even consider the influence of in-laws, adding depth to their analysis. An innovative aspect of their study is exploring how economic resources affect the strength of intergenerational correlations in energy use, finding these correlations more pronounced among lower-income households. This suggests that economic constraints significantly shape and perpetuate family energy practices. Theoretically, the study applies Bourdieu's concept of cultural reproduction to understand how energy consumption practices are embedded within family dynamics and transmitted through everyday interactions. This lens highlights the unconscious, routine ways sustainable—or unsustainable—practices are passed down through generations. Complementing this perspective, Gram-Hanssen et al. (2020) explore the temporal rhythms of showering practices in Danish households, showing how the timing and sequence of daily practices like showering are influenced by socio-demographic factors and cultural dispositions. Their study reveals that the order and timing of showering, which also entail energy and water use, are not random but structured by societal norms and household routines. By combining statistical cluster



analysis with qualitative interviews, Gram-Hanssen et al. (2020) demonstrate that these routines, much like energy consumption practices, are embedded within broader societal rhythms and are transmitted and adapted across generations. This approach reinforces the idea that everyday practices, including energy use, are deeply embedded in the temporal and cultural fabric of family life, further supporting the findings of Hansen and Jacobsen.

Unlike Hansen's emphasis on intergenerational transmission, Bardazzi and Pazienza (2018) focused more on consumption differences between cohorts. They initiated a series of studies that investigate the influence of generational cohorts on energy consumption patterns, revealing that older generations tend to adopt more energy-conservative practices, whereas baby boomers show a preference for higher fuel consumption related to automobile use. This foundation sets the stage for an expanded exploration of energy use behaviours across different socio-economic and generational backgrounds. Building upon their initial findings, Bardazzi and Pazienza (2020) delve deeper into the Italian context, introducing the concept of "energy culture." This framework suggests that daily habits and energy consumption patterns are significantly shaped by the generational experiences of household members. However, unlike broader discussions of "energy culture" that encompass a variety of social and cultural influences on energy practices (as discussed by Stephenson (2010) and others), Bardazzi and Pazienza (2020) specifically argue that these patterns are generationally distinct. Their analysis, based on a pseudo-panel dataset of Italian households, demonstrates that energy usage varies not only with the age of the householder but also across different generations, influenced by unique life experiences and economic conditions. This generational perspective on energy culture provides a nuanced understanding of how deeply ingrained practices, formed by distinct generational experiences, continue to shape energy consumption behaviours over time. In a subsequent study focused on a developing economy, Bardazzi and Pazienza (2022) explore how these patterns differ in Mexico. They employ a double-hurdle model to analyse the main drivers of residential electricity consumption, emphasizing the significance of age and generational effects. Their findings show that age significantly impacts electricity consumption from 30 years onwards, with effects increasing monotonically. Interestingly, householders born before the 1960s exhibit lower electricity consumption compared to those of the same age born in later

decades, suggesting a generational shift towards higher energy use in younger cohorts. Moreover, the study in Mexico reveals pronounced disparities in energy consumption across income quartiles. The lower income groups experience a sharper increase in electricity expenditure by age and cohort compared to what is observed in more affluent quartiles—a contrast that highlights the influence of economic inequality on energy use. These findings underscore the need to consider the developmental state of an economy when analysing energy consumption trends. Through their analysis across different studies, Bardazzi and Pazienza (2022) underscore the importance of considering both generational and socio-economic factors in understanding energy consumption patterns.

While quantitative analyses have effectively highlighted the transmission and differences of energy practices across population cohorts, shaping distinctive intergenerational energy cultures, they often fall short in explaining the deeper dynamics driving these differences. These deeper dynamics encompass the social, cultural, and behavioural mechanisms that underpin generational variations in energy practices. Social practice research addresses this gap by focusing on the interplay of material conditions, cultural norms, and competences that constitute daily routines. By tracing familial narratives, cultural norms, and everyday practices, qualitative studies, especially those grounded in social practice theory, provide a nuanced understanding of how generational differences emerge and evolve. This approach not only uncovers the underlying forces behind cultural shifts but also reveals how changes in daily life practices drive broader transitions in energy behaviours, offering richer insights than quantitative methods alone. For example, Henwood et al. (2016) offer a compelling exploration of intergenerational narratives and their impact on energy usage within families. They point that energy practices often emerge from generational storytelling that reinforces certain attitudes towards conservation and consumption. For instance, stories passed down from older family members about previous economic hardship or the environmental effects of wasteful consumption often inspire younger generations to embrace more mindful resource management strategies. However, these inherited narratives are rarely accepted wholesale. Instead, they are reinterpreted, adapted, and modified to align with contemporary technologies and social norms. Henwood et al. (2016)'s work underscores that the transmission of energy practices is not just a matter of inheritance but involves a complex process of

negotiation and reinterpretation within the family structure. This dynamic of continuity and transformation reflects the complexities of generational transmission and divergence in energy practices. In his study of air conditioning perceptions in Doha, Hitchings (2020, 2022) compares attitudes between older Qatari nationals and younger Qatari students, highlighting generational differences shaped by historical, cultural, and lifestyle factors. Older Qataris, who lived in Doha before widespread AC, fondly recall traditional cooling methods like wind towers and courtyards, associating them with strong family and community ties. They view the rise of AC as weakening these bonds, seeing modern environments as isolating and leading to cultural loss. Conversely, younger Qataris see AC as integral to their lives, representing progress and modernity. They acknowledge some drawbacks, like reduced outdoor activity, but view AC as essential to their comfortable lifestyle. The primary difference lies in older Qataris' nostalgia for traditional practices versus younger Qataris' embrace of technological convenience as a marker of prosperity. These attitudes reflect how cultural memories and expectations of modernity shape generational views on air conditioning.

Foulds et al. (2016), and Khalid and Foulds (2020) uncover that as sustainability and convenience gain traction as dominant cultural norms, younger generations adopt more flexible, adaptable energy consumption habits that align with these values. For instance, a growing awareness of climate change and the importance of sustainable practices leads younger people to adopt renewable energy sources, reduce unnecessary consumption, and minimize waste. However, these new behaviours often coexist with lifestyle habits that prioritize convenience, such as extensive use of air conditioner and high-speed internet. Foulds et al. find that younger generations are more receptive to energy-efficient technologies and innovative solutions, but this openness often clashes with the habitual consumption patterns of older generations, leading to differences in energy practices within the same household. Chard and Walker (2016) delve into the coping strategies employed by older adults in England who struggle with fuel poverty, particularly how these individuals adapt to their circumstances without fundamentally challenging or recognizing their precarious conditions. Their study reveals that older people tend to normalize their coping strategies—such as adjusting heating times, using secondary heat sources, layering clothing, and altering daily routines—to manage energy costs effectively, despite

these strategies not necessarily aligning with ideal health standards. These adaptations are driven by a mixture of necessity and a cultural reluctance to view their circumstances as out of the ordinary, which can prevent them from seeking help. Contrary to the transformative cultural shifts observed in younger generations, who adapt inherited energy practices to modern technologies and environmental consciousness, the older adults in this study largely maintain traditional practices that do not leverage modern efficiencies. Chard and Walker (2016)'s research highlights the importance of understanding cultural and generational differences in energy use, illustrating how older adults might not fully benefit from advances in energy efficiency and health standards that are now more common in younger households. This disconnect suggests a need for targeted interventions that account for these cultural persistences and encourage a more critical reflection on energy use among the elderly.

Moreover, qualitative research sheds light on the interplay between generational norms and external factors like government policies, market dynamics, and technological advancements. Strengers (2013) explores how energy policies and smart technologies influence household energy practices. Her study reveals that while smart meters and energy efficiency campaigns encourage families to reduce consumption, their success heavily depends on aligning these measures with the cultural values and practical needs of different generational cohorts. Strengers (2013) finds that while older generations may value energy efficiency due to past experiences of scarcity or environmental concerns, younger generations may be more driven by the convenience and control offered by new technologies. These differences create varying responses to energy-saving campaigns and adoption of smart technologies across generations. Additionally, qualitative studies highlight the significance of socio-economic factors in shaping intergenerational energy practices. Middlemiss and Gillard (2015) explore how economic constraints can affect a household's ability to adopt sustainable energy practices. Their research indicates that while older generations often pass down cost-saving energy habits, these practices can be challenging for lower-income families to implement due to financial limitations. Middlemiss and Gillard (2015) argue that generational transmission of energy practices is therefore heavily influenced by socio-economic status, with wealthier households more able to incorporate energy-efficient technologies and renewables into their daily routines. This socio-economic dimension

helps explain the persistence of energy consumption disparities between different social groups and generations. Another crucial aspect revealed through qualitative research is the role of identity and values in intergenerational energy practices. Hards (2012) explores how identity influences individuals' energy consumption choices. Her study finds that environmental values often intersect with generational identity, leading individuals to adopt practices that align with their self-concept. For instance, younger generations who strongly identify with environmental activism may prioritize sustainable living practices, while older generations might hold onto traditional consumption patterns that align with their identity and past experiences. Hards argues that the interplay between identity and energy practices often creates tension within households, where different generations negotiate their differing values and consumption habits. Consistent with Henwood et al. (2016) and Hards (2012) observations, the importance of this negotiation process becomes evident when examining intergenerational differences. These negotiations involve complex social and cultural dynamics, which will be reviewed in detail in the next sections.

In summary, qualitative research rooted in social practice theory complements quantitative findings by offering a detailed understanding of the cultural, socio-economic, and relational factors that shape intergenerational energy practices. While quantitative studies effectively highlight the transmission and differences of energy practices between population cohorts, they often fail to capture the deeper dynamics driving these shifts. Social practice researchers have meticulously uncovered how cultural narratives, evolving daily routines, and socio-economic contexts intersect to shape energy practices. By examining the interplay of materials, meanings, and competences, these studies illuminate how technological acceptance, cultural norms, and socio-economic conditions converge to influence energy use. This approach provides a richer understanding of how energy practices are passed down, adapted, and transformed across generations. Recognizing these dynamics is crucial for developing energy policies that not only achieve technological efficiency but are also culturally informed and responsive to the diverse needs and behaviours of different generations, ensuring long-term sustainability.

## 2.4 Social Negotiation and Energy Consumption

When energy practices involve multiple stakeholders, it requires considerable social negotiation around subjective perceptions. Grandclément et al. (2015) examined the sociotechnical complexities of achieving energy efficiency and comfort in buildings by studying a low-energy residence for older adults in Grenoble, France. They emphasized that optimizing energy performance in buildings isn't just a technical challenge but also involves significant social dimensions. The concept of "intermediation" was put forward, which means activities link technology with end-users to negotiate the relationship between building performance and resident comfort. They found that while some intermediation efforts successfully align energy efficiency and comfort goals, others maintain the divide between technical optimization and occupant satisfaction. It is argued that energy consumption in buildings is inherently sociotechnical, shaped by a complex interplay of social and technical factors. They called for energy efficiency policies that allow for continuous negotiation and adjustment of building design and use to accommodate evolving occupant needs and preferences, arguing that rigid parameters can lead to suboptimal outcomes. Real-world performance often deviates from theoretical models due to the dynamic nature of human interaction with built environments. Although this study did not delve into the specific factors affecting negotiations, it provides a case that negotiations around "comfort" are inevitably part of social dynamics. Indeed, such negotiations involve extensive social and cultural discussions across various contexts. Healey and Webster-Mannison (2012) explored negotiated practices around thermal comfort in Australian offices, emphasizing that individuals operate within distinct cultural frameworks that shape their expectations and behaviours. In some office cultures, individuals may hesitate to express preferences or challenge norms due to a desire for group harmony. This can lead to underreporting of discomfort, as people avoid conflict. In contrast, cultural context valuing individualism encourage more direct negotiation, where individuals advocate for personal needs over group cohesion. The authors further examined regional and organizational cultural influences, noting that hierarchical organizations often defer to superior preferences, while flatter structures foster a more democratic approach. Cultural norms around gender and communication styles can amplify or suppress individual voices. Murtagh et al. (2022) also analysed the pervasive role of air conditioning (AC) in the daily

lives of Dubai residents. The continuous use of AC, particularly during the long summer months, is a non-negotiable aspect of living in Dubai's harsh climate. In the workplace, similar negotiations occur, with people wearing winter clothing indoors to cope with the preferred settings. The reliance on air conditioning influences social interactions and physical activities by limiting outdoor activities, such as jogging, and shifting social engagements into air-conditioned commercial spaces like malls. This shift can affect social relationships by reducing participation in family and community activities. Negotiation over AC usage affects not just comfort but also social relationships and community engagement, contributing to a sense of social withdrawal during peak summer months. Hitchings (2022) further highlights how 'avoided air-conditioning conversations' in Doha underscore a reluctance to openly discuss AC usage preferences, which can contribute to unspoken tensions and reinforce existing social norms. These avoided conversations reveal the complex social dynamics at play in environments where AC use is deeply embedded in daily life, often preventing meaningful dialogue about energy consumption and its broader impacts on social interactions and community cohesion. Family members often have varying temperature preferences, which lead to complex discussions on air conditioning and heating systems. Cultural norms also shape what temperatures are considered comfortable or excessive. In Scandinavia, indoor temperatures that North Americans find chilly are seen as comfortable, while in parts of the U.S., excessively cool indoor environments are maintained during summer, which Europeans might find uncomfortable. These cultural disparities highlight how social factors dictate energy practices and influence how technologies are adopted and used in households. In communities emphasizing sustainability, decisions around heating and cooling are more collectively oriented to balance individual comfort with energy efficiency. Where individualism is prioritized, personal comfort often leads to higher energy consumption. Understanding social and cultural contexts is crucial in designing effective smart energy technologies. Successful integration of these technologies into daily life requires not only technical knowledge but also a deep appreciation of social negotiations that shape their use (Strengers, 2013). Similarly, Phillips and Waitt (2018) propose that practices like refrigeration involve ongoing household negotiations, particularly in setting refrigerator temperatures. Despite modern refrigerators with precise controls, many households rely on informal agreements and personal comfort levels rather than energy efficiency guidelines. These negotiations

reflect diverse household dynamics and preferences for food freshness, balancing varying needs. Cultural perceptions also play a significant role. For example, in Japan and South Korea, there is a strong emphasis on using refrigeration to maintain food freshness, leading to lower temperature settings and higher energy consumption. Conversely, in Germany and Sweden, energy conservation is prioritized over extreme freshness, resulting in higher temperature settings and more sporadic use of refrigeration. These cultural nuances influence both operational decisions regarding refrigerators and broader attitudes towards energy consumption and environmental responsibility.

Negotiation processes and results vary significantly across different cultural contexts, and cultural factors shape daily energy consumption through what people prioritize and value. In practical terms, energy negotiations are most commonly discussed in the contexts of workplace and households. However, cultural factors in household negotiations are often more pronounced because they occur in intimate settings where personal preferences and traditional practices collide. Energy consumption, including the use of air conditioning, is not merely an isolated act; it is deeply embedded within "family practices" such as managing thermal comfort, which are passed down through generations and negotiated between members. For example, Strengers Yolande and others have pointed out how cultural factors influence household practices around cleanliness and comfort, which in turn affect energy consumption decisions. One significant factor is the persistent gender norms surrounding domestic labour. In many cultures, women traditionally bear the primary responsibility for managing the household environment, including decisions about thermal comfort. These roles are a legacy of historical social norms, where women often set the standards for comfort and cleanliness, internalized through societal expectations that link their worth to the upkeep of their homes. These dynamics influence household negotiations, leading women to prioritize air conditioning usage to maintain a comfortable and clean-living space, while men might focus on other aspects of household management (Strengers, 2009; Strengers and Maller, 2011). Growing environmental consciousness is another cultural factor affecting household practices. Campaigns like Japan's Cool Biz and Warm Biz advocate for environmentally friendly norms in thermal comfort by promoting natural ventilation and climate-appropriate clothing. These campaigns encourage families to reduce air conditioning in the summer and heating in the winter,



challenging historical preferences and habits to reconcile environmental ideals with household routines. Negotiations around household practices constantly evolve through an interplay of historical gender roles, commercial influences, and environmental norms, continually redefining what is "normal" or acceptable in comfort and cleanliness (Strengers, 2013).

While studies like those by Strengers have aptly highlighted the cultural dynamics behind household negotiations, they often overlook the unique value of intergenerational negotiations, likely because they focus on a particular household model—typically a heterosexual couple—thereby missing the complexities of other co-habiting arrangements, including multi-generational households where energy use practices are influenced by a broader range of family members across different age groups. Older family members establish routines that younger ones adopt, creating deeply ingrained, emotionally charged legacies of energy use. Traditional practices, such as heating, evoke a sense of familial togetherness, which can resist the adoption of energy-efficient technologies that disrupt established norms. Additionally, younger generations introduce environmental concerns into family dialogues, challenging traditional practices and underscoring the need for interventions that respect traditional habits while promoting sustainability (Henwood et al., 2016). Building on this, Hargreaves and Middlemiss (2020) highlight that social relationships fundamentally shape energy consumption, particularly through intergenerational learning and negotiation. They critique individual-focused energy policies for overlooking the complexities of social networks, which play a crucial role in transmitting energy practices. Younger family members often challenge older norms due to growing environmental awareness, leading to significant shifts in household energy demand. However, there is still a lack of detailed discussions on how cultural factors influence these intergenerational negotiations. For example, Sintov et al. (2019) indicate that American's negotiations about thermostat settings often result in practices reflecting the conflicting or converging comfort preferences of household members. Successful negotiations, where parties reach a mutual understanding or compromise, often lead to immediate adjustments in thermostat settings to accommodate the agreed-upon comfort levels. In contrast, unresolved disagreements can prevent such adjustments. Although Sintov et al. (2019) uncover significant gender-related dynamics in these negotiations, they neither address the unique nature

of intergenerational negotiations nor recognize that these negotiations themselves are shaped by cultural factors. They found that women often report greater discomfort and a higher need for warmth compared to men, yet their preferences are less prioritized in household thermostat settings. Men typically achieve more favourable outcomes in negotiations, reflecting a gender bias influenced by cultural norms around gender roles. Women are less likely to initiate negotiations and face higher conflict and lower success rates when they do. Cultural expectations about gender roles and negotiation behaviours shape these dynamics, with societal norms viewing men as more assertive and women as more accommodating, leading to power imbalances that affect negotiation outcomes and household energy use patterns.

Most studies on household negotiations focus on peer interactions within Western cultural contexts. However, research like that conducted by Amin (2021) provides a pioneer case into intergenerational negotiation practices within Asian contexts, broadening observation of these dynamics. Amin explores how family dynamics and intergenerational transmission of knowledge play crucial roles in negotiating cooling practices within Malaysian households. Elderly family members often advocate for the continued use of traditional methods, perceived as healthier and more attuned to the Malaysian climate, passing these practices down to younger generations who are influenced by globalized, modern living standards favouring air conditioning. This intergenerational dialogue forms a critical part of cultural negotiation within households, balancing respect for tradition with the allure of modern convenience (Amin, 2021). Across other Asian regions, similar complex intergenerational negotiation dynamics, influenced by cultural values such as filial piety in China and respect for elders in Japan, significantly impact household energy practices (Qian, 2018; Zhang, 2016). In China, the cultural value of filial piety (孝道, *Xiaodao*) often results in younger generations adhering to the energy use practices preferred by their elders, creating a dynamic negotiation process within households as younger members advocate for energy-efficient practices to reduce costs and environmental impacts (Shi, 2016). In Japan, respect for elders (尊老) may lead to elderly family members having final say in energy use decisions, with younger generations introducing energy-saving technologies and practices, reflecting a blend of traditional respect and modern sustainability efforts. These intergenerational negotiations have significant implications for energy practices. They suggest that interventions aimed at promoting

energy efficiency need to consider cultural values and the dynamics of family interactions. Policies and programs that respect and incorporate these cultural norms are likely to be more effective. For example, framing energy conservation as a way to honour and care for elders can resonate with values of filial piety and respect, thereby facilitating the adoption of energy-efficient practices. Younger family members can also play a crucial role as cultural mediators, introducing and advocating for sustainable practices within the household while respecting traditional values (Liu, 2008). Given these dynamics, it becomes evident that a deeper focus on intergenerational negotiation, particularly in contexts such as China, is crucial for understanding and influencing energy consumption behaviours. This focus can help tailor energy conservation efforts that are culturally sensitive and more likely to succeed in diverse familial settings.

## 2.5 Home Comfort and Family Dynamics

Understanding the negotiation of household energy practices requires attention to their unique context compared to other settings, incorporating the symbolic, psychological, and social dimensions of "home" (Wang et al., 2021; Bobrova et al., 2024). This requires delving deeply into the literature on energy use within the framework of family studies. Aune (2007) highlights the multifaceted meanings of "home": as an ongoing project, a sanctuary of comfort, and a space for everyday activities. Through interviews and field observations, Aune (2007) found that family members' understanding and emotional investment in their home evolve over time, influencing their energy use decisions. For instance, as children grow, the demand for comfort and safety within the home may increase, leading to higher usage of heating and cooling (Zhu et al., 2024). Therefore, family members imbue the home with emotional significance through daily practices such as energy use. Factors such as technology, habits, skills, and personal interests contribute to the unique characteristics of each household's daily life (Ellsworth-Krebs et al., 2015; Gram-Hanssen & Darby, 2018; Ellsworth-Krebs et al., 2021). Seemingly simple actions, such as leaving lights on in unoccupied rooms, can have different meanings for different individuals: for some, it might evoke a sense of home, while for others, it may be inconsequential (Gerhardsson et al., 2021). Gram-Hanssen and Darby (2018)

examined the role of smart home technologies in shaping modern household concepts. Based on behaviour data and interviews with smart home users, they concluded that smart thermostats not only improve energy efficiency but also enhance residents' control over their home environment, thereby increasing comfort and a sense of belonging. This aligns with the emotional expectations and connections to the home as a place of safety, activity, relationships, and identity. Madsen (2017) argues that the pursuit of comfort in the home—such as warmth, soft furnishings, relaxation, privacy, and family relationships—often correlates with high-energy-consuming household practices like heating, watching TV, and working remotely. The quest for comfort frequently leads to increased household energy consumption, exemplified by prolonged use of heating devices and multimedia equipment. Furthermore, the sense of home is deeply rooted in the social structure of family life, evident in daily rituals and items symbolizing family bonds, as well as concepts of privacy, security, autonomy, and relaxation. Comfort and the sense of home both involve energy consumption, from cooking and laundry to decorating and family gatherings, with key spaces like kitchens, living rooms, bedrooms, and home offices being focal points. While Madsen (2017) provides crucial insights into the multifaceted nature of "home," she also raises critical questions about the implications of this understanding for energy consumption and sustainability. Emphasizing physical comfort and the social aspects of family life often leads to increased energy use, posing challenges to sustainable living. The intrinsic link between comfort, the sense of home, and high-energy practices suggests potential conflicts between creating a cozy home atmosphere and achieving energy efficiency (Jensen et al., 2021; Li & Sunikka-Blank, 2023; Madsen, 2018). This tension requires a critical examination of how social norms and personal comfort preferences drive higher energy consumption and environmental footprints of households.

These studies have well established that expectations surrounding the sense of "home" are closely tied to energy use choices. However, the concept of home involves multiple family members, it therefore also related to each family member's definition of what "home" means. Collins (2015), expanding upon Hargreaves et al. (2013) and in dialogue with Larsson et al. (2010), highlights the dynamic and relational roles within families, across all age groups, as key influencers in shaping sustainable living practices. These relationships are not just interpersonal but are deeply intertwined

with daily consumption habits, and ultimately, with larger environmental implications. For instance, Maréchal and Holzemer (2018) mentioned the importance of understanding the interactions between individuals, their households, and appliances, as these interactions profoundly influence household energy behaviours. They point out that the way family members interact with household appliances—such as the frequency, duration, and manner of use—can significantly affect energy consumption. For example, one family member's strong attachment to high-energy appliances like power showers or air conditioners can lead to resistance against energy-saving measures, necessitating accommodations by other family members. At the core of this research is the recognition of family members' active roles in shaping energy demand and comfort. Their daily habits and expectations deeply influence energy consumption patterns, highlighting the contested nature of comfort within the household environment. In this context, Klocker et al. (2012) investigated the intersection of family dynamics and sustainability, underscoring how personal and familial values profoundly influence resource management strategies. The study reveals a picture where individual desires for privacy and autonomy can conflict with the goals of collective resource sharing, leading to varied sustainability outcomes. This aspect becomes particularly salient in extended families 'living together but apart', where the tension between individual autonomy and collective resource usage is most apparent (Hessel and LeBouef, 2023). Ellsworth-Krebs et al. (2014, 2019) and Horn et al. (2015) also stress that in the family context, negotiation and compromise play critical roles in shaping individual experiences. For example, parents and children may have different temperature preferences, requiring communication and compromise to reach a consensus. Privacy, rooted in individual preferences, is a key theme in understanding household comfort, as homes are typically expected to be places of control. The emphasis on privacy and control complicates energy use, as family members might prioritize their own comfort, leading to energy choices that conflict with collective efficiency goals. For instance, children might use personal heating or cooling devices in private spaces. This interplay between individual desires and collective efficiency means that comfort is influenced not only by temperature but also by emotional entanglements, particularly those surrounding energy appliances and technologies, such as conflicts and negotiations. Osunmuyiwa et al. (2020) also note the influence of 'others,' such as children or health advice, on AC use decisions. This is relevant to intergenerational family dynamics as it demonstrates how

household decisions, particularly regarding energy use, are influenced not just by individual or collective environmental values, but also by practical considerations and the needs or advice of family members across generations. Therefore, the impact of family dynamics on energy use also includes intergenerational considerations and the perpetuation of unsustainable practices, often tied to emotional aspects of home care, such as nurturing familial bonds. To understand this, it's pivotal to acknowledge that social relations significantly influence everyday life and energy consumption decisions. Wang et al. (2022) followed the social relations framework built by Hargreaves & Middlemiss (2020) and pointed that individuals residing alone often experience greater autonomy and reduced necessity for negotiation regarding energy consumption compared to those in family settings. In familial households, especially those with infants and young children, certain routines such as naps, feedings, and bedtime rituals are imperative and non-negotiable, significantly influencing energy usage (Burningham & Venn, 2020; Nicholls and Strengers, 2015, 2018). As children reach school age, household energy dynamics evolve to accommodate structured schedules encompassing school hours, homework, and extracurricular activities (Powells et al., 2014), alongside an emerging need for autonomy and privacy, evidenced by separate bedrooms for children (Gibson et al., 2011). The care of elderly relatives represents another pivotal stage, often leading to increased demands for heating and cooling to ensure comfort (Shirani et al., 2017). The trend of more adults living in their parental homes, driven by factors such as escalating housing costs and rising divorce rates (Bell et al., 2015), further impacts household energy consumption. This situation necessitates negotiation within families, particularly over thermostat settings and the use of lights or smart devices, to balance comfort needs with economical living practices (Hargreaves et al., 2016). The aforementioned dynamics of energy consumption in households, particularly influenced by life stages and familial structures, carry profound implications for understanding and managing energy demand. The diverse patterns emerging from solitary living, familial arrangements with children of varying ages, and multi-generational cohabitation reflect the evolving nature of energy needs through different life cycles.

Although these studies provide valuable insights, they mainly emphasize how energy choices are rooted in various concepts of home and intergenerational perspectives. However, they tend to overlook how families negotiate these issues in their everyday

lives. The complexities of intra-family negotiations, power dynamics, and the processes through which family members reconcile their differing energy needs and preferences remain underexplored. For example, how do parents and children negotiate thermostat settings to balance comfort with energy efficiency? What strategies do family members use to mediate conflicts over high-energy appliances like air conditioners or electric heaters? These day-to-day negotiations are critical to understanding how energy practices are actually implemented within households. Additionally, power dynamics within families can significantly influence energy use decisions. Gender roles, age hierarchies, and economic contributions often determine whose preferences take precedence. For instance, in many cultures, the head of the household, often a male figure, may have the final say in energy-related decisions, potentially sidelining the needs and preferences of other family members. This can lead to a household energy use pattern that reflects the priorities of a single individual rather than a collective agreement. Moreover, cultural norms and values play a crucial role in shaping how families approach energy consumption. While Ellsworth-Krebs (2019) brought attention to the theme of 'privacy' in the context of Anglo-Saxon homemaking, emphasizing individualism, independence, and self-reliance, this perspective is not universally applicable. Cultures with a more collectivist orientation, as highlighted by Ozaki (2002) and Lansford et al. (2021), emphasize family, collectivism, and interdependence, leading to different familial negotiations and energy use patterns. For example, in collectivist societies like China, family decision-making around energy consumption, particularly cooling, might involve more collaborative and intergenerational considerations, as observed by Wang et al. (2022). This distinction is crucial because it impacts how energy-saving initiatives are perceived and implemented within different cultural contexts. Understanding these cultural differences is essential for developing effective energy policies that are sensitive to the specific needs and dynamics of different family structures.

## 2.6 Summary

From the review of the literature, it is evident that the dynamics and evolution of practices have consistently been a central focus in the study of energy consumption. In particular, scholars' application of social practice theory has provided valuable

insights into how cultural, generational, and social factors collectively shape energy practices related to thermal comfort. These studies emphasize that energy consumption is not merely a technical or economic choice but a deeply embedded social process within specific cultural contexts. By examining the formation and transformation of everyday practices, researchers have highlighted how interactions within households drive the transmission and adaptation of energy behaviours, as well as how technological innovations intersect with social norms and cultural expectations to redefine the meaning of comfort.

From the history of air conditioning use in the West to the evolving concepts of thermal comfort in Asia, it is clear that comfort is not a static or universal state, but a dynamic practice shaped by specific cultural and material contexts. The analysis of intergenerational transmission reveals how distinct historical and socio-economic experiences influence generational attitudes toward energy practices. These generational differences underscore the need for energy policies that not only address technological solutions but also consider the embedded cultural and social dimensions of energy practices. Within families, the transmission of practices reflects both the perpetuation of established behaviours and opportunities for transitions to more sustainable approaches. Social negotiation emerges as a critical mechanism shaping household energy practices. Cultural norms, gender roles, and family dynamics play significant roles in determining how energy consumption is practiced and negotiated. These interactions are not merely about managing resources but also about sustaining social relationships and fulfilling cultural expectations. Such negotiations reveal how practices are shaped collectively, making household energy use both complex and deeply tied to the cultural and relational fabric of daily life. The concept of "home" serves as a central space where energy practices are most intimately enacted and negotiated. The pursuit of comfort within the home often leads to increased energy consumption, especially when comfort is equated with modern conveniences like air conditioning. This raises vital questions about the sustainability of current energy practices and highlights the need to redefine comfort in ways that align with environmental goals while respecting cultural values. While this chapter draws on global research to provide a broad understanding of energy practices, it also identifies a significant gap in studies focused on China and other Asian regions. These contexts, with their unique cultural, historical, and socio-economic specificities, require



approaches that are sensitive to local practices and evolving dynamics. This chapter lays the theoretical groundwork for such research, identifying areas where trends in China and other Asian contexts align with or diverge from global patterns. As I transition to the empirical chapters, the insights from this literature review will guide the exploration of energy practices within Chinese households. By examining how cultural, generational, and social factors influence energy practices—particularly through the lens of air conditioning—this study aims to contribute to a deeper understanding of how these practices are formed, negotiated, and adapted, and how they can be directed toward more sustainable pathways.

## Chapter 3: Contextualisation of Shenzhen

### 3.1 Why Shenzhen?

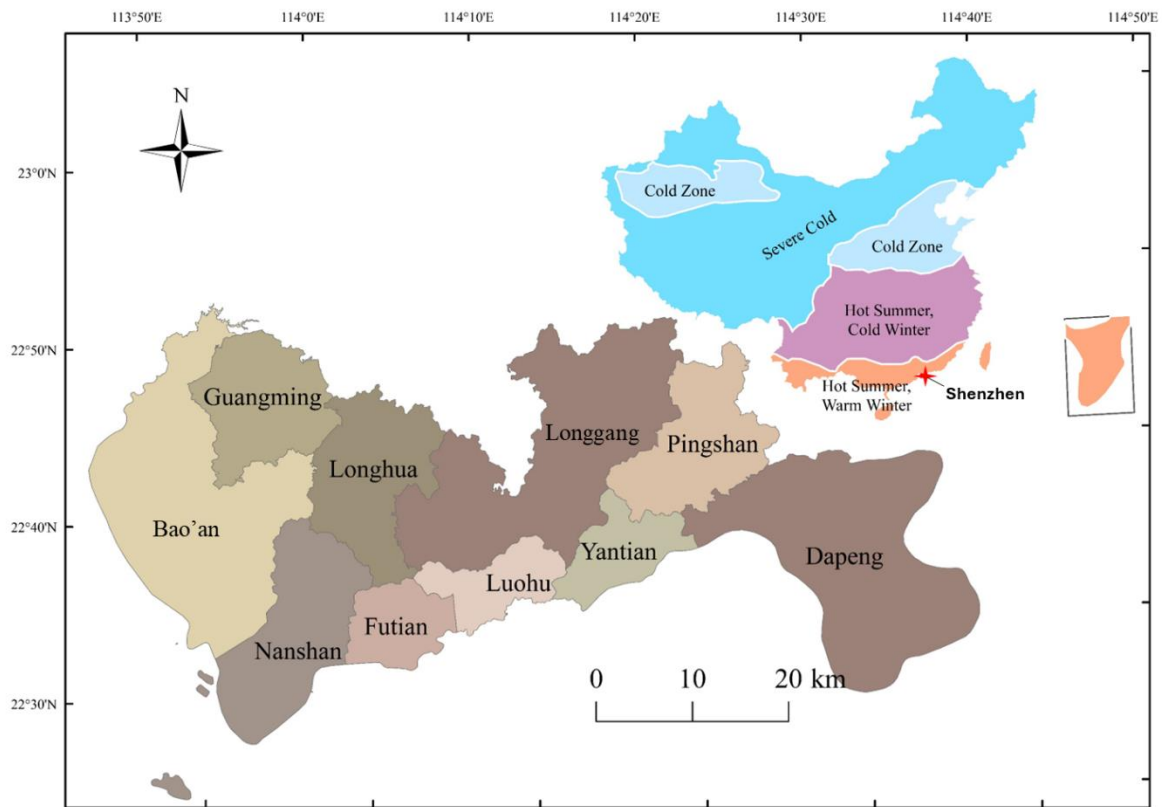
With my brothers based in Shenzhen, I often stayed there from a young age and witnessed first-hand how this once-modest fishing village transformed into a symbol of China's rapid urbanization. Shenzhen's designation as a Special Economic Zone in the early 1980s marked a turning point, not only for the city but also for the country. It became a testing ground for China's economic reforms, showcasing the potential for rapid development and the integration of global markets. Over the decades, Shenzhen has evolved into a bustling metropolis, embodying the spirit of China's economic ascent and the cultural shifts accompanying it. This dramatic transformation makes Shenzhen an ideal setting for studying family dynamics and air conditioning (AC) use, as the city reflects the complex intersection of economic growth, urban infrastructure, and changing household needs.

Shenzhen's success attracted people from all over China, resulting in a diverse demographic mix. Many residents migrated to pursue new employment opportunities and join the city's burgeoning workforce, bringing with them varied cultural backgrounds. The city's high population density led to the rise of high-rise residential buildings and extensive infrastructure, transforming the urban landscape to meet the needs of a rapidly growing population. Rising incomes and increasing middle-class status have also driven a shift in living standards, where comfort—symbolized by the widespread adoption of air conditioning—has become an essential household expectation.

Located in southern China, Shenzhen's subtropical climate, characterized by long, humid summers, has made AC use nearly indispensable. In the early years, air conditioning was a luxury, affordable only to a selected few. However, as Shenzhen's economy boomed, AC units became more accessible, reflecting both a rise in purchasing power and the increasing expectations for modern conveniences. As climate change further intensifies summer heat, the demand for artificial cooling continues to rise, challenging the city's energy infrastructure. Unlike older cities with established energy systems, Shenzhen faces unique pressures in meeting its growing energy needs sustainably, especially during peak cooling seasons.

Beyond infrastructure and energy needs, Shenzhen's rapid development has brought significant shifts in family structures. Traditional multi-generational households are becoming less common, replaced by smaller, nuclear family units as young adults move away for work or education. This shift echoes the broader societal changes across China, where traditional family values, such as respect for elders and frugality, are often reinterpreted in the context of urban life. For example, younger generations may view AC as a necessity for comfort and productivity, while older family members, shaped by a history of conservation and minimalism, may still regard it as a luxury. This creates a unique dynamic within households, where family members negotiate over AC use in ways that reflect both generational values and changing perceptions of comfort.

The purpose of this chapter is to provide a broad introduction to Shenzhen's unique context. In the sections that follow, I will outline the historical, infrastructural, and cultural background of Shenzhen to support readers who may be unfamiliar with the city's social, economic, and environmental landscape. Through this descriptive and observational approach, I aim to create a comprehensive setting that helps frame the family dynamics and air conditioning practices explored in later empirical chapters, offering context for understanding the findings within Shenzhen's distinctive urban environment.



**Figure 1.** Location of Shenzhen and its districts

Source: Drawn by the author based on public geographical data

### 3.2 Economic Development and Urban Transformation

Shenzhen's transformation over the past few decades has been nothing short of extraordinary, reshaping its social, economic, and physical landscapes. Growing up, I would often hear my parents and grandparents speak about Shenzhen's early days—when it was a quiet fishing village with modest communities, long before it became the bustling metropolis it is today. My grandparents, like many in their generation, witnessed first-hand the rapid changes that came after the city was designated a Special Economic Zone in 1980. They would recount stories of early Shenzhen, when fishing boats lined the shores of districts like Nanshan, and life followed the rhythm of the Pearl River Delta.

Each time I visited Shenzhen, I was struck by how rapidly the city changed, with the modern cityscape constantly evolving beyond the descriptions my parents and

grandparents had shared. Areas like Nanshan and Futian, which my grandparents remembered as open spaces with only modest housing, had become hubs of economic activity, populated with towering high-rises and sprawling tech parks. This transformation was fuelled by a wave of foreign investment, especially in manufacturing and technology, as well as economic policies that encouraged growth and innovation. Over time, the city attracted an influx of people from all over China, each drawn by the promise of opportunity and prosperity.

With this influx came a demand for housing, and districts such as Bao'an and Luohu developed into densely populated urban areas. High-rise apartment complexes sprang up to accommodate the growing population, a stark contrast to the small, single-story homes that used to characterize Shenzhen's landscape. Walking through these neighbourhoods today, I see rows of apartments equipped with external air conditioning units—an almost universal feature that speaks to the shift in living standards and the new expectations for comfort that have emerged alongside the city's economic ascent.

In the early days of my parents' and grandparents' lives, air conditioning was a luxury that few could afford. People relied on ceiling fans or simply endured the heat, especially in the more traditional residential areas. But as Shenzhen's economy grew and incomes rose, the desire for modern comforts became more accessible to a wider population. Today, air conditioning is not only commonplace in individual households but also a critical component of public and commercial spaces. I observed that in many homes, each room now has its own air conditioning unit.

During my fieldwork, I had the chance to speak with families who had lived through this transformation. Many older residents spoke of their early reluctance to use air conditioning, either due to cost or habit, while younger family members often expressed an expectation for air-conditioned comfort. This generational difference underscores the broader socio-economic shifts that Shenzhen has undergone, where air conditioning has moved from a symbol of affluence to a standard household appliance.

In addition to residential growth, Shenzhen's economic success has led to the establishment of commercial centres, technology parks, and upscale housing developments, particularly in districts like Nanshan, where companies like Tencent now have their headquarters. The widespread installation of air conditioning in office buildings, shopping malls, and other public spaces highlights a broader cultural shift

toward a “cooling culture” that defines Shenzhen’s urban experience. The expectation for air-conditioned spaces is pervasive, shaping not only domestic routines but also workplace environments and leisure activities.

The evolution of Shenzhen’s urban landscape thus sets a unique stage for understanding family dynamics around air conditioning. As the city grew and adapted to meet the needs of its diverse population, comfort expectations also shifted, bringing air conditioning into the heart of everyday life. The following sections will delve further into Shenzhen’s climate, energy policies, and changing family structures, grounding these practices within the city’s complex developmental history.

### 3.3 Climate Characteristics and the Demand for Air Conditioning

Shenzhen’s subtropical climate, characterized by long, hot, and humid summers with mild winters (as shown in **Figure 1**), significantly influences the city’s lifestyle and energy needs (Diamond et al., 2013). Situated in the Pearl River Delta in southern China, Shenzhen experiences some of the country’s highest summer temperatures, regularly exceeding 30°C (86°F) from May through September, with peak daytime temperatures often reaching 35°C (95°F) or more during July and August (Meteorological Bureau of Shenzhen, 2024). Humidity is a constant factor, frequently surpassing 80% during these months, intensifying the perceived heat and creating a muggy environment that feels oppressive. This combination of heat and high humidity creates a critical need for cooling solutions, making air conditioning an integral part of daily life for most Shenzhen residents.

Statistics from the Meteorological Bureau of Shenzhen (2024) indicate that the city’s average summer temperature has been on a gradual rise, with the average summer temperature now about 1°C higher than it was two decades ago. This is partly due to the natural climate but also exacerbated by the urban heat island effect—a consequence of rapid urbanization and dense high-rise developments that trap and radiate heat throughout the day and into the night. According to official planning documents, Shenzhen’s green space per capita was only around 5.1 square meters per person in the early 1990s, though recent efforts have raised this to approximately 16 square meters per person (Xinhuanet Shenzhen, 2018). Despite this improvement, Shenzhen’s green

coverage remains lower than that of many other Chinese cities, contributing to the accumulation of heat within built-up areas.

The need for air conditioning in Shenzhen is particularly high from late spring to early autumn. Many residents begin using air conditioning as early as April, as daytime temperatures and humidity start to rise, while by June, consistent AC usage becomes almost essential. This continues through September, with many families leaving their units on for extended periods to combat the high nighttime temperatures that often remain above 27°C (80°F). During field visits, I observed how air conditioning has moved from being a luxury in Shenzhen's early days to a necessity, not just for comfort but as a practical measure to manage the unrelenting summer heat.

During my interviews with local residents, I noticed distinct generational differences in AC usage. Younger residents, who have grown up in Shenzhen's modern high-rise apartments, view air conditioning as essential and often run it continuously, especially during peak summer months. By contrast, older generations, who may remember a time before AC was widespread, often use air conditioning more sparingly. Many parents and grandparents expressed concerns over energy costs or mentioned “节约” (conserving resources), turning on the AC only during the hottest parts of the day or opting for fans during cooler evening hours.

The shift in air conditioning demand is also visible in Shenzhen's commercial and public spaces. In high-density business districts like Nanshan, where global technology firms such as Tencent have their headquarters, central cooling systems are a standard feature, ensuring that office environments remain comfortable year-round. Shopping malls, public transportation hubs, and educational institutions across the city also rely on extensive air conditioning, making cooling infrastructure a fundamental aspect of Shenzhen's urban experience. The Nanshan and Futian districts, with their dense clusters of office buildings and commercial centres, particularly highlight the role of air conditioning in maintaining a productive and comfortable environment for the city's workforce.

As Shenzhen's average temperatures continue to rise due to both climate change and urbanization, the Shenzhen Development and Reform Commission (2024) has acknowledged the city's growing reliance on air conditioning. Recent policies promote the adoption of energy-efficient AC technologies and advocate for green building

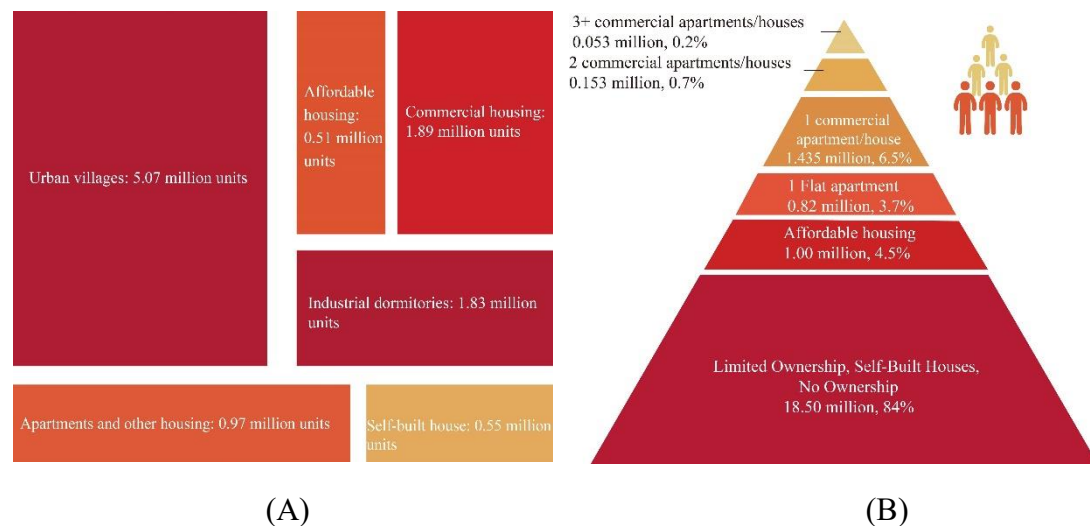
standards in new developments. Nonetheless, for the city's residents, air conditioning remains a practical solution to an immediate need—a means of achieving comfort amid the city's relentless heat.

Ultimately, Shenzhen's climate, intensified by rapid urbanization and early planning choices, has ingrained air conditioning deeply into the lives of its residents. The ways in which families use AC, however, still reflect individual habits, generational perspectives, and, for many, a continuing negotiation around comfort and cost. These practices form an integral part of Shenzhen's evolving urban identity, providing a backdrop for understanding the broader social dynamics explored in this study.

### 3.4 Evolution of Building Structures and the Material Demand for Air Conditioning

According to the Shenzhen Bureau of Housing and Construction (2021), the city had about 10.82 million housing units by the beginning of 2020. Shenzhen's housing planning, as outlined in the city's *14th Five-Year Plan for Housing Development* (Shenzhen Bureau of Housing and Construction, 2022), reflects a unique approach compared to countries such as the UK. Different categories of housing and their corresponding quantities from are shown in **Figure 2 A**: (1) Urban “villages”: 5.07 million units; (2) Commercial housing: 1.89 million units; (3) Industrial dormitories: 1.83 million units; (4) Apartments and other housing: 0.97 million units; (5) Self-built units: 0.55 million units; (6) Affordable housing: 0.51 million units. According to **Figure 2B**, property ownership in Shenzhen can be basically divided into two categories: people with limited property rights and people without housing ownership (84%) and social housing (4.5%). This group is characterized by the fact that they live in properties that cannot be freely traded or dealt with. The other category is those who own their own homes (apartments and commercial houses), which together account for about 11.5%.



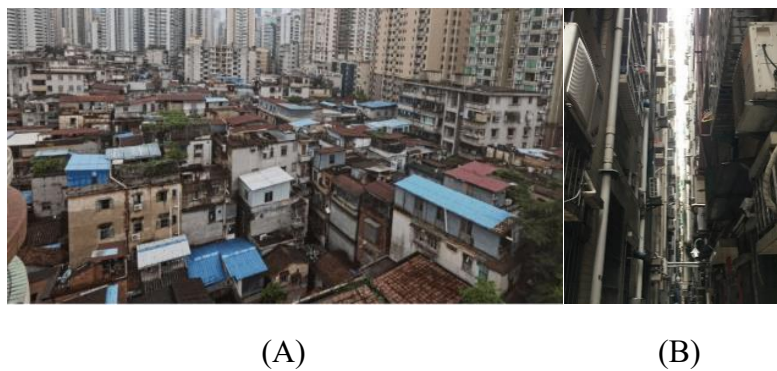


**Figure 2.** Distribution of housing types (A) and ownership (B) in Shenzhen

Source: Shenzhen Bureau of Housing and Construction (2021, 2022)

Detailed data by building type are not available because some housing buildings are quite diverse, especially the first category of property ownership mentioned above. In particular, the urban “villages” with the highest proportion were traditional villages at the beginning, and the architectural landscape was closely related to residents’ cultural customs (Pan & Du, 2021; O'Donnell, 2021). However, with the progress of urbanization, self-built houses in urban villages lack unified planning and illegal residential buildings are common (as shown in **Figure 3A**). At present, most urban villages in Shenzhen are self-built houses similar to apartment buildings, which have high building density and floor area ratio (those located in the downtown areas are especially high), as shown in **Figure 3B**. This phenomenon is due to the large number of migrant workers and tenants here. The second category consists mainly of apartment buildings and semi-detached/detached houses. Most of these houses are in the form of residential communities (as shown in **Figure 4**). Residential communities refer to a relatively closed and independent residential area that has been built and put into use according to the unified urban planning and has reached a certain scale with complete infrastructure. When selecting the population of interest, it is obvious that the second type of housing is more convenient to control the building type. With the rapid economic development of Shenzhen, the first type of housing, especially in urban villages, is constantly decreasing. In my field investigation, I found that a large number of former urban villages in Shenzhen are demolishing and are now being built into

office or apartment buildings suitable for urban life. In the process of demolition and construction, the original property owners are often compensated or relocated to new residential communities, almost all of which are apartment buildings. Therefore, apartment buildings constitute the main residential building type in Shenzhen and such trend and proportion seems likely to expand even more in the future. As the situation between semi-detached/detached buildings and apartment buildings are quite different, the focused groups were therefore limited to the participants living in apartment buildings. Specifically, my population of interest belong to the second category of people who live in apartment building.



**Figure 3.** Urban villages in Shenzhen

Source: Provided by participants Helen Wang and Karen Zhao



**Figure 4.** A residential community in Shenzhen

Source: Provided by participant Lily Zhang

It is obvious that the architectural landscape of Shenzhen has undergone a remarkable transformation over the past few decades, moving from low-rise, traditional homes to dense, high-rise apartment complexes that define the city's modern skyline. This shift in building structure has significantly impacted the demand for air conditioning, as the

newer, densely populated residential towers intensify indoor temperatures and make cooling essential. The rise of high-rise living has not only increased the physical demand for air conditioning but also reflects a broader shift toward enhanced comfort, privacy, and convenience in urban lifestyles.

In Shenzhen's older districts, such as Luohu and parts of Bao'an, many of the buildings date back to the 1980s and early 1990s, a period marked by Shenzhen's initial surge in growth following its designation as a Special Economic Zone. These older buildings are generally low- to mid-rise, with simpler construction materials and limited insulation, making them less equipped to retain cool air and mitigate external heat. According to the Shenzhen Bureau of Housing and Construction (2023), buildings constructed during this time were typically around 6 to 12 stories tall and relied on natural ventilation or ceiling fans as primary cooling methods. Many of these buildings still stand today, particularly in less redeveloped areas, and often have a single air conditioning unit installed in the main living area, which is turned on only during peak summer days to manage cooling needs in a centralized space (Shenzhen Government Office, 2023).

In contrast, districts like Futian, Nanshan, and newer areas in Bao'an are now dominated by high-rise apartment complexes, which commonly exceed 30 stories and accommodate large numbers of residents within compact urban spaces. High-rise buildings trap heat more easily due to their dense structure and expansive concrete surfaces, which intensify the urban heat island effect. Data from the Shenzhen Statistical Yearbook (Statistics Bureau of Shenzhen Municipality, 2021) shows that by 2020, high-rise buildings accounted for over 60% of the city's residential units, reflecting Shenzhen's transition toward a high-density urban model. This shift has driven widespread air conditioning adoption, with units installed in nearly every room in newer apartments. The air conditioning setup in these buildings highlights a shift from collective, family-centred cooling habits to individualized, room-specific temperature control, catering to each occupant's preferences and comfort.

During field visits, I observed stark differences between older and newer residential areas, not only in terms of architecture but also in how air conditioning is utilized. In older residential areas, air conditioning units are often limited to living rooms, and family members gather there during the hottest times of day to conserve energy. By

contrast, in modern high-rise apartments, each bedroom often has its own AC unit, allowing family members to adjust their room temperatures independently. This setup reflects an evolving lifestyle in Shenzhen where personal space and individualized comfort are prioritized, signalling a shift toward more private, segmented family living arrangements that align with the city's fast-paced, urban culture.

The increase in high-rise buildings has also influenced where and how air conditioning units are installed. In the older low-rise areas, AC units are often installed on balconies or attached to windows, a practice that was initially done more out of necessity than planning. Newer high-rise buildings, however, feature integrated AC slots or centralized HVAC systems for common spaces, such as lobbies and corridors, to ensure consistent cooling in both private and shared areas. According to recent guidelines from the Shenzhen Bureau of Housing and Construction (2018) and Shenzhen Bureau of Planning and Natural Resources (2021), newly constructed buildings are encouraged to incorporate energy-efficient cooling technologies, with many high-rise apartments now designed to support split-unit air conditioning systems that allow for greater control over individual room temperatures.

The positioning of AC units in high-rise residences also reveals how comfort and privacy needs have evolved. In conversations with local residents, younger family members, in particular, mentioned their preference for separate AC units in their bedrooms, viewing them as essential for studying, working, and relaxing independently. This contrasts with the habits of older family members, who often still prefer centralized cooling in common areas and may view room-specific units as an unnecessary expense. The widespread adoption of individualized AC systems in high-rise apartments represents a new standard for comfort that is becoming the norm in Shenzhen's urban life, enabling each family member to create a personal oasis within a shared living environment.

In summary, the evolution of building structures in Shenzhen—marked by a shift from low-rise, communal housing to high-rise, individualized apartments—has fundamentally shaped the city's demand for air conditioning. The modern high-rise model not only accommodates a growing population but also caters to changing expectations around comfort, privacy, and convenience. Shenzhen's architectural transformation, therefore, provides an essential backdrop for understanding the role of

air conditioning in the daily lives of its residents, highlighting how urban design, technological adaptation, and lifestyle demands intersect in the city's approach to cooling and comfort.

## 3.5 Energy Supply and Policy Context in Shenzhen

Shenzhen's energy provisioning and policies play a central role in shaping residential cooling practices, particularly air conditioning (AC) usage. As the city's population and economic activities have grown, so too has its demand for energy, especially during the sweltering summer months. This section will cover the historical evolution of energy supply in Shenzhen, trends in energy costs and their impact on household behaviour, and key policies related to energy usage and cooling.

### 3.5.1 Historical Evolution of Energy Supply

Shenzhen's energy supply structure has seen a significant transformation over the past few decades. Initially, electricity was sourced primarily from coal and oil, but as environmental concerns mounted and national energy policies evolved, Shenzhen began diversifying its energy portfolio. The city now relies on a mix of coal, natural gas, nuclear, and renewable sources, with a particular emphasis on increasing clean energy production. According to the Shenzhen Bureau of Energy (Science Technology and Innovation Commission of Shenzhen Municipality, 2020), approximately 32.85% of Shenzhen's energy now comes from renewable sources, including solar and wind power by the end of 2019, with plans for further expansion.

Due to the variability of renewable energy sources, however, Shenzhen still depends on fossil fuels and nuclear power to ensure a stable electricity supply during peak demand periods, especially in the summer when AC use surges. During my field visits, I noticed that most residential areas rely heavily on grid power for cooling, with older buildings, in particular, appearing more vulnerable to grid strain during heatwaves. Local conversations revealed that while newer districts with more recent infrastructure handle peak loads better, older areas occasionally experience brief power disruptions during extreme heat. This ongoing reliance on a balanced mix of energy sources highlights Shenzhen's need to maintain reliable power while advancing its transition to cleaner energy.

### 3.5.2 Trends in Energy Costs and Impact on Cooling Behaviour

Energy pricing in Shenzhen is influenced by both market dynamics and regulatory policies designed to encourage responsible energy use. The city operates a tiered electricity pricing system, where rates increase as consumption exceeds certain thresholds, and a time-of-use pricing structure, which charges higher rates during peak hours. This combination is intended to encourage households to use electricity more efficiently, especially during peak demand hours.

According to the Shenzhen Development and Reform Commission (2023), Shenzhen residents pay 0.6542 RMB per kWh for the first tier of consumption (0-260 kWh per month during summer months), with prices rising to 0.9542 RMB per kWh in the third tier (above 600 kWh per month) for higher usage levels. According to the Shenzhen Statistical Bureau (2024), the per capita disposable income of Shenzhen residents in 2023 was 76,910 RMB. Assuming a household size of three people, the average household income would be approximately 230,730 RMB per year, or about 19,227 RMB per month. Electricity expenses, therefore, constitute a relatively small portion of monthly budgets for middle- and higher-income families, making it a manageable cost for most households. Many families consider these costs acceptable, adapting to the pricing structures without making drastic changes to their air conditioning usage patterns. In contrast, lower-income households, particularly those earning below 5,000 RMB per month, face higher financial impacts from electricity costs, which can represent a more significant portion of their monthly budget, especially during the summer. During interviews with lower-income residents, several mentioned consciously limiting air conditioning use to reduce electricity bills, either by restricting usage to evenings or setting the air conditioning to a higher temperature. In response to these concerns, Shenzhen offers subsidies on energy-efficient appliances and tiered pricing to help ease this financial strain, making cooling more accessible for all residents.

### 3.5.3 Energy and Cooling Policies

To manage high electricity demand and promote energy conservation, Shenzhen has introduced several key policies that influence residential cooling practices, such as time-of-use pricing, energy efficiency incentives, and load management programs aimed at stabilizing the grid during peak demand periods.

### **1. Peak and Off-Peak Electricity Pricing**

Shenzhen's time-of-use pricing charges higher rates during peak hours (typically from 3 PM to 9 PM), which encourages households to avoid energy-intensive activities during these times. Many residents I spoke to were mindful of these higher rates, particularly older residents, who often adjusted their AC usage accordingly. Households with flexible routines delay or limit AC use during peak hours to avoid surcharges, while others adopt cooling strategies that leverage off-peak hours, such as pre-cooling rooms before peak times.

### **2. Energy Efficiency Incentives**

Shenzhen's government offers subsidies for high-efficiency appliances, including AC units that meet strict energy standards. Households purchasing certified energy-efficient AC models are eligible for rebates covering part of the cost, making these appliances more affordable and attractive to residents. According to Huajing Intelligence Network (2020), these incentives have led to a 15% increase in energy-efficient AC adoption over the past five years. In more modern apartments, I observed an increase in newer, energy-efficient AC units, while in older buildings, residents are gradually replacing older units to take advantage of the rebates.

### **3. Demand Response and Load Management**

During high-demand periods, such as heatwaves, Shenzhen's government implements demand response measures to prevent overloading the grid. Notifications are sent to residents, encouraging them to reduce AC usage, and large commercial consumers are often required to cut back their energy usage to ensure residential power availability (Shenzhen Development and Reform Commission, 2024). Some commercial buildings have also started using energy storage systems, shifting part of their energy use to stored power during peak hours. I observed that in areas with older infrastructure, local stores and public facilities were particularly receptive to demand response measures, with many opting to reduce their cooling during peak hours as a contribution to maintaining grid stability.

### 3.5.4 Household Income and Adaptation to Energy Pricing

The effectiveness of these policies also reflects Shenzhen's socioeconomic profile, where many households are middle- to upper-income and thus able to accommodate electricity expenses. A survey by the Guangdong Provincial Situation Survey Research Centre (2024) indicates that approximately 88.81% of Shenzhen households find current electricity rates manageable and do not consider energy costs a major deterrent to AC use. Many residents adapt by balancing comfort with efficient use, setting air conditioners to moderate temperatures rather than excessive cooling. However, for lower-income families, energy costs significantly influence cooling behaviour, as I observed in conversations where families actively monitor and limit their AC usage. They often reserve AC for the hottest times of day, managing energy expenses while attempting to maintain a comfortable living environment.

In summary, Shenzhen's approach to energy provisioning and policy incorporates a balance of affordability, efficiency, and sustainability. Through tiered and time-of-use pricing, energy efficiency subsidies, and demand management measures, Shenzhen's policies help shape household cooling behaviour while maintaining grid stability. For most residents, electricity costs are a manageable expense, but for lower-income families, targeted policies and incentives play a crucial role in ensuring equitable access to cooling. These varied practices reflect Shenzhen's diverse socioeconomic landscape, offering a comprehensive backdrop for understanding air conditioning use as shaped by both energy policies and the practicalities of daily life.

## 3.6 Social Pressures and Shifting Family Structures in Shenzhen

Shenzhen, a city of over 17 million people in 2021(Statista, 2022), is a unique urban landscape largely shaped by China's rapid modernization and economic reform policies. Its residents, many of whom migrated to the city within the last few decades, face distinct social pressures and evolving family dynamics. This environment, which differs vastly from Western welfare-supported societies, shapes everyday choices and priorities, including investments in education, shifts in family structure, and even how resources like air conditioning are utilized in the home.



### 3.6.1 Migration and the Transformation of Family Structure

Most residents of Shenzhen are migrants from other parts of China, having moved to the city within the past 40 years as it developed from a small fishing village into a major metropolis. This influx has created a diverse yet largely nuclear-family-based population, with the multigenerational households of traditional rural China giving way to smaller, self-contained family units. Due to high housing costs and limited living space, extended families living together is less feasible than in rural areas. Instead, many young families in Shenzhen live apart from elderly parents, who often remain in their home provinces, supported by remittances rather than co-residence.

This shift from multigenerational to nuclear family living has had profound impacts on family life. Traditionally, Chinese families adhered to a Confucian-influenced structure where multiple generations shared both a home and responsibilities, with elders giving care in exchange for their lifelong support to the family. In urban Shenzhen, however, housing limitations and demanding work schedules make this arrangement difficult. Younger generations must balance the demands of urban careers with providing for both their children and their elderly parents from afar. Interviews with residents indicate that this separation often comes with feelings of guilt and loss, as adult children feel torn between urban economic opportunities and fulfilling filial responsibilities.

Moreover, traditional family dynamics have been challenged by the urban environment. In Shenzhen, space constraints within high-rise apartments reduce the shared family areas that are common in rural homes, meaning less collective family time and more emphasis on individual spaces. In the older areas of Shenzhen, such as Luohu, where many original migrants first settled, families often still use a single air conditioning unit in the living room for communal cooling. However, in newer districts like Nanshan, I observed that high-rise apartments often feature individual air conditioning units in each bedroom, underscoring the shift toward individual comfort and privacy.

### 3.6.2 Gender Roles in Transition

In traditional Chinese rural settings, gender roles were clearly defined, with men serving as primary earners and women typically managing the household and childcare. However, as Shenzhen urbanized and evolved into a technology and finance hub, these roles have become more fluid. The city's economic dynamism and living costs has drawn women into the workforce in unprecedented numbers, with 41.4% of Shenzhen's

workforce now female, according to the Shenzhen Bureau of Statistics (2022). This shift toward dual-income households has given women greater financial independence but has also created new pressures, as they balance professional roles with enduring family expectations.

The evolving role of women in Shenzhen has also influenced family decision-making and spending priorities. As both parents increasingly contribute financially, decisions around household amenities, such as air conditioning, are viewed as shared investments in family well-being. In many of the newer apartments I visited, it was the mothers who decided where and when to install additional AC units to create a productive and comfortable home for both their children and themselves. The shared financial responsibility reflects the city's ongoing transition from traditional gender roles to a more collaborative family structure.

### 3.6.3 The High Value of Education and “Intensive Parenting” (卷娃)

In Shenzhen, as in many parts of urban China, education is viewed as the primary path to success, both for individual achievement and family stability. Unlike Western societies with welfare systems that support citizens through retirement, China's social safety net is relatively limited, and many parents in Shenzhen view their children's academic success as essential to securing their family's long-term well-being. This has given rise to a highly competitive educational culture, known as “卷娃” (juanwa), or “intensive parenting,” where parents invest very significant resources into tutoring, private schooling, and extracurricular activities to support their children's future careers.

According to a survey conducted by the China Institute for Educational Finance Research at Peking University, the average family in China allocates approximately 20-30% of its income to education-related expenses, including tuition fees, tutoring sessions, and specialized programs (Wei, 2023). This heavy investment often starts as early as kindergarten and intensifies through secondary education. Compared to this, the cost of electricity and air conditioning is relatively negligible. The electricity bill for air conditioning, averaging 2-3% of monthly household income for middle- and higher-income families, is seen as a minor expense in the broader context of family expenditures (Sohu News, 2021). Even for lower-income families, where energy costs represent a higher percentage of the budget, the government's energy subsidies and incentives for efficient appliances have made air conditioning more accessible. Many

parents expressed that they would prioritize their child's comfort and productivity over cutting costs, as creating an optimal study environment is integral to their educational aspirations for their child.

### 3.6.4 Filial Expectations and Evolving Elderly Care Norms

Chinese culture traditionally emphasizes filial piety, where adult children are expected to care for their aging parents. However, in Shenzhen, where families often live apart from elderly parents who remain in their rural hometowns, this responsibility has taken on new forms. According to Zhu and He (2022), approximately 36.7% of young migrant families regularly remit money to their parents in rural areas, a figure that rises to 49.8% among older migrants. This remittance behaviour not only reflects the continuation of traditional filial piety in the context of urbanization but also highlights the younger generation's adaptation to shifting lifestyles.

For many families, this adaptation highlights the tension between traditional expectations and modern realities. While adult children continue to feel a duty toward their parents, they must balance this with the high costs and constraints of urban living. The shift toward remote caregiving and financial support, rather than physical co-residence, reflects both Shenzhen's unique housing limitations and the broader modernization of family life in China. This arrangement has required younger generations to adapt filial piety to contemporary urban settings, finding ways to express respect and care without daily proximity.

### 3.6.5 The Impact of Limited Social Welfare on Family Pressures

Unlike many Western countries with robust welfare systems that provide healthcare, pensions, and support for elderly citizens, China's welfare system is still developing. In cities like Shenzhen, this creates significant pressures on individuals to provide for themselves and their families. Young professionals in Shenzhen are often acutely aware of the need to secure financial stability, not only for themselves but also to support their parents in old age. Without the security of comprehensive state-provided benefits, families must plan for both their own futures and their parents' needs.

For many families, this translates into a dual strategy: investing in children's education to ensure long-term upward mobility while managing day-to-day expenses to save for

the future. The role of air conditioning in this context is complex. On one hand, it represents a necessary comfort in Shenzhen's hot climate, particularly for supporting children's education and productivity. On the other hand, for lower-income families, it is a carefully managed resource, with usage adjusted to minimize costs. During my fieldwork, I observed that while middle- and high-income families tend to run air conditioning consistently throughout the day, lower-income families are more likely to restrict usage to evenings or particularly hot afternoons, demonstrating the financial trade-offs they navigate daily.

### 3.7 Chapter Summary

In this chapter, I have explored how Shenzhen's unique socio-economic, cultural, and environmental context shapes the way families negotiate air conditioning use within their homes. Shenzhen, a city that emerged from rapid industrialization and migration, stands as a microcosm of China's urban transformation. Its distinct blend of modern high-rise apartments and remaining traditional housing, the soaring demand for cooling solutions due to its subtropical climate, and the diverse backgrounds of its residents create a setting where air conditioning is both an adaptation to environmental demands and a symbol of socio-economic progress.

The rapid rise of Shenzhen's middle class, driven by economic opportunity and high levels of educational investment, highlights the importance that families place on creating an environment conducive to both comfort and productivity. In this context, air conditioning becomes more than just a response to the physical climate; it is deeply intertwined with the social climate of competition, educational expectations, and the desire for upward mobility. For many families, particularly those that have transitioned from rural to urban lifestyles, air conditioning represents a commitment to modern living standards. Yet, the financial pressures associated with urban life and the increasing costs of living mean that families often make nuanced, negotiated decisions about how and when to use air conditioning, especially during peak hours when energy costs are higher.

My own observations in Shenzhen reinforce this complexity. Conversations with residents reveal that while younger generations consider air conditioning an essential part of daily life, older family members who remember life before its widespread use may view it as a luxury, selectively used to balance comfort with frugality. Moreover,

the lack of a robust welfare safety net amplifies the significance of household resources, making the costs associated with air conditioning less of a trivial matter and more of a recurring point of negotiation. Unlike in Western cities, where state support provides a measure of security, Shenzhen's families must actively strategize around their own long-term stability, often viewing their children's future success as a means of achieving security in old age. This leads to decisions that prioritize educational investment over immediate comforts, such as cooling, demonstrating the depth of these intergenerational negotiations around resource use.

Thus, Shenzhen's blend of modern development and deep-rooted family values makes it a prime example of how urban Chinese families navigate the balancing act between tradition and modernity, necessity and aspiration. These combined factors provide an essential context for the following chapters, where I will delve into specific household practices surrounding air conditioning. The socio-cultural fabric of Shenzhen not only exemplifies the urban Chinese experience but also offers broader insights into how families in rapidly urbanizing areas globally might adapt their energy practices in response to economic, social, and environmental pressures.

## Chapter 4: Methodology and Theory

### 4.1 Introduction

This chapter outlines the methodological approach adopted to investigate the complex, socially embedded practices surrounding air conditioning (AC) use in Shenzhen households. Central to this study is the application of social practice theory (SPT) as the primary conceptual framework. This choice stems from the recognition that AC usage is not simply a matter of individual preference or isolated decision-making; rather, it is deeply intertwined with social norms, material conditions, and evolving cultural expectations. By employing social practice theory, I can examine air conditioning as a negotiated behaviour that reflects broader patterns of family dynamics, societal pressures, and urban living. Through this lens, AC usage is not merely a response to climate conditions, but a socially constructed practice shaped by interactions among family members, their competencies, and their interpretations of comfort and modernity. Social practice theory enables a nuanced understanding of how different elements—such as material infrastructure, competencies, and social meanings—converge in everyday AC practices. This framework captures the lived realities of Shenzhen families as they navigate the pressures of rising temperatures, economic growth, and rapid urbanization. In particular, it highlights how families make AC decisions that balance comfort with cost, generational expectations, and evolving family norms, thus providing insights into the cultural and social dimensions of energy consumption. Shenzhen serves as an ideal context for examining these dynamics due to its unique blend of economic, social, and environmental influences. As one of China's most rapidly urbanized cities, with a population that has grown from rural origins into a dense urban landscape, Shenzhen epitomizes the shifting expectations and lifestyle adjustments typical of modern Chinese urban centres. The city's socio-economic profile—with its high proportion of migrants, significant middle-class growth, and distinctive climate—offers a rich backdrop for exploring the specific negotiations around AC practices. Furthermore, Shenzhen's residents face unique pressures related to the region's limited social welfare systems and the high costs associated with urban living. These pressures often reinforce family interdependence and foster distinct ways of balancing modern comforts with

traditional expectations. Given these socio-economic and environmental factors, Shenzhen represents a compelling case for investigating how domestic cooling practices evolve within a rapidly developing city in Asia. Through this case study, the research aims to provide insights that could extend to similar urban centres facing comparable challenges in energy consumption, familial adaptation, and environmental policy.

## 4.2 Research Design and Evolution of Methodology

### 4.2.1 Transition from Quantitative to Qualitative Approach: Learning from Chalk and Cheese

At the beginning of my doctoral journey, I embarked on a pilot study with a quantitative approach aimed at capturing broad patterns in air conditioning (AC) usage and identifying key demographic factors, such as income and age, influencing cooling practices. This quantitative survey-based approach appeared suitable at first, as it allowed for the analysis of numerical data across a broad sample. However, the survey results highlighted a distinct “chalk and cheese” discrepancy: while the quantitative data captured general patterns in AC use, it fell short in explaining the intricate, socially embedded negotiations occurring within families around cooling practices. This experience was instrumental in leading me to reconsider the methodological approach. The data lacked depth in exploring the cultural values, beliefs, and negotiation processes essential to understanding AC usage in familial settings. Recognizing that quantitative methods alone could not capture these complex dynamics, I pivoted towards a qualitative approach that better aligned with the study’s objective to understand air conditioning as an interactive, socially embedded practice. As Silverman (1998, 2017) emphasizes, qualitative research is uniquely suited to uncover the “why” and “how” behind social behaviours, allowing for a more detailed exploration of lived experiences and interpersonal interactions. This transition was not merely a methodological change but a shift in analytical perspective that underscored the limitations of relying solely on numerical patterns when studying nuanced cultural practices. The qualitative approach allowed for the use of semi-structured interviews and participant observations, which provided insights into the subjective and

relational aspects of AC use, such as how families negotiate comfort, balance tradition with modern needs, and reflect intergenerational differences.

#### 4.2.2 Theoretical Framework Selection: Weighing Cultural Frameworks and Social Practice Theory

In selecting an appropriate theoretical framework, I initially gravitated towards cultural frameworks, which offered the advantage of focusing on collective beliefs, values, and norms that shape intergenerational differences in attitudes toward comfort and resource use. Cultural frameworks, as proposed by theorists like Hofstede (1984) and Markus and Kitayama (1991), focus on macro-level influences that shape individual behaviours, particularly useful for examining how generational perspectives on comfort, thrift, and necessity have evolved in a rapidly modernizing China. For instance, a cultural lens would allow the study to explore how older generations, shaped by the collectivist values of post-revolutionary China, view AC as an occasional luxury, whereas younger generations, influenced by modernization, consider it an everyday necessity. However, as I delved deeper into the dynamics of AC negotiation within families, I encountered limitations with cultural frameworks. Cultural theory often emphasizes static, overarching values, which risks overlooking the everyday negotiations and adaptations that family members make in response to evolving social, economic, and environmental contexts. Cultural frameworks tend to generalize behaviours within generational groups, which can obscure the diversity of lived experiences and practices within families.

To capture these nuances, I ultimately chose SPT as the primary analytical lens, specifically adopting the three-element version proposed by Shove et al. (2012), which conceptualizes practices as comprising materials, meanings, and competencies. This version is particularly suitable for analysing air conditioning practices in contemporary China, where the technology is relatively straightforward to operate and lacks the advanced formalized knowledge often associated with central air conditioning systems in other contexts. The inclusion of a fourth element, "formalized knowledge," as seen in some versions of social practice theory, was deemed less relevant for this study due to the simplicity of how most AC systems function in China today. By focusing on the three interconnected elements, this framework allows



for a dynamic exploration of how family members negotiate and adapt their cooling practices, integrating generational values, material conditions, and competencies into everyday interactions.

Additionally, while I considered the Energy Cultures Framework proposed by Stephenson et al. (2010), I ultimately found it less fitting for the study's objectives. Energy Cultures emphasizes the interplay between material culture, norms, and practices in shaping energy-related behaviours, which provides valuable insights into the broader environmental and societal factors influencing energy use. However, its primary focus on cognitive norms and external environmental factors tends to treat practices as outcomes rather than processes. This limitation makes it less effective in capturing the dynamic, iterative nature of family interactions and negotiations around air conditioning use. In contrast, social practice theory offers a more process-oriented lens, allowing for a detailed examination of how material elements (e.g., the air conditioning units), meanings (e.g., the perception of comfort or academic necessity), and competencies (e.g., the skills to operate and regulate AC) are constantly negotiated and reconfigured within family units. This focus on the ongoing “doing” of practices aligns closely with the study’s aim to understand how generational values and material conditions converge to shape everyday cooling practices in urban Chinese households. By highlighting the continuous adaptation of these elements, social practice theory provides a richer and more nuanced framework for analysing the complexities of intergenerational negotiation and adaptation.

#### 4.2.3 Integrating Theory with Method: How Social Practice Theory Informed Data Collection and Analysis

The choice of social practice theory not only shaped the research questions but also significantly influenced the design and implementation of qualitative methods. The emphasis on the interconnection of materials, meanings, and competencies informed the use of semi-structured interviews, where questions were crafted to explore each of these elements in depth. For instance, participants were asked to describe not only their AC usage but also the meanings they associated with comfort, thrift, and necessity, alongside their practical knowledge of AC operation and maintenance.

Moreover, participant observation became an essential method to capture the actual "doings" of people with AC within households. Observing how family members interacted with AC units—their physical placement, frequency of adjustments, and ambient interactions around AC usage—provided concrete insights into the skills and meanings embedded in these practices. These observations were critical in interpreting AC use as a “social practice” rather than a mere technological interaction, aligning with Schatzki’s (2016) perspective on practices as bundles of material, symbolic, and skill-based elements co-produced through everyday actions. The observations also enabled me to document generational differences in competencies—how, for example, older family members might rely on simpler cooling techniques, and meanings—such as prioritizing a thrifty attitude toward AC use, whereas younger members often emphasized convenience and comfort. These insights highlighted how the elements of competencies and meanings evolve across generations, illustrating the dynamic and adaptive nature of AC-related practices within families.

In sum, the methodological transition and theoretical reframing were necessary steps to accurately capture the lived, negotiated nature of AC practices within Shenzhen households. Social practice theory offered a structured yet flexible framework that allowed for both the cultural and interpersonal dimensions of these practices to be analysed in a cohesive way, providing a richer, more contextually grounded understanding of cooling practices in a rapidly urbanizing, intergenerational family setting. Additionally, Confucian values, deeply rooted in Chinese culture, provide a crucial backdrop for understanding the relational dynamics embedded in these practices. Core principles such as filial piety and the prioritization of family cohesion influence how material, competency, and meaning elements are shaped and negotiated within households. These values not only frame the broader cultural context but also inform the ways in which generational shifts in cooling practices are interpreted and adapted over time. By tying the evolving elements of social practice theory to Confucian values, the study situates these household practices within a broader cultural and historical context. This approach enhances the theoretical framework by bridging the relational and cultural dimensions, offering a more nuanced perspective on the social and material dynamics at play.

## 4.3 Data Collection Methods

### 4.3.1 Semi-structured Interviews

This study employs semi-structured interviews as the primary method for data collection, aligning with the framework of social practice theory to explore household cooling practices in a nuanced, contextualized manner. Semi-structured interviews offer the flexibility needed to capture the complex social dynamics and culturally embedded routines surrounding air conditioning (AC) use within families (Galletta & Cross, 2013). Unlike structured interviews, this approach provides room for participants to discuss their practices in detail, while still ensuring that core themes relevant to social practice theory—such as material conditions, competencies, and shared meanings—are consistently addressed across all interviews (Petrescu et al., 2017).

The semi-structured format strikes a balance between allowing open-ended responses and maintaining enough structure to focus on specific aspects of cooling practices (Knott et al., 2022). This adaptability enables the interviewer to follow up on relevant topics as they arise, thus facilitating a richer understanding of AC practices and family dynamics that would be difficult to achieve through more rigidly structured methods. Given the study's aim to explore how cooling practices are socially negotiated and influenced by cultural and generational factors, semi-structured interviews provide the depth and flexibility required to capture these interactions within Shenzhen's unique socio-economic and climatic context (Martin & Larsen, 2024).

In line with social practice theory's emphasis on the interplay of material, competence, and meaning dimensions, semi-structured interviews are particularly effective for exploring how cooling practices are performed and adapted within households. This approach allows the research to reveal the specific ways in which material conditions, social norms, and competencies shape everyday routines in household settings, thereby addressing the core objectives of this study (Halkier, 2016).

### 4.3.2 Observation as a Complementary Method

Observation served as a crucial complement to the interview process, offering immediate insight into household routines and interactions with cooling devices.

Through in-person observations during interviews, I documented how family members moved within shared spaces, where cooling devices were positioned, and any unique adaptations to the environment, such as the placement of fans or open windows. These observations were particularly informative in helping me contextualize verbal responses, revealing practical behaviours that participants might not explicitly state. For example, in homes where air conditioning units were only installed in certain rooms, I observed patterns in family movements between rooms based on cooling availability. In one case, a family who expressed a preference for natural ventilation in interviews was seen relying heavily on an AC unit in their main living area, indicating a gap between stated values and practical adaptations to temperature and layout. Such observations aligned closely with social practice theory's emphasis on how material conditions, social norms, and daily routines collectively shape behaviours.

Notes from these observations were recorded immediately after each session in a field notebook, capturing the spatial and behavioural details that enriched the data analysis. This observational data was particularly valuable in virtual interviews with cautious participants, who shared floor plans to aid my understanding. For these online-only interactions, having a visual reference of the household layout helped me to accurately visualize their daily paths, AC unit placements, and ventilation options, which provided essential context for understanding their cooling choices. These observational insights, alongside interview data, allowed for a richer, more holistic understanding of cooling practices, demonstrating how material arrangements and social interactions intersect in everyday life. This approach also supported the core objectives of social practice theory by revealing the embedded, practical nuances that shape family dynamics around cooling within the unique cultural and spatial context of Shenzhen.

## 4.4 Data Collection

### 4.4.1 Participant Criteria

This study employs a purposive sampling strategy to select participants who can provide rich, relevant data on household cooling practices in Shenzhen. Focusing on

multi-generational families living in self-owned apartments was crucial, as it allowed for a consistent examination of intergenerational dynamics within familiar residential environments. For this study, "self-owned family apartments" refers to properties owned by one or more family members residing together, such as an adult child living with their parents or an extended family sharing a single apartment. The study's purposive sampling criteria reflect Shenzhen's urban and cultural contexts, where apartment living is the dominant housing type, particularly among families who own their homes. This criterion ensures that participants' control over their housing environment is relatively consistent, with fewer limitations imposed by landlords or property managers.

### **Participant Criteria:**

- **Family Composition:** The study includes families with at least two generations of adults—parents and their adult children—who live in the same household. This setup allows for the exploration of intergenerational interactions, providing insight into how families negotiate shared spaces and air conditioning usage across generations.
- **Age of Participants:** The participant pool comprises adults aged 18 and above, divided into two broad generational categories to capture distinct perspectives:
  - **Younger Generation (aged 18-38):** This group consists of adult children who often are either pursuing higher education or early in their careers. Shenzhen's younger generation is generally highly educated, benefiting from the city's developed educational infrastructure. For clarity in data analysis, a subset of this group (ages 18-30) is later referred to as Group A1, capturing participants who largely depend on parental support and thus may engage in cooling negotiations that reflect emerging autonomy and economic dependence.
  - **Older Generation (aged 38 and older):** Parents typically fall within this cohort. However, to acknowledge shifts in educational access over time, this group can be further divided based on age. While individuals in their late 30s and early 40s increasingly received higher education,

participants over 50 typically have lower formal education levels due to limited opportunities during earlier decades. This generational divide influences not only economic practices but also attitudes towards air conditioning, as those over 50 often developed cooling practices before widespread AC access.

- **Building Type:** Given Shenzhen's high urban density, participants are limited to those living in apartment buildings, which are the predominant housing type. Shenzhen apartments generally feature windows that can be fully opened, allowing for natural ventilation.
- **Residency Duration:** To ensure established cooling practices and routines, participating families have lived in their current residences for at least two years. This criterion allows for the examination of long-standing practices that are less likely to be influenced by recent changes in living conditions.

This sampling strategy provides a representative cross-section of Shenzhen's urban families, capturing both the younger generation's educational attainment and career aspirations, as well as the older generation's values shaped by historical economic and cultural constraints. Younger participants tend to be financially stable, while the socio-economic profile of older generations varies, reflecting Shenzhen's diversity.

#### 4.4.2 Recruitment Process

To recruit a diverse and representative participant sample, I used three main methods: community posters, social media, and snowball sampling. Posters were placed on residential community boards in Shenzhen with the help of neighbourhood councils, targeting families who rely on local announcements rather than online platforms. Social media recruitment was conducted through Weibo, a widely used Chinese platform similar to Twitter, which helped connect with younger participants who are more active online and more likely to respond. Snowball sampling encouraged participants to refer family or friends who met the study criteria, allowing access to a broader range of backgrounds. To incentivize participation and acknowledge the time and effort of participants, each participant was offered a £30 monetary reward upon completing the study. These methods and incentives ensured a participant pool that reflected Shenzhen's demographic and socio-economic diversity, which was crucial for understanding intergenerational cooling practices.

#### 4.4.3 Stratified Sampling

For structured analysis, families were further stratified into two primary groups based on apartment ownership and family living arrangements, which allowed for targeted comparisons of intergenerational cooling practices.

- **Group A:** This group comprises families where adult children live in their parents' apartment. Within Group A:
  - **Group A1:** Represents the younger subset (ages 18-30), who are generally students or early-career professionals. These participants often still rely on parental support, influencing their approach to cooling practices. As their parents primarily own the property, these young adults engage in daily negotiations around cooling practices, balancing personal comfort with respect for parental preferences.
  - **Group A2:** Consists of the parents of Group A1 participants, typically aged 38 and older. This generation's cooling habits are often shaped by their own childhood experiences before the widespread use of air conditioning in China, contributing to a conservative approach to cooling, emphasizing energy conservation.
- **Group B:** This group consists of families where parents live in their adult children's apartment. Within Group B:
  - **Group B1:** Includes younger participants aged 30-50 who financially support their parents and are generally more financially stable. Many in this group are college-educated, particularly those in their 30s and 40s, and their cooling habits reflect a balance of modern expectations and traditional considerations.
  - **Group B2:** Consists of the parents of Group B1, typically aged 50 and older. This group, exposed to air conditioning only later in life, tends to value traditional cooling methods, relying more on natural ventilation and more conservative AC use.

The stratification ensures a balanced representation of Shenzhen's diverse family arrangements, enabling a focused comparison of generational cooling practices. For

instance, older participants, particularly those over 50, recall limited access to AC during their youth and maintain frugal usage habits, while younger participants adopt more flexible practices aligned with urban lifestyles.

The majority of respondents in this study reside in standard apartment complexes or residential communities, representative of Shenzhen's low- to middle-income groups. Initially, I aimed to collect detailed household income data, but many participants were reluctant to provide precise figures, finding it challenging to estimate their total household income accurately. Consequently, I adapted my approach, asking participants at the beginning of each interview how they perceived their income level within the context of Shenzhen's socio-economic landscape. Most respondents identified themselves as being within low- to middle-income or middle-income brackets, aligning with the demographic diversity I sought to represent.

In instances where participants were unable to complete their interviews, partial data was still included if it provided valuable insights into family cooling practices. As shown in Table 1, a total of 59 respondents contributed to the study, including 25 families with full multi-generational participation. Additionally, 7 families initially intended to provide multi-generational insights but ultimately contributed only one generation due to factors like lack of interest or availability. After receiving consent to retain their responses, these single-generation participants offered perspectives that either corroborated or uniquely informed the study's broader findings. The final sample included 16 families in Group A and 9 in Group B, along with 4 independent participants from Group A and 3 from Group B.



**Table 1.** Participants of the Interview (N=59)\*

<b>Family</b>	<b>Name</b>	<b>Gender</b>	<b>Age</b>	<b>Group Type</b>	<b>Generations</b>	<b>Family Member Details</b>	<b>Member Number</b>	<b>Interview Method</b>
1	<i>Tony Wang</i>	Male	32	A	2	Parents, son and daughter-in-law	4	In-person
	<i>Helen Wang</i>	Female	58					In-person
2	<i>Leo Chen</i>	Male	33	B	2	Parents and son	3	In-person
	<i>Barbara Li</i>	Female	63					In-person
3	<i>Lily Zhang</i>	Female	31	B	2	Parents and daughter	3	In-person
	<i>Susan Zhang</i>	Female	58					In-person
4	<i>Jack Li</i>	Male	33	B	3	Son and daughter-in-law, mother, grandson	4	In-person
	<i>Margaret Chen</i>	Female	64					In-person
5	<i>Tom Zhang</i>	Male	25	A	2	Parents and son	3	In-person
	<i>Dorothy Liu</i>	Female	46					In-person
6	<i>Jerry Liu</i>	Male	23	A	2	Parents and son	3	In-person
	<i>Patricia Yang</i>	Female	48					In-person
7	<i>Mike Wu</i>	Male	32	A	2	Parents, son and daughter-in-law	4	In-person
	<i>Andy Wu</i>	Male	62					In-person
8	<i>Mary Wu</i>	Female	43	B	3	Parents-in-law, son and daughter-in-law, grandson	5	In-person
	<i>Nancy Xu</i>	Female	74					In-person
9	<i>Karen Zhao</i>	Female	43	B	3	Parents-in-law, daughter, son-in-law, grandson	5	In-person
	<i>Linda Lin</i>	Female	78					
10	<i>Ken Xu</i>	Male	28	A	2	Parents and son	3	Online
	<i>Ran Xu</i>	Male	58					In-person

	<b><i>Elizabeth Sun</i></b>	Female	57					In-person
11	<b><i>Henry Zhao</i></b>	Male	24	A	2	Parents and son	3	Online
	<b><i>Deborah Guo</i></b>	Female	53					In-person
12	<b><i>Alice Lin</i></b>	Female	34	B	3	Parents-in-law, son and daughter-in-law, granddaughter	5	In-person
	<b><i>Alex Lin</i></b>	Male	61					In-person
13	<b><i>Shirley Lee</i></b>	Female	41	A	3	Parents-in-law, daughters, sons-in-law, grandson	5	In-person
	<b><i>Carol Zhou</i></b>	Female	67					In-person
14	<b><i>Judy Huang</i></b>	Female	51	B	3	Mother, daughter, granddaughter	3	In-person
	<b><i>Janet Tan</i></b>	Female	73					In-person
15	<b><i>Emily Wang</i></b>	Female	23	A	2	Mother and daughter	2	In-person
	<b><i>Beverly Gao</i></b>	Female	49					In-person
16	<b><i>Sophie Li</i></b>	Female	24	A	2	Parents and daughter	3	In-person
	<b><i>Diane Wei</i></b>	Female	49					In-person
17	<b><i>Eric Sun</i></b>	Male	22	A	2	Parents and son	3	In-person
	<b><i>Ruth Chu</i></b>	Female	50					In-person
18	<b><i>Grace Chen</i></b>	Female	24	A	2	Parents, 1 daughter, 1 Son	4	In-person
	<b><i>Joyce Jiang</i></b>	Female	54					In-person
19	<b><i>Bella Wu</i></b>	Female	24	A	2	Parents, 2 daughters, 1 Son	5	In-person
	<b><i>Kathy Shen</i></b>	Female	57					In-person
20	<b><i>Eunice Guo</i></b>	Female	23	A	3	Grandmother, Parents and daughter	4	In-person
	<b><i>Peter Guo</i></b>	Male	53					In-person
21	<b><i>Benjamin Sun</i></b>	Male	30	A	2	Parents, daughter and son in law	4	In-person
	<b><i>Fiona Chen</i></b>	Female	28					Online
	<b><i>Yvonne Lin</i></b>	Female	57					In-person
22	<b><i>Min Dai</i></b>	Male	60	B	2	Parents, son and daughter-in-law	3	In-person
	<b><i>Meilan Gao</i></b>	Female	87					In-person

23	<b><i>Youjun Zhang</i></b>	Male	52	B	2	Parents, son and daughter-in-law	3	In-person
	<b><i>Cuiying Ju</i></b>	Female	93					In-person
24	<b><i>Kevin Tan</i></b>	Male	26	A	2	Parents and son	3	In-person
	<b><i>Kai Tan</i></b>	Male	54					In-person
25	<b><i>Franklin Zhou</i></b>	Male	28	A	2	Parents and son	3	In-person
	<b><i>Lucas Zhou</i></b>	Male	57					In-person
Independent 1	<b><i>Evelyn Hu</i></b>	Female	32	A	2	Parents and daughter	3	Online
Independent 2	<b><i>Ryan Wang</i></b>	Male	26	A	3	Parents and son	3	Online
Independent 3	<b><i>Yu Zhang</i></b>	Male	36	A	2	Parents, son and daughter-in-law	4	Online
Independent 4	<b><i>Lau Qian</i></b>	Male	82	B	2	Parents, son and daughter-in-law	4	In-person
Independent 5	<b><i>Jie Xu</i></b>	Female	76	B	2	Parents, son and daughter-in-law	4	In-person
Independent 6	<b><i>Rui Cui</i></b>	Male	79	B	2	Parents, son and daughter-in-law	3	In-person
Independent 7	<b><i>Jia Lu</i></b>	Female	18	A	2	Parents and daughter	3	Online

**\*Note:** Based on the consent form, the research only has the rights to use year of birth, gender, and marital status to explained interviewees.

#### 4.4.4 Data Collection Steps

The data collection process was designed with attention to detail, ensuring robust and meaningful insights. The following steps outline this process:

1. **Recruitment and Screening:** Families meeting the generational and residence criteria were recruited for the study. All participants were over 18, with anonymity maintained throughout. During recruitment, a screening questionnaire was used to collect basic demographic information such as age, marital status, family composition, and apartment ownership status. This enabled stratified sampling, essential for examining generational contrasts in cooling practices.
2. **Flat Design Analysis:** During the design phase, I anticipated that COVID-19 concerns might limit in-person interviews, as some families might be hesitant about face-to-face interaction. Fortunately, by the time the interviews commenced in 2023, China had basically lifted its stringent zero-COVID policy, enabling the majority of interviews to be conducted in person. However, a few participants remained cautious and opted for online interviews. For these participants, I obtained floor plans of their homes, which proved useful in understanding their living spaces and air conditioning setups. Originally, I intended to use these layouts to examine whether room arrangements affected ventilation and cooling habits. While the layouts did not reveal significant patterns related to ventilation, they greatly enhanced my ability to contextualize each family's daily routines and air conditioning practices. For instance, families with limited window access were more reliant on AC for cooling, whereas those with cross-ventilation options displayed varied levels of AC dependence. This approach helped bridge the observational gap for online interviews, allowing me to better interpret their spatial interactions and cooling strategies.
3. **Scheduling Interviews:** Interview scheduling required flexibility, accommodating participants' schedules to minimize disruptions. Interviews were conducted in the participants' homes or online through Microsoft Teams video conferencing. In-home interviews allowed for observational data

collection on living conditions, while online interviews, though less immersive, benefited from floor plans that supported visualization of household layouts.

4. **Obtaining Informed Consent:** Before each interview, participants received a comprehensive information sheet explaining the study's purpose, process, and confidentiality measures. Informed consent was obtained via signed forms, ensuring that participants were fully aware of their rights and the study's aims, enhancing ethical transparency.
5. **Ensuring Confidentiality:** Confidentiality was emphasized from the start. All participants were informed about their rights when gaining their consent. Participants were assigned unique code numbers, and identifying data was stored securely. This encouraged open, candid discussions, especially on potentially sensitive family dynamics and disagreements over AC usage.
6. **Recording Interviews:** With participant consent, interviews were recorded to ensure an accurate representation of their insights. These recordings allowed for thorough analysis, ensuring that subtle nuances in responses were captured and enabling detailed thematic analysis aligned with social practice theory.

#### 4.4.5 Interview Process and Trust-Building

The interview process was carefully designed to capture authentic insights on household cooling practices. To foster trust, I engaged in preliminary conversations with participants, particularly for those who expressed hesitation or a reluctance to discuss sensitive family dynamics. In some instances, I noticed signs of uncertainty during initial phone calls, often related to concerns about privacy or discussing intra-family disagreements. For these cases, I took extra steps to build rapport by speaking with participants earlier in the day to allow for a more relaxed, conversational approach.

In these conversations, I would introduce myself not only as a professional researcher but also as someone personally familiar with family dynamics around cooling preferences. For example, I occasionally shared anecdotes from my own experience, such as disagreements with my grandmother over indoor temperature settings. By

presenting myself as someone who has encountered similar experiences, I aimed to create a sense of shared understanding, which helped put participants at ease and encouraged openness.

Interviews were scheduled based on participant availability rather than specific times of day. While I aimed to conduct sessions during hot afternoons when possible, to prompt discussions about peak cooling use, the actual interview times varied significantly, with some sessions taking place in the morning, afternoon, or evening as suited participants' routines. This flexibility was essential for accommodating participants' busy schedules and ensured that I could gather diverse perspectives on cooling practices under natural conditions.

Each interview lasted approximately 70 to 90 minutes, with some participants opting for in-person sessions and others preferring online interviews. Conducting interviews in person allowed for deeper engagement and enabled me to directly observe aspects of the household environment, while virtual interviews were a respectful choice for those who remained cautious about COVID-19. Regardless of format, I emphasized confidentiality and assured participants that their contributions were anonymous and would be handled responsibly.

Photographs of cooling devices and household layouts, taken with participants' permission, were used as supplementary data to provide visual context for the study. These images illustrated cooling device placement, room arrangements, and other elements relevant to understanding household practices. Including some of these visuals, pending permissions, could enhance the depth of this research presentation.

## 4.5 Positionality: Self-Reflection

As a researcher with significant ties to Shenzhen but without having grown up there, my positionality occupies a unique space between cultural familiarity and external detachment. This dual perspective has profoundly influenced both the data collection process, and the interpretative lens applied to the study. While my frequent visits and familial connections provided me with an understanding of the city's context, my experiences differ from those of long-term residents, creating both opportunities and

challenges. These differences shaped how participants perceived me and how I approached the data.

Growing up outside of Shenzhen allowed me to bring an external perspective to the fieldwork, which was particularly useful when examining intergenerational dynamics and negotiations around air conditioning use. This outsider vantage point enabled me to question practices that long-term residents might take for granted, offering fresh insights into how modernization and urbanization shape family interactions. However, my position as a Chinese researcher also imposed certain limitations. While my cultural familiarity helped me intuitively connect with participants and ask resonant questions, it may have constrained my perspective. For instance, it was through discussions with my supervisor that I fully realized the broader implications of China's unique emphasis on education and limited welfare provisions in amplifying intergenerational pressures—issues that I had initially underemphasized. A completely external observer might have more readily identified these structural factors, though they might struggle to grasp the nuanced cultural meanings embedded in family practices or build rapport with participants.

Recognizing these dynamics, I adopted a collaborative interview style to address participants' hesitance in discussing sensitive topics, such as family tensions over cooling preferences. Sharing personal anecdotes about similar intergenerational dynamics within my own family helped participants feel at ease, fostering openness and trust. For example, when parents were reluctant to discuss conflicts over temperature settings, recounting my own family's differing cooling preferences encouraged them to share their experiences more candidly. This approach allowed me to access narratives that might otherwise have remained hidden.

As someone who experienced a traditional Chinese education, I found my background particularly valuable in interpreting the cultural motivations underpinning household decisions about cooling. It provided me with a lens to understand how deeply ingrained educational and social expectations drive family choices, such as prioritizing a child's comfort and productivity over energy savings. However, social practice theory guided me to adopt a reflexive stance, prompting me to critically examine my assumptions. This reflexivity allowed me to step beyond my own experiences and recognize how educational aspirations in China not only influence

immediate decisions about air conditioning use but also embed comfort practices into the fabric of family life.

My cultural familiarity shaped the questions I asked and the patterns I sought in the data, such as the prioritization of children's educational comfort over parental energy-saving preferences. Rather than imposing this interpretation, I used it as a starting point to examine participants' accounts more critically. This reflexivity led me to document explicit instances where parents framed these choices as moral obligations, rooted in Confucian values of family support and collective success. For instance, one parent articulated their willingness to endure personal discomfort during the summer to ensure their child's study environment was optimal, describing it as an ethical duty within their role as a provider.

Yet, as a partial outsider, my reliance on participants' narratives and periodic visits limited my ability to fully capture some localized subtleties, such as how neighbourhood-specific microclimates or informal norms within residential communities influence cooling practices. These are nuances that might be more immediately apparent to long-term Shenzhen residents. Nevertheless, my geographical detachment enabled me to critically question practices that might seem self-evident to locals, such as the assumption that prioritizing academic comfort over energy efficiency is an uncontested norm.

Balancing this dual role as a culturally familiar yet geographically detached observer added depth and transparency to the analysis. While a Shenzhen-born-and-bred researcher might have captured more localized environmental and social nuances—such as the historical development of AC infrastructure or the role of neighbourhood networks in shaping energy practices—they might also internalize these as given, potentially overlooking broader cultural or structural influences. My positionality allowed me to interrogate these dynamics with a degree of critical distance, enabling a richer understanding of how urbanization, generational shifts, and cultural values intersect in shaping family practices.

By reflecting on my positionality, I aim to offer readers a clear and nuanced understanding of how my interpretations were shaped. This balance between cultural sensitivity and critical detachment ensures that the representation of Shenzhen's family dynamics acknowledges both shared cultural values and the diversity of lived



experiences. At the same time, I remain mindful of the limitations imposed by my positionality and strive to address them through reflexivity and rigorous data analysis.

## 4.6 Application of social practice theories

This study employs social practice theory as a foundational framework to analyse how cooling practices in Shenzhen households are shaped and negotiated. Social practice Theory, as articulated by Shove et al. (2012), conceptualizes practices as composed of three interconnected elements: materials (physical objects and infrastructure), competencies (skills and knowledge), and meanings (social and cultural significance). This framework was initially chosen for its ability to move beyond individualistic or static accounts of behaviour, offering instead a dynamic view of how practices evolve and are sustained within specific contexts.

During the research design stage, the focus was on the practical application of these three elements, particularly in understanding how cooling practices are embedded within daily routines and influenced by generational differences. The research questions and interview design were structured to explore these dimensions systematically, seeking to uncover how material resources, learned competencies, and cultural values interact to shape the use of air conditioning (AC) in family settings. While social practice theory provided an effective starting point, the analysis process revealed the need for additional theoretical perspectives to address certain complexities, such as the role of social interaction and cultural adaptation in shaping these practices. This realization led to a more reflexive approach, incorporating insights from Halkier (2020) and Welch et al. (2020) as supplementary frameworks to enrich the analysis.

### 4.6.1 Social Practice Theory in Research Design

At the outset, this study's research design was primarily guided by social practice theory's three-element model, emphasizing the interplay between materials, competencies, and meanings. These elements were particularly suited to understanding how cooling practices are enacted and negotiated within Shenzhen households, where air conditioning use reflects not only functional needs but also evolving cultural and generational dynamics.

The element of materials was central to framing initial questions around the physical and technological aspects of cooling. The presence of AC units, their placement within households, and their integration with other cooling methods, such as fans or natural ventilation, were identified as key components influencing how families manage temperature. For instance, initial interview questions focused on uncovering how families decided when and where to use AC versus other methods, aiming to capture the material dependencies and constraints shaping their routines.

The second element, competencies, guided the exploration of skills and knowledge related to cooling practices. This included practical aspects, such as how family members operated AC units, adjusted settings, and maintained the devices, as well as the intergenerational transmission of these skills. Questions were designed to probe how competencies were shared or contested within families, particularly in multi-generational households where members might have differing levels of familiarity with modern cooling technologies.

Finally, the element of meanings was integral to understanding the cultural and social significance of cooling practices. At this stage, the research design drew on the broader context of Chinese family values, such as filial piety, thrift, and educational aspirations, to frame questions about how participants interpreted comfort and resource use within their households. For example, questions explored whether cooling was viewed as a necessity or a luxury and how these perceptions varied across generations.

While this initial framework provided a robust structure for data collection, it became evident during the analysis phase that certain dimensions—particularly the role of social interactions and the negotiation of cultural meanings—required deeper theoretical engagement. The dynamics of family discussions around AC use, for example, highlighted the importance of interpersonal negotiation and generational tensions that were not fully accounted for within the initial framework. This led to the incorporation of supplementary insights from Halkier and Welch, whose work on reflexivity and culturally embedded practices offered valuable tools for addressing these complexities. These additions, while not part of the original design, enhanced the analysis by providing a richer understanding of how cooling practices are shaped through both individual actions and collective processes.

#### 4.6.2 Social Practice Theory's Components in Question Design

The integration of social practice theory into the question design for interviews was crucial to capturing the nuanced dynamics of household cooling practices. By structuring the interview guide around the three core elements of social practice theory—materials, competencies, and meanings—I sought to uncover how air conditioning (AC) practices are shaped by intergenerational negotiations, cultural values, and evolving social norms.

##### *Materials*

The material component in social practice theory highlights the role of physical objects, technologies, and environmental factors in shaping practices. For this study, materials included the AC units themselves, other cooling devices, and the physical and environmental conditions of Shenzhen, such as heat intensity and urban housing layouts.

To explore how materiality influenced cooling practices, I crafted questions that encouraged participants to reflect on the physical and technological aspects of their cooling routines. These questions aimed to capture participants' engagement with AC units and other cooling devices in everyday life, highlighting how these materials are incorporated into their practices. Example questions included:

- “What was the design of your previous or current home, and did that help with cooling? Did you have outside space?”
- “What changes or adjustments have been made to your home to deal with the heat, like AC installation or adding shading?”

These questions allowed participants to elaborate on how their access to and interaction with cooling technologies varied according to environmental and situational demands. Observations of material arrangements, such as the placement of AC units or the availability of fans, further enriched the understanding of material influences on practices.

##### *Competencies*

Competencies encompass the skills, knowledge, and decision-making processes involved in performing practices. In the context of this study, competencies were explored by examining how family members manage cooling technologies and negotiate their use within the household.

To probe this dimension, the interview guide included questions that explored both individual and collective competencies in managing AC use. For example:

- “Do you think you know how to use AC in an energy-efficient way? Why?”
- “Have you ever received any advice or instructions about using AC, like how to save energy? When was it, and were you able to follow it?”

These questions were designed to uncover generational differences in competencies, such as older family members’ reliance on traditional cooling methods versus younger members’ familiarity with technology. They also provided insights into how competencies are shared or contested within families, reflecting the intergenerational negotiation of practices.

### ***Meanings***

The meanings component in social practice theory focuses on the cultural and symbolic significance of practices. For cooling practices, this includes interpretations of comfort, modernity, thrift, and environmental responsibility. To explore meanings, I asked participants to reflect on the broader values and expectations that shape their cooling preferences and behaviours. Key questions included:

- “Do you think the way your family uses cooling reflects certain family or societal values, like saving money or being modern? Can you give some examples?”
- “Do you think disagreements about cooling are about more than just staying comfortable? What else might be involved?”

These questions prompted participants to articulate how their cooling practices align with or challenge cultural norms and family values. For instance, parents often discussed the prioritization of children’s comfort for academic success as a reflection of their role as providers, while younger participants highlighted the symbolic association of AC with modernity and convenience.

### ***Interconnections Between Components***

While the questions were designed to address each element of practice theory independently, they also revealed the interconnections between materials, competencies, and meanings. For example, a participant might describe how the material availability of an AC unit is intertwined with their competency in managing its settings and the cultural value placed on comfort or energy conservation. These interconnections underscored the dynamic nature of practices, where elements continuously influence and reshape one another within the context of family interactions. By systematically addressing these components, the question design ensured a comprehensive exploration of cooling practices (as shown in **Appendix 1**). This approach aligned with the study's goal of understanding how AC use is embedded within the cultural, material, and social fabric of Shenzhen households, providing a robust foundation for subsequent analysis.

### **4.6.3 Supplement Social Practice Theory: Cultural and Interactional Insights from Welch and Halkier**

This thesis builds on Daniel Welch's (2020) and Bente Halkier's (2020) contributions to enrich the application of social practice theory. Welch provides a cultural lens to understand how societal values and norms are lived and negotiated within practices, emphasizing that culture is not an external force but something actively embedded and expressed in daily life. Halkier complements this by offering tools to analyse how social interactions shape the negotiation and adaptation of these practices. Together, their insights illuminate the interplay of culture and interaction in shaping intergenerational cooling practices in Chinese households.

#### ***Welch's Contribution: Culture "In Practice" as a Theoretical Lens***

Welch (2020)'s work emphasizes that culture is not merely an overarching context or external influence but is lived and performed within practices. Through his editorial leadership in the Special Issue: Renewing Theories of Practice and Reappraising the Cultural, he advocates for a view of culture "in practice," where cultural values and societal narratives are continuously negotiated and expressed through everyday actions. In this thesis, Welch's cultural perspective is key to understanding how

Confucian values—such as thrift, filial piety, and educational priorities—manifest in cooling practices. These values are not static; instead, they are reinterpreted and adapted as families navigate modern demands. For instance, parents prioritizing their children’s comfort during study sessions, even at the expense of traditional thrift, exemplifies how broader cultural imperatives are enacted within specific practices. Welch’s insights provide a foundation for situating these behaviours within the larger context of modernization and cultural transformation in China.

### ***Halkier’s Dimensions for Analysing Interactional Dynamics***

While Welch highlights how culture is embedded in practices, Halkier (2020) focuses on how interactions make these cultural influences visible and shape their evolution. In her article “Social Interaction as Key to Understanding the Intertwining of Routinized and Culturally Contested Consumption”, Halkier identifies four dimensions—*coordination*, *intersection*, *hybridity*, and *normative accountability*—that shed light on how practices are shaped and reshaped through social interactions. These tools are particularly useful for dissecting how family members negotiate and adapt cooling practices.

- *Coordination* explains how shared routines are managed, such as parents and adolescents negotiating air conditioning usage to balance household energy goals with individual comfort.
- *Intersection* reveals how cooling practices align with other daily routines, like adjusting air conditioning to accommodate study schedules.
- *Hybridity* illustrates how traditional values and modern needs merge through reflexive adjustments, for example, when adolescents challenge thrift norms while advocating for comfort.
- *Normative Accountability* highlights how cultural expectations guide interactions, with parents justifying their decisions through values like educational success or household harmony.

These dimensions show that interactions are not merely moments of conflict or agreement but key processes through which cultural meanings and practical routines are continually negotiated and adapted. By applying Halkier’s dimensions, this thesis uncovers the relational dynamics that bring culture “in practice” into sharp relief. This

thesis emphasizes that cultural values do not simply operate as external influences on practices but are embedded within and actively expressed through them. Interaction plays a pivotal role in this process, as it is through social interactions that cultural narratives are interpreted, contested, and reaffirmed. For example, the negotiation of air conditioning use within families brings Confucian values like filial piety and thrift into practical focus, transforming these values into lived experiences that evolve with generational shifts. Halkier's dimensions can enable a detailed analysis of these dynamics, showing how interactions not only reveal the presence of culture in practice but also serve as the mechanisms through which culture adapts to new material and social conditions. This perspective deepens the understanding of how tradition and modernity coexist and interact within everyday practices.

## 4.7 Thematic Analysis

Thematic analysis was employed in this study to identify, analyse, and report patterns within the qualitative data collected from the interviews. This method is particularly suited for exploring the complex dynamics of household cooling practices and intergenerational negotiations, providing a robust framework for understanding these intricate interactions. The process began with familiarization with the data. Recorded interviews were transcribed verbatim in Chinese to ensure accuracy, as the nuances of the language are crucial for capturing the participants' true meanings. As a native Chinese speaker, I immersed myself in the data by reading the transcriptions multiple times, which allowed me to capture initial impressions and note potential patterns and themes.

The coding was conducted using NVivo software. A coding framework, based on the research questions and theoretical framework of social practice theory guided this process. Relevant data segments were highlighted and assigned codes. The coding was iterative; as more data was analysed, new codes were created and existing ones refined. This iterative nature of coding ensured that the process remained flexible and responsive to emerging insights. Following the initial coding, the codes were collated into potential themes. This step involved examining the codes to identify patterns and relationships. The development of thematic maps was instrumental in visualizing the

connections between codes and themes. These maps were refined iteratively, ensuring that they accurately represented the data and the emerging patterns.

Themes were then reviewed to ensure they accurately reflected the data. This review process involved checking if the themes worked in relation to the coded extracts and the entire data set. Feedback and iterative refinement were crucial at this stage, ensuring that the themes were robust and representative of the data. Each theme was analysed in detail to understand its scope and focus. This detailed analysis included identifying sub-themes and exploring the relationships between them. Themes were named to reflect their essence, ensuring they conveyed a clear understanding of the patterns within the data.

The final step involved constructing a narrative that explained the identified themes and their significance in relation to the research questions. Quotes from participants were used to illustrate the themes and provide evidence for the analysis, ensuring that the findings were grounded in the participants' own words and experiences. Ensuring depth and rigor in the analysis was paramount. The coding process was thorough and detailed, capturing all relevant data segments for analysis. Themes were continuously refined through an iterative process involving revisiting the data and refining the coding framework. Conducting the analysis in Chinese allowed for a deeper understanding of the nuanced expressions and meanings inherent in the language, adding depth and richness to the findings.

Several challenges were addressed during the data analysis. Interpretation issues, such as ambiguities or unclear responses, were mitigated by revisiting the context in which the responses were given. The use of Chinese transcription and analysis helped maintain the integrity of participants' meanings and expressions. Complex themes that overlapped or were difficult to distinguish were discussed and refined to reach a clear definition and understanding of their boundaries. Maintaining consistency in coding was achieved by developing and regularly reviewing a codebook, allowing for the continuous refinement of codes and themes. By employing these strategies, the thematic analysis in this study was rigorous and reliable. This methodological rigor enhances the credibility of the findings and provides a robust foundation for exploring the intricate dynamics of household cooling practices in Shenzhen. Conducting the analysis in Chinese ensured that the nuanced meanings and expressions of the



participants were fully captured, adding depth and richness to the findings. This thorough and thoughtful approach ensures that the data collected is both rich and detailed, providing valuable insights into household cooling practices and intergenerational dynamics.

## 4.8 Ethical Considerations

In conducting this research, several ethical considerations were meticulously addressed to ensure the protection and respect of participants' rights and privacy. The recruitment process began by posting advertisements and recruitment posters in communities and on social media platforms such as Weibo. Interested individuals could express their interest by scanning a QR code on the posters (**Appendix 2**), which directed them to an online consent form hosted on Opinio, a UCL-approved secure survey tool. Potential participants were provided with a detailed information sheet that explained the purpose of the study, the nature of their participation, and their rights, including the right to withdraw from the study at any point without any consequences (see **Appendix 3** and **Appendix 4**). The information sheet was translated and written in simple Chinese to ensure clear understanding, and participants were required to sign the consent form before any data collection began. To protect participants' privacy and confidentiality, data were pseudonymized, meaning personal identifiers were replaced with code numbers in all research data records. Contact details were retained separately, only for communication purposes. During the data collection process, participants' names were not recorded in the research data. Interview recordings were stored securely on a password-protected, encrypted hard drive accessible only to the data collector. After transcription, the original recordings were deleted, and the anonymized transcripts were shared with other team members via OneDrive, ensuring secure and limited access. All collected research data were stored on UCL's OneDrive, a secure online file storage system, while personal/contact data were securely maintained in a separate file. Access to both the research and personal data was restricted to the data collector and the principal investigators ensuring a high level of data security and confidentiality throughout the research process.

The study received ethical approval (Project ID: 20599/002, **Appendix 5**) from the University College London (UCL) STEaPP Local Research Ethics Committee. The approval process involved a thorough review of the study's design, including its ethical considerations and data management plans. Specific ethical issues such as ensuring participants' comfort and well-being during interviews, managing potential risks of data leakage, and maintaining the confidentiality of sensitive information were addressed in the application. Additionally, the study adhered to the General Data Protection Regulation (GDPR) 2018, ensuring that all personal data were processed in compliance with legal requirements. To further ensure ethical compliance, the research plan and materials were also reviewed and approved by Shantou University in China. This local ethical approval added an additional layer of oversight and ensured that the research met local ethical standards and guidelines. During the interviews, participants were reminded of their rights, including the right to withdraw from the study at any point without any negative consequences. They were also informed about the purpose of the research and how their data would be used, ensuring transparency and building trust. To maintain the participants' comfort and well-being, interviews were conducted in a manner that allowed participants to pause or stop the interview if they felt uncomfortable. The interview process was designed to be respectful and considerate, with open-ended questions that encouraged participants to share their experiences freely and openly. In summary, this study was conducted with a strong commitment to ethical principles, ensuring that participants' rights, privacy, and well-being were protected at all stages of the research.

## 4.9 Limitations of the Study Design

Shenzhen serves as a compelling case study for exploring intergenerational energy practices due to its rapid urbanization, cultural diversity, and economic affluence. The city's unique blend of traditional values and modern technological adoption provides a rich context for analysing how cultural norms, material conditions, and generational interactions influence cooling behaviours. These characteristics make Shenzhen particularly illustrative for understanding similar dynamics in other rapidly urbanizing cities in China, such as Shanghai, Guangzhou, and Chengdu, where socio-economic transitions and intergenerational value shifts shape energy practices. Moreover, cities

in Southeast Asia, such as Bangkok, Kuala Lumpur, Jakarta, and Ho Chi Minh City, face comparable challenges due to their rapid economic growth, urbanization, and middle-class expansion, coupled with cultural traditions rooted in collectivism and family-centred values.

In these regions, shared characteristics—such as rising air conditioning adoption, evolving cultural norms, and tensions between traditional and modern lifestyles—align closely with the dynamics observed in Shenzhen. For example, the interplay between material conditions (e.g., availability of cooling technologies), generational competencies, and cultural meanings in cooling practices is likely to resonate in urban contexts across Asia where collectivist cultural frameworks prevail. However, the specificity of Shenzhen's socio-economic profile introduces limitations to the broader applicability of its findings. The city's advanced infrastructure, higher levels of affluence, and significant migrant population may not fully reflect conditions in smaller cities or rural areas within China, such as Lijiang or Lanzhou, where resource constraints, lower air conditioning penetration, and differing cultural norms could result in distinct intergenerational energy practices. Similarly, variations in regional climate, housing designs, and local governance structures may influence how cooling technologies are adopted and negotiated in other cities. Despite these limitations, Shenzhen's relevance lies in its ability to offer a framework for understanding energy behaviours in cities that share key socio-economic and cultural characteristics. The insights gained from this case study have particular applicability to regions experiencing rapid urbanization, where family dynamics and cultural values intersect with modern technological adoption.

Besides, for the qualitative method I adopted, one limitation is its inherently subjective nature. The data collection and analysis processes rely heavily on the researcher's interpretation, which can introduce bias. In this study, the thematic analysis was conducted by a single researcher, which, while ensuring consistency, also means that the interpretation of the data is subject to the researcher's perspectives and potential biases. This could influence the coding and theme development processes, affecting the study's overall findings. To mitigate this, the analysis was conducted using a systematic approach and involved regular peer debriefing sessions with the research supervisors. These sessions provided an opportunity to discuss emerging themes and interpretations, ensuring that different perspectives were considered.

Another limitation is the potential for biases in participant selection. The study used purposive sampling to recruit multi-generational families living in self-family apartments in Shenzhen. While this approach ensures that the participants are relevant to the research questions, it may also introduce selection bias. The recruitment methods, including community posters, social media, and snowball sampling, aimed to reach a diverse and representative sample. However, there is still a possibility that the sample may not fully represent the broader population, particularly those from different socio-economic backgrounds or living arrangements.

In response to the logistical challenges posed by conducting online interviews, particularly during the COVID-19 pandemic, I implemented several strategies to ensure the quality and depth of the data collected. While 7 interviews were conducted online via Microsoft Teams, I took extra steps to mitigate the potential loss of non-verbal cues and contextual insights typically gained through in-person interactions. First, I conducted a pre-interview briefing to help participants familiarize themselves with the online platform and ensure that they felt comfortable using it, which allowed for smoother communication during the actual interview. Additionally, I used open-ended questions to encourage participants to elaborate on their responses, providing richer detail despite the virtual format. During the interviews, I paid close attention to verbal cues, such as tone and pauses, and followed up with probing questions to capture deeper insights that might not have been immediately apparent through video alone.

# **Chapter 5: Generational Perspectives on Cooling Practices**

## **5.1 Introduction**

By analysing intergenerational variations with social practice theory, this chapter explores how shifts in material conditions—such as the availability, affordability, and design of air conditioning systems—and competencies, including skills and knowledge for using these technologies, have influenced the meanings associated with cooling practices over time. These changes reflect broader socio-economic and technological transitions in urban Chinese households. The chapter highlights how material and skill-based elements of cooling practices evolved across generations, moving from resource-constrained, frugality-driven behaviours to practices characterized by greater accessibility and reliance on modern cooling technologies. Older generations, shaped by earlier periods of economic scarcity, often adopted resourceful, low-cost cooling methods, while younger generations, benefiting from technological advancements and rising living standards, approach air conditioning as a routine aspect of daily life. These shifts illustrate how changes in material conditions and competencies contribute to evolving practices and their embedded meanings. This chapter provides a foundational understanding of how generational shifts in materiality and competence influence cooling practices, offering a basis for discussions in subsequent chapters. By exploring these elements independently, this chapter sets the stage for later analyses of how intergenerational negotiations, social interactions, and broader cultural shifts shape the adaptation and negotiation of these practices over time.

## **5.2 Redefining Comfort: The Interplay of Material Affluence and Generational Cooling Practices**

### **5.2.1 Parent's Perspectives on Material Shifts**

Throughout the interviews, the influence of economic development on cooling practices consistently emerged as a defining theme, particularly in shaping the material dimension of these practices. Across generational lines, participants

highlighted how economic growth expanded access to air conditioning, fundamentally altering the material conditions of comfort and reshaping established routines. While older and younger generations differed in their experiences and adaptations to this material transformation, there was widespread agreement that technological advancements and increased affordability of cooling technologies redefined household expectations and practices. This intergenerational shift reflects the evolving material accessibility of resources and infrastructure, which have been internalized differently by each generation, shaped by their unique historical and socio-economic contexts.

For older generations, who lived through periods of economic scarcity and resource constraints, modern cooling technologies such as air conditioning represent both progress and adaptation to new material realities. Their cautious approach to these technologies reflects their lived experiences, where resource conservation was ingrained as a survival strategy rather than a choice. This perspective underscores how material conditions during their formative years shaped enduring values of thrift, resilience, and responsibility. For instance, Carol Zhou, a 67-year-old interviewee, shared her reflections on how economic reforms improved rural infrastructure, making technologies like air conditioning more accessible but also prompting a shift in how comfort was perceived and managed:

*"Certainly, back in the day, we used to have to use our own resources because there was no water or electricity at our parents' place. In the countryside, there was no electricity. It's only now, after the reforms and opening-up, that rural areas have started to improve. Water and electricity are available, roads are paved, and transportation is convenient. Everything's better than before; it's just the way it is."*

(Carol Zhou, female, 67 years old)

Carol's narrative vividly illustrates how economic reform transformed material conditions, particularly through improved access to stable resources such as electricity and infrastructure. For her generation, air conditioning represents the tangible benefits of modernization, reshaping perceptions of comfort and redefining everyday practices. However, the expanded availability of such technologies has not diminished the cautious attitudes toward resource use cultivated during earlier periods of scarcity. While air conditioning is now more accessible, older generations continue to approach

its use with a measured balance of practicality and restraint, demonstrating an enduring competence in resource management shaped by necessity. This careful management of resources also plays a significant role in intergenerational interactions, as older family members actively impart these values to younger generations. For many, the deliberate use of air conditioning is not merely a matter of cost efficiency, but a practice deeply rooted in conserving resources and maintaining the cultural values of thrift and responsibility ingrained in their lived experiences.

During a visit to Karen Zhao's home, the material affluence afforded by economic progress was unmistakable. Karen, a 43-year-old woman living with her parents and children, sat comfortably in a meticulously furnished living room. The room, cooled by the gentle hum of an air conditioner, showcased elements of modern middle-class life—plush cushions, sleek furniture, and minimalist decor. The scene was emblematic of a lifestyle defined by controlled comfort, one made possible by decades of rapid economic development.

Yet, as I took in the scene, I couldn't ignore the thought that this sense of comfort might be interpreted very differently depending on one's generational and experiential background. For someone like Karen's mother, who might have experienced life in times when cooling meant open windows and handheld fans, the air conditioner's hum could symbolize progress and achievement. At the same time, it might also evoke a feeling of unease or even nostalgia—a sense that the careful restraint and resourcefulness once ingrained in daily life were slowly slipping away. The cool air, once considered a luxury, had become so deeply woven into the texture of Karen's daily life that she didn't even question it. This casual approach, a quiet acceptance of comfort, might be seen by some as a departure from the values of thrift and resilience that once underpinned her family's worldview.

Karen herself seemed to be aware of this shift, and her words reflected a consciousness of the generational divide in how air conditioning is perceived and valued within her family. She talked about her children, particularly her almost 20-year-old son, and how their understanding of comfort was starkly different from her own upbringing:

*"They [kids] are much happier now. If you ask them, they're definitely happy. Because for kids who grew up in Shenzhen, I think it's what my mom said, they haven't*

*experienced hardships... We did experience hardships here. Despite all the reforms and being more advanced than others, Shenzhen still faced [technological] limitations..... used to have frequent water and power outages. Nowadays, if there's a water or power outage, it's a major civic event... But now, we don't have that anymore. So, children simply don't know about supply issues. They don't feel resource scarcity..."*

(Karen Zhao, female, 43 years old)

Karen's reflection highlighted the significant influence of material conditions on her generation's cooling practices, shaped by a transition from scarcity to abundance. Her parents' cautious approach to air conditioning, developed during times of resource constraints, continues to influence her worldview. This mindset, rooted in mindful resource management, informs her awareness of the importance of conserving energy. However, Karen also acknowledges the conveniences enabled by economic progress, which have allowed her family to incorporate air conditioning more seamlessly into their daily lives. In discussing her son's use of air conditioning, Karen observed a striking generational shift. For her son, air conditioning is not a luxury or a carefully considered decision but an unquestioned aspect of daily life—readily available and effortlessly integrated into modern routines. This contrast underscores how material affluence has normalized technologies like air conditioning, creating a generational divide in how these resources are perceived and utilized. While Karen retains her parents' value of cautious use, her children view air conditioning as a baseline utility, reflecting the reshaped expectations associated with resource stability.

Karen also recounted the influence of her parents' advice on her own practices, which were shaped by a time when resource conservation was a necessity. She shared how her parents would remind her not to use the air conditioner unless it was absolutely essential:

*"Why did they used to say not to use the air conditioner unless it's over 30 degrees? Because back then, energy was scarce... So, parents thought there was no need to use this resource until that era... Now, in this city, they don't feel a shortage of electricity. So, they don't feel the need to conserve."*

(Karen Zhao, female, 43 years old)



Her parents' emphasis on restraint exemplifies a generational competence in managing limited resources. While Karen continues to value this principle, she applies it with greater flexibility, reflecting the material changes that have made air conditioning more accessible and affordable. Her relationship with air conditioning, therefore, is shaped by both a memory of scarcity and the reality of abundance—a practical adaptation to changing material conditions. Karen's narrative highlights the interplay between material affluence and generational practices, illustrating how shifts in resource availability influence competencies and behaviours. Her story demonstrates how material progress reshapes household cooling practices while preserving elements of past attitudes, such as the emphasis on mindful use. These values, passed down through generations, remain embedded in Karen's understanding of resource management, even as her family adapts to modern standards of comfort. This interplay provides insight into the evolving meanings and competencies associated with air conditioning in an era of material transformation.

Helen Wang, a 58-year-old parent, provided a vivid account of how her generation navigates the balance between embracing modern comfort and maintaining a sense of resource responsibility:

*"In the past, buying a[n electric] fan used to cost several hundred [RMB]... with a monthly income of just a few tens, you would feel like this thing was an astronomical figure... In the beginning, it used to cost several thousand dollars, and now if you buy an air conditioner, you see those expensive ones for four or five thousand, and it feels like something you can gradually accept."*

(Helen Wang, female, 58 years old)

Helen's narrative underscores the transformative role of economic progress in expanding access to cooling technologies. For her generation, resource limitations in earlier decades cultivated a sense of prudence in consumption, which continues to inform their approach to air conditioning use. This caution, shaped by economic constraints, reflects a generational competence in resource management that prioritizes deliberate and thoughtful use. While today's material conditions have improved significantly, enabling greater access to air conditioning, the ingrained practices of resource conservation remain a cultural value among many in her age group.

For Helen and her peers, this competence has transcended practicality to become a cultural ethos of conservation. Even as air conditioning becomes more affordable and accessible, their approach reflects a lifelong practice of adjusting consumption to fit available means, demonstrating how material conditions interact with deeply rooted values.

This ethos is accompanied by a sense of nostalgia for a time when cooling technologies, such as fans or air conditioners, were rare and highly valued luxuries. This nostalgia is not simply sentimental; it reflects a lived awareness of the resource constraints that shaped earlier practices. For parents like Helen, this awareness translates into an effort to impart a balanced perspective on comfort and resourcefulness to their children. By sharing stories and practices rooted in past material limitations, they seek to instill an appreciation for the value of restraint, even as they navigate a shifting material landscape where air conditioning has become a normalized and readily available feature of modern life.

Karen Zhao, a 43-year-old participant, reflected on this generational dynamic and her own negotiation of resource use within her family:

*"Why did they used to say not to use the air conditioner unless it's over 30 degrees? Because back then, energy was scarce... So, parents thought there was no need to use this resource until that era... Now, in this city, they don't feel a shortage of electricity. So, they don't feel the need to conserve."*

(Karen Zhao, female, 43 years old)

Karen's remarks highlight how the older generation's cautious practices have influenced younger family members' perceptions of cooling technologies. While air conditioning is now integrated into daily life as an essential utility, older parents' narratives about past resource scarcity serve as a reminder of the importance of mindful consumption. These stories illustrate how generational values of thrift and restraint are transmitted and adapted within families, blending past experiences with present material realities.

Nancy Xu, aged 74, further illustrated this ethos of conservation by describing how her life experiences with resource scarcity continue to shape her deliberate and sparing use of air conditioning. Her perspective, like Helen's, emphasizes how

material affluence has expanded access but has not entirely replaced the resource-conscious values instilled during periods of scarcity.

During a visit to Nancy Xu's home, the deliberate preservation of her air conditioning unit stood out. The unit was carefully covered with gauze (**Figure 5**), while the remote control was neatly wrapped in a thin layer of plastic (**Figure 6**). These small but intentional acts symbolized her respect for the device's functionality and cost, highlighting a generational approach to material resources shaped by decades of scarcity. Nancy only removes the cover when absolutely necessary, instead relying on fans or open windows to maintain comfort during moderate conditions.

Nancy's sparing use of air conditioning exemplifies a deeply ingrained commitment to managing resources responsibly, shaped by a lived history of scarcity. This practice underscores the material significance of air conditioning as more than just a technological convenience; it reflects values of restraint and sustainability embedded in her generational experience. For Nancy, air conditioning is a resource to be used judiciously, symbolizing a balance between comfort and conservation. Her cautious approach not only aligns with her own values but also serves as a means to instill these principles in younger family members, fostering a sense of intergenerational responsibility and resource-consciousness.



**Figure 5.** AC covered with gauze.

Source: Provided by Nancy Xu



**Figure 6.** AC remote wrapped in a thin plastic.

Source: Provided by Nancy Xu

Alex Lin, aged 61, shared a similar perspective on the enduring influence of resource scarcity in shaping his approach to cooling technologies. Reflecting on his childhood, Alex described how air conditioning was once an unattainable luxury:

*"Back in the day, we didn't even dare to dream of having air conditioning. It was a luxury reserved for the wealthy. We managed to get by without it. Even now, I'm not particularly fond of it. I'm accustomed to the heat."*

(Alex Lin, male, 61 years old)

For Alex, air conditioning remains a selective tool rather than a ubiquitous fixture in daily life. His approach reflects a competence honed during years of limited resources, emphasizing adaptability and prioritizing necessity over convenience. This mindset, shaped by past material constraints, continues to inform his restrained use of air conditioning despite the improved affordability and accessibility of such technologies.

This cautious perspective was echoed by Carol Zhou, aged 67, who articulated a balance between appreciating modern comfort and maintaining resource-conscious practices:

*"We certainly have the means to use air conditioning, but we don't feel the need to keep it running all the time. We believe in using resources sensibly and avoiding*

*extravagance. Just because we have air conditioning doesn't mean we should use it recklessly."*

(Carol Zhou, female, 67 years old)

Carol's reflection illustrates a broader generational ethos that views air conditioning as both a convenience and a potential excess. For her and others in this age group, the disciplined use of cooling technologies represents a cultural value cultivated through years of resource scarcity. This approach to material resources has become an enduring aspect of their identities, informing how they engage with modern conveniences while upholding principles of prudence and moderation.

In summary, the older generation's approach to cooling practices is deeply intertwined with their historical experiences of economic change and resource scarcity. Air conditioning, though now widely accessible, is often treated as an occasional luxury rather than a daily necessity. This cautious use reflects an ethic of thrift and resilience, values forged during times when even basic comforts were unattainable. These values continue to shape their engagement with material resources, offering a sharp contrast to the perspectives of younger generations who have grown up in an era of abundance. As I transition to the younger generation's narratives, I will further explore how material affluence has transformed the socio-cultural meanings and practices surrounding cooling technologies across generations.

### 5.2.2 How the Younger Group Saw Things Differently

Younger individuals perceive and use air conditioning in ways distinctly shaped by their materially abundant environment. Unlike the older generation, for whom air conditioning symbolizes a careful balance between comfort and resource conservation, younger people—particularly those under 24—have grown up with air conditioning as an integral part of everyday life. For this group, air conditioning is no longer a luxury or even a symbol of progress but a normalized utility akin to water or electricity, embedded seamlessly into their material world.

Jerry Liu, a 23-year-old university student in Shenzhen, encapsulated this perspective during our interview at a local café. Relaxed and matter-of-fact, Jerry described how air conditioning had become a natural backdrop to his life, highlighting its indispensability:

*"Jerry Liu: You know, for our generation, air conditioning is just as essential as having a smartphone... I mean, when I was a kid, my mom would always say, "Turn it off! It's wasting electricity!" So we just had this tiny fan, and my brother and I would fight to sit in front of it... Now, it's like—air conditioning? You don't even think about it—it's just there.*

*Researcher: So, do you think this is something unique to Shenzhen? Or is it like this everywhere?*

*Jerry Liu: Hmm... I think Shenzhen's kind of special. The summers here are—how to put it—sticky. Like, when you step outside, it's like the air is hugging you, you know? Back in high school, my friends and I would go to malls—not really to shop, just... to enjoy the AC. And it's not just the weather. Shenzhen is such a fast-paced city; everyone's always moving, working. I feel like... without air conditioning, you'd just collapse under the heat and the pressure.*

*Researcher: You mentioned Shenzhen's rapid changes. How do you think those changes have affected your generation?*

*Jerry Liu: Oh, it's had a huge impact. My parents, they always talk about when they first came here... They lived in this tiny, old apartment—super cramped—and no one had air conditioning back then. Just those metal fans, you know? And the streets were... dusty, noisy. Now, it's like a completely different city—skyscrapers, malls everywhere, AC in every home, even those little street vendor stalls sometimes. It's like... Shenzhen grew up alongside us, and all this comfort we have now... it's really because the city changed so much.*

*Researcher: So, would you say air conditioning means more than just staying cool?*

*Jerry Liu: Definitely. For my parents, it was like... a luxury, a dream. They told me how proud they were when they finally saved up to buy their first unit. For us? It's just normal. But it's more than that—it's like a symbol of... progress, you know? How far we've come. From sweaty, noisy nights with just a fan to this modern, fast-paced city where AC is just... a given."*

(Conversation with Jerry Liu, male, 23 years old)

Jerry's perspective underscores the material shifts that define his generation's comfort standards. Unlike his grandparents, who endured summers with little more than handheld fans and open windows, Jerry's experiences have been shaped by the consistent availability of modern cooling technologies in an economically developed city. For him, air conditioning is seamlessly integrated into daily life, demonstrating how technological advancements have been normalized for younger generations. This normalization reflects a significant material transformation: as air conditioning became more accessible, it established itself as a fundamental component of modern living, shaping the practices and expectations of younger individuals.

Jerry's reflections also highlight how air conditioning has become essential not just for physical comfort but for maintaining productivity and quality of life in a bustling urban environment. For his generation, cooling technologies are no longer perceived as a privilege or luxury but as an indispensable element of urban infrastructure. This material shift redefines comfort as an expected standard, removing the deliberation or restraint that characterized earlier generations. Unlike his parents or grandparents, Jerry views air conditioning not as an exceptional convenience but as a necessary condition for navigating the demands of contemporary life.

Henry Zhao, a 24-year-old university graduate, echoed Jerry's sentiment, describing the natural integration of air conditioning into his daily routine:

*"I can't imagine not using the AC! It's like a basic need, just like water and electricity. I've had it my whole life, and it's a no-brainer for me."*

(Henry Zhao, male, 24 years old)

Henry's remarks further illustrate how the material availability of air conditioning has shaped generational attitudes. For younger individuals like him, air conditioning is not merely a response to environmental conditions but a default expectation, reflecting a broader material shift where cooling technologies are deeply embedded in their living environments. This perspective marks a clear departure from the cautious and resource-conscious approach of older generations, emphasizing how evolving material conditions redefine both the practices and meanings associated with air conditioning.

Sophie Li, a 24-year-old, contextualized the material transformation of cooling practices by contrasting her reliance on air conditioning with her grandparents' ability to endure summers without it. However, she viewed their practices as part of a bygone era:

*"My grandparents talk about how they survived the summers without air conditioning. I respect that, but it's a different world now. We're used to comfort and convenience, and there's no going back."*

(Sophie Li, female, 24 years old)

For Sophie, air conditioning represents the material affluence and technological advancements of the modern era. Her comments reflect a generational shift in which air conditioning is no longer perceived as a luxury but as a basic component of acceptable living standards. This normalization of cooling technologies exemplifies how material improvements have reshaped expectations, embedding air conditioning into her generation's understanding of daily life. For Sophie and her peers, comfort is not just a benefit but a default condition, reflecting how material accessibility has redefined the role of cooling in shaping lifestyles.

Among slightly older individuals within the younger generation (those aged 30 and above), a more balanced perspective emerges, informed by their experiences of limited access to air conditioning during their youth. This subgroup demonstrates an evolving relationship with cooling technologies, shaped by both their parents' resource-conscious values and the increasing material availability of air conditioning as they grew older.

Jack Li, a 33-year-old professional, recounted how his upbringing shaped his initial cautious approach to air conditioning:

*"I vividly remember my parents telling me not to use the air conditioner too much when I was a kid. They would say things like 'We didn't have this luxury when we were young.' So, I tried to be frugal with it. But as I grew older and started working, especially during those scorching summers, I realized how essential air conditioning is. It's not about luxury; it's about being productive and comfortable."*

(Jack Li, male, 33 years old)



Jack's narrative highlights how material improvements have influenced a generational shift in cooling practices. While he initially adhered to his parents' emphasis on frugality, his professional environment and contemporary expectations of productivity have necessitated a greater reliance on air conditioning. This shift illustrates the interplay between evolving material conditions and social norms, as younger generations adapt to economic progress while still being influenced by earlier values of conservation. Jack's account underscores how the increasing material accessibility of air conditioning has gradually reshaped the practices and priorities of those transitioning from resource-conscious childhoods to adulthood in a more affluent era.

Lily Zhang, aged 31, shared a similar experience, emphasizing how material availability has influenced generational shifts in cooling practices:

*"Back in the day when none of us had much, it was possible to do without air conditioning. Now that it's accessible and we've grown accustomed to it, it's almost like we can't do without it. When conditions limit you, you learn to endure, but when there are no restrictions, it's challenging to limit yourself."*

(Lily Zhang, female, 31 years old)

Lily's reflections highlight how increased material access to air conditioning has reshaped her generation's practices. Growing up with limited resources instilled a cautious approach to cooling, yet the growing availability of air conditioning in adulthood has led to an adjustment in her routines. This shift reflects the broader influence of material affluence, where the once-limited technology has become a ubiquitous part of daily life, subtly altering the habits and priorities of her generation. Lily's remarks underscore how improved material conditions can lead to a dependence on cooling technologies that would have been unimaginable in her parents' time, marking a transition from practices of endurance to expectations of convenience.

For some within this subgroup, however, the values passed down by older generations continue to shape their approach to air conditioning. Alice Lin, a 34-year-old, described how her family's teachings influenced her balance between comfort and restraint:

*"My mom always told me how they used to manage without air conditioning. She said it taught them to appreciate the little things and not take comfort for granted. I try to strike a balance. I use the air conditioner, but I don't go overboard. I want to respect the environment and honour what my parents taught me."*

(Alice Lin, female, 34 years old)

Alice's approach highlights the interplay between material availability and inherited values. While she enjoys the convenience of air conditioning, her parents' emphasis on resource conservation informs her use, ensuring it remains measured rather than excessive. For Alice, air conditioning represents not only technological progress but also a responsibility to manage resources wisely—values deeply rooted in the scarcity her parents experienced. Her comments reveal how material conditions shape practices differently within the same generation, as some individuals incorporate their families' conservation habits into their modern routines.

Mike Wu echoed similar sentiments, focusing on the environmental implications of increased air conditioning use:

*"I understand the convenience of air conditioning, but I also see the strain it puts on resources. It's about finding that middle ground. I'm conscious of my energy usage, and I think my parents' generation had a point about not overusing it."*

(Mike Wu, male, 32 years old)

Mike's perspective illustrates the evolving considerations tied to material affluence. While air conditioning is now an integral part of his life, Mike remains aware of the resource demands it entails. His reflections suggest that material access alone does not entirely dictate practices; rather, the values and awareness instilled by earlier generations continue to influence decision-making. For individuals like Mike, the intersection of material comfort and environmental awareness reflects a nuanced approach to modern cooling practices, balancing the benefits of technology with a mindfulness of its broader impacts.

## 5.3 Phasing out of Traditional “Materials”

### 5.3.1 Shared Cooling Practices

#### 5.3.1.1 Older Generations: Shared Cooling, Changing Environment, and Nostalgia

##### *Shared Cooling in Memories*

The palm-leaf fan (蒲扇, as shown in **Figure 7**) was a common household tool in China, particularly in southern regions where hot and humid summers demanded practical solutions for cooling. Made from natural materials such as bamboo and palm leaves, these fans were lightweight, easy to use, and affordable, serving as an indispensable part of daily life before the widespread availability of electric fans and air conditioners. Historical records, such as in *Shiji* (《史记》), mention the use of such fans, highlighting their practicality in managing summer heat.



**Figure 7.** Palm-leaf fan

Source: Provided by Janet Tan

In Chinese literature and art, the palm-leaf fan also reflects the interaction between daily life and cultural values. The Ming Dynasty poet Yao Shi (姚氏) captured this connection in his poem *Palm-leaf Fan* (《咏蒲扇》):

“世间物性初无定，百鍊刚成绕指柔。

何似萑蒲经织后，能将九夏变三秋。”

"Inherent qualities are ever-changing,

*What once was rigid steel bends with ease.*

*How like the woven palm-leaf fan,*

*That turns the sweltering summer into autumn's breeze."*

This poem not only underscores the fan's functionality but also its symbolic association with simplicity and self-reliance. Paintings by Ming Dynasty artists such as Tang Yin (唐寅) often depict people using fans under large trees, illustrating how these tools facilitated communal and environmental harmony in traditional Chinese life.

The palm-leaf fan was not used in isolation; its effectiveness often relied on shared practices, such as gathering under large banyan or camphor trees. These trees provided natural shade that enhanced the fan's cooling capacity, creating a natural synergy between material tools and the environment.

*"We didn't just use the fan indoors. On hot days, we'd take it to the big banyan tree in the village centre. Everyone would be there—children playing, adults chatting. We'd bring along woven mats and bamboo chairs, setting them up under the shade. Some families even carried small bamboo beds or rattan loungers, so the elderly could lie down comfortably. It was a time for everyone to gather, share snacks like watermelon or herbal tea, and enjoy a cool breeze together. The fan worked best under the tree, where the breeze and shade made it much cooler."*

(Janet Tan, female, 73-year-old)

Janet Tan, a 73-year-old resident of Shenzhen, recalls these practices vividly. Janet also described how these cooling practices extended into the evenings and nights:

*"During the day, we'd stay under the trees, but at night, families would bring their mats and rattan chairs up to the rooftop or open courtyard. It was cooler up there because of the breeze, and we'd lie under the stars. The children loved it—they'd listen to stories from the adults while we all waved our fans to keep mosquitoes away. It wasn't just about staying cool; it was about spending time together."*

These vivid memories highlight the intricate material interdependence between the fan, other cooling tools, and the spatial settings where these practices took place. The banyan tree provided shade, enhancing the fan's ability to circulate cooler air, while

mats and rattan chairs created comfortable spaces for extended gatherings. At night, rooftops or open courtyards offered natural ventilation, complementing the cooling provided by the fans and mats. Together, these practices formed an integrated system of cooling that blended natural elements, material tools, and human interaction.

The communal nature of these practices also fostered strong family and social bonds. Alex Lin emphasized how cooling was not merely an individual activity but a collaborative process:

*"Everyone contributed something. Someone would bring the mats, another person would bring the chairs or the fan. The children would run around fetching water to dampen the mats—it made them cooler when you sat on them. If someone had a watermelon, they'd cut it into slices and share it with everyone. It felt like the whole neighbourhood was a big family."*

(Alex Lin, male, 61 years old)

These descriptions illustrate how shared cooling practices were deeply embedded within broader social structures. The effort required to set up these spaces—laying out mats, positioning chairs, and coordinating shared responsibilities—created opportunities for interaction and cooperation. Children participated by helping with simple tasks, while adults engaged in storytelling and casual conversations. This collaborative aspect of cooling practices not only made them more effective but also reinforced communal ties, turning the act of staying cool into a social event.

The transition between daytime and nighttime cooling practices reveals how different elements of these routines were interdependent. During the day, the banyan tree provided a central gathering point, where families could socialize and share resources. At night, the rooftops and courtyards became extensions of this communal space, with similar routines of mat-laying, fan-waving, and storytelling continuing under the stars. The shared tools—fans, mats, and chairs—moved seamlessly between these settings, adapting to the changing environmental conditions while maintaining their role as facilitators of both comfort and community.

This interconnectedness underscores the flexibility and adaptability of traditional cooling practices. Material tools like the palm-leaf fan were not static objects but dynamic components of a broader network of practices that responded to

environmental and social contexts. The routines associated with these tools extended beyond their immediate functional use, creating spaces where social cohesion and cultural traditions could flourish.

### *Transformations in Practice*

The decline of shared cooling practices, such as gathering under large trees with palm-leaf fans, reflects the broader material and social transformations brought about by urbanization and technological progress. In cities like Shenzhen, the open courtyards and shaded communal spaces of the past have been replaced by towering apartment buildings and air-conditioned interiors. Janet Tan described this shift with a mix of regret and longing:

*"The city has changed. When I was young, we had big trees and open spaces where we could gather. Now, people are always indoors with their air conditioners. The fan reminds me of those days, but it feels out of place now."*

(Janet Tan, female, 73-year-old)

Janet's nostalgia was tempered by the reality of her present surroundings. Shenzhen, a city that had transformed from a fishing village to a global tech hub, had little room for the slower pace of life she had known. The city's relentless expansion and vertical construction had left little space for the sprawling trees and gatherings of old. People here were always on the move, and neighbours rarely had the chance to become friends.

This sense of nostalgia is not merely a longing for the past but a reflection of the loss of communal and interactive dimensions in cooling practices. In Janet's words, the fan no longer holds the same meaning in her modern context. Its physical function has been replaced by the efficiency of air conditioning, but its symbolic role—as a connector of people and a facilitator of shared experiences—has diminished, leaving behind an emotional void.

The nostalgia for these shared practices highlights the shifting meanings attached to material tools like the palm-leaf fan. Previously, the fan was not just an individual tool for managing heat but a central component of a networked system of practices. Its use was deeply embedded in the rhythms of daily life, involving specific routines, social

norms, and environmental conditions. For example, families gathering under banyan trees were not only escaping the heat but also reinforcing social bonds, passing down skills to younger generations, and fostering a shared sense of community. The decline of these practices represents more than a technological substitution—it signifies the fragmentation of the social and cultural fabric that once underpinned them.

This shift can also be understood through the transformation of material arrangements and their influence on social practices. In traditional settings, the use of a shared fan in communal spaces was shaped by material limitations—who owned the fan, how it was positioned, and how families adapted their routines to maximize its cooling effect. These material constraints fostered a sense of collective coordination and mutual participation, reinforcing the communal nature of cooling practices. However, the transition to individualized cooling technologies, such as air conditioners, has altered these dynamics. With air conditioning providing personalized comfort in private spaces, the material environment no longer necessitates such shared interactions, leading to a decline in the collective experiences that once accompanied cooling practices.

The emotional impact of this transformation is further amplified by the physical and sensory disconnection brought about by modern cooling technologies. The swishing sound of fans, the tactile effort of manual fanning, and the interplay of natural breezes under shaded trees have been replaced by the hum of air conditioners behind closed windows. These changes not only alter the materiality of cooling but also disrupt the embodied and sensory connections that made these practices meaningful. For individuals like Janet, the fan now serves as a symbol of loss and memory, evoking a time when cooling was an act of engagement with both people and the environment.

Nostalgia, as seen through Janet's reflections, encapsulates how the meanings attached to material tools evolve over time. While the fan was once a functional necessity, it is now a keepsake—a material object imbued with emotional and cultural significance. This shift from practicality to symbolism highlights the dual nature of materiality: it is both a physical entity and a vessel of meaning shaped by historical and social contexts.

The decline of these practices also demonstrates the tension between modernization and tradition. Air conditioning, with its convenience and efficiency, has reshaped the

physical and social landscapes of urban life, making communal practices like tree gatherings largely obsolete. Yet, the persistence of nostalgia suggests that these traditional practices continue to hold cultural resonance, serving as a reminder of the interdependence between material tools, social norms, and environmental conditions.

#### *5.3.1.2 Younger Generations: Inherited Competence, Changing Environment and Overwhelming AC*

The younger generation, particularly those born in the late 1980s and 1990s, grew up during a period of significant material and technological change in China. As cities like Shenzhen transformed into urban centres dominated by high-rise buildings, air conditioning, and enclosed spaces, cooling practices were reshaped by both technological advancements and the unique dynamics of urban migration. Many younger individuals—especially those in their 30s—retained memories of traditional cooling practices through their interactions with older family members, often observed in rural or semi-urban settings where these shared practices remained prevalent. These observations provided an understanding of the practice elements in traditional cooling practices, but urban life and modern technologies gradually redefined their relevance.

#### *Inherited Practices and Elements of Cooling*

For many young people, their early exposure to traditional cooling practices came from observing their elders in environments vastly different from Shenzhen's urban context. Leo Chen, a 33-year-old office worker who grew up in a small village before moving to Shenzhen, described how his grandmother combined different tools and techniques to create a cooling system during hot summers:

*"My grandma would always prepare everything perfectly. She would lay woven mats in the courtyard, place bamboo chairs in the shade, and dampen towels to put over the chairs to make them cooler. She always had a palm-leaf fan in her hand, moving it steadily while chatting with neighbours. Sometimes, she'd fan me to sleep, and only after I was sound asleep would she fan herself. It wasn't just about cooling—it was about her care and how she created a sense of comfort for everyone around her."*

(Leo Chen, male, 33-year-old)



In this example, materiality (woven mats, bamboo chairs, palm-leaf fans), competence (knowing how to position tools and use water effectively), and meaning (expressions of familial care and community bonding) were intricately linked in traditional practices. Leo's understanding of cooling practices came not only from witnessing his grandmother's actions but also from engaging with an environment—courtyards, open spaces, and natural shade—that facilitated these interactions.

However, as Leo's family moved to Shenzhen, the materiality of the urban environment—enclosed apartments, concrete surroundings, and reliance on air conditioning—rendered many of these competencies obsolete. The disappearance of open communal spaces and the ubiquity of modern cooling tools meant that the relational and environmental dimensions of cooling were increasingly replaced by individual and mechanized routines.

*"When I visited my grandparents in the summer, they would set up bamboo chairs under the big trees in the yard. My grandpa always used a palm-leaf fan to cool us down, and we'd sit there eating watermelon and talking until it got dark. But in Shenzhen, it's completely different. We live in apartments with AC, and there's no need to sit outside anymore. I miss those times, but life here is faster, and we just don't do things that way."*

(Emily Wang, female, 23-year-old)

Emily Wang, a 23-year-old graduate student who also experienced this shift, reflected on the practices she observed during childhood visits to her grandparents' rural home. Emily's comments illustrate how changes in materiality and competence are intertwined with shifts in meaning. In rural settings, the tools and skills required for cooling were embedded in the spatial and social fabric of daily life, emphasizing connection and shared experiences. In Shenzhen, the enclosed and individualized nature of the urban environment deprioritized these elements, reshaping cooling into a solitary and utilitarian activity.

### *Material Changes and the Disconnection of Shared Practices*

The transformation of material and environmental contexts has profoundly altered the dynamics of cooling practices. In rural and semi-urban environments, tools like palm-

leaf fans and woven mats were part of an interdependent system that relied on competence to adapt to the environment—knowing how to find shade, optimize airflow, or use water to enhance cooling. However, in Shenzhen’s urban landscape, these competencies are no longer relevant.

*"When I was a kid, my grandparents would take the whole family up to the rooftop at night. We'd bring woven mats, and my grandpa would fan us with a palm-leaf fan while we ate slices of watermelon. The wind on the rooftop, combined with the fan, made it feel like the perfect escape from the heat. We'd all talk and laugh together. But in Shenzhen, there's no rooftop life—just air conditioning in every room. Everyone stays indoors, and we hardly have those moments as a family anymore."*

(Mike Wu, male, 32-year-old)

Mike Wu, a 32-year-old software engineer, reflected on this disconnection with a sense of nostalgia. Mike’s story highlights how the materiality of Shenzhen—high-rise apartments, enclosed spaces, and modern cooling technologies—eroded the shared meaning and collective experiences associated with traditional practices. The rooftop, once a communal gathering place, has been replaced by private, air-conditioned interiors. This shift from shared cooling to individualized routines reflects how urban material environments dismantle the social connections once inherent in these practices.

Modern cooling technologies, particularly air conditioning, have redefined cooling practices by prioritizing efficiency and individual comfort. This shift in materiality has had a cascading effect on both competence and meaning. While traditional practices required manual effort and knowledge—how to fan effectively, where to position mats, or how to adapt to the environment—modern cooling tools eliminate the need for such skills. At the same time, the relational and communal meanings of cooling have been overshadowed by the convenience of independent operation.

Eunice Guo, a 23-year-old university student, explained how air conditioning aligns with her urban lifestyle:

*"Air conditioning just fits better with how we live now. I can set the temperature to what I want and focus on what I need to do. It's efficient, and it means I don't have to think about all the extra work or rely on someone else to help me stay cool. But I do*

*miss the feeling of sitting with my family and talking under the trees—those moments felt slower and more meaningful."*

Eunice's reflection underscores how modern materiality reshapes meaning by emphasizing autonomy and convenience. While she acknowledges the efficiency of air conditioning, she also expresses a longing for the slower, shared moments of traditional practices. This tension reveals how material advancements, while providing functional benefits, can disrupt the social and emotional dimensions of everyday practices.

Despite their preference for modern cooling technologies, many younger individuals express a deep sense of nostalgia for the relational and environmental meanings embedded in traditional practices. Mike Wu reflected on what has been lost:

*"There was something special about sitting together as a family, everyone sharing the same fan or mat. It wasn't just about cooling—it was about being together. Now, with everyone in their own rooms, it feels like we've lost that connection. I miss those times, but life is so different now, and it's hard to go back."*

Mike's comments highlight how materiality not only transforms practices but also redefines the values and connections tied to those practices. The shared meaning of cooling—once rooted in communal effort and relational care—has been replaced by efficiency and individualized comfort, reflecting broader societal changes in how we interact with material tools and with each other.

The younger generation's cooling practices reflect the profound influence of materiality, competence, and meaning on the evolution of shared practices. While many inherited a basic understanding of traditional tools and their use, the urban and technological transformations of environments like Shenzhen have redefined these practices. The communal and relational dimensions of traditional cooling have been overshadowed by the demands of efficiency and autonomy. Yet, the nostalgia expressed by younger individuals reveals an enduring appreciation for the slower, more connected rhythms of the past, offering a poignant counterpoint to the mechanized and individualized nature of modern cooling.

### *5.3.1.3 Summary*

The analysis of shared cooling practices across generations reveals a dynamic interplay of materiality, competence, and meaning that has evolved significantly with urbanization and technological progress. For older generations, tools like palm-leaf fans and woven mats were central to communal and adaptive cooling systems deeply embedded in the rhythms of daily life. These practices emphasized collaboration, familial care, and environmental harmony, where material tools, spatial contexts, and social interactions were seamlessly interwoven. The banyan tree's shade, rooftops under the stars, and shared tasks such as fanning or dampening mats created a sense of togetherness and cultural continuity.

In contrast, the younger generation, shaped by urban environments like Shenzhen and modern cooling technologies, experienced a fundamental shift in how cooling practices were understood and performed. While some inherited a partial understanding of traditional practices through observations of older family members in rural or semi-urban settings, the materiality of urban life—air-conditioned apartments, enclosed spaces, and centralized cooling—rendered much of this competence obsolete. The shared meaning of cooling as a relational and communal act gave way to values of efficiency, autonomy, and individual comfort.

This transition also reflects broader societal transformations. Urbanization has fragmented communal spaces, and technological advancements have prioritized convenience over interaction. While older generations express nostalgia for the social cohesion embedded in traditional cooling practices, younger individuals often view these practices with a mix of admiration and pragmatism, acknowledging their cultural significance but preferring the functionality of modern tools.

The enduring nostalgia expressed by younger individuals suggests that traditional practices continue to hold cultural resonance, even as their material and practical relevance diminishes. This nostalgia highlights a tension between the mechanized, individualized nature of modern cooling and the slower, more connected rhythms of the past. Ultimately, the shift in cooling practices illustrates how materiality drives cultural and social change, redefining not only the tools we use but also the relationships and meanings they sustain.

### 5.3.2 Electric Fans: A Turning Point in Cooling Technology

Electric fans, introduced in China during the 1980s, marked a significant shift in cooling practices, bridging the gap between traditional tools like cooling chairs, woven mats, and modern air conditioning systems. By altering the materiality, competence, and meaning associated with cooling, electric fans redefined how generations approached comfort and cooling. While older generations integrated fans into existing practices, enhancing traditional tools like cooling chairs and mats, younger generations largely abandoned these combinations, favouring newer technologies and aesthetics.

#### 5.3.2.1 Older Generations: Integrating Electric Fans with Traditional Practices

For older generations, electric fans were not a replacement for traditional cooling tools but rather an enhancement that improved their effectiveness. By integrating fans into pre-existing practices involving cooling chairs (**Figure 8**), woven mats (**Figure 9**), and communal spaces, older individuals adapted to technological advancements while preserving the social and cultural dimensions of cooling.

Judy Huang, a 51-year-old, vividly remembered how her family used the ‘Diamond’ electric fan as shown in **Figure 10** in conjunction with woven mats during her childhood:

*"Our first electric fan brought us more joy than buying a small car today. ....It was a brand-new model called 'Diamond.' Nowadays, we have brands like Midea and Gree, but 'Diamond' is still around. Our first one was a desk fan, placed on a table.....My mom would roll out the bamboo mats on the living room floor; and we'd all sleep there together. She would position the fan just right, so it would blow across the mat and make it feel cooler. Sometimes, she'd even dampen a towel and hang it in front of the fan to make the breeze a bit cooler. We didn't just feel relief from the heat—it felt like an upgrade in our whole way of living."*

(Judy Huang, Female, 51 years old)

In this practice, the materiality of the electric fan complemented that of the woven mat. The fan's oscillating breeze reduced the stickiness and discomfort often associated with mats, especially during humid nights, while the mat provided a cool

surface for sleeping. The combination created a more pleasant experience without eliminating the tactile and sensory qualities of traditional cooling.

Judy's memory also highlights the competence involved in this adaptation. Positioning the fan, adjusting its speed, and improvising with damp towels required practical knowledge and skill, underscoring the active participation needed to make these tools work effectively together.

*"We used to set up bamboo chairs in the courtyard during the afternoons. The chairs by themselves could get a bit uncomfortable—sometimes the bamboo slats would pinch your skin if you weren't careful. But with the fan blowing, it felt much better. My father would recline on the chair, with the fan oscillating back and forth, and the breeze made it all feel a bit more luxurious. We'd sit there for hours, talking and drinking tea."*

(Helen Wang, female, 58 years old)

As the family's experience Helen Wang shared, Cooling chairs, made from bamboo or rattan, were another traditional tool that benefited from the addition of electric fans. The cooling chair's materiality, though practical and lightweight, had limitations in comfort. The electric fan mitigated these issues by providing continuous airflow, which reduced discomfort and allowed users to stay seated for longer periods. This integration also required competence, such as knowing how to position the chair relative to the fan and adjusting the fan's oscillation to cover multiple people.

For older generations, the electric fan did not disrupt the communal nature of cooling practices. Instead, it often enhanced shared experiences. Helen recalled how fans became central to family gatherings:



**Figure 8.** Cooling Chair

Source: Provided by Helen Wang



**Figure 9.** Straw/Woven Mats

Source: Provided by Helen Wang



**Figure 10.** "Diamond" fan

Source: Shared by a Baidu Tieba user<sup>1</sup>

*"In the evenings, we'd all sit together under the fan. The children would lie on mats or bamboo chairs, and the adults would talk about the day. Sometimes, we'd even use the fan to dry fruit or herbs—it wasn't just for cooling but for anything that needed a bit of air circulation. The fan brought everyone together in one place."*

Here, the fan's meaning extended beyond its functional role. It became a symbol of modernity and shared progress, a tool that connected traditional practices with new possibilities while maintaining the social bonds that older methods fostered.

Older generations demonstrated a remarkable ability to adapt to the electric fan's introduction, blending it seamlessly into existing systems of cooling. By enhancing the performance of traditional tools like mats and chairs, the fan became an indispensable part of their cooling routines. The continued use of these combinations highlights the transitional nature of the electric fan—it was not merely a technological innovation but a bridge between past and present practices.

For this generation, the electric fan was more than a tool; it was a collaborative instrument that maintained the relational and tactile qualities of traditional cooling. Its integration reflected both practicality and cultural continuity, ensuring that the values of care, community, and adaptability remained central to the cooling experience.

#### *5.3.2.2 Younger Generations: Rejecting Traditional Combinations*

For younger generations, the electric fan has become a niche tool, selectively used but rarely central to their daily cooling practices. Unlike the older generation, who integrated fans into a cohesive system with tools like cooling chairs and woven mats, younger individuals largely view these traditional tools as irrelevant to their modern lifestyles. This generational shift reflects profound changes in the materiality, competence, and meaning of cooling practices, driven by technological advancements, urbanization, and evolving cultural values.

Cooling chairs and woven mats, once ubiquitous in older cooling practices, are now widely rejected by younger individuals due to their perceived discomfort and

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<sup>1</sup> As our participant Judy declined to provide a picture of her fan, I utilized an image shared on Baidu Tieba, available at: [https://mbd.baidu.com/newspage/data/dtlandingsuper?nid=dt\\_4961785996353661337](https://mbd.baidu.com/newspage/data/dtlandingsuper?nid=dt_4961785996353661337) (accessed on December 13, 2023).



incompatibility with modern aesthetics. Sophie Li, a 24-year-old, expressed her frustrations with cooling chairs:

*"Whenever my mom brings out her old bamboo chair, I just can't understand why she keeps it. The bamboo slats pinch your skin, and if you lean back, it pulls your hair. It's not just uncomfortable—it's ugly. It doesn't fit in with the rest of our apartment, which is more modern and minimalistic."*

For Sophie and her peers, the materiality of the cooling chair—its hard surface, potential to catch hair, and outdated design—is a significant barrier to its continued use. This is in stark contrast to older generations, who appreciated the chair for its lightweight portability and natural cooling properties. The transition reflects a change in how the physical qualities of tools are evaluated, with younger people prioritizing comfort and visual harmony over the practical adaptability valued by their elders.

Woven mats, similarly, evoke negative memories among younger users. Lily Zhang, a 31-year-old, recalled:

*"Those mats were terrible. They'd leave these marks on your skin, and if it was a humid night, they felt sticky and gross. My mom used to say they were the best way to stay cool, but I couldn't wait to grow up and have air conditioning. It's so much better than lying on a sticky mat."*

This rejection illustrates the loss of competence associated with traditional tools.

Where older generations knew how to position mats in ventilated spaces, keep them clean, or enhance their cooling effect with fans, younger individuals no longer see the value in acquiring these skills. Instead, they rely on the automated and consistent cooling provided by air conditioning.

For younger generations, the electric fan itself is often viewed as insufficient in the face of modern alternatives. Sophie's comments capture this sentiment:

*"Fans just blow hot air around. When it's really hot outside, they don't actually cool the room. Air conditioning is quieter, invisible, and actually works. Fans just seem like a lot of effort for very little payoff."*

This perspective marks a departure from how fans were perceived by older generations. Where fans once enhanced traditional tools and fostered shared

experiences, they are now seen as standalone devices with limited utility. Their meaning has shifted from symbols of progress and community to reminders of inefficiency and obsolescence.

That said, fans have not disappeared entirely from younger households. Instead, they are selectively used in specific contexts. Eunice Guo, a 23-year-old, described one such scenario:

*"We still use a small fan during lunch if we're in the living room. Turning on the central AC for a short meal feels wasteful, so the fan is a more practical option for those moments."*

While this selective use reflects the fan's enduring practicality in certain situations, it also underscores its diminished significance. Unlike older generations, who saw fans as integral to their cooling systems, younger individuals regard them as supplementary tools, used only when more advanced technologies are unnecessary or excessive.

#### 5.3.2.3 Summary

The introduction of electric fans in China during the 1980s marked a pivotal moment in the evolution of cooling practices, serving as a transitional tool that bridged traditional methods with emerging technologies. For older generations, fans seamlessly integrated into existing practices, enhancing the effectiveness of tools like cooling chairs and woven mats while preserving the communal and tactile aspects of traditional cooling. The fan's materiality complemented these tools, its oscillating breeze mitigating discomfort and improving shared spaces. Competence played a critical role, as users learned to position fans strategically and adapt their use to environmental conditions, turning the fan into a symbol of progress and a facilitator of shared experiences.

In contrast, younger generations have largely rejected these traditional combinations, driven by changing material conditions, urbanization, and the advent of air conditioning. Tools like cooling chairs and mats, once essential to older practices, are now viewed as uncomfortable, impractical, and aesthetically outdated. This shift reflects a loss of competence, as younger individuals, accustomed to automated solutions, no longer engage with the adaptive skills required to use traditional tools effectively. The meaning of the electric fan has also transformed; what was once a

central symbol of communal effort and ingenuity has become a secondary, utilitarian device, selectively used in contexts where air conditioning is deemed excessive.

Overall, the generational shift underscores how changes in materiality, competence, and meaning redefine the role of cooling tools in daily life. While older generations embraced electric fans as a bridge between tradition and modernity, younger generations prioritize efficiency and individual comfort, reflecting broader societal and technological transformations in how cooling is experienced and valued.

## 5.4 Adapting to Cooling Practices: Generational Competence in Transition

The generational lens offers a rich perspective for exploring shifts in competence. In the context of cooling practices, competence shapes how people interact with tools like palm-leaf fans, electric fans, and air conditioning systems, as well as how they adapt to environmental conditions such as heat. For older generations in China, competence in cooling was deeply rooted in cultural wisdom and manual techniques, reflecting a life shaped by limited technological resources and a reliance on communal and natural solutions. This generation's ability to endure heat, strategically use simple tools, and incorporate traditional philosophies like "心静自然凉" (a calm mind brings natural coolness) reveals their mastery of practices suited to their historical and material circumstances. In contrast, younger generations have developed competencies aligned with the rapid technological advancements and urban transformations of contemporary China. Growing up with air conditioning and smart temperature control systems, they exhibit a fluency in modern devices and a reliance on technological solutions to manage comfort. However, this shift also signifies a departure from the adaptive skills and shared cultural practices that defined earlier approaches to cooling.

### 5.4.1 Adaptability to Heat

*"Aha, young people can't tolerate the heat "*

(Elizabeth Sun, female, 57 years old)

Elizabeth Sun, a 57-year-old mother, lives in an apartment on the top floor of a building constructed in 1995, which becomes unbearably hot during the summer due to poor insulation. On a scorching summer day with temperatures soaring to 35°C, I arrived at her home, drenched in sweat within minutes. Observing my discomfort, Elizabeth quipped with a smile, *“Young people can’t tolerate the heat.”* Her comment reflected a generational pride in their ability to endure physical discomfort.

Elizabeth’s generation developed competence in coping with heat that went beyond physical endurance. For her, tolerating heat is not only about survival but also a virtue—a badge of honour for her cohort, who grew up without modern conveniences like air conditioning. *“If it’s hot, just tough it out,”* she remarked. *“It’s a characteristic of our generation. Weren’t we fine in the past without air conditioning?”*

Behind her words lies a broader narrative of resilience, resourcefulness, and cultural wisdom. Elizabeth views enduring heat as a sign of strength and adaptability, traits deeply embedded in her generation’s identity. Their competence in managing heat is not simply about tolerating physical discomfort; it is a reflection of their ability to adapt to environmental challenges, grounded in traditional knowledge and practical ingenuity.

For Elizabeth and many of her peers, coping with heat extends beyond physical endurance—it is deeply embedded in cultural and philosophical understandings that have been passed down through generations. Central to this is the traditional Chinese belief system of *yin-yang* (阴阳), which conceptualizes life as a balance between two opposing yet interconnected forces. Andy Wu, a 62-year-old family friend, illustrated this perspective:

*“In summer, sweating is good for the body and helps maintain the balance of yin and yang. Heat corresponds to yang energy, and sweating releases the excess, restoring equilibrium.”*

In the framework of *yin-yang*, *yang* is associated with warmth, energy, and activity, while *yin* embodies coolness, rest, and receptivity. During the summer, the body accumulates *yang* energy due to the external heat. Excess *yang* is believed to cause imbalances, leading to symptoms like restlessness, overheating, or irritability.

Sweating, in this view, serves as a natural mechanism to release excess *yang*, maintaining physical and emotional balance.

Elizabeth elaborated further, emphasizing the role of *Qi* (气), a core concept in traditional Chinese medicine:

*“Qi is essential. Feeling the natural heat in summer allows the Qi in the body to flow smoothly, which is beneficial for health. Excessive use of air conditioning disrupts this balance and can harm the body.”*

*Qi* (pronounced “chee”) is often described as vital energy or life force that flows through the body, sustaining health and vitality. Traditional Chinese medicine posits that maintaining the smooth and unobstructed flow of *Qi* is critical for overall well-being. Excessive reliance on artificial cooling methods, like air conditioning, is thought to constrict the body’s natural regulatory mechanisms, blocking the flow of *Qi* and causing imbalances that manifest as health issues, such as fatigue, stiffness, or respiratory problems.

This philosophy places great emphasis on aligning human behaviour with natural rhythms. For instance, summer heat is not merely an inconvenience to be avoided but an element to be harmonized with. Elizabeth explained:

*“Summer is supposed to be hot, just as winter is supposed to be cold. By embracing the heat—sweating a little, drinking cooling herbal teas, and taking things slow—you allow your body to adapt and stay strong. My generation believes this alignment with nature helps us stay healthy for the long term.”*

Elizabeth’s observations are echoed in daily practices. She mentioned how her parents would prepare mung bean soup, a traditional cooling drink, as a way to mitigate the effects of heat without disrupting the natural flow of *Qi*. Similarly, afternoon naps in shaded areas were encouraged to conserve energy during the hottest parts of the day, reflecting an intrinsic understanding of how to live in harmony with the environment.

Younger generations increasingly prioritize technological solutions over traditional practices or environmental adaptations, reflecting a fundamental shift in how competence is understood. For Elizabeth’s son, Ken Xu, a 28-year-old urban professional, this transition is clear:

*“My parents believe in enduring the heat, but I find it outdated. Why suffer when air conditioning works so well? It’s efficient and keeps life moving.”*

Ken’s perspective exemplifies a redefinition of competence, one that values the mastery of modern technology over the ability to endure discomfort. For him, the capability to manage indoor temperatures using air conditioning symbolizes progress, convenience, and control over an unpredictable environment—qualities that are particularly valued in fast-paced urban life.

Lily Zhang, a 31-year-old office worker, offered a similar viewpoint:

*“I respect my parents’ ability to tolerate heat, but I can’t see it as a virtue. Air conditioning significantly improves quality of life. It’s healthier and safer than sweating excessively in the heat.”*

Interestingly, Lily also remarked on how her parents often expressed pride in their ability to endure harsh conditions, which she found both admirable and puzzling:

*“They always say, ‘我们那一代吃得苦’ [‘Our generation knows how to endure hardship’], as if we’re supposed to feel bad for not suffering in the same way. But isn’t the point of progress to make life better? They see us as weak for not tolerating heat, but I think we’re just smarter for using the tools we have.”*

For Lily, competence lies in adopting solutions that provide immediate comfort while reducing health risks such as dehydration or heatstroke. In contrast to the older generation’s emphasis on adapting to natural rhythms, Lily and her peers see environmental control through technology as a more practical and reliable approach.

This generational shift underscores a transformation in the values underpinning competence. While the older generation often views resilience and balance—adapting one’s body and behaviour to align with environmental conditions—as markers of capability, younger individuals place greater emphasis on efficiency, safety, and autonomy. Their reliance on air conditioning and other modern conveniences is not merely a rejection of traditional practices but a reflection of the evolving demands and expectations of contemporary urban life.

Despite this divergence, it is important to recognize that both generations seek to address the same underlying challenge—managing heat and ensuring well-being—but approach it from fundamentally different perspectives. For the younger generation,

competence is no longer about enduring; it is about optimizing. This redefinition of competence mirrors broader societal changes, where technology increasingly mediates how individuals interact with and adapt to their environments.

### 5.3.2 A Calm Heart Keeps You Cool?

"心静自然凉," which can be translated as "Calm Mind Brings Natural Coolness," is a traditional Chinese phrase that embodies an indigenous form of wisdom. It suggests that by maintaining a calm and composed state of mind, one can naturally feel cooler, even in sweltering and uncomfortable conditions. This concept has been passed down through generations in Chinese households and was often used as a way to cope with heat, especially during hot summer days or nights when cooling options were limited.

*"My parents would say, 'If you're feeling hot, don't run around. Just sit quietly, and soon, you'll feel cool naturally.' This phrase, 'Keep a calm mind, and you'll naturally feel cool,' was used frequently. They didn't say much else, maybe just fanned us a bit. At that time, there were no electric fans or air conditioning."*

(Deborah Guo, Female, 53 years old)

Deborah, a woman in her early 50s, shared her experiences and thoughts about "心静自然凉" during our conversation. She recollected how her parents imparted this wisdom to her during her childhood, painting a vivid picture of what life was like back then. She described her family's modest home, where they had no access to modern luxuries such as air conditioning or electric fans. Instead, they relied on simple, time-tested methods to combat the oppressive heat of the summer. This practice required not only the application of competence—specific know-how about remaining calm and composed—but also the ability to foster a deliberate and mindful state in challenging physical conditions.

Deborah's reminiscences took us back to her childhood days when the scorching sun would bear down on their small courtyard. It was during these moments that her parents would gently remind her and her siblings to embody the principle of "心静自然凉," encouraging them to sit quietly while fanning themselves with palm-leaf fans.

Over time, they developed the competence to regulate their discomfort using this embodied wisdom, achieving a cooling effect through their actions and mental focus.

As Deborah recounted, the transmission of this wisdom was not just verbal; it was deeply experiential. Her parents modelled the practice through their behaviour, teaching their children how to cultivate a sense of calm under oppressive heat. She emphasized how this knowledge and skill set had a lasting impact on her life:

*"To this day, when the heat becomes unbearable, I still follow my parents' advice. I find a quiet spot, close my eyes, and take a few deep breaths. It's remarkable how, even in the absence of fans or air conditioning, I can sense a gradual cooling effect."*

(Deborah Guo, Female, 53 years old)

Deborah's narrative illustrates how the competence to enact "心静自然凉" was honed through practice, becoming a generational legacy. Her story is not an isolated case; it reflects a broader cultural pattern among older generations, particularly those born before the 1970s. Many of these individuals recall their younger days when sweltering heat was an unrelenting presence, and the absence of advanced cooling technologies necessitated practical ingenuity. Their parents, too, encouraged them to embrace "心静自然凉," teaching them to calm their minds and bodies under the shade of trees or within the cool confines of their homes. This competence, passed down through generations, became a shared skill for managing discomfort and creating an embodied sense of coolness through mindfulness and deliberate action.

As I shift focus to the younger generation, I encounter a notable contrast in their perspectives regarding "心静自然凉."

*"It's interesting that my parents believe in this, but I see it as a sort of mental trick. When it's hot, it's hot. Thinking calm thoughts won't change that. We use air conditioning now, so there's no need to rely on this old saying."*

(Ken Xu, Male, 28 years old)



For many younger interviewees, "心静自然凉" is met with scepticism and often regarded as a quaint relic of the past. While the phrase was commonly heard during their childhoods, their reflections reveal a disconnect between its intended practice and their own lived experiences. Central to this generational shift is the role of competence, or the embodied knowledge and skills required to meaningfully engage with this concept.

For the older generation, competence in practicing "心静自然凉" was acquired through repeated exposure to specific cultural routines and environmental constraints. These routines often involved practical techniques such as sitting still in shaded areas, regulating one's breathing, and maintaining a calm state of mind to reduce the sensation of heat. This embodied competence was intertwined with a lifestyle that valued patience, self-regulation, and harmony with natural rhythms. Importantly, these skills were developed within a material context that lacked alternative cooling technologies, making the practice not only relevant but necessary.

In contrast, the younger generation, shaped by the ubiquity of modern cooling technologies, has not developed the same level of competence in engaging with "心静自然凉." Their scepticism stems partly from an inability to internalize and operationalize the practice in the way their parents did. As Leo Chen shared:

*"Oh yes, my parents used to say it all the time. But honestly, I've never found it helpful. I'm someone who can't stand the heat. The moment it gets hot, I start sweating profusely. I mean, I can literally hear the drops of sweat falling. So, '心静自然凉' sounds like a joke to me. It doesn't change how I feel in the heat."*

(Leo Chen, male, 33-year-old)

This statement reflects a lack of the embodied know-how that underpins the successful implementation of "心静自然凉." Without the habitual engagement and social reinforcement that characterized the older generation's experience, the younger generation often perceives the practice as ineffective or irrelevant. Their reliance on air conditioning as a primary cooling strategy further diminishes the opportunity to cultivate the patience and mindfulness necessary to make "心静自然凉" effective.

*"The older generation believes it works because they grew up without AC. But honestly, I don't think it makes a difference. If it's hot, it's hot. It's just a way for them to endure the heat."*

(Leo Chen, male, 33-year-old)

However, there are exceptions where younger individuals have begun to rediscover the value of "心静自然凉" through specific life experiences. For instance, Leo Chen, despite his earlier scepticism, noted a shift in his perspective:

*"I didn't pay much attention to this phrase when I was a child. But after I started working, I found it quite sensible. When you're agitated in the heat, it does get hot. However, if you calm down, it suddenly feels cooler. I don't know if it's psychological, but I find it quite useful."*

(Leo Chen, Male, 33 years old)

This change demonstrates that competence is not entirely lost but can be re-acquired when individuals are exposed to new contexts that challenge their reliance on technology. For Leo, developing an understanding of how emotional states influence physical sensations allowed him to engage with "心静自然凉" in a more meaningful way, even if this competence was limited compared to the deeply ingrained practices of his parents.

From a practice perspective, this generational divergence highlights how competence is shaped by material conditions and social norms. The older generation's competence in practicing "心静自然凉" was supported by a cohesive set of social and environmental factors, including the necessity of managing heat without technological assistance and the cultural emphasis on self-regulation. For the younger generation, these conditions no longer exist, and the absence of sustained practice has hindered their ability to embody the skills and mindset required to make "心静自然凉" effective.

At its core, "心静自然凉" is not simply a mental exercise but a practical, embodied skill that requires active engagement with one's environment and internal states. For the older generation, this competence was cultivated through lived experience and reinforced by social interactions, such as parents modelling the practice or encouraging their children to adopt it. For the younger generation, however, the widespread availability of air conditioning has fundamentally altered the context in which cooling is conceptualized and achieved. Their competence lies in navigating technological solutions rather than cultivating embodied practices, which reflects a broader shift in how comfort is pursued in contemporary life.

In essence, the divergence in competence between generations underscores a transformation in the relationship between people, practices, and their environments. While the older generation's mastery of "心静自然凉" reflects a deeply embedded cultural practice, the younger generation's scepticism reveals the fragility of such practices in the face of technological and societal change. Understanding these shifts provides valuable insight into how traditional competencies evolve—or are lost—within the context of modernization.

#### 5.4.2 Adaptability to AC Operations

*"I don't understand those electronic gadgets. I prefer using the old manual controls for air conditioning. They seem simpler to me. Nowadays, even switching it on feels like solving a puzzle. If the weather weren't this hot, I'd rather stick to my old fan. But my grandson insists I use it and even taught me a few times, though I always forget. It's just too complicated for me."*

(Linda Lin, Female, 78 years old)

During my visit to Linda's home, an elderly lady approaching her 80s, I encountered a scene that resonated with experiences from my own grandmother's life. Linda sat in her modest living room, shaded by heavy curtains to keep the heat out. On one side was a modern air conditioner with its digital display and remote control resting on the table; on the other, an old palm-leaf fan she kept close for comfort.

*"These days, there are so many buttons. Look at this remote—what does 'Mode' even mean? And why are there so many symbols? My grandson says I can make it cooler or save energy by pressing something here, but I can never figure it out. Every summer, I end up calling him to help me set it up. Sometimes I think, why bother? My old methods worked just fine for me all these years."*

Linda's comments vividly illustrate her struggle with the competence needed to operate modern air conditioning systems. Her words reveal not only her unfamiliarity with the technical language and functions of the device but also the frustration of trying to acquire skills that seem alien and overly complex. Linda's experience reflects a generational context where technological change was neither rapid nor central to daily life during her formative years, resulting in limited exposure to the foundational skills necessary for navigating modern digital interfaces.

Many of her peers share similar sentiments. Among the interviewed septuagenarians, reliance on family members to operate air conditioning was a recurring theme. Yet, this reliance often came with reservations about the technology itself.

*"We didn't grow up with things like this," Linda continued. "Back then, we opened windows, used bamboo mats, or just sat under the tree outside. It was enough. Now, everything is electronic, and you can't even fix it yourself if it breaks. It's not just the heat that's hard; ....it's this feeling that we're left [behind]."*

Her remarks underscore a broader issue: for many in Linda's generation, the lack of competence is not merely about technological know-how but also about the loss of agency and self-reliance in managing their environment. The dependence on younger family members to operate air conditioners adds a layer of vulnerability, further reinforcing their cautious engagement with the technology.

In contrast, individuals like Peter Guo, a 53-year-old retired engineer, present a starkly different relationship with air conditioning technology.

*"My children set up a smart temperature control system for me, and I think it's great. I can control it from my phone, even when I'm not at home. At first, it felt a bit unnecessary, but after trying it a few times, I realized how convenient it is. You don't have to get up to change the settings—it's all right there on your screen."*

(Peter Guo, male, 53 years old)

Peter's description reflects a high degree of competence stemming from his professional background and frequent interaction with technology throughout his life. Unlike Linda, Peter's ability to learn and adapt to modern systems is bolstered by his foundational understanding of technological principles, such as interfaces and connectivity. His positive outlook further highlights the role of familiarity and confidence in shaping one's competence with modern devices.

This divergence in experiences emphasizes that older adults' adaptability to air conditioning technology is not monolithic. Factors such as education, career exposure, and technological engagement significantly influence their competence levels.

Shirley Lee, a 41-year-old working mother, provided a middle-ground perspective:

*"I've learned to operate the central air-conditioner.... I remember when we first installed it, it took me a while to figure out the remote and the different modes. But now I've got the hang of it. When my parents come over, though, they just stare at the buttons and ask me to set it up for them. My dad says he doesn't trust these smart devices. He prefers those old-style window AC units where you turn a knob to control the temperature. It's funny because I feel the same way about my kids' gaming consoles—they're so advanced that I can't even begin to understand them."*

(Shirley Lee, Female, 41 years old)

Shirley's narrative illustrates how competence evolves across generations and contexts. While she initially struggled to adapt to the new system, repeated practice and necessity enabled her to acquire the skills required to operate it confidently. Her parents, however, remain anchored in their past experiences, where simpler, manual controls were the norm. Their hesitation to engage with newer technologies highlights the difficulties older adults face in bridging the gap between traditional competencies and modern demands.

For Linda and Shirley's parents, this generational divide in competence is further shaped by the broader historical context of China's rapid technological revolution. Those who lived much of their lives before the 1980s were accustomed to a slower pace of change, where mastering tools and devices required minimal adaptation. By contrast, individuals like Shirley and Peter grew up and worked in an era of

continuous technological innovation, which fostered a greater capacity to adapt to new systems.

The rapid transformation of China's technological landscape within a single generation has created a stark contrast in how different age groups approach air conditioning. For the older generation, navigating the complexities of digital interfaces can feel overwhelming, leading to reliance on familiar methods or external assistance. Younger generations, meanwhile, develop their competence through consistent exposure and the social expectation of technological proficiency.

In essence, the adaptability to air conditioning technology among older adults is deeply intertwined with their historical, social, and personal contexts. The generational gap in competence reflects not only differences in exposure and learning opportunities but also broader cultural shifts in how people interact with their environment. For the older generation, the struggle with modern air conditioning highlights the challenges of maintaining autonomy in a rapidly changing world. For younger individuals, the ability to adapt and master such systems underscores the fluidity of competence in response to evolving material and social conditions.

In stark contrast, when it comes to the younger generation's viewpoint, a different narrative unfolds regarding air conditioning technology. Younger individuals, growing up in the digital age, approach these matters with a high degree of confidence and familiarity. They are typically well-versed in electronic gadgets and modern technology, including smart temperature control systems.

*"When we got a smart TV at home, it took me a month to teach my grandma how to use it. She'd ask me to repeat every step again and again, and in the end, she only figured out how to 'turn it on and switch to live TV.' She kept saying, 'Why do they call this smart? It's not smart for me at all.' She even felt frustrated, like she was being left behind by the times. So, when I tried to show her how to use the air conditioner's remote, especially to adjust the cooling or heating settings, it wasn't any better. She gave up quickly and said, 'Just set it to something comfortable for me, and leave it alone!'"*

(Mike Wu, Male, 32 years old)

For many young adults like Mike, the sight of their parents or grandparents struggling with "complex" modern gadgets is a common experience. They often find themselves acting as tech support, teaching their elders how to navigate smartphones, tablets, and even air conditioning systems. While they recognize the gap in technological competence, they also perceive it as a natural consequence of the different technological landscapes their elders grew up in.

For the younger generation, smart temperature control systems are not merely tools but essential conveniences that define modern living. These systems align seamlessly with their lifestyle, where multitasking and efficiency are prioritized.

*"I can't imagine going back to the days of fiddling with manual controls. With the app on my phone, I can adjust the temperature in my room from anywhere—even when I'm stuck at work or out with friends. It's a game-changer, especially during the scorching summer when I can pre-cool the room before I get home. It saves time and effort, and honestly, I barely even think about it anymore—it just works."*

(Emily Wang, Female, 23 years old)

Emily's enthusiasm highlights the younger generation's high level of competence with modern air conditioning systems. This competence is not limited to basic operational knowledge; it encompasses an intuitive understanding of how to integrate these technologies into daily routines to optimize comfort and efficiency. Unlike older adults, who may find the plethora of buttons and options overwhelming, younger individuals like Emily readily adapt to new systems and even take them for granted.

This generational divide in competence becomes particularly evident when comparing the differing emotional and practical responses to technology. For older individuals, the complexity of modern gadgets often induces feelings of frustration or inadequacy, as seen in Mike's description of his grandmother's struggles. In contrast, younger adults perceive these technologies as extensions of their capabilities, enabling them to enhance their control over their environment with minimal effort.

The dynamic also represents an inversion of traditional learning roles within families. Whereas younger generations once learned traditional practices from their elders—

such as "keeping calm to stay cool" as discussed earlier—it is now the older generation that is seen as needing to "keep up" with the demands of new technologies.

*"My grandma would always tell me to slow down, to sit still, and stop being impatient when I was younger. But now, she's the one who struggles to keep up. It's like the roles have flipped. I teach her how to use the AC, and she keeps saying, 'This is too much for me. Just teach me the basics.' I feel like I've become the patient one now."*

(Mike Wu, Male, 32 years old)

This shift in learning roles underscores how technological advancements have redefined the dynamics of intergenerational relationships. Older adults, accustomed to being the custodians of cultural and practical knowledge, now find themselves dependent on their younger relatives to navigate the complexities of modern life. This reversal highlights the profound socio-technical shifts that have accompanied rapid technological progress in China, where the pace of change often leaves older individuals feeling out of step with the younger generation.

For the younger generation, competence in managing air conditioning systems goes beyond operational familiarity. It involves the ability to integrate these systems into a broader framework of convenience, comfort, and control. Technologies like app-based remote controls and smart thermostats are seen as indispensable tools for managing their fast-paced lifestyles, reflecting their broader preference for efficiency and instant results.

This generational divide not only illustrates differences in technological competence but also reveals deeper cultural and societal shifts. While older adults may value traditional, incremental approaches to learning and comfort, younger individuals prioritize adaptability and seamless integration of technology into everyday life. The pressure on older adults to adapt to these new tools often creates tension, as they navigate a landscape that feels alien and overwhelming.

The contrast between generations also reflects the broader socio-technical transformation of Chinese society. Younger individuals like Emily and Mike have grown up in an environment where technological competence is both a necessity and a norm, whereas older individuals must bridge the gap between their past experiences



and the demands of modern technology. This divide underscores how rapidly evolving technologies redefine not only comfort but also intergenerational roles and relationships.

In essence, the divergence in attitudes and competencies surrounding air conditioning technology highlights the broader implications of socio-technical change. For younger individuals, smart systems represent empowerment and efficiency; for older adults, they often symbolize complexity and alienation. This generational gap in competence is a microcosm of the broader shifts in how families interact with both technology and each other in an increasingly digital world.

## 5.5 Chapter Summary

This chapter has explored generational differences in cooling practices through the framework of social practice theory. By examining how different generations interact with cooling technologies and practices, this chapter sheds light on the broader socio-cultural transitions that underpin these behaviours.

For older generations, cooling practices are deeply rooted in cultural values shaped by historical material conditions. Tools like palm-leaf fans, bamboo mats, and early electric fans were integral to their daily lives, fostering communal interactions and shared competence. These practices emphasized resilience, thrift, and a connection to the environment, reflecting their lived experiences of resource scarcity. Competence in this context meant strategically using available resources and adapting to environmental conditions. However, the rapid urbanization and technological advancements of recent decades have rendered many of these skills obsolete, challenging older adults' sense of agency in navigating modern cooling technologies like air conditioners. This generation's cautious approach to air conditioning reflects not just technological unfamiliarity but also cultural values that prioritize moderation and sustainability.

In contrast, younger generations, shaped by urban environments and digital technologies, exhibit a markedly different set of competencies and meanings. Air conditioning is viewed not as a luxury but as an essential component of modern living. Proficiency with smart temperature control systems and other digital interfaces

demonstrates their integration into a fast-paced, efficiency-driven lifestyle. However, this shift toward individualized comfort has diminished the communal and relational dimensions of traditional cooling practices. While younger individuals appreciate the convenience of modern technologies, their nostalgia for shared family moments under banyan trees or on rooftops points to a lingering cultural resonance of past practices.

This chapter illustrated how materiality and competence interact to influence meanings across generations. For example, older adults' reliance on family members to operate modern devices highlights the interdependence between material limitations and competence gaps, while younger generations' seamless integration of technology underscores the evolving relationship between tools and social norms. These intergenerational dynamics also reveal how traditional practices, though altered or replaced, continue to shape perceptions of comfort and sustainability.

The analysis has demonstrated that cooling practices are not merely functional behaviours but are deeply intertwined with cultural narratives, material conditions, and evolving competencies. This intergenerational interplay highlights the dynamic negotiation between tradition and modernity in shaping energy consumption and environmental interactions.

As a foundation for subsequent chapters, this discussion emphasizes the significance of intergenerational dialogue in the adoption and use of cooling technologies. Future analyses will explore in greater depth how families reconcile differing values and preferences, examining the coordination and resource-conscious decision-making required to balance comfort, efficiency, and sustainability. By synthesizing these perspectives, this chapter contributes to a nuanced understanding of how material and cultural shifts redefine energy practices amidst the rapid socio-technical changes of contemporary China.

# **Chapter 6: Education in Air-Conditioning: How Parents Respond to Different Stages of Their Children's Development**

## **6.1 Introduction**

This chapter examines the ways in which parents guide their children's air conditioning (AC) practices across different life stages, framed within the broader cultural context of Confucian values and the dynamic interplay of intergenerational interactions. It explores how parents regulate, adapt, and negotiate their children's use of AC, highlighting the evolving family dynamics and emphasizing how these practices are continuously shaped through relational processes. The analysis underscores the role of interactions in mediating generational priorities and values, particularly during periods when parents exert dominant control over household decisions. Through a chronological exploration of three key life stages—early childhood, adolescence, and young adulthood—the chapter focuses on the relational dimensions of these transitions. In early childhood, parents leverage their authority and use AC as an educational tool, embedding foundational competencies such as understanding when and how to use AC, while imparting cultural values like thrift, health-consciousness, and resource responsibility. These interactions are often characterized by directive teaching and structured guidance, establishing norms through consistent reinforcement. Adolescence serves as a transitional period where interactions shift toward negotiations over control and autonomy. Here, parents engage in more dynamic exchanges, balancing their adherence to traditional values with their children's growing technological fluency and desire for independence. Finally, in young adulthood, intergenerational interactions evolve further as the normalization of AC use prompts a redefinition of familial roles. Parents and children renegotiate their relationships, reflecting a shift toward mutual respect and collaboration as children take on greater responsibility for their energy practices while maintaining cultural connections to familial values.

## 6.2 Early Childhood to Middle Childhood: Establishing Disciplines

This section examines how parents guide their children's air conditioning (AC) practices during early and middle childhood, focusing on instilling discipline and shaping foundational competencies. Drawing on the reflections of parents, I explore how their approaches to "moderated cooling" during their children's formative years were shaped by economic considerations, cultural values, and broader concerns about health and resource conservation. These practices, rooted in Confucian ideals of discipline and moderation, highlight the intersection of traditional values and modern technological use in Chinese families. By analysing these early life stages, I trace how parents leveraged control over AC use to impart broader life lessons, emphasizing the importance of thrift, responsibility, and resilience. This analysis integrates the practice elements, showing how parents' disciplinary approaches not only taught practical skills but also reinforced cultural norms. Additionally, I highlight how family interactions aligned around shared rules and expectations, creating a framework for understanding how these early practices shaped later family dynamics.

### 6.2.1 Disciplined Cooling Practices in Early Childhood

Cooling practices in early childhood serve as a microcosm of broader family dynamics, reflecting the interplay of material constraints, cultural values, and assumed parental authority. For many Chinese families in the late 1990s and early 2000s, the air conditioner was a newly accessible yet costly device, symbolizing both modernity and responsibility. Parents, as custodians of family order, viewed it as an opportunity to instil discipline, thrift, and respect for authority, often drawing on Confucian principles like 节俭 (thrift) and 尊卑有序 (hierarchical respect). Through their strict regulation of air conditioning, they conveyed not just rules but values, anchoring their authority in both practical necessity and cultural tradition. This section examines these practices through the interwoven elements, highlighting how they shaped early childhood behaviours while reaffirming parental authority.

The air conditioner, as a physical object, carried significant material implications for families first began to use. High purchase costs, noticeable energy consumption, and

its status as a relatively rare household item reinforced its perception as a resource that required careful management. Parents leveraged these material properties to establish strict rules just their parents did, using the tangible nature of air conditioning—electric bills, the remote control, the time control—as tools to teach restraint and accountability.

*"Our parents set rules for us about everyday behaviour from a young age, and we've passed on the same principles to our child. When we bought this air conditioner, it felt like we had entered a new era. Back then, not every family could afford one, and the electricity bills were no joke. I told my daughter, 'This is not a toy. If we don't use it wisely, it will become a burden.' So, I made a rule: the air conditioner only goes on when the whole family is in the room. To prevent her from misusing it, we often hid the remote control in a drawer or behind a cabinet. But if she ever managed to find it and turned on the AC while we were out, we'd scold her right away—and sometimes, when words didn't work, we'd have to resort to using a ruler to make the lesson stick."*

(Diane Wei, female, 49 years old)

Meeting with Diane was in her home, a typical apartment built in the 90s with excellent ventilation. Even in 30°C weather, sitting on their mahjong mat-covered sofa in the living room, it wasn't uncomfortably hot to me. When I complimented her home's ventilation, pride beamed on her faces as they mentioned that having good airflow was a primary requirement when the school allocated this apartment to them, feeling it was a responsible choice for their family's health. Both Diane and her husband are elementary school teachers with, perhaps, more to say on the education of Chinese children than the average parent.

Diane has a vivid memory of disciplining her child and describes her family as a 'traditional Chinese household' with strict discipline and many traditional constraints. From her young age, she followed numerous etiquettes tied to morals, like waiting for the eldest to begin eating before the others could start. When discussing cooling, she recalls the severe punishment she received from her parents after swimming in the river to cool down with friends as a child. Back then, with heavy family burdens and several children, parents often resorted to physical punishment to quickly instil behavioural standards. Diane, for her part, doesn't rigidly believe in using such strict measures to cultivate habits in children, like the simple act of turning off lights when

leaving a room, but she does represent a generation of parents who believe in imposing more restrictions on their children's use of air conditioning during their childhood.

Similarly, Joyce Jiang, a mother of two and a former factory worker, recounted how she framed air conditioning as a privilege, not a right:

*‘I’d tell my kids, ‘If you’re not in the room, the AC stays off. It’s as simple as that.’ They didn’t like it at first, but I explained that every extra degree costs money, and money doesn’t brought by wind. Over time, they understood—especially when I showed them the electricity bill.’*

(Joyce Jiang, female, 54 years old)

Joyce’s straightforward rules reflected a respect for material resources, which she tied directly to her experience of growing up in a household where even basic appliances were scarce. *“We didn’t have an air conditioner when I was a child,”* she said. *“In summer, we used hand fans and shared one electric fan in the living room. I wanted my children to appreciate how far we’ve come but also not to take it for granted.”*

Parents’ efforts to instil competence in managing air conditioning often blended explicit instruction with implicit modelling. However, unlike the negotiation-based coordination, these practices were characterized by unilateral enforcement. Parents assumed their authority as natural and unquestionable, often dismissing children’s opinions as naive or irrelevant.

Diane provided a vivid example of how she guided her daughter to manage air conditioning responsibly. One summer, when her daughter was about nine years old, Diane came home to find the living room AC running while her daughter played outside.

*“I didn’t ask her why she left it on—I just turned it off and said, ‘This is wasteful. Do you know how much this costs?’ I showed her the bill and explained what that money could buy instead, like books or new shoes. She looked embarrassed and said, ‘I didn’t think about it that way.’ From then on, she was more careful.”*

(Diane Wei, female, 49 years old)

Diane’s approach tied the physical consequences of air conditioning use (e.g., higher bills) to moral lessons about responsibility and foresight. This method of teaching

through tangible examples allowed her daughter to internalize these values while reinforcing Diane's role as the household authority.

Peter Guo, a civil engineer and father of two, described his parenting style as "firm but fair":

*"My kids would sometimes complain, saying, 'But our friends get to set the AC to whatever temperature they want!' I'd reply, 'That's their family, not ours. In this house, we value moderation.' I showed them how to set the thermostat and explained why 26 degrees is enough to stay comfortable without wasting energy."*

(Peter Guo, male, 53 years old)

Peter's emphasis on moderation highlights how competence was taught not only as a technical skill but as a moral practice intertwined with the family's collective well-being. The disciplined use of air conditioning was deeply tied to Confucian cultural meanings, particularly emphasizing thrift, responsibility, and respect for hierarchy. Parents viewed these values as integral to their role as educators and enforcers of family norms, often drawing on traditional idioms to justify their rules.

Joyce recalled a saying her father used to repeat: "俭, 德之共也; 侈, 恶之大也 (*Thrift is a virtue; extravagance is a great vice*)."

She admitted to using the same phrase with her children when they questioned her rules about air conditioning.

*"I'd tell them, 'You don't leave the AC running when you're not using it, just like you don't leave food on your plate. It's wasteful, and wastefulness leads to bad habits.' I think they rolled their eyes at me, but they understood eventually."*

(Joyce Jiang, female, 54 years old)

This linkage between material practices and moral lessons illustrates how parents used air conditioning as a tool for reinforcing broader cultural values.

While there is potential for collaborative coordination in household practices, the reality described by these parents was far more hierarchical. Coordination, in this context, was less about negotiation and more about ensuring compliance with established rules.

Peter summed up this dynamic succinctly:

*"I didn't sit down with my kids and say, 'What do you think the rules should be?' That's not how things worked when they were kids.....They are kids, what they know?"*

*we parents made the rules because we knew what was good for them. They could fuss, but the final decision was mine.”*

(Peter Guo, male, 53 years old)

This sense of unquestioned authority underscores the role of hierarchical respect in shaping these practices. Parents saw themselves as both moral guides and practical decision-makers, whose wisdom was rooted in their lived experience.

The disciplined cooling practices of early childhood reveal a tightly interwoven relationship between material constraints, parental authority, and cultural values. Materiality—embodied in the air conditioner’s cost, energy consumption, and physical presence—served as the foundation for rules that emphasized moderation and resourcefulness. Competence, though often taught unilaterally, focused on instilling habits of mindful consumption and technical understanding. Finally, meaning was deeply embedded in Confucian ideals of thrift and hierarchical respect, which legitimized parents’ authority and framed their rules as moral imperatives. Through these practices, parents not only managed household resources but also transmitted enduring values, shaping their children’s behaviours and worldviews.

### 6.2.2 Reflections on Childhood Discipline

If the interviews with parents provided an understanding of their rationale for imposing disciplined air conditioning practices—grounded in material limitations, skill transmission, and the promotion of thrift—the perspectives of their children reveal a different layer of the story. The young adults who grew up with air conditioning, predominantly born after 1995 and mostly between 20 to 28 years old, often share a common thread in their upbringing. Through discussions about their childhood experiences, it becomes clear that rebellion in those years was rare. Instead, there was a noticeable compliance with parental authority. Parental guidance is not just influential; it is often viewed as absolute by the children. From the children’s accounts, it becomes evident that Confucian values, particularly hierarchical respect (尊卑有序) and filial piety (孝道), played an essential role in ensuring the transfer and acceptance of these practices. This section focuses on how these cultural values shaped the reception of parental authority and facilitated the smooth transmission of



air conditioning practices, even when such practices were heavily unilateral in their imposition.

*"I remember it was a scorching day, and all I craved was the relief of cold air... But beyond the heat, it was the burden of expectations I felt. My parents had this tacit rule – not to use something just because it's available. I didn't quite grasp the 'why' behind it; I knew it was part of being in this family. It's only now that I see the broader context – it was about conservation, respect, and above all, discipline."*

(Grace Chen, female, 24 years old)

When Grace Chen, the daughter of Joyce, looks back on those days, she sees beyond the simple act of reaching for the AC remote. Hailing from a middle-class family in the rapidly growing city of Shenzhen, her parents, both university-educated and working in the public sector, had experiences similar to many of their contemporaries who lived through frugal times in rural areas. This background gave them an acute awareness of the scarcity of resources. Despite early access to air conditioning through their public sector housing, Grace's mother emphasized the importance of conserving resources, often encouraging the use of natural ventilation or simply adapting to the ambient temperature rather than relying on air conditioning. Grace represents many of her peers who were brought up by hard-working families intent on instilling thriftiness in their children. She recalls her parents' instructions not to overuse the air conditioner or to raise the temperature setting without showing any dissatisfaction, reflecting a high degree of acceptance of the values imparted by her parents during that time.

*"I remember, it would be extremely hot, but turning on the AC was not just a simple decision. It represented what my grandma, my parents, and our entire family believed in. They grew up without AC and wanted us to appreciate the value of things, to not take anything for granted... It's like there's a legacy in our family, a way of life that's been handed down. It's not just about habits; it's about heritage."*

(Grace continued)

Grace's reflections reveal a critical insight into how hierarchical family structures and Confucian values contribute to the successful transfer of disciplined practices. Her story exemplifies a classic case of how practices are sustained through norms such as

filial piety and hierarchical respect. In her family, parental authority is reinforced not through explicit rules but through shared values and an implicit understanding that respect for elders entails aligning with their expectations. For Grace, adhering to these practices felt natural—a reflection of the deeply rooted cultural context in which she grew up.

Through Grace's eyes, the family's approach to air conditioning was not merely about saving money or limiting comfort; it was about sustaining a way of life. The Confucian emphasis on respecting elders and adhering to their wisdom meant that the parents' rules were rarely questioned. Grace's acceptance of these rules illustrates how hierarchical respect not only reinforced her parents' authority but also facilitated the smooth transfer of their disciplined practices. As she recalls, "*It wasn't just about the AC; it was about learning what it meant to be a part of this family.*" This sense of belonging and obligation ensured that Grace internalized her parents' values, which she now sees as shaping her broader worldview.

Grace's case highlights how her parents' emphasis on thrift and resourcefulness effectively integrated material realities—such as the cost of electricity and environmental awareness—with meanings of discipline and respect. These values were further reinforced through their lived experiences of scarcity and their desire to pass down these lessons to their children. For Grace, air conditioning use became part of a larger moral narrative that emphasized responsibility, restraint, and appreciation for resources. By framing the practice as a family legacy, her parents ensured that these values were not only transferred but also internalized, shaping Grace's identity and worldview well into adulthood. Grace's story demonstrates how cultural values and material conditions work in tandem to influence intergenerational practices. Her parents' deliberate approach to managing air conditioning use reflects a broader ethos of conservation and respect for resources, which they successfully embedded within a cultural framework of family responsibility. These practices were accepted, internalized, and carried forward as part of a legacy that connected generations through shared values and lived experiences.

Although the transmission of disciplined practices during childhood often features successful cases like Grace's, other instances, such as Emily Wang's experience, provide a stark contrast. These cases further underscore the role of hierarchical family

structures and filial piety in enforcing parental authority. While parents exercise significant discretion in asserting their authority, Grace's parents represent the gentler, more typical approach. Emily's family, sharing a similar socioeconomic background with Grace, upheld conservative principles, but her experience of air conditioning discipline was characterized by a series of strict, non-negotiable directives.

Emily Wang offers a contrasting perspective, despite hailing from a household that upheld similar conservative values.

*"Our home was like a stronghold of traditions, where every practice had its rightful place," Emily recalls. "I'd lie there sweating, listening to my friends talk about returning to their cooled homes. I envied them—not just for the comfort, but for the freedom it represented. My parents always had a rationale for keeping the AC off: 'It's not that hot,' 'You'll catch a cold,' or 'Think of the electricity bill.' I used to suspect they were just making excuses, but I never challenged them openly."*

(Emily Wang, female, 23 years old)

Unlike Grace, who internalized and eventually appreciated her parents' guidance, Emily struggled to accept the rigid rules imposed on her. She perceived her parents' reasoning as excuses rather than genuine explanations, leading to feelings of alienation and subtle defiance. This inner rebellion began early, as Emily vividly recalls her parents engaging in fierce arguments over seemingly trivial matters. These conflicts, though perhaps stemming from personality differences, reflected a broader dynamic: parental authority was non-negotiable, and any perceived challenge to it was met with dramatic assertions of dominance. For Emily, these episodes reinforced the belief that her parents' authority was unyielding and rooted in the traditional justification of *"the rod produces a filial son"* (棍棒出孝子). This philosophy gave her parents a sense of legitimacy to enforce discipline, even in ways that might be perceived as unhealthy or overly authoritarian in Western contexts.

Emily's experience highlights how the hierarchical family structure constrained her autonomy during childhood. Even though she neither fully internalized her parents' values nor comprehended the broader meanings behind their rules, she was compelled to comply. Her parents' strict adherence to traditional notions of respect for elders and the inviolability of authority left little room for negotiation. Emily's reflections reveal

that such environments often left children feeling undervalued and unsupported, as individual needs and opinions were subordinated to the collective family order.

She recalls, *"I remember lying in bed, drenched in sweat, and feeling trapped—not just by the heat but by the weight of their rules. My father especially had this way of shutting down any questions. 'Children don't understand; adults must teach,' he'd say. But it never felt like teaching—it felt like being controlled."*

Her story represents an extreme case in which the authority of parents eclipsed the possibility of meaningful dialogue or understanding. While most children in the study demonstrated a degree of compliance with their parents' rules, Emily's experience underscores that not all compliance stems from internalization. For some, like Emily, compliance is a necessity born of an unbalanced power dynamic, where hierarchical respect and filial piety sustain parental authority without fostering genuine alignment with the child's values or needs. This case serves as a crucial counterpoint to Grace's, illustrating the varied ways in which traditional values intersect with family dynamics to influence the transfer of disciplined practices.

In contrast to the strict, non-negotiable practices observed in households like Emily's, families such as Peter's represent a more moderate and harmonious approach to air conditioning usage. While still grounded in traditional values, these families employed a gentler form of guidance, rooted in mutual respect and trust. This softer dynamic, guided by the Confucian principle of filial piety (孝道), fostered a positive cycle of parental care and child responsibility, resulting in a coordinated and sustainable practice of air conditioning use.

Eunice Guo, Peter's daughter, provides an exemplary case of how such coordination can be achieved in a less restrictive environment. Reflecting on her childhood, she describes a household characterized by balance and understanding. *"Our house always had this comfortable balance,"* Eunice begins with a smile. *"My parents weren't strict in the traditional sense. They never sat us down to lecture about the evils of air conditioning or anything. Instead, they led by example. They'd say, 'Let's open the windows and enjoy the breeze today. It's nice out.' It wasn't a command; it was a suggestion, and that made all the difference."*

Eunice's account underscores the stark difference between her upbringing and that of her peers, who often experienced stricter household rules. *"I had friends who would come over and be amazed that I could just turn on the AC if I felt hot. But I rarely did. It wasn't that I couldn't; it was that I didn't feel the need to. My parents trusted me to make the right choice, and I didn't want to disappoint them. It was about respect, yes, but it was also about personal responsibility. They trusted me, and I learned to trust myself."*

This atmosphere of trust and encouragement reflects the familial dynamic where the hierarchical respect inherent in Confucian values is expressed not as authoritarian control but as a foundation for mutual understanding. Eunice's parents conveyed the importance of moderation not through commands but through subtle, everyday interactions. *"I remember my mother saying, 'Use the AC if you really need it, but remember, the best things in life come in moderation,'"* Eunice recalls. *"It was a simple message, but it stuck with me. They wanted me to understand the value of self-restraint, not by enforcing it, but by encouraging me to choose it for myself."*

Financial stability in Peter's family played a role in this approach. Unlike families where material constraints necessitated strict rules, Eunice's household was not bound by financial limitations. However, this affluence did not translate into indulgence. Instead, it provided the parents with an opportunity to emphasize ecological responsibility and moderation as virtues rather than necessities. *"My dad would joke about the AC being 'the family's cool friend who shouldn't overstay his welcome.' It was his way of reminding us to be mindful of how often we used it. We laughed, but the message was clear,"* Eunice adds. *"And because it was delivered with humour and not as a strict rule, it felt more like wisdom than a directive."*

The success of this approach lies in its ability to align Confucian values with modern circumstances. By framing air conditioning use within a broader context of personal responsibility and social awareness, Eunice's parents managed to instil discipline without resorting to strict control. Eunice reflects, *"Looking back, I realize that my parents were teaching us about choice and consequence. They never made a big fuss about it, but they made sure we understood that every action, even something as small as turning on the AC, was a decision that reflected on us and our family's values."*

This nuanced parenting style exemplifies how the principles of filial piety can foster coordination in a positive and constructive manner. Rather than enforcing compliance through strict hierarchical control, Eunice's parents cultivated a sense of shared responsibility and mutual respect. This created a dynamic where both parents and children actively participated in the practice, resulting in a balanced and harmonious household.

Eunice's experience highlights a less common but equally significant aspect of disciplined practices in Chinese families. It shows that even in the absence of material constraints, values like filial piety can guide behaviour effectively when paired with a flexible, understanding approach. In such families, coordination is not enforced but naturally achieved through a culture of trust and respect. This stands in contrast to the more authoritarian methods observed in other households, demonstrating that traditional values can be adapted to foster positive and sustainable family dynamics. By internalizing her parents' lessons, Eunice grew up with a clear understanding of moderation and ecological responsibility, values she continues to uphold as an adult. Her case illustrates how filial piety, when expressed through care and encouragement rather than strict control, can create a harmonious and effective framework for transmitting disciplined practices across generations.

### 6.2.3 Negotiating Practices

In the disciplinary phase of early childhood, the transmission of cooling practices relies heavily on the interplay of material conditions, competencies, and cultural meanings. While parental authority often appears unilateral, closer analysis reveals implicit forms of negotiation and coordination occurring within these practices. Drawing on Halkier's (2020) emphasis on the integration of material constraints, skills, and meanings, this section discusses how the intergenerational interactions around air conditioning use reflect a tacit alignment between parents' expectations and children's gradual adaptation.

Parents' regulation of air conditioning practices was deeply tied to its material properties—energy consumption, costs, and physical availability. These tangible constraints provided the foundation for their disciplinary efforts, serving as tools to impart lessons about resource conservation and responsibility. For many children, the

visibility of these constraints—through electricity bills, hidden remotes, or verbal reminders—acted as a constant reinforcement of the practice. In Grace’s family, for instance, her parents never explicitly “negotiated” these rules, but there existed a tacit understanding that their authority stemmed from lived experiences of scarcity. This alignment reflects implicit coordination, where practices are not questioned because they are anchored in a shared recognition of material limitations and cultural values. However, not all families achieved this alignment seamlessly. In Emily’s case, the imposition of rules lacked the subtlety and communicative framing that would allow her to connect material constraints with deeper meanings. As a result, while compliance was enforced, it often lacked internalization.

The development of competence—knowing when, how, and why to use air conditioning—played a crucial role in stabilizing these practices. Parents frequently balanced explicit instruction with implicit modelling to teach their children responsible use. Explicit instruction was particularly evident in families like Peter’s, where children were taught technical skills, such as setting the thermostat to an “appropriate” temperature. This approach framed competence as a matter of practical efficiency, with parents providing clear rationale to justify their rules. In contrast, households like Eunice’s demonstrated a subtler dynamic, where parents relied on role modelling and gentle guidance. Through daily interactions, children observed and adopted the values of moderation and resourcefulness, internalizing competence not as a forced rule but as a personal habit. These examples show that while parental authority often dictated the rules, children’s responses—whether through active participation or passive acceptance—reflect a form of negotiation. Through Halkier’s lens, competence is not simply taught but co-produced within families as children navigate and adapt to the rules set for them.

The successful transmission of cooling practices relied on embedding material and practical considerations within broader cultural meanings. For parents, air conditioning use was more than a technical or economic issue; it symbolized values of thrift, restraint, and responsibility. These meanings, deeply rooted in Confucian ideals, lent moral weight to the rules, ensuring that they were accepted as part of a family’s identity and legacy. In Grace’s narrative, her parents framed air conditioning as a privilege tied to their lived history of resource scarcity. By positioning it within a larger moral narrative, they effectively fostered an understanding that went beyond

compliance. Grace's adherence to these practices reflects the integration of meanings into everyday actions. It was not merely about following rules but about engaging with values that her family considered integral to their way of life. This cultural framing, however, was not universal. In families like Emily's, the lack of meaningful communication created a disconnect between rules and their intended values. While compliance was achieved, it came at the cost of resentment and alienation, underscoring the importance of coordinating material conditions and cultural meanings to ensure effective practice transmission.

### 6.3 Adolescence: Shifting Meanings and Emerging Priorities

This section's attention is divided between two narratives: the perspective of parents on their adolescent children's energy use, and the perspective of the youths on parental control during their 'formative years'. Here, "formative years" refers to the period when individuals are developing a stronger sense of identity, independence, and critical thinking skills, which typically occurs during adolescence (ages 12-18). This stage is crucial because it is when young people begin to make more autonomous decisions and start to challenge or negotiate the rules and values set by their parents. It's important to note that access to air conditioning during the adolescent phase (e.g., middle and high school) isn't exclusive to those born after 1995. Many post-90s interviewees recounted experiences of air conditioning use and parental oversight during this stage. Parents of those from these two age cohorts, who largely grew up in the more austere times of the 60s and 70s, share parallel experiences in their relationships with their children. Conversations with interviewees revealed two salient themes: concessions made in light of academic priorities and adolescents' pushback against air conditioning restrictions. Typically, the Chinese parents prioritize education, leading them to offer greater comforts during their children's middle school years, including the use of air conditioning, which is seen as a crucial tool for creating an optimal study environment. Yet for the adolescents, amidst their rebellious streak, even though some recognize the pitfalls of overusing air conditioning, many still savour the comfort it brings, leading to a strong desire to indulge without restraint. When teenagers' cravings for comfort exceed what their parents are willing to tolerate, it sets the stage for heightened family conflicts during these years.



### 6.3.1 Parents Concede for Academic Reasons

#### *6.3.1.1 From the Parents' Perspective*

During the adolescent years, the practices surrounding energy consumption, particularly the use of air conditioning, undergo significant reconfigurations. Adolescents born after 1995 and those from the early '90s both experienced air conditioning's evolution from a luxury to a more commonplace household appliance, marking a transitional phase in the material availability of this technology. Despite slight differences in the timing of their upbringing, the practices they engaged in reveal striking parallels in how air conditioning use was constrained and renegotiated within households. These parallels can be understood through the broader socio-historical context: parents of both cohorts were deeply influenced by the hardships of China's Reform and Opening Up period (late 1970s onwards), which entrenched values of frugality and resourcefulness as essential meanings underpinning their energy-use practices. These meanings, coupled with the material limitations and the competencies parents developed to manage resources effectively, were central to how they regulated air conditioning use and passed down these practices to their children. By drawing on these deeply rooted values, parents sustained a disciplined approach to energy consumption while gradually adapting their practices to accommodate the changing material conditions and their children's growing needs.

Parents, shaped by the imprints of their own challenging pasts, often embedded meanings of conservation and practicality within their energy-use practices—meanings tied to experiences of scarcity and necessity. These principles, discussed earlier in this chapter, formed the foundation of their approach to disciplining energy consumption. However, as their children entered the pivotal adolescent years, the practices surrounding air conditioning began to evolve. Material changes, such as the increasing availability and affordability of air conditioning units, intersected with shifting meanings of household priorities. Education, a recurring theme in the interviews, became a pivotal meaning driving this transformation. For many parents, air conditioning ceased to be just a household amenity; it was reframed as a tool integral to creating a conducive learning environment and supporting their children's

academic success. This reframing represented a renegotiation of meanings, where the value of education began to outweigh traditional notions of thrift.

While education frequently served as the dominant justification for loosening air conditioning restrictions, the dynamics were rarely unidirectional. Competence—the parents’ ability to manage their children’s behaviour—also shaped these evolving practices. In some cases, parents relented due to their adolescents’ persistent demands or struggles to comply with earlier rules. This highlights the role of social interactions in reshaping practices. The challenges of managing adolescent behaviour introduced an element of negotiation and compromise, contrasting with the unilateral enforcement seen in earlier stages of childhood. These nuanced shifts illustrate that while education was a major driver of change, it acted in concert with other elements, such as material advancements and relational dynamics, to reconfigure air conditioning practices.

Dorothy Liu, a 46-year-old mother, exemplifies how Chinese parents reconfigured cooling practices during their children's adolescent years, driven by the evolving meanings of education and success. Her son, Tom Zhang, now 25 and pursuing postgraduate studies, reflects the culmination of these adjusted practices. My meeting with Dorothy took place in her modest 53m<sup>2</sup> apartment in Longgang, Shenzhen—a home purchased by her parents decades ago after migrating to the city for work. Upon entering their home, I was struck by the array of certificates and awards adorning the walls, celebrating achievements from Tom's childhood right through to the present day—a testament to the pride Dorothy holds for her son's accomplishments. It was reminiscent of my own childhood, where my parents dedicated a white wall to my accolades, such as being an outstanding student.

What caught my attention was the selective placement of air conditioning units in their home—only in Tom's room and the living area. The living room unit had been added only the previous year, but the air conditioner in Tom’s room had been installed when he reached ninth grade, eight years prior. This calculated choice illustrated a significant shift in cooling practices, where the meanings attached to air conditioning evolved from being a luxury to an academic necessity. For Dorothy’s generation, steeped in frugality and resourcefulness from enduring China’s Reform and Opening Up period, this selective installation marked a departure from traditional thrift. The air

conditioner became not just a material object but a focal point in the practice of facilitating educational success.

*"Our summers were always about endurance, counting each coin," Dorothy shared. "But times have changed. As my son steps into the rigors of high school, the air conditioner has shifted from a mere wall fixture to an essential tool in his educational arsenal."* This statement highlights the renegotiation of meanings surrounding air conditioning. Once viewed as a resource requiring strict regulation, it was now reframed as an enabler of academic productivity. The materiality of the air conditioner—its cooling capacity and ability to provide comfort—aligned with the competence required to manage intense study schedules, reflecting a practice fundamentally shaped by the family's educational priorities.

Dorothy's justification reflects a broader shift in parental perspectives. She explained, *"It's not about enjoying. It's about providing what's necessary for him to concentrate and excel. It's no longer just an appliance; it's a vital part of his study environment."* This sentiment illustrates the integration of meaning (education as paramount), materiality (air conditioning as a supportive tool), and competence (parental adaptability in managing household resources to align with new priorities). In this reconfigured practice, the air conditioner transitioned from a symbol of indulgence to a representation of parental care and foresight.

For Dorothy and many parents like her, the decision to adapt air conditioning practices during their children's adolescence was not a simple concession but a recalibration of priorities. It involved negotiating the meanings of air conditioning within the context of educational aspirations, navigating material constraints, and fostering an environment that balanced tradition with the demands of modernity. By prioritizing her son's academic success, Dorothy redefined cooling practices as an essential component of the family's collective effort to secure a brighter future.

In the shared psyche of Chinese parents, adolescence represents more than just a period of growth; it is a critical crossroads that holds the potential to shape futures. This perspective reflects deeply ingrained cultural values, where education is both a personal milestone and a societal responsibility. Dorothy's story exemplifies this broader narrative, highlighting how parents recalibrate household practices to prioritize educational achievement. By leveraging every possible tool—including the

cooling comfort of air conditioning—parents position themselves as facilitators of their children’s academic success.

This long-standing emphasis on education is firmly rooted in the Confucian tradition, which historically placed scholars in high societal esteem. In contemporary China, this reverence manifests as an intense focus on academic achievement, with high school performance viewed as a gateway to prestigious universities and prosperous careers. The *Gaokao*, China’s national college entrance examination, symbolizes this ethos. Often described as the great equalizer, the Gaokao holds the transformative potential to change a family’s socioeconomic trajectory, a sentiment echoed by almost all parent: “*The Gaokao can change a family's fate.*”

Within this context, cooling practices undergo significant evolution as parents redefine their relationship with air conditioning. The shift from strict regulation to thoughtful allowance aligns with the material, cultural, and generational demands of this stage of life. Materiality plays a pivotal role here; air conditioning transitions from being a scarce and costly commodity to an essential resource for creating a conducive study environment. Parents like Dorothy strategically integrate air conditioning into their children’s study spaces, recognizing its role in enhancing comfort and focus. This shift reflects an emerging competence in managing household resources to align with educational priorities.

The meanings attached to air conditioning also evolve during this period. For parents, air conditioning becomes imbued with symbolic significance, representing care, foresight, and a commitment to their children’s success. As Dorothy’s neighbour, Deborah Guo (53 years), explained, “*It was never about the air conditioning itself. It was about providing an environment where my son could study without unnecessary discomfort distracting him from his goals.*” This statement illustrates how air conditioning transcends its physical function to embody broader cultural and familial values.

Deborah’s reflections further highlight the intergenerational adaptation of meanings within cooling practices. “*When I was young, we believed enduring hardship was character-building. But for my son, I want every hour of his study to be as effective as possible, and if that means a cooler room in the summer, so be it,*” she shared. Her words underscore a redefinition of parental competence, where the ability to adapt

traditional values to modern necessities becomes paramount. While enduring hardship was once seen as a virtue, today's parents reinterpret this value to include enabling their children to thrive in a highly competitive academic environment.

In this shift, parents remain deeply influenced by their own experiences of scarcity and hardship, but they adapt these lessons to meet the evolving demands of their children's education. Cooling practices during adolescence thus serve as a site of negotiation, where traditional values and modern priorities intersect. In facilitating their children's academic success, parents redefine air conditioning as a critical tool—one that embodies their role as providers, educators, and advocates for their children's future.

For Chinese parents, allowing more frequent use of air conditioning during their children's teenage years reflects a recalibration of practice elements to align with the high stakes of contemporary Chinese education. This adjustment is not a departure from their core values of thrift and discipline but rather a strategic decision that integrates evolving material realities with shifting meanings. *"We still worried about over-indulgence,"* Deborah admitted, reflecting a tension between longstanding concerns and the new educational priorities. *"But we also understand that the pressures our children face are different from what we experienced. Our role is to support them through these pressures, not add to them."*

For most parents, this shift in practice involved negotiating the material element of air conditioning. Once considered a luxury, air conditioning units became increasingly accessible as financial circumstances improved, allowing families to view them as essential tools rather than indulgences. The physical presence of air conditioners in adolescents' study spaces, combined with their capacity to mitigate the intense summer heat, redefined the practice of cooling from one rooted in restraint to one focused on enhancing productivity and comfort.

The competence element also underwent a transformation as parents adapted their practices. While earlier stages of parenting involved teaching children how to minimize usage, adolescence brought new skills to the forefront, such as managing thermostat settings to balance comfort and efficiency. This shift was less about enforcing rules and more about demonstrating how air conditioning could be used responsibly to support educational goals. As Deborah explained, *"It's not about letting*

*them do whatever they want. We made sure they knew how to use it efficiently—when to turn it on, how to set the temperature, and when it was unnecessary."*

The meaning element experienced perhaps the most significant evolution. Air conditioning, once symbolizing indulgence or waste, became recontextualized as a means to achieve academic success. The focus on education, deeply rooted in Confucian ideals of self-improvement and family honour, provided a justification for this shift. Parents framed their decisions as investments in their children's futures, aligning the practice with the broader cultural value placed on education. As Deborah noted, *"It's no longer just an appliance; it's a necessary part of their study environment. It's about ensuring they can focus and excel."*

Despite this shift, concerns over excess and wastefulness persisted, highlighting the enduring influence of traditional values. These concerns often led to careful monitoring and periodic reminders about energy consumption, even as parents increasingly prioritized academic demands. Such negotiations reveal the ongoing balancing act within these households: integrating new practices without fully discarding old values. For many parents, this balance represented a way to maintain coherence between evolving material and cultural contexts while safeguarding core beliefs.

Finally, the broader societal context played a crucial role in solidifying these changes. As air conditioning became more common and culturally normalized, resistance to its use diminished. Parents observed its adoption by other families and, over time, internalized the practice as a necessity rather than a luxury. This shift reflects not only the influence of changing material conditions but also the adaptive capacity of practice elements to respond to external pressures and new priorities.

In sum, the integration of air conditioning into teenage study spaces illustrates a significant evolution in parental practices. By reconfiguring material, competence, and meaning elements, parents adapted their approach to align with both the educational pressures and the evolving social norms of contemporary China. This evolution underscores how practices are shaped and reshaped within dynamic cultural and material landscapes, maintaining continuity while accommodating change.

### 6.3.1.2 From the Children's Perspective

As the sweltering Shenzhen summers of the early 2000s wore on, the rigid air conditioning rules imposed during early childhood began to loosen during adolescence. For many young people, this shift marked a subtle but significant transition in family dynamics. Adolescents, caught between their growing desire for autonomy and the expectations of their parents, began to negotiate their use of air conditioning within the broader framework of academic achievement and resource-conscious values.

The metaphor of “鱼跃龙门” (leaping carp passing through the dragon gate), drawn from Confucian tradition, encapsulates the pressures faced by Chinese adolescents. Success in academics is viewed as a collective family goal, and for many young people, air conditioning became part of this pursuit—not as a luxury, but as a tool to meet their educational demands. However, the process was rarely without tension. Adolescents found themselves navigating a shifting set of rules, balancing their desire for comfort with the lessons of thrift and restraint ingrained in them since childhood.

For Leo Chen, now 33, this transition occurred quietly, but it left a lasting impression on how he understood his relationship with his parents and their values:

*“I remember sitting at my desk during those hot summers, trying to study. The ink on my papers would smudge because my palms were sweating so much. I was restless and frustrated. Then one day, I realized things had changed—without a word, my parents let me use the living room air conditioner while studying. It wasn’t a negotiation; it was something they noticed I needed. They didn’t explain it, but I felt it was their way of supporting me.”*

(Leo Chen, male, 33 years old)

For Leo, this subtle shift in practice reflected an unspoken understanding between him and his parents. Their earlier emphasis on discipline and thrift was not abandoned, but it was temporarily adjusted to meet his educational needs. In Leo’s view, air conditioning became less about comfort and more about helping him focus—a practical compromise that quietly acknowledged the pressures of adolescence.

Others, like Evelyn Hu, experienced a more structured approach to air conditioning use:

*“When I started high school, my parents finally let me use the AC while studying, but it came with strict conditions. They’d say, ‘You can use it, but only at 26 degrees, and you have to turn it off when you’re done.’ It didn’t feel unfair. I understood that this was their way of letting me have what I needed while still teaching me how to use it responsibly.”*

(Evelyn Hu, female, 32 years old)

Evelyn’s account highlights how air conditioning was reframed as a conditional privilege rather than an indulgence. For her, the experience was not about conflict but about learning to balance the practical benefits of air conditioning with the values of thrift and responsibility that her parents sought to instil. Her family’s conditions—like temperature limits or usage monitoring—served as boundaries that taught her resource management while still offering some flexibility.

For many adolescents, air conditioning became a site of quiet negotiation—not through explicit rebellion but through small, everyday acts of compromise. They learned to adapt their behaviour to meet their parents’ expectations, demonstrating restraint while also asserting their growing independence. For example, some described setting timers or adhering to agreed temperature settings as ways to maintain parental trust while enjoying the comfort of cooling.

At the same time, the meaning of air conditioning itself shifted in the eyes of many adolescents. What had once been framed solely as a household expense became, for them, a tool to enable academic success. As Evelyn put it:

*“At some point, I started to think of the air conditioner as part of my study desk—it was there to help me concentrate. I didn’t see it as wasteful because I was using it for something important.”*

This reframing reflects the evolving relationship between adolescents and the resources they were allowed to use. By contextualizing air conditioning within their educational pursuits, young people could reconcile their reliance on it with the values of restraint and moderation passed down by their parents.

For others, however, these negotiations were less harmonious. Adolescents like Emily Wang recall feeling frustrated by what they perceived as lingering parental control:



*“My parents always had a rule—no AC unless absolutely necessary. Even when I was sweating and trying to study, they’d say, ‘It’s not that hot, you can manage.’ I knew they were worried about the electricity bill, but it felt like they didn’t understand how hard it was for me to focus.”*

(Emily Wang, female, 23 years old)

Emily’s experience highlights the tension that arose when the meanings ascribed to air conditioning—comfort, necessity, or indulgence—differed between parents and children. For her, the rules felt rigid and unyielding, creating a sense of alienation rather than alignment. Unlike Leo and Evelyn, who saw their parents’ flexibility as supportive, Emily perceived her parents’ reluctance as a failure to recognize her needs, underscoring how generational differences in values and priorities could lead to conflict.

### 6.3.1.3 Negotiating Practices

Adolescence marked a dynamic phase in the evolution of air conditioning practices within households, characterized by a renegotiation of meanings and the emergence of intersecting priorities. These transformations were not merely a reaction to changing material conditions but also a reflection of how familial values and expectations adapted to meet the pressures of modern life. This section builds on earlier discussions to explore how the shifting meanings of air conditioning practices during adolescence reveal deeper patterns of negotiation and adaptation within families.

At this stage, air conditioning practices became a site where competing priorities—education, comfort, and thrift—intersected, reshaping not only the practices themselves but also the broader family dynamics. For parents, the symbolic meaning of air conditioning transitioned from a resource requiring stringent control to a facilitator of academic success. This shift was underpinned by their recognition of the intense demands placed on adolescents, particularly within the high-stakes educational environment of China. The air conditioner, previously framed as a luxury, was reframed as a necessity that supported their children’s ability to focus and excel academically.

This reframing did not occur in isolation but emerged through a process of tacit negotiation between parents and children. Adolescents, increasingly aware of their own needs and developing a stronger sense of autonomy, subtly pushed against earlier restrictions. This was not necessarily through overt rebellion but through their actions and the visible challenges they faced—sweaty study sessions, smudged papers, and restless frustration during sweltering summers. These cues prompted parents to adapt their approach, balancing their long-standing values of thrift and discipline with their desire to support their children’s educational pursuits.

The concept of intersections is particularly useful in understanding this phase. Air conditioning practices intersected with educational practices, creating new meanings that redefined the boundaries of resource use within the household. Parents began to view the air conditioner as part of the broader ecosystem of tools and resources essential for academic achievement, integrating it into the material and cultural framework of the family. This intersection created a hybrid practice that combined elements of both the old and the new, allowing families to reconcile traditional values with the demands of modernity.

Parents maintained their authority by framing air conditioning use within the moral framework of resource conservation and responsibility. Even as they allowed greater flexibility, they often set clear boundaries—stipulating temperature limits or usage times—to ensure that their children’s actions aligned with the family’s shared values. Adolescents, in turn, navigated these expectations by adopting behaviours that signalled compliance while gradually asserting their independence. This delicate balance of accountability allowed families to maintain cohesion during a period of significant change.

Importantly, the negotiation of air conditioning practices during adolescence highlights the relational nature of household dynamics. These adjustments were rarely formalized or explicitly discussed but instead emerged through an ongoing process of observation, response, and adaptation. Parents responded to their children’s needs not by abandoning their own values but by recalibrating the balance between competing priorities. Adolescents, for their part, learned to operate within these negotiated boundaries, demonstrating both respect for parental authority and a growing sense of self-determination.

Through this lens, the adolescent phase can be seen as a critical juncture in the evolution of household practices, where the integration of new meanings and priorities set the stage for future transformations. The shifts in air conditioning practices during this period were not merely about accommodating immediate needs but about navigating the complex interplay of material realities, cultural values, and generational aspirations. These negotiations, while subtle, reveal the depth of familial adaptation and the capacity of household practices to evolve in response to changing social and environmental contexts.

### 6.3.2 Constantly negotiated boundaries and teenage rebellion

#### *6.3.2.1 From the Parents' Perspective*

During teenage years, parental authority experienced a subtle but significant transformation. While parents acknowledged the necessity of relaxing some restrictions—primarily to support their children's academic demands—the relaxation of air conditioning rules often proved difficult to fully control. Although parents initially maintained their role as ultimate decision-makers in household practices, the shift in priorities toward education inadvertently set the stage for new challenges. As teenagers grew accustomed to the stable comfort provided by air conditioning, their reliance on it deepened, gradually leading to expanded demands that extended beyond academic purposes.

This shift reveals an evolving tension: the traditional parental authority rooted in cultural norms of hierarchy and filial responsibility clashed with the adolescents' growing autonomy and desire for comfort. Over time, what began as a controlled allowance often expanded into unanticipated patterns of use, with children pushing the boundaries of established rules. This gradual divergence in expectations widened the generational gap, ultimately amplifying differences in perspectives and leading to friction within households. The relaxation intended to facilitate academic success, therefore, became a double-edged sword, challenging the delicate balance between traditional values and the emerging priorities of modern family life.

Many parents observed a subtle but unmistakable shift in their children's attitudes and behaviours surrounding air conditioning use. What was once a tightly controlled household practice began to evolve, with teenagers pushing the boundaries of

established rules in ways that reflected broader changes in the material, social, and cultural elements of cooling practices. These changes, as parents noted, were not just isolated acts of defiance but part of a larger transformation influenced by external environments, peer dynamics, physiological factors, and the adolescents' growing sense of autonomy.

From a material perspective, the increased accessibility of air conditioning in public spaces and schools played a significant role in shaping teenagers' expectations. Parents recounted how their children were exposed to air-conditioned environments outside the home, from classrooms to shopping malls, where cooling was presented as the norm rather than a privilege. This normalization of air conditioning in public spaces altered teenagers' perceptions, embedding the expectation that consistent coolness was a baseline requirement for comfort.

*“My daughter would come home and say, ‘Mom, why is it always so hot here? At school, the classrooms are always cool, even in the middle of summer.’ She’d point out that all the other families in her class seemed to have air conditioners in every room, and that we were the only ones still being so strict about it. It wasn’t just about feeling cool—it was like she felt embarrassed that we were different. She’d ask, ‘Why can’t we live like everyone else?’ And honestly, that question hit me hard because I realized how much her expectations had changed compared to when I was growing up.”*

(Diane Wei, female, 49 yrs)

Additionally, many teenagers visited the homes of peers whose families adopted more relaxed attitudes toward air conditioning. These experiences further reinforced the idea that their own household rules were overly restrictive or outdated, prompting them to push for greater freedom in their use of cooling devices.

*“My son would come back from his best friend’s house and tell me, ‘At James’s place, they keep the AC on all day, even when they’re just watching TV or playing video games. They don’t have to ask permission—they just use it.’ Then he’d say, ‘Why do I have to wait until it’s unbearably hot or until you say it’s okay?’ It felt like every time he went to someone else’s house, it became a comparison game, and we were always the strict parents.”*

(Elizabeth Sun, female, 57 yrs)

In terms of competencies, teenagers demonstrated increasing ingenuity in navigating household rules around air conditioning. Parents observed their children's growing ability to adjust thermostat settings, set timers, or justify extended use under the guise of academic necessity. This behaviour reflected a developing skill set in managing the technology to suit their preferences while circumventing parental restrictions.

*"I'd come home from work and find the AC running at full blast in my son's room. When I confronted him, he'd say, 'I need it to study—how do you expect me to focus in this heat?' At first, I believed him, but then I started noticing the AC was on even when he wasn't studying. I realized he'd figured out how to reset the timer so it would run longer, or he'd wait until I was busy and sneak it back on. He was always one step ahead, finding ways to keep it on without me noticing."*

(Ruth Chu, female, 50 yrs)

This increasing competency also extended to their ability to negotiate or justify their actions. Many teenagers positioned their use of air conditioning as aligned with broader household priorities, such as academic success, framing their actions as responsible rather than indulgent.

*"My daughter would say, 'Mom, you always tell me that school comes first and that I need to do well to get into a good university. How can I do that if I'm sitting here sweating and uncomfortable? Isn't the AC part of helping me succeed?' She was so clever about it—she knew exactly what to say to make me feel like I was the unreasonable one."*

(Joyce Jiang, female, 54 yrs)

The meanings attached to air conditioning also underwent significant transformation during this period, further driving the divergence between parents and children. While parents continued to view air conditioning as a tool for specific, purposeful use—primarily to support academic success—teenagers began to associate it with broader notions of modernity, comfort, and even social status.

*"It wasn't just about staying cool anymore. For my son, having the air conditioner on was about feeling like he belonged in this modern, urban world. He'd say, 'Everyone else has it, so why can't we? Are we not good enough to have nice things?' It was no longer just a practical device—it became tied to his sense of identity and self-worth."*

(Elizabeth Sun, female, 57 yrs)

For adolescents, air conditioning came to symbolize a standard of living that aligned with their emerging independence, contrasting sharply with their parents' emphasis on thrift and moderation. This divergence in meanings widened the gap between generations, creating tension as teenagers increasingly viewed household rules as restrictive and outdated.

Ultimately, these evolving elements—material access, growing competencies, and shifting meanings—converged to create a widening gap in cooling practices within families. Parents often found themselves grappling with the implications of these changes, as their attempts to enforce boundaries were increasingly challenged by their children's expanding expectations. This divergence in practices was not merely a result of adolescent rebellion but a reflection of broader societal shifts that redefined the role of cooling technologies in everyday life.

*“I used to think it was just a phase, that he'd grow out of it, but it felt like our whole way of living was being questioned. Every rule we had about saving electricity or being mindful of resources suddenly felt old-fashioned to him. I realized it wasn't just about the air conditioner—it was about how different his world was from the one I grew up in.”*

(Elizabeth continued)

These reflections highlight how the seemingly mundane practice of air conditioning use became a microcosm for broader shifts in family dynamics and cultural expectations. The evolving practices of teenagers, driven by external influences, physiological changes, and internal growth, underscored the fluid and contested nature of household routines, where material changes, competencies, and meanings interact to shape the trajectories of everyday life.

#### *6.3.2.2 From the Children's Perspective*

The interviews with young adults highlight a generational contrast in attitudes toward parental constraints and the pursuit of autonomy, particularly regarding air conditioning use during adolescence.

For individuals over 30 (born before 1995), their reflections suggest a period of greater acceptance of parental authority and household norms. While they occasionally desired more personal freedom and comfort, their accounts depict a tendency to conform to the rules set by their parents. This adherence was often shaped by the cultural values of their upbringing, where deference to authority and respect for family harmony were prioritized. These individuals recall their teenage years as a time when parental decisions, though sometimes restrictive, were seldom openly contested.

In contrast, the younger cohort, under 30, describes a more confrontational approach to air conditioning use during adolescence. For them, control over cooling practices became emblematic of a broader struggle for independence. Growing up in a rapidly modernizing society with increased material comforts and exposure to more permissive norms among peers, this group exhibited a heightened readiness to push against traditional household boundaries. Air conditioning, once viewed as a luxury, was increasingly seen as a standard necessity, reinforcing their expectation for greater autonomy in its use.

#### (1) General observation: Younger adults over 30

The narratives of young adults over 30 reflect a generation shaped by a delicate balance between the growing availability of modern conveniences, like air conditioning, and the cultural values of filial piety and frugality deeply embedded in their upbringing. While they were not entirely passive in their interactions with their parents, their actions reveal a tendency to avoid direct confrontation, instead resorting to subtle, quieter forms of resistance that maintained familial harmony.

For this cohort, adolescence coincided with a period of transition in many Chinese households, as the growing affordability of air conditioning units meant more families could afford one. However, even as these appliances became more accessible, their use was tightly regulated by parents, often framed as a resource to be used sparingly due to financial and health considerations. Mike Wu, now 32, recounted how his family's first air conditioner, installed when he was in elementary school, became both a symbol of progress and a source of contention.

*“I remember how proud my parents were when they finally bought an AC unit. It was installed in the living room, and for a while, it was almost like a museum piece—we barely used it. If I complained about the heat in my room, my dad would say, ‘Go sit in the living room for a few minutes, but don’t waste it.’ It wasn’t just about money, though. They’d say things like, ‘It’s bad for your body to go from hot to cold all the time.’ And sure, I’d roll my eyes, but I didn’t argue outright. That wasn’t how things worked in our house.”*

While outright rebellion against parental rules was uncommon, this generation wasn’t entirely submissive. Instead, they found creative ways to stretch the boundaries without directly challenging their parents. Alice Lin, 34, shared how she would wait for moments when her parents were out of the house to use the air conditioner freely:

*“I wasn’t going to pick a fight over it because that would just get me into trouble. But if they went out to run errands or visit relatives, I’d sneak into the living room and crank it up. The trick was to make sure it was back to their ‘acceptable’ temperature before they got home. I’d even use a fan to help cool down the room faster so it didn’t look suspicious.”*

This kind of calculated disobedience was common among respondents, reflecting their awareness of the limits they could push without crossing a line. For many, these moments of quiet resistance were a way to assert some autonomy while still respecting the boundaries set by their parents.

What sets this group apart from younger generations is their deeply ingrained respect for parental authority and the cultural meanings attached to air conditioning use. For them, the household rules around air conditioning were not just about practical considerations but also about maintaining the family’s hierarchy and upholding traditions. Jack Li, now 33, reflected on how this shaped his attitude during adolescence:

*“Arguing with your parents back then just wasn’t done—not because you didn’t want to, but because it felt wrong. My dad worked so hard to make sure we had what we needed, and even if I thought the rules were strict, I respected where he was coming from. Sure, I’d complain under my breath, but I wouldn’t dare say, ‘No, I’m going to do what I want.’ It wasn’t just about the air conditioner—it was about respecting them and the sacrifices they made.”*



This respect for parental authority often led to a restrained approach to pushing boundaries. While they might have tested the rules in small ways, they were unlikely to openly defy their parents. Alice Lin described how this mindset influenced her behaviour:

*“Sometimes I’d think, ‘Why can’t we just keep it on a little longer?’ But then I’d remember all the lectures about saving money and how hard they worked to provide for us. It wasn’t worth starting an argument over something like that. In the end, I’d grumble to myself and leave it alone.”*

While these individuals found ways to navigate their parents’ rules, their resistance rarely escalated into overt conflict. This restraint was partly due to the cultural emphasis on filial piety, which discouraged direct challenges to parental authority, and partly because of the household dynamics at the time. Mike Wu reflected on how this shaped his relationship with his parents:

*“I think we all knew that if we pushed too hard, there’d be consequences—not just grounding or losing privileges, but a kind of disappointment that felt worse than any punishment. My parents weren’t tyrants; they just believed in doing things a certain way, and we learned to work around it without disrespecting them outright.”*

As these young adults reflect on their experiences, many note the stark contrast between their upbringing and that of today’s adolescents. Jack Li observed how younger generations appear more willing to question authority:

*“I look at my nieces and nephews, and they’re so much bolder than we ever were. If they think something’s unfair, they’ll argue until their parents give in. For us, it was like, ‘Your parents are the boss, and that’s it.’ I think it’s good that kids today are more confident, but sometimes I wonder if they’re missing out on learning the value of patience and respect.”*

Alice Lin added, *“It’s not that we didn’t want more freedom—we just knew there were limits. I see younger kids now, and they don’t seem to have the same understanding of boundaries. It’s like they see everything as negotiable.”*

For young adults over 30, adolescence was a time of navigating the intersection between modern conveniences and traditional values. While they occasionally pushed back against parental restrictions, their actions were tempered by a deep respect for

their parents and an acceptance of cultural norms that prioritized moderation and authority. Their approach to air conditioning use reflects a broader practice shaped by material conditions, competencies in negotiating boundaries, and the enduring significance of filial piety. This generation's quieter, more calculated resistance contrasts sharply with the more assertive attitudes of today's adolescents, highlighting the evolving dynamics of family relationships and the shifting meanings attached to comfort and autonomy.

(2) General observation: younger adults below 30

Among the younger interviewees below 30, there is a noticeable ambivalence towards the stringent discipline they experienced growing up. This group tends to express more disagreement or conflict within the family, particularly regarding the strict upbringing they received. In a recent conversation, Diane's 24-year-old daughter, Sophie Li, who often avoids returning to her parents' home even during holidays, opened up about the strict environment she was raised in by her teacher parents. *"They've always been strict with me, which I guess helped me get into a good university,"* she admits. *"But the traditional education I received meant always respecting my elders, never talking back, even if I thought they were wrong."*

She recounted how, growing up, any form of dissent or contradiction was unimaginable amongst her peers, a stark contrast to what seems more commonplace now. *"Back then, clashing with your parents wasn't an option. We were taught to never argue with the adults in the family,"* she explained. Throughout her younger age, she mostly avoided conflicts with family members, a mode of interaction she has largely internalized.

*"However, as I've grown older, I find myself grappling with mixed emotions,"* she continues. The struggle for autonomy, the desire to make her own choices, especially regarding simple comforts like air conditioning, has intensified. *"It's not just about being cool in summer anymore. It's about the freedom to make choices without someone always looking over my shoulder,"* she says with a hint of defiance.

Young adults like Emily Wang and Tom Zhang articulate a shared frustration from childhood to adolescence, a time when their wishes were often dismissed by parental

authority. *"We grew up being told 'no' a lot when it came to using the AC. It felt like we had no say,"* Emily explains. This imposed powerlessness has left a mark, contributing to a counter-reaction now that they have control over their environments.

Tom adds, *"My parents had their way of doing things, but now I've got mine. They were all about saving energy, and I get that, but sometimes it feels like those old habits are a straitjacket."* For Tom and his peers, the rejection of past practices isn't just about comfort; it's a statement of identity and a declaration of their right to choose.

These young individuals find themselves at a crossroads where the meaning of household practices, particularly air conditioning use, reflects a growing divergence from traditional values. Unlike their older counterparts, who largely internalized Confucian ideals of moderation, thrift, and respect for parental authority, this younger generation increasingly questions the relevance of such values in their daily lives. While they may acknowledge the eco-conscious and disciplined upbringing they received, they are less inclined to embrace it fully. Instead, they gravitate toward self-determination, prioritizing personal comfort and autonomy over adherence to inherited norms. For many, this shift in meaning lies at the heart of the tensions with their parents. Adolescence becomes a stage where the balance tips: the boundaries set by parents, rooted in traditional ideals, are perceived as increasingly outdated and incompatible with the realities of modern life. As societal values evolve and comfort becomes more accessible through technological advancements, these younger individuals feel emboldened to redefine practices on their own terms. This redefinition often leads to friction. From the perspective of these adolescents, parental concessions—such as limited air conditioning use for studying—may appear tokenistic, insufficient to meet their broader desire for freedom and agency. The rigid boundaries that parents uphold feel overly restrictive, sparking dissatisfaction and conflict. Unlike the older cohort, whose respect for filial piety tempered their resistance, this younger generation is more willing to openly challenge their parents, rejecting the traditional meaning of air conditioning as a controlled resource tied to family hierarchy and discipline. Ultimately, this clash of meanings—not just about the material use of air conditioning but about what it symbolizes—drives the sharper conflicts within these households. For parents, air conditioning represents a tool for measured support within a framework of discipline and thrift. For their children, it

symbolizes personal agency and modernity, a break from the past and a declaration of independence. This divergence amplifies the practice tensions, making the generational gap in cooling practices far more pronounced than in previous cohorts.

*"I remember the battles over the AC remote control in the high school years," says Jerry Liu, now 23, reflecting on his teenage years. "It felt like every degree lower was a step towards my own choice. When my dad would switch off the AC, I'd wait for him to leave the room and then turn it back on, just a couple of degrees cooler. It was like saying, 'I'm here, I have a say too.'"*

Another young adult Emily recounts, *"There were these standoffs, you know. My mom would say the AC shouldn't go below 26 degrees. I'd nod, but as soon as they were out of sight, I'd crank it down to 22. I always feel that they take their temperature preferences to restrict me, I think the AC settings also have to see their own feelings, setting so high is better than not, I would like to directly turn off!"*

And then there's Jia Lu, who at 18 is in the thick of this familial tug-of-war. *"Just last week, I had a major row with my parents. They keep this lock on the AC settings, and I get why, but it's frustrating. I told them, 'It's my room, I should decide how cool it is.' It's not just about the temperature; it's about being treated like an adult."*

The tension between adolescent self-determination and traditional Chinese values is particularly evident in the evolving meanings tied to air conditioning use. In Chinese culture, Confucian values such as filial piety (孝道), respect for elders, and communal harmony have long shaped family dynamics and decision-making processes. These values emphasize a hierarchical family structure, where parental authority is paramount, and children are expected to demonstrate deference and compliance. However, as Chinese society continues to modernize and global influences grow more pervasive, younger generations are increasingly exposed to ideas of individualism and personal autonomy, challenging these traditional norms. For adolescents, the debate over air conditioning use transcends mere physical comfort; it becomes a symbolic contest over their autonomy within the family. The air conditioner, a hallmark of modern convenience, embodies more than its functional purpose—it signifies the adolescents' aspiration to assert their independence and redefine their role within the family structure.

When adolescents push against restrictions on air conditioning, their actions are imbued with meanings that go beyond the immediate discomfort of summer heat. They are questioning the cultural narratives that have traditionally governed their behaviour. For instance, a teenager who insists on lowering the AC temperature against parental objections is not merely seeking relief; they are challenging the underlying values of thrift and deference that form the foundation of a traditional Chinese upbringing. Parents, in turn, may interpret such behaviour as a rejection of the cultural norms they have worked to instil, viewing it as a direct challenge to their authority. This divergence in meanings creates a generational rift: while adolescents see their actions as an expression of self-determination, parents perceive them as a failure to uphold core familial values.

This generational clash illustrates a broader cultural shift within Chinese families. As younger generations increasingly prioritize personal freedom and self-expression, they find themselves at odds with the collectivist ethos of their parents, who emphasize family cohesion and adherence to long-standing traditions. The air conditioning dispute, therefore, becomes a microcosm of a larger negotiation, symbolizing the tension between preserving cultural heritage and embracing evolving social values. In this context, air conditioning use reflects more than a practical issue; it serves as a site where shifting meanings of autonomy and tradition are contested. Adolescents' pursuit of self-governance signals not only a natural phase of individual development but also a redefinition of how respect for tradition can coexist with personal autonomy in a rapidly modernizing society. Understanding this evolving dynamic sheds light on the ways Chinese families navigate the interplay of cultural continuity and change, offering insight into how future generations might reconcile these seemingly opposing forces.

#### *6.3.2.3 Negotiating Practices*

The teenage years represent a pivotal phase where cooling practices undergo dynamic shifts, shaped by evolving interactions between parents and adolescents. These interactions are not isolated acts but are deeply embedded in the broader practice elements of material conditions, competencies, and meanings. The divergence in how

air conditioning is understood and used within families becomes a key site of negotiation, where generational tensions unfold and practices are contested.

At the heart of these negotiations lies a tension rooted in intersections—where the practices of adolescents interact with external influences, such as their peers and societal norms. For teenagers, exposure to air-conditioned classrooms, shopping malls, and friends' homes reframes their understanding of what air conditioning symbolizes. It becomes more than a controlled household resource; it represents a baseline of modern living and personal comfort. These external interactions feed into their evolving expectations, creating friction as they perceive parental restrictions as misaligned with their lived experiences outside the home.

Parents, on the other hand, seek to anchor air conditioning use within a framework of normative accountability. Their restrictions are not merely practical but are infused with cultural meanings tied to thrift, discipline, and respect for authority. By maintaining rules about temperature settings, usage times, or conditions for use, parents aim to uphold these values while also positioning themselves as responsible stewards of household resources. For example, parents often link air conditioning to health concerns or financial prudence, reinforcing their role as guardians of family welfare. However, for adolescents, these restrictions often feel outdated, leading to a growing sense of dissatisfaction. The competencies of both parents and teenagers further shape these negotiations. Parents rely on their established skills in managing household practices, such as monitoring electricity bills or setting clear boundaries. Yet, adolescents increasingly develop their own competencies, using technological know-how to bypass restrictions or presenting persuasive arguments that align their desires with family priorities. A teenager might, for instance, frame their extended use of air conditioning as necessary for academic focus, invoking the family's shared value of education to justify their actions. These strategies reveal a sophisticated understanding of how to navigate and subtly challenge parental authority.

One of the most pronounced aspects of these interactions is the divergence in meanings attached to air conditioning. For parents, air conditioning remains a controlled and purposeful resource, symbolizing care, foresight, and the preservation of family values. Adolescents, however, imbue it with meanings tied to autonomy, self-expression, and even social identity. The air conditioner becomes a site of

resistance, where teenagers assert their independence and challenge the traditional hierarchy within the family. This clash of meanings is at the core of the generational tension, as each side negotiates the boundaries of acceptable use. These negotiations often lead to the formation of hybrid practices, where traditional and modern values coexist but not without friction. For example, a teenager might comply with parental rules in their presence but adjust the air conditioning settings covertly when unsupervised, blending deference with autonomy. Similarly, parents may reluctantly allow more lenient use during study hours but enforce stricter rules during leisure time, reflecting their attempt to balance evolving expectations with established norms. The result is a fluid and contested dynamic, where cooling practices become a microcosm of broader generational shifts. Adolescents' push for autonomy reflects their adaptation to a rapidly modernizing society, while parents' efforts to maintain control signify their commitment to preserving traditional values. These negotiations are not just about resolving immediate conflicts but are indicative of deeper changes in how Chinese families navigate the interplay between cultural continuity and modern aspirations.

## 6.4 Early Adulthood: Emerging Independence

The transition from high school to university marks a significant turning point in the lives of young adults, where they gain their first real taste of independence. This stage introduces new freedoms, including choices around everyday comforts such as air conditioning, a resource that was previously regulated within the framework of parental authority. At university or in their early professional environments, these young adults often experience autonomy in ways that contrast sharply with their upbringing. However, this newfound independence does not necessarily alter dynamics when they return home during breaks. The air conditioning practices at home remain shaped by the cultural norms and expectations established during adolescence, even as the young adults begin to challenge and renegotiate these boundaries. This stage of life reveals several evolving elements in air conditioning practices within families. From the perspective of young adults, their growing financial contributions—whether through part-time work, internships, or full-time employment—can serve as a catalyst for renegotiating authority over household

decisions, including air conditioning use. As they begin to perceive themselves as contributors to the household, their expectations for autonomy intensify, often prompting a shift in family dynamics. For example, the financial independence they gain may reinforce their belief that they deserve greater say in how resources like air conditioning are used. At the same time, parents often adapt to their children's emerging independence, gradually transitioning from strict enforcers of household norms to advisors who recognize their children's growing maturity. This evolution in the parents' role reflects both a practical acknowledgment of their children's capabilities and a broader cultural shift, where young adults' autonomy becomes an accepted part of family life. Parents may ease their oversight, especially as they observe their children managing responsibilities independently outside the home. This shift in parental involvement is particularly pronounced when young adults demonstrate responsibility, such as contributing financially, excelling academically, or managing their living arrangements effectively. However, these changes do not always lead to seamless transitions in practice. When young adults return home, the pre-existing norms of air conditioning use often create friction. The tension between traditional expectations and the young adults' desire for autonomy frequently manifests in subtle, negotiated ways. For instance, parents might still impose limits on air conditioning use—such as maintaining temperature settings or setting time restrictions—while young adults may assert their preferences more openly than before, leveraging their newly acquired independence as justification. This section will explore the interplay of these evolving elements—material circumstances, competencies, and meanings—shaping the transformation of air conditioning practices in early adulthood. By examining how young adults navigate these transitions and how parents adapt their roles, the discussion will illuminate the broader shifts in family dynamics that accompany the assertion of autonomy. These changes not only redefine the use of air conditioning but also symbolize the renegotiation of authority, responsibility, and identity within the family unit during this pivotal life stage.



#### 6.4.1 From the Parents' perspective

Deborah Guo recounts a summer that marked a turning point in her household. Her 19-year-old son, Henry, had just completed his first year of university and returned home for the holidays. The atmosphere at home was warm and joyful, as this was the first time their child had been away for so long. Yet, as parents, Deborah and her husband quickly noticed significant changes in their son over the year. *"When he left, he was still quite naive, but when he came back, he looked more like a young adult,"* Deborah observed. What stood out the most, however, was how his habits had changed, particularly regarding the use of air conditioning.

The living room, once a place where the air conditioning was seldom used, had now become a cool refuge from the summer heat. *"Back in the day, he wouldn't dream of grabbing the AC remote without getting the green light from us first. But now, he just strolls in, grabs the remote, and flips on the AC like it's nothing, dialling it to whatever temperature he feels like without batting an eye or throwing a glance our way,"* Deborah recounts, reflecting on this shift with a complex mix of emotions. *"It hits you, you know? He's not just getting taller—he's growing up, making his own calls. Kinda makes you step back and realize, hey, he's not that little guy anymore who'd do everything you say just 'cause you said so. We gotta trust that we've taught him enough to know what he's doing."*

During discussions about air conditioning, which now occur over shared meals rather than as parental edicts, Deborah's neighbour, Dorothy, also finds herself engaging in a new kind of conversation with her son. *"I'd always be on them like, 'Don't touch that AC unless you're dying of heat,' but now? They're only home for a month, so it doesn't seem necessary to argue. I'm more like, 'So, what's your sweet spot for cool?' It's more of a back-and-forth chat than laying down the law. He comes back at me with his reasons—like he's been hitting the books hard all day, or it's one of those nights where the heat's just too much—and I get it."*

These discussions no longer revolve around who controls the AC but about understanding and negotiating each other's preferences. Parents like Dorothy and Deborah find themselves considering their children's points of view more seriously, a testament to the evolving dynamic between them. *"I've come to realize,"* Dorothy

reflects, *"this stage is not about holding on to control, but about adapting to the new reality of our relationship."*

This shift in dynamics does not simply represent a general acceptance of children growing up but rather reflects significant changes in specific practice elements, as perceived from the parents' perspective. Compared to the teenage years, the transition to early adulthood introduces nuanced changes in the meanings and competencies associated with air conditioning use, while material conditions remain relatively stable. These shifts highlight how the evolving independence of young adults prompts parents to reevaluate and adapt household practices in ways distinct from earlier stages of life.

From the parents' perspective, the most striking change is in the meaning attached to air conditioning use. During the teenage years, parents often viewed air conditioning as a tool for achieving educational success, tightly regulated within a framework of discipline and resourcefulness. However, in early adulthood, this meaning begins to shift. Parents increasingly see air conditioning as a symbol of their children's autonomy and maturity, reflecting their ability to make responsible choices.

Deborah Guo's experience illustrates this change. When her son Henry returned from university, she noticed how confidently he adjusted the air conditioner without seeking permission. While this behaviour might have sparked conflict during his teenage years, Deborah interpreted it differently now. *"It's not about him defying us anymore,"* she reflected. *"It's about him showing that he knows what he needs and can take care of himself."* For parents, this shift in meaning transforms air conditioning from a strictly controlled resource into a marker of their children's progression toward adulthood. The discussions about air conditioning that follow are no longer about enforcement but about negotiation and mutual understanding, acknowledging their children's changing role within the household.

The competencies displayed by young adults also evolve significantly in this stage, further distinguishing it from the teenage years. Unlike teenagers, whose use of air conditioning often relied on subverting rules or negotiating within tightly defined boundaries, young adults demonstrate a more confident and informed approach. Having lived independently at university, they return home with a heightened sense of their own needs and the ability to articulate them persuasively.

This competency is not just about technical knowledge, such as setting timers or adjusting temperatures efficiently, but also about relational skills—how they communicate their preferences to parents in ways that reflect their growing maturity. Parents like Deborah and Dorothy notice that their children no longer argue about air conditioning in the same way. Instead, they present reasoned arguments that align their desires with broader household priorities. For instance, Henry justified his air conditioning use by pointing out that he had been contributing financially through part-time work and internships. This ability to frame their actions within a shared family context often softens parental resistance, as it signals responsibility rather than rebellion.

The material conditions surrounding air conditioning, in contrast, remain largely unchanged from the teenage years. The devices themselves, their costs, and their availability do not significantly differ. However, the normalization of air-conditioned environments outside the home, such as in university dormitories and workplaces, continues to influence young adults' expectations. From the parents' perspective, this external normalization plays a quieter role in shaping their children's behaviours, making them more inclined to view air conditioning as a standard rather than a luxury. While this material normalization was already a factor during adolescence, its impact becomes more pronounced in early adulthood as young adults begin to integrate these external norms into their identities.

What distinguishes this stage is how parents interpret these changes in practice elements. In the teenage years, boundary-pushing often felt like a challenge to their authority, creating tension and conflict. In early adulthood, however, the same behaviours are more likely to be seen as evidence of their children's growth and independence. This shift in parental perspective underscores a broader reconfiguration of family dynamics, where the meaning of parental authority itself begins to change. Parents move from being enforcers of rules to facilitators of autonomy, a transition that reflects their recognition of their children's maturity and the evolving role of household practices in supporting this growth.

In sum, the early adulthood stage is characterized by key changes in the meanings and competencies associated with air conditioning use, as viewed through the lens of parental experience. These changes transform air conditioning from a contested

resource into a symbol of independence, reshaping family dynamics and redefining household practices. For parents, this stage is not simply about relinquishing control but about finding new ways to balance traditional values with their children's emerging autonomy, navigating the complexities of modern family life.

#### 6.4.2 From the Children's Perspective

Dorothy's son, Tom Zhang, a 25-year-old young man just getting to his early career, offers a candid glimpse into his mindset.

*"Coming back home is always comforting, yet it feels different now," Tom admits. "I've got used to making my own choices at university, small as they may seem. Deciding when to crank up the AC is one of them. At school, no one is there to tell me to put on a sweater instead. I didn't realize how much I valued that autonomy until I came back home this summer."*

Tom reflects on the subtle shifts at home since he started university. *"I remember walking into the house and instantly feeling the need to make it cooler, just because that's what I've been doing in my dorm. I went for the remote without thinking. Later, I noticed Dad watching, and there was this moment, I could tell he was biting back the old lecture. It struck me then, how these small acts are my way of showing them, 'Hey, I'm not a kid anymore.'"*

From Tom's perspective, this stage is less about rebelling and more about asserting his ability to make day-to-day decisions. *"It's not like I want to disrespect the way we do things at home. It's just that I've learned to trust my own judgment,"* he explains. *"For instance, when it's too hot, I can't focus or sleep, and I know that using the AC responsibly won't break the bank. I try to explain this to my parents, to help them see that I'm not being wasteful, just taking care of myself."*

Tom's words encapsulate a shift in mindset common among his peers: a desire for self-governance tempered with a sense of responsibility. This reflects a transformation in the meanings attached to air conditioning use—a move away from its earlier associations with parental control and thrift, towards an individualized perspective where comfort is seen as a justified and manageable choice. Unlike during their teenage years, when air conditioning symbolized a site of contention within family

rules, young adults like Tom redefine it as an expression of autonomy within their personal space. This reinterpretation of air conditioning's role in their lives mirrors their broader journey toward independence, where everyday decisions signify their ability to manage their own lives responsibly. Instead of adhering to family-imposed rules, young adults now contextualize air conditioning within their own frameworks of accountability and modern living standards, subtly challenging the traditional family hierarchy without outright rejecting it.

For instance, Eric Sun, a 22-year-old university student, shares insights into his dormitory experience. *"Living in the dorms was my first taste of making collective decisions without parental input. We'd negotiate with each other about when to turn on the AC, and usually, the consensus leaned towards using it more often than not. It was a democratic process, and honestly, the AC was on more frequently than it ever was at home."*

Eric reflects on how this experience reshaped his views. *"Once I was out from under my folks' eagle eyes, things shifted for me. That AC wasn't some kind of off-limits luxury; it just became a regular part of the day-to-day. We'd use it, sure, but not like we were breaking any big family rules. It was more chill, literally. Made me realize that being comfortable isn't supposed to be this big no-no."*

Similarly, Grace Chen, a 24-year-old who recently started a job at a finance firm, reflects on how her time in the dorm shaped her sense of independence. *"Living in the dorm made us see the AC in a new light. It wasn't this big deal that we had to earn the right to use or feel guilty about. As long as we were mindful of everyone's comfort and not running up the bill too high, we were all good with flipping it on. Since then, all the way up to now, I don't make a fuss about using the AC freely. And honestly, after starting work, it seems like air conditioning is just everywhere."*

This perspective is also echoed by Bella Wu, a 24-year-old recent graduate. *"While my parents were pretty surprised at first when I started university and was more straightforward about using the AC, now they see it as normal. Living in Shenzhen, where air conditioning is as common as having a fridge or a TV, from the dorms to classrooms, and now at my internship, I've just grown accustomed to it. It's a part of daily life here, and I've adapted. So, asserting my comfort level at home doesn't come*

*as a shock anymore; it's just another step in growing up and settling into my own routine."*

The transition of young adults into greater autonomy over their living conditions brings a reconfiguration of established practices, particularly regarding air conditioning use. University life and early career experiences represent formative periods where young individuals develop a new sense of agency over their daily routines. Air conditioning, once a household resource controlled by parents, is increasingly seen as a personal tool for comfort and productivity. This shift reflects broader transformations in how young adults perceive autonomy, responsibility, and the negotiation of traditional norms within modern contexts.

In the university environment, air conditioning becomes an unregulated and normalized utility. Here, young adults learn to make decisions collaboratively with peers or independently, removing the layers of oversight they experienced at home. This exposure reshapes their expectations; air conditioning transitions from a resource governed by familial rules to an essential part of their daily lives. These experiences embed a mindset where comfort and self-management are prioritized, making traditional household restrictions feel increasingly out of step with their independent lifestyles.

When these individuals return home, their revised practices frequently clash with longstanding family norms. Parents, accustomed to regulating air conditioning use as part of their authority within the household, find themselves negotiating with children who now possess a stronger sense of independence. For young adults, the act of adjusting the air conditioner or advocating for its use reflects not just a practical decision but an assertion of their evolved identity. It signals a shift from viewing air conditioning as a controlled luxury to seeing it as a necessity aligned with modern expectations of living standards.

This negotiation process reveals deeper tensions between the generational meanings attached to air conditioning. For parents, its use is often tied to values of thrift, discipline, and collective well-being—values rooted in their own experiences of material scarcity or resource-conscious upbringing. For their children, however, air conditioning represents self-governance, personal comfort, and a reflection of the modern, urban lifestyle they have grown accustomed to. These contrasting

interpretations create friction, as both sides grapple with how to balance emerging independence with the preservation of familial harmony.

The broader societal and material context amplifies these tensions. As young adults become immersed in urban environments where air conditioning is ubiquitous, their expectations of accessibility and usage diverge even further from those of their parents. This environmental shift reinforces their sense of autonomy, making it challenging for traditional household rules to hold the same influence. Parents, in turn, face the dual task of maintaining their authority while adapting to the reality that their children's lives are now shaped by external influences that prioritize individual agency and comfort over collective restraint.

This stage of life highlights a critical transition in family dynamics. The practices surrounding air conditioning use serve as a microcosm for larger shifts in autonomy and cultural adaptation. While young adults assert their independence, their actions also reflect an evolving negotiation with traditional values, where self-determination begins to coexist with a residual respect for family structures. This interplay between modern and traditional meanings signals not only a generational divergence in practice but also a broader redefinition of how everyday resources and relationships are managed within contemporary Chinese families.

### 6.4.3 Negotiating Practices

In early adulthood, the negotiation of air conditioning use within families reflects a critical interplay between growing autonomy and residual parental influence. This stage, characterized by the partial transfer of decision-making power to young adults, sees a redefinition of family dynamics, centring on coordination and hybridity as dominant themes. These concepts encapsulate the evolving interactions that shape this transitional phase in practice.

Coordination emerges as a prominent feature of air conditioning practices in early adulthood. Unlike during adolescence, where parental authority often dictated household rules, young adults returning from university or entering the workforce introduce a more balanced approach to decision-making. Their autonomy, developed through independent living, intersects with their parents' ongoing desire to maintain

household norms, resulting in a dynamic process of shared decision-making. For instance, young adults returning home might negotiate air conditioning use by framing their needs within broader family priorities. Rather than requesting unrestricted access, they may justify increased usage through practical arguments, such as managing productivity or contributing financially to the household. Parents, recognizing their children's growing maturity, often adopt a more consultative role, framing their input as guidance rather than enforcement.

This collaborative dynamic marks a departure from earlier, more adversarial interactions. Parents, once strict enforcers, now rely on dialogue to align household practices with the evolving competencies of their children. Similarly, young adults exhibit a nuanced understanding of their family's values, tempering their assertions with considerations for collective well-being. This balance between individual needs and familial expectations encapsulates the essence of coordination in this phase.

Hybridity, the coexistence of new and traditional meanings, defines the negotiation process in early adulthood. While young adults bring with them practices shaped by the independence of university life, these are recontextualized within the framework of their family's values. Parents, in turn, begin to interpret their children's actions not as challenges to authority but as indicators of maturity and responsibility. For example, a young adult who freely adjusts the air conditioner may be seen not as defying household norms but as demonstrating their ability to manage resources responsibly. This shift in perception underscores how hybridity bridges the gap between autonomy and tradition. Parents may still emphasize values such as thrift and discipline, but these are now balanced against their children's demonstrated competencies and self-awareness. Similarly, young adults incorporate elements of their upbringing into their autonomous practices. While they may assert control over air conditioning use, they often do so in ways that reflect their parents' influence, such as setting reasonable temperature limits or being mindful of electricity consumption. This blending of old and new practices highlights the adaptive nature of hybridity, where the boundaries between independence and tradition are continuously renegotiated.

The negotiation of air conditioning practices during early adulthood centres on coordination and hybridity, reflecting the evolving dynamics between young adults



and their parents. Coordination facilitates shared decision-making, where individual autonomy and familial values find common ground. Hybridity, meanwhile, illustrates the blending of independence with traditional norms, creating a practice that is both reflective of modern living and rooted in cultural continuity. These interactions provide a deeper understanding of how everyday practices, like air conditioning use, become sites of negotiation and adaptation in the broader context of family life.

## 6.5 Chapter Summary

This chapter explored how parents guide and negotiate their children's air conditioning (AC) practices across three pivotal life stages: early childhood, adolescence, and early adulthood. By examining these transitions through the lens of social practice theory, I uncovered the evolving interplay of material conditions, competencies, and cultural meanings within Chinese families. In early childhood, parents exercised significant control over AC use, embedding cultural values such as thrift, discipline, and respect for authority into everyday practices. Through unilateral enforcement, parents used material constraints and explicit instruction to instill foundational competencies in their children, ensuring that AC was framed as a resource to be managed responsibly rather than indulged. Adolescence emerged as a transitional period marked by growing tensions and negotiations between parents and children. The increased material accessibility of air conditioning and the educational pressures faced by adolescents prompted parents to relax certain restrictions. However, this stage also witnessed a shift in meanings, with adolescents associating AC use with autonomy and social identity, often challenging the hierarchical family structure. These dynamics revealed the subtle negotiations and compromises that redefined cooling practices within the household. In early adulthood, as young adults gained independence through university life or professional work, air conditioning practices were further renegotiated. Parents adapted to their children's evolving competencies and autonomy, transitioning from authoritative enforcers to collaborative advisors. This stage illustrated a shift from conflict to coordination, as both generations blended traditional values with modern expectations, resulting in hybrid practices that reflected mutual respect and understanding. Overall, this chapter highlights how the intergenerational negotiation of AC practices serves as a

microcosm for broader shifts in family dynamics, cultural continuity, and adaptation. By tracing these changes across life stages, the discussion underscores the nuanced ways in which everyday technologies intersect with material realities, cultural norms, and generational aspirations in shaping familial relationships in modern China.

# Chapter 7: Asserting Independence Through Cooling Practices in Adulthood

## 7.1 Introduction

This chapter examines how young adults in their thirties navigate the transition to greater independence, with a focus on the evolving role of air conditioning within their daily practices. By analysing these cooling practices, this chapter uncovers how independence is subtly negotiated and expressed within the context of shared family spaces and future-oriented planning in modern Chinese households. For those still residing in multigenerational homes, air conditioning use serves as a focal point for asserting personal autonomy while respecting established family norms. These practices reveal a delicate balance: on one hand, they involve the operational competence of using and maintaining the technology in a way that aligns with their schedules and preferences; on the other, they reflect changing perceptions of air conditioning, from a resource governed by thrift and moderation to a symbol of personal comfort and modern living. Furthermore, the material accessibility of newer, more efficient air conditioning units—often introduced by these younger adults as part of their financial contributions to the household—reshapes both the boundaries of control and the dynamics of family authority. The narrative then shifts to explore the planning and decision-making processes surrounding future independent households. For many young adults, the decisions they make about air conditioning are infused with broader meanings of identity, modernity, and sustainability. Cooling practices for their future homes reflect a synthesis of personal aspirations, societal standards, and the enduring influence of their parents' advice. For instance, while they may prioritize comfort and advanced energy-saving technologies, these preferences are often tempered by familial expectations, such as ensuring energy-efficient practices that reflect long-standing cultural values of thrift and responsibility. Lastly, the chapter explores the role of parents as these young adults transition into their own households. Parents' guidance often shifts from direct authority to consultative support, highlighting a broader cultural shift where intergenerational relationships become more reciprocal. This dynamic is particularly evident in the co-purchasing or gifting

of household appliances, where parents' involvement in choosing air conditioning systems often signifies a continued but adapted influence on their children's lives.

## 7.2 "The Generation Behind Closed Doors"

This section examines the living arrangements of young professionals in Shenzhen, many of whom continue residing with their parents due to the high cost of urban living after graduation. These young adults face the challenge of carving out personal spaces within shared family homes, where air conditioning becomes both a material resource for comfort and a means of asserting independence. Through their practices, such as controlling room temperatures and creating private retreats, they negotiate aspirations for a modern lifestyle within the constraints of traditional family structures. This dynamic reflects broader shifts in parent-child relationships, with parents transitioning from authoritative figures to more accommodating partners as they adapt to their children's growing autonomy. The section also explores whether these evolving practices represent a continuation of long-standing patterns of young adults asserting independence or are shaped by the unique pressures and norms of contemporary urban life in Shenzhen.

### 7.2.1 It Means Freedom

In examining family dynamics in Shenzhen, I focused on young adults in the early stages of their careers who continue to live with their parents. These individuals, mostly within a few years post-graduation, navigate the complexities of maintaining traditional family structures while also carving out their own identities. A key element in this dynamic is their use of air conditioning, which they strategically employ to create personal comfort zones within the shared space of their family homes.

*“In my [university] dorm, we consistently set the AC to 22 degrees. This level of control over our environment was something we took for granted... It symbolized a form of freedom, you know? Now, being back at home, where I need to limit its use, it feels like stepping backward....”*

(Ken Xu, male, a 28-year-old recent graduate).

Ken, originally from a traditional working-class family in Shantou, experienced a significant transition when his family moved to Shenzhen during his high school years. He recalled his early years by the seaside, where his grandparents taught him ways to cope with the heat, such as finding breezy spots along the coast or taking trips to higher elevations inland. Although his family later introduced fans and air conditioning into their home, his grandparents remained firm in their rejection of over-reliance on these modern conveniences. *"As a child, I never questioned my grandparents' strict rules about fan and AC usage,"* Ken reflected.

However, Ken's outlook underwent a drastic change during the 8 years between his high school graduation and the end of his master's degree in Huizhou, a neighbouring city of Shenzhen. This period marked a rapid passage to independence in his and his family's eyes, especially concerning air conditioning usage. *"Those years of university life, away from my family's watchful eyes, reshaped my view on personal comfort. I began to see air conditioning not just as a luxury but as an essential part of my daily life,"* he shared.

Now, embarking on his career in an internet company, Ken's perspective on air conditioning has evolved even further. *"I've come to believe that it's alright to use the AC as I please. It's a part of the independence and comfort I've grown to value,"* he stated. Our conversation took place in his bedroom, a small but meticulously organized space that serves as his personal retreat in the flat he shares with his family. The cool ambiance of his room, maintained by the soft hum of the air conditioner, stands in stark contrast to the rest of his family's naturally ventilated apartment. This sharp difference highlights a bubble of autonomy for Ken, where two co-existing approaches to managing summer heat reflect the evolving dynamics between his personal independence and the traditional family setting.

During my interviews with recent graduates in Shenzhen, I explored their reflections on air conditioning experiences both at university and back in their family homes. One of the interviewees, Kevin Tan, a 26-year-old working in a marketing firm, highlighted the contrast between these two environments. *"[In] our uni dorms, it was almost like a ritual, setting the AC to really low temperatures. We'd all huddle in our blankets, feeling so comfy... Walking down the dorm hallways, you could always feel this cool breeze escaping from under every door,"* Kevin recounted with a nostalgic

smile. *"But back home, it's a different story. It's not just about comfort anymore. I have to think about the electricity bills, my parents' opinions on health and AC use... It's just not the same."* His words captured the essence of a significant transition. University life offered young adults like Kevin a space where they could enjoy a level of comfort and autonomy that was new to them, and this autonomy was often expressed through the collective act of setting the AC to very low temperatures. *"The freedom we had in our dorms was huge! We'd bicker, laugh, and somehow land on a temperature everyone could live with. But at home, it's more about finding a middle ground with my parents,"* Kevin continued, his voice tinged with a mixture of resignation and understanding. This collective decision-making in dorms was more than just about finding comfort—it also represented a way of asserting independence, something the students relished because they weren't directly responsible for the costs. For Kevin and his peers, dramatically lowering the AC temperature became a way of symbolizing their newfound freedom from parental authority. This experience stands in contrast to the more traditional, moderated environment at home, where decisions about air conditioning had to accommodate parental concerns about health, costs, and household routines. While Kevin appreciated the independence dorm life provided, his transition back home reminded him of the ongoing negotiation between personal autonomy and family expectations.

The stark contrast between the uninhibited freedom of dorm life and the more regulated environment of home life is a recurring theme in many young adults' narratives. For individuals like Kevin, the return home marks not just a physical shift, but an emotional and practical negotiation. While some found the adjustment to family life challenging, as they had to reconcile their newly developed preferences for cooling and comfort with the more traditional family boundaries, others showed more flexibility, citing financial or health concerns. Kevin's experience, however, is emblematic of a broader cohort, where the return home signals not only a re-entry into a regulated family environment but also an encounter with resistance to the newfound autonomy they had established during their time away.

The shift from traditional, regulated methods of cooling to a more independent approach in young adulthood is driven by a desire for personal autonomy and a resistance to the dictates of parental authority. This is particularly evident in how young adults, such as Kevin, relate to air conditioning. While in university, air

conditioning became an embodiment of autonomy—something they could control freely to create a comfortable, personal space. It was not just about the physical comfort it provided, but the symbolic freedom that came with being able to dictate the environmental conditions in their living space. In contrast, the return home, where air conditioning use is often subject to familial rules, represents a disruption of that independence.

As described by parents like Deborah and Ruth, their children, upon returning home, tend to retreat into their rooms, close the door, and switch on the air conditioner—indicating both a physical and symbolic move toward a more individualized, controlled environment. *“It’s like they’re always behind closed doors now,”* Deborah remarked. *“They don’t want to interact as much as they used to. They just go to their rooms, turn on the AC, and stay there.”*

However, this retreat is not solely driven by a desire for isolation. In university dorms, these same individuals often shared the air conditioning, which was used communally, suggesting that the retreat at home is not just about avoiding family interaction. Instead, it reflects an attempt to assert control over their personal environment—specifically through the use of air conditioning. Ruth observed: *“Back in the day, we’d all gather in the living room—no AC back then, just fans. But now, with the air conditioners in their rooms, they just disappear. It’s harder to keep them engaged.”* The air-conditioned room thus becomes a sanctuary, a space that provides both physical comfort and emotional distance. It allows them to manage not only their personal comfort but also to avoid family negotiations and conflicts over household rules.

This shift underscores how air conditioning, as a practice, has come to symbolize a means of asserting independence. What was once a collective, regulated practice of cooling within the home has transformed into a more individualized, privately controlled practice, reflecting the growing desire for autonomy among young adults. The air-conditioned room, therefore, is not merely a space of physical comfort; it has evolved into a key site where young adults negotiate their independence and personal identity. It also marks a distinction between the older generation's continued reliance on natural cooling methods and the younger generation's embrace of technology for personal comfort.

Thus, the contrast between the shared spaces of family life and the individualized air-conditioned retreats represents a broader transformation in family dynamics. For young adults like Kevin, the ability to control the temperature of their personal space—through the air conditioner—is an assertion of their evolving relationship with both their family and their own autonomy. It symbolizes a shift from the collective, regulated family practices toward a more individualized, self-managed approach to comfort, highlighting a significant change in the way material spaces are used to communicate independence and identity within the family.

Franklin Zhou (28 yrs), who was Ken's university roommate, vividly recalled a moment that sharply illustrated the generational divide in their household: *“So, there was this evening, right? I got home, totally wiped out. All I wanted was to relax in my room with the AC cranked up. My dad comes by, gives me this look, and goes, 'Why crank up the AC when there's a cool breeze outside?' And that's when it hit me—our expectations of comfort are worlds apart.”* This incident underscores more than just a difference in preferences for cooling; it highlights how young adults like Franklin have grown accustomed to mechanically controlled environments, where comfort is delivered at the push of a button, while the older generation still maintains a connection with the natural environment. Franklin's dad's remark about the breeze suggests a more traditional approach, one that doesn't automatically default to the use of technology for comfort. Franklin, on the other hand, didn't even consider the breeze as an option, underscoring the changing definition of comfort across generations.

Similarly, the emotional refuge that air-conditioned spaces offer young adults extends beyond physical comfort, providing a way to manage family conflicts. Alice Lin (32 yrs) shared a relatable moment: *“Just the other day, my mom and I were having this super intense talk about when I should tie the knot. Total dead-end. I just excused myself, bolted to my room, set the AC to my chill mode, and just... took a breath. It's like my room's this neutral territory, my escape from all the judgments and expectations.”* For Alice, the air-conditioned room isn't just about controlling the temperature—it's about creating a space that feels insulated from family pressures. Her story resonates with many young adults who seek both physical and emotional relief in their private spaces, using the air conditioner as a way to mark a separation from the traditional family dynamics at play.



In both Franklin's and Alice's cases, the air-conditioned room becomes more than just a modern convenience; it evolves into a key tool for asserting autonomy and navigating family tensions. For older generations, the environment is something to adapt to—usually in a shared, collective space. In contrast, young adults like Franklin and Alice prefer to control their surroundings, using the air conditioner as a way to carve out personal comfort zones, both to escape the physical discomfort of heat and to distance themselves from family expectations. This shift in practice, where air conditioning is used not only for comfort but as a tool for emotional and social control, reflects societal changes. As younger generations become increasingly detached from nature, they turn to technology—particularly air conditioning—to create controlled environments that reflect their desire for autonomy. These personal zones of comfort, once governed by traditional family practices, are now reshaped to align with the growing need for individual space within the family home.

The experiences shared by these young interviewees highlight a significant reconfiguration in family dynamics. What was once seen as unchallengeable parental authority is being replaced by an evolving relationship that increasingly emphasizes mutual respect. Young adults like Franklin and Alice are leveraging their autonomy over the air-conditioned space as part of a broader strategy to claim their personal space and independence. This shift is not simply about controlling the temperature—it's about reworking the very meaning of the physical space they occupy. The air-conditioned room, which once served as a shared and regulated space for the whole family, becomes a personal retreat where young adults assert their emotional and physical boundaries.

Franklin's experience epitomizes this changing dynamic: *"My worldview differs quite a bit from my parents', especially when it comes to personal choices, like how I spend money or live my life. When talks with them reach a deadlock, I find my refuge in my room with the AC on. It's more than just setting a comfortable temperature; it's about carving out a space for myself where I can think and be, free from judgment."* For Franklin, the air-conditioned room represents more than just physical comfort—it becomes a sanctuary where he can retreat from family tensions, reflecting his desire for emotional independence in addition to physical comfort.

In reality, it seems that young people's preference for "open-minded" and "negotiable" parents is not as strong as their desire to avoid potential troubles. Among the families interviewed, a significant trend is emerging: young adults are opting to maintain their own space and lifestyle within the family home, independent of their parents' influence or interference. This attitude is fostering a kind of spatial separation within the family home, where young adults carve out their own havens, often with air conditioning as a central feature.

*“My room is my own little universe. It's where I can be on my phone, get some work done, or just kick back without anyone's commentary. I control the AC how I like, and I think my folks have gotten the hang of that. We've settled into this silent agreement, living our separate lives but under the same roof. It's about respecting our individual choices.”*

*“I've noticed this change at home. We don't go into things like my AC usage anymore. My parents do their stuff, and I do mine. We've kind of carved out our own areas in the house. It's not that we don't care about each other; it's more like we've found our peace in this way of coexisting.”*

(Lily Zhang, female, 31-year-old marketing Professional)

Young adults, especially those in the early stages of their careers and still living at home, are establishing new boundaries within the family structure. Their choice to retreat to air-conditioned rooms is not merely about physical comfort; it's also an expression of their growing autonomy and a reflection of their changing relationships with their parents. The dynamics within these homes show a shift from parent-centric authority to a more balanced arrangement, where mutual respect and individual space play a larger role in everyday life. This trend, seen in my interviewees' narratives, highlights how young adults are learning to navigate their roles within the family unit, managing traditional expectations while asserting their independence and comfort. The air-conditioned room becomes a symbol of this evolving relationship, where personal preferences coexist with the broader demands of family life.

### 7.2.2 It Means Understanding

Throughout my research into shifting family dynamics in Shenzhen, I observed that air conditioning use offers a valuable lens through which to view broader changes in family relationships, particularly between parents and their young adult children. While I anticipated that these interactions would highlight important transitions, what became clearer was how air conditioning decisions reflect each family's process of adaptation—not as an act of ‘letting go,’ but rather as a journey of understanding and mutual adjustment as their children grow more independent.

In the Ken family’s modest Shenzhen apartment, the evolving role of air conditioning vividly illustrates these dynamics. When Ken started working after university, subtle changes in their household routine began to emerge. His mother, Elizabeth (58 yrs), fondly recalled the early days of Ken’s employment: *“We clung to our familiar routines. Our living room was a place of togetherness, not necessarily for air conditioning. We would sit together in the evenings, talking about our day and watching TV. We rarely turned on the AC, preferring the natural breeze from the open windows.”* For Elizabeth, air conditioning initially functioned as a shared utility, its meaning grounded in collective practices of family interaction. However, as time went on, Elizabeth noticed a shift. “Ken used to join us, but gradually, he started spending more time in his room, drawn to the cool air of his air-conditioned space,” she remarked.

This transition—from shared spaces to individual retreats—mirrors the broader adjustments within the family, as Ken asserted more independence in his living environment. The materiality of the air-conditioned room became not just a physical space but a symbolic one, where Ken’s personal control over temperature represented his growing autonomy. What was once a site of family cohesion was now reconfigured into a private sanctuary, where the boundaries of shared living began to dissolve. For Elizabeth, this change necessitated a rethinking of her own competencies: learning not just to operate within these new dynamics, but also to interpret them as reflective of her son’s changing needs.

Elizabeth’s reflections on the past reveal the depth of this transformation. She nostalgically recounted their life in their old hometown before moving to Shenzhen: *“Back in our hometown, evenings were for leisurely strolls. We’d walk under the*

*streetlights, circling the town with our dog, often joining neighbours, creating a jovial parade of sorts. We'd share stories from our day, laugh, and enjoy the night air. But here in Shenzhen, such outdoor evening strolls have become less appealing, especially to the younger generation like Ken.*" In these earlier practices, the natural environment and shared activities provided both comfort and connection, with the cooling breeze representing not just relief from the heat but a communal experience. By contrast, the material presence of air conditioning in Shenzhen offered a convenience that fundamentally redefined comfort as an individualized and technologically mediated practice.

For Elizabeth, this shift in meaning was challenging to accept at first. As she noted, *"Back then, the whole family used to be together, even during the hottest days. Now, it feels like we are each in our own bubble, retreating into separate spaces."* Her words highlight how the materiality of air conditioning—once peripheral and supplemental—has come to structure family life in new ways, with profound implications for the meanings of comfort and togetherness.

Ken's father, Ran Xu (58 yrs), echoed his wife's reflections, though his journey toward acceptance was fraught with resistance. He nostalgically recalled the evening walks they used to enjoy as a family, contrasting them with the present, where Ken now prefers the comfort of his air-conditioned room. *"We miss those moments of togetherness—the walks, the talks. But we understand that Ken needs his space now. It's his way of relaxing after a demanding day,"* Ran reflected. Initially, however, Ran struggled to adapt to this change. *"I remember arguing with him, even opening his window because we thought his room was too cold. But Ken always had his reasons—work stress or simply not liking the heat. Over time, we've come to realize that his need for space isn't about shutting us out; it's just his way of communicating differently now."*

Ran's resistance reflects a generational tension over the meanings of space and comfort, shaped by the material practices of cooling. For him, the air-conditioned room initially signified an unnecessary indulgence, a stark departure from the shared, natural cooling practices of his own upbringing. Yet as he began to interpret this practice through the lens of his son's emotional and professional needs, the room—

and its cooling technology—took on a new meaning: a space of self-care and independence.

This realization—understanding that their children’s retreat into their own rooms is a form of self-care, not rejection—has been echoed by other parents. Susan Zhang (58 yrs), mother of Lily, expressed a similar sense of loss over diminishing family interactions but also recognized the need to respect her daughter’s autonomy. *“It wasn’t easy seeing them retreat to their rooms. We used to discuss everything. Now, they prefer their own company. At first, we questioned them about their excessive AC use, sometimes even reprimanded them. But gradually, we understood that their reasons—whether related to work or comfort—meant we couldn’t impose our ways on them anymore. We’ve had to learn to give them space,”* she shared. For Susan, this shift reflects not just a change in her daughter’s behaviour, but a renegotiation of familial competencies, where parenting required a greater emphasis on understanding and accommodation.

Unlike families like Ken’s, where the transition was gradual and at times contentious, some urban parents adapted more seamlessly to their children’s changing preferences. Kathy Shen (57 yrs), a lifelong resident of Shenzhen, described her perspective: *“Air conditioning was a luxury in my youth, but now it’s just part of city living—in buses, malls, everywhere. My son always retreats to his room when he’s home, and that doesn’t bother me. It seems normal for kids raised in the city. They live differently than we did, and I see it as just another aspect of urban life in Shenzhen.”*

For Kathy, air conditioning is embedded within the material fabric of urban living, its meaning tied to the rhythms of modern city life rather than to family conflict or cohesion. This perspective illustrates how the material and symbolic integration of technology into everyday practices can vary across different contexts, with some families viewing it as a natural evolution rather than a disruptive change.

Similarly, the economic implications of air conditioning, once a point of tension, have also been reframed. Ruth Chu (50 yrs), who works in an air-conditioned office year-round, explained: *“In a place like Shenzhen, where every expense from rent to groceries is high, the extra cost for AC doesn’t really hit hard. It’s just a small part of our overall living expenses here.”* For parents like Ruth, air conditioning represents an

acceptable trade-off between cost and the comfort it affords their hardworking children, further normalizing its role as a tool for self-care and productivity.

In the context of Shenzhen's rapidly changing urban environment, these shifts in air conditioning practices illustrate the interplay of materiality, competencies, and meanings in reshaping family life. The material presence of air conditioning has redefined comfort as an individualized, technologically mediated experience. At the same time, parents have developed new competencies—whether economic, emotional, or practical—to navigate these changes, transforming their understanding of their children's independence and their own roles within the family.

As young adults assert their autonomy, particularly in spaces like their bedrooms, air conditioning becomes a symbol of that independence. For many parents, the once-stringent control over AC usage has given way to a more relaxed, unspoken agreement that reflects the unique demands of this life stage. This transition speaks to a broader reconfiguration of family practices, where traditional notions of togetherness are renegotiated through the evolving material and symbolic landscapes of modern technology.

### 7.2.3 Negotiating Practices

Halkier's concepts of Coordination and Normative Accountability is helpful to frame the negotiation processes observed between young adults and their parents. Within shared family homes, coordination is not only a logistical requirement—ensuring that different preferences for temperature, space usage, and energy consumption coexist—but also a relational practice that maintains familial harmony. For example, young adults like Kevin often retreat to their air-conditioned rooms, carving out individual spaces within collective living arrangements. This retreat reflects their desire for autonomy but also requires subtle coordination with their parents. Kevin's insistence on maintaining his room at a constant, cooler temperature contrasts with his parents' preference for natural ventilation in the rest of the house. However, this difference does not result in outright conflict but instead prompts adjustments on both sides.

Kevin's parents, while initially resistant to his cooling practices, gradually adapt by respecting his need for personal space. Similarly, Kevin moderates his practices

during shared family time, such as meals or evening gatherings, where the air conditioning is turned off in favour of traditional cooling methods. This dynamic illustrates how coordination enables both parties to balance their individual preferences with the collective norms of family life. Coordination also operates at a broader level, shaping family routines and spatial arrangements. Lily Zhang's description of her family's "silent agreement" on air conditioning use exemplifies how families negotiate implicit rules that allow for coexistence. This coordination extends beyond the material practice itself to encompass the emotional and relational dimensions of family life, fostering a sense of mutual respect even amidst differing preferences.

While coordination facilitates practical adjustments, Normative Accountability plays a crucial role in legitimizing these adjustments within the moral framework of the family. This concept captures how both young adults and parents justify their actions in ways that align with—or challenge—existing family norms and expectations. For young adults, the use of air conditioning often requires justification that balances personal autonomy with familial responsibilities. Franklin, for instance, retreats to his air-conditioned room after conflicts with his parents, framing this action as a necessary response to stress rather than an act of defiance. By presenting his retreat as a means of self-care, Franklin aligns his individual choice with broader familial values of health and well-being. Parents, too, engage in normative accountability when adapting to their children's practices. Susan Zhang's initial reprimands about her daughter Lily's air conditioning habits gradually give way to a more accepting stance, framed by the recognition that Lily's independence reflects successful parenting. This shift underscores how parents justify their reduced influence as a natural progression, aligning their actions with societal expectations as children transition into adulthood.

### 7.3 Planning Cool Independence

This section delves into the evolving dynamics of air conditioning use as young adults transition into their professional lives while still living with their parents. At this stage, there is a noticeable negotiation between individual preferences for comfort and the norms set by the family. For these young adults, air conditioning is no longer seen

merely as a luxury, but as an integral part of their day-to-day lives. As they begin planning their own future homes, their experiences within their family homes shape how they think about cooling systems. In the present, however, the interaction between young adults and their parents around air conditioning remains a delicate balance. While parents may have historically exercised greater control over cooling practices in the home, there is now a growing acceptance of the younger generation's desire for personal space and comfort, particularly as they take on professional roles. This shift is still rooted in family life, as parents are gradually adjusting their expectations to accommodate their children's needs for autonomy, while maintaining a shared household. Discussions around air conditioning are reflective of broader changes in family dynamics—where respect for tradition coexists with emerging modern lifestyles. While these young adults may also be thinking ahead to their future homes, the current reality of living together is marked by ongoing negotiation. Parents, who have traditionally been more conservative with energy use, are learning to strike a balance between maintaining their values and adapting to their children's modern habits. This phase of life demonstrates how families are navigating comfort in their shared spaces, with air conditioning becoming a symbol of both generational adjustment and coexistence.

### 7.3.1 It Means Designing for Maximum Comfort in this Modern City

In my discussions with young adults in Shenzhen about their plans and aspirations for future homes, it became evident that their evolving concept of comfort extends beyond creating physical spaces—it is deeply intertwined with how they define their identities and lifestyles. These individuals are actively reshaping the meaning of comfort, viewing it not as a static state but as a reflection of modernity, personal autonomy, and well-being. This shift is particularly visible in their approach to cooling systems, which are no longer seen as mere utilities but as central to their envisioned living environments. Air conditioning, for this group, symbolizes control and self-expression, with choices such as central systems for seamless integration or individual units for flexibility reflecting the negotiation of material constraints and budgetary competence. Rather than prioritizing traditional milestones like family formation, their decisions reveal a broader emphasis on crafting personalized spaces



that align with their modern urban aspirations and the demands of a rapidly transforming society.

*"You know, central air conditioning isn't just about cooling. It's more about lifestyle, about the quality. It's equally about the aesthetic and comfort. I don't want bulky units on my walls. Everything hidden, blending in, that's my ideal of a minimalist, elegant home...."*

(Leo Chen, male, 33 years old)

During our conversation at a bustling café in Shenzhen's heart, Leo Chen, a 33-year-old marketing manager, spoke about his ideal home setup. His vision mirrors that of many modern urban professionals. Leo, who secured a high-paying job in financial sales at a prestigious firm in the Futian district after graduating, shared insights drawn from his routine. *".....my daily grind – commuting in sweltering heat, then stepping into the cool, controlled environment of the office – it's made me appreciate good air conditioning. It's not just about the comfort. On a scorching day, coming home to a cool apartment isn't a luxury; it's a necessity for unwinding and keeping my sanity,"* he said, laughing slightly as he pictured his ideal home setting. His words reflect the aspirations shaped by the stark contrasts of his daily life in Shenzhen.

Leo's inclination towards central air conditioning is deeply ingrained in his experiences and aligned with the latest urban trends in Shenzhen. *"It's like stepping into the future. In a city as fast-paced as Shenzhen, having a home with the latest cooling tech is pretty much key. It's more than just comfort.....might be about keeping up with Shenzhen's speed, it's always moving forward....,"* he explained with conviction. His preference also mirrors a broader societal shift in home renovations among his peers in Shenzhen. *"Every time home design comes up in conversations with friends, central air conditioning is always a hot topic. It's almost like an unspoken rule now for modern living,"* Leo remarked, shedding light on the collective mindset of his generation.

In contrast, Mike Wu, a 32-year-old software engineer, takes a more pragmatic approach to his home's air conditioning. His decision to install individual air conditioners in each room of his newly purchased second-hand apartment was shaped by budgetary constraints and practicality. *"I've seen central air conditioning systems, and while they are impressive, the cost of installation and upkeep is a significant*

*factor for me,"* he shared, sitting in his new home. Given that his apartment was not originally designed for central air conditioning, retrofitting such a system would be expensive and impractical. *"In a city like Shenzhen, where living expenses are high, I have to be smart about where my money goes. Wall-mounted air conditioners give me the flexibility to cool specific areas as needed and are more economical in the long run,"* he reasoned. Mike's decision-making process reflects a broader trend among young adults who are more budget-conscious in their housing choices. While wealthier peers may opt for minimalist designs and central air conditioning, those on tighter budgets, like Mike, prioritize practicality and long-term cost-effectiveness. *"Starting fresh with new appliances is enticing. However, I'm also very conscious of the ongoing costs associated with such a choice, like higher electricity bills and regular maintenance,"* he elaborated. This emphasis on managing household expenses contrasts with the more aesthetic-focused decisions of those who can afford higher-end solutions.

Mike's approach, while cost-conscious, does not imply a compromise on cooling efficiency or comfort. *"Each room in my apartment has its own air conditioner, even the kitchen. My parents and I agreed on that—sounds strange, right? But it's about ensuring comfort everywhere, even while staying within a budget,"* Mike explained. This decision highlights the collaborative nature of his relationship with his parents, who supported his choices even though they no longer lived with him. They contributed financially to help him set up his new home, which explains their involvement in these decisions. Reflecting on this balance, Mike emphasized, *"I think I managed to strike the right balance between cost and comfort. It's important to stay practical, but I don't want to feel like I'm compromising on the quality of my living space."* His perspective demonstrates how young adults in Shenzhen, while mindful of urban living expenses, still prioritize creating comfortable environments in their homes.

The differing approaches to air conditioning among Shenzhen's young adults reveal the varied priorities and aspirations that shape their living practices. For Leo, choosing central air conditioning signifies more than just achieving physical comfort—it represents a commitment to an aspirational lifestyle that integrates modernity, aesthetic appeal, and social status. His preference aligns with a broader urban trend where central systems symbolize sophistication and alignment with the

fast-paced rhythm of upscale urban living. The meaning attached to central air conditioning for Leo is rooted in its seamless integration into a minimalist, elegant home environment, reflecting his desire for an elevated quality of life that matches the city's rapid modernity.

In contrast, Mike's decision to install individual air conditioners in each room of his home demonstrates a practical approach shaped by budget constraints and the specific material limitations of his second-hand apartment. For him, comfort is defined through efficiency and cost-effectiveness rather than status or aesthetics. This decision underscores a different kind of competence—one that involves optimizing cooling practices to balance affordability with functionality. Mike's reliance on wall-mounted units highlights the adaptability of young adults in managing the competing demands of financial prudence and modern comfort in a high-cost urban environment like Shenzhen.

Despite their contrasting choices, both Leo and Mike view air conditioning as an indispensable feature of daily life. This shared reliance reflects a significant shift: air conditioning has moved beyond its original status as a luxury to become a normalized component of urban living, deeply embedded in the practices and meanings of comfort. For Leo, it aligns with societal aspirations of modernity and elegance, while for Mike, it represents a pragmatic solution to achieving personal comfort within financial limits. These narratives collectively illustrate how mechanical cooling solutions have become integral to urban living practices, reshaping the meaning of comfort for Shenzhen's young professionals.

When discussing their future homes, alternative or passive cooling strategies, such as natural ventilation, rarely came up unprompted. For many young adults, air conditioning has become synonymous with modern comfort. Only when prompted did interviewees consider these alternatives, often responding with mild surprise. Evelyn Hu, a 32-year-old graphic designer, admitted, "*Honestly... I hadn't thought about that. Isn't having air conditioning enough?*" This response, echoed by others, underscores how air conditioning has transitioned from being a luxury to becoming an indispensable part of urban living, shaped by the physical realities of their environment.

*“Our ancestral home in the village was cleverly designed with thick walls and high ceilings, specifically to enhance cross-ventilation. The large windows and shaded areas around the house, along with the trees my grandparents planted, managed to keep our home pleasantly cool even during the hottest days,”* shared Jack Li, a 33-year-old IT professional from Shenzhen. Reflecting on his rural childhood and his current urban lifestyle, Jack described the stark contrast in cooling options. *“Here in the city, it’s a whole different story. We live in what we jokingly call ‘pigeonholes’—compact, stacked, and lacking in natural airflow. The reality is, without air conditioning, it’s just unbearable in the summer. You hardly find such thoughtful designs aimed at natural cooling in modern city apartments,”* he explained.

Jack’s observation highlights the significant role of material constraints in shaping cooling practices. Shenzhen’s high-density, high-rise urban environment prioritizes maximizing usable living space over features like cross-ventilation. This architectural shift limits the feasibility of passive cooling methods, effectively making air conditioning not just a preference but a necessity. The change from expansive, well-ventilated rural homes to tightly packed urban apartments reflects not only a lifestyle transformation but also a narrowing of choices regarding how cooling can be managed.

Jack also noted how these constraints interact with the pace of life in urban environments. *“Even if we had homes that allowed for natural cooling, I’m not sure people my age would choose them over air conditioning. We’ve grown used to the convenience and instant relief it offers. Waiting for a house to cool down naturally just doesn’t fit with how fast things move here,”* he remarked. His comments illustrate how mechanical cooling aligns seamlessly with the immediacy and efficiency demanded by urban life, where air conditioning has become a practical response to both environmental and spatial constraints.

This reliance on air conditioning reflects a broader adaptation to urban conditions, where personal preferences are often shaped by external factors. For Jack and many of his peers, it is not just about choosing comfort but about managing the challenges of compact, high-density living spaces. *“When you’re living in the city, it’s not just about what you prefer; it’s about adapting to the space you have. And in places like Shenzhen, where everything moves so fast, there’s no time to wait for the room to cool*

*down naturally*,” Jack explained. His words underscore how air conditioning has come to symbolize a practical alignment with the constraints and demands of urban living.

While interviewees like Jack acknowledge their reliance on air conditioning, they often view it as an unavoidable feature of their environment rather than an actively shaped preference. The physical realities of Shenzhen’s urban architecture and the high-speed nature of life within the city leave little room for alternatives. The convenience and efficiency of air conditioning fit neatly within this framework, reinforcing its role as the default cooling solution rather than a conscious or deliberate choice.

As Shenzhen continues to expand, reconciling these established practices with more sustainable cooling strategies poses significant challenges. However, there is potential for change if urban design and technology evolve to better accommodate alternative solutions. Jack’s reflection offers a glimpse of this possibility: *“I guess if we had more time to slow down, maybe we’d be open to other ways of keeping cool. But right now, air conditioning is just part of life here.”* His comment highlights how shifts in living conditions or technological innovations could pave the way for a rethinking of cooling practices, provided they align with the material and practical realities of urban environments.

Ultimately, these narratives highlight how air conditioning has become an integral part of life for young urban adults in Shenzhen. It is not merely a matter of personal preference but a response to the physical and spatial constraints of modern urban living. As they transition from shared family homes to their own living spaces, air conditioning emerges as an essential tool for navigating these constraints—a solution born out of necessity in the face of limited alternatives.

### 7.3.2 It Means Maintaining *Mianzi*

Within the shifting family dynamics associated with leaving the family home and establishing a new, more independent life, the concept of *Mianzi*—a cornerstone of Chinese culture that denotes social prestige, respect, and honour—emerges as a significant factor in shaping the meaning of air conditioning within household

practices. This influence is especially pronounced during pivotal life events such as marriage and setting up new households. In a Confucian society like China, marriage holds profound cultural and social importance. It is not only seen as the union of two individuals but also as a symbol of familial success and continuity, where outward markers of stability and prosperity play a crucial role. Against this backdrop, air conditioning transcends its practical function and becomes a symbol of modernity, comfort, and familial achievement. The pursuit of *Mianzi* often drives families to uphold a standard of living and outward appearance that aligns with societal expectations, thereby influencing decisions about home amenities, including cooling systems. Many parents expressed personal reservations about excessive air conditioning use within their own homes, citing concerns about health, energy consumption, and the emotional disconnection caused by family members retreating into separate, air-conditioned spaces. However, when setting up their children's homes, these practical concerns often give way to the cultural imperatives of *Mianzi*. In the context of marriage, providing a home with advanced amenities such as central air conditioning is imbued with meaning. It reflects not only the parents' commitment to their children but also their ability to meet societal benchmarks of success and status. This practice signifies a collective negotiation of values, where the material choices associated with cooling systems are deeply intertwined with cultural expectations of familial responsibility and social prestige. By emphasizing *Mianzi*, the meaning of air conditioning in this setting shifts from a tool for comfort to a marker of readiness for a socially acknowledged future. It highlights how Confucian ideals of filial piety, family honour, and societal standing converge to reshape the practical and symbolic significance of household practices in contemporary China.

*".....When Tony was about to get married, we all got involved in setting up his new home. It's a big deal in our culture," shared by Tony Wang's mother Helen Wang (58 yrs). "We bought the apartment for him two years back, and decorating it took us nearly eight months—truly a labour of love... For our child's wedding, everything must be presentable, and that includes installing a top-of-the-line central air conditioning system. It's what people expect."*

Helen Wang is a civil servant in Shenzhen, shared her experience with a sense of pride. She was relocated to the city in its early development over 30 years ago and has witnessed its rapid growth. Now, with her 32-year-old son Tony preparing for his

marriage, Helen has invested a significant portion of her savings into his future—a decision that seems quite natural given the context of Shenzhen's evolution.

Chuckling lightly, Helen delved into the topic of air conditioning in their home. *“Oh, the discussion about air conditioning caused a bit of a stir in our house. Tony and his wife thought having individual wall-mounted units in each room was fine. Tony kept saying, ‘Mom, why spend more? These are good enough.’ But my husband and I had a different take on it.”* Helen's tone mixed pride with nostalgia. *“In our times, we didn't have much. But for our son, we wanted something that speaks ‘quality’. We suggested a central air conditioning system. It's not just about cooling the place... it's sleek, it's modern, and frankly, it says something about where you stand in life.”*

Kai Tan, a 54-year-old neighbour whose son also recently married, shared similar insights. Kai's tone turned serious as he described the social pressures surrounding home furnishing. *“We've seen situations where not meeting certain standards in home setup caused disagreements, especially in marriage. The bride's family often has expectations. We thought, why take a risk? Better to be safe and opt for something that's universally seen as a mark of a well-off home. Central air conditioning, in that sense, is more than just an appliance. It's an insurance against potential discord.”* His words highlight the underlying anxieties and societal expectations that drive many of these decisions.

Reflecting on the changes over time, Helen added, *“It's funny, back when we got married, the focus was on simpler things – the ‘big three’ we called them: a watch, a sewing machine, and a bicycle. You know, the ‘big three’ evolved over time. In the ‘80s, it became about owning a fridge, a colour TV, and a washing machine. By the ‘90s, the essentials shifted to air conditioning, computers, and VCRs. Back then, owning an air conditioner was a luxury, a real sign of prosperity. Now, it's about how well-furnished your home is. And central air conditioning? That's a sign of a well-off home.”*

Both Helen and Kai eventually convinced their sons to install central air conditioning. From further interviews, it became clear that this decision was less about personal preference and more about fulfilling expectations that seemed almost preordained. These interviews highlight how air conditioning decisions, particularly in the context of newlywed households, are imbued with layers of meaning beyond practical

considerations. Parents play a pivotal role in shaping these decisions, aligning them with cultural expectations of what constitutes a proper and successful transition into a new phase of life.

Rather than being solely about comfort or convenience, the choice of advanced air conditioning systems like central units reflects an effort to meet societal benchmarks of modernity and success. In this context, air conditioning becomes a material expression of values tied to family honour and social standing. These systems symbolize not just the physical cooling of a home but the alignment of the family with contemporary ideals of affluence and progress. For the parents involved, advocating for these systems represents a negotiation of meaning: ensuring their children's new homes meet both practical needs and the broader expectations of what a well-equipped, socially respectable household should look like.

This shift in practice—from prioritizing frugality and simplicity to embracing more sophisticated and costly solutions—illustrates how societal pressures can transform the symbolic significance of household amenities. For many parents, the push for central air conditioning in their children's homes serves as a way to affirm their familial commitment and uphold their status in the community. These decisions are framed less as personal choices and more as obligations shaped by shared cultural narratives about what constitutes a “proper” home.

The phrase “*new homes, new air conditioners*” captures this prevailing mindset, where equipping a new household with the latest and most advanced technologies has become a near-universal expectation. This trend is not merely about adopting modern conveniences but about participating in a collective redefinition of what a home represents. Parents, once stewards of conservative energy practices, now find themselves advocating for—and often financing—technologies they might have resisted for their own use. These choices reflect the evolving practices of cooling, where the material and symbolic converge to create meanings deeply rooted in cultural norms and societal aspirations.

The trend of installing central air conditioning is not limited to marriage-linked home purchases. Many families I interviewed had recently transitioned to new residences. Beverly Gao (49 yrs), the mother of Emily Wang, shared her experiences while discussing their choice of a new home. She and her husband, both long-time city



workers, had recently made a significant financial leap. *"We've been saving for over a decade,"* she began, her tone a mix of pride and resignation. *"Finally, we managed to put together enough for a down payment on this apartment."* As Beverly continued, the complexities of their decision-making process became apparent. *"In Shenzhen, with its sky-high property prices, our choices were quite limited. Opting for a fully-furnished new home seemed more practical. It saved us almost 400,000 RMB in renovation costs."* She paused for a moment, glancing towards the window. *"The developers had already fitted central air conditioning in all units. It's just sitting there, still wrapped...it's almost 2 years. We're on the 19th floor, and honestly, opening the windows does the trick. It's cool enough most days."*

Her story took an interesting turn when she recounted a recent summer incident. *"There was this incredibly hot week last month, and Emily just couldn't bear it anymore. She had always been able to use a small AC unit in her rented place, and suddenly not having that comfort in her own home seemed unreasonable.... She was quite adamant, saying, 'Mom, Dad, we need to start using the central air. We can't live like this.'"* Beverly recalled how they had initially resisted the idea, rooted in their old habit of frugality. *"My husband and I were hesitant. We thought of the electricity bills, the maintenance... it all seemed excessive. But seeing Emily so determined, and honestly, suffering in the heat, we began to reconsider."* She chuckled softly, a sign of her eventual acceptance. *"Eventually, we gave in. It was hard to argue with such determination, especially when we too felt the discomfort of those scorching days. We realized that while we hold on to our old ways, the city and its expectations have changed. So, we started using the central air, albeit reluctantly at first."*

These stories about decisions around home cooling systems reveal a complex intersection of parental influence and societal pressures, where practical choices are imbued with deeper cultural significance. While traditional values of thrift and modesty continue to shape parental attitudes, the modern narrative of success and quality of life increasingly revolves around visible markers of prosperity, such as advanced home technologies. In this context, central air conditioning transcends its functional purpose, becoming a material expression of societal expectations and familial pride. This shift reflects a broader transformation in urban living practices. The competitive nature of city life, particularly in Shenzhen, has fostered a culture where keeping up with or surpassing peers drives many lifestyle decisions. For

parents, traditionally cautious about energy consumption, advocating for advanced cooling systems in their children's homes signifies an alignment with modern definitions of success and care. It is no longer just about providing comfort; it is about affirming the family's place in an urban society that increasingly equates progress with technological sophistication. The adoption of central air conditioning in these stories highlights how cultural and material practices intertwine to redefine household norms. These systems, once seen as luxuries, are now regarded as essential components of a socially acceptable home—necessities not only for physical comfort but also for maintaining social standing. The narrative of air conditioning in Shenzhen homes thus reflects the city's evolving socio-cultural fabric, where traditional practices of frugality intersect with the modern drive for status and societal validation. In these negotiations, parents and young adults alike navigate a shifting landscape of values, finding meaning in the tangible markers of urban modernity.

### 7.3.3 Negotiating Practices

In the context of air conditioning use, the negotiation of practices between generations in Shenzhen reflects a dynamic interplay between cultural expectations, material realities, and personal aspirations. As young adults strive to establish their own homes, they do so within the bounds of what is culturally acceptable and socially aspirational. At the same time, their parents view these practices through the lens of cultural values such as *Mianzi* and their role in facilitating a modern and respectable life for their children. This ongoing negotiation illustrates how normative accountability shapes and evolves within intergenerational interactions. For instance, Leo Chen's preference for central air conditioning epitomizes young adults' efforts to align their living spaces with societal ideals of modernity and sophistication. For Leo, central air conditioning is not merely a functional choice but a reflection of his identity and aspirations. As he puts it, the sleek integration of the system into his home's design aligns with his vision of an "elegant and minimalist home." His perspective showcases how air conditioning becomes a tool for asserting individuality while simultaneously conforming to urban ideals of progress and modern living.

Conversely, Mike Wu's more practical approach highlights how budgetary constraints and material limitations can temper the pursuit of these ideals. Opting for individual

air conditioners in each room of his apartment, Mike exemplifies how young adults negotiate comfort and affordability in high-cost urban environments. His decision to prioritize functionality over aesthetics reflects a broader competence in managing material constraints while still striving to meet personal and societal standards of comfort. Parents play a pivotal role in these negotiations, often introducing their own expectations and cultural priorities into the equation. In Helen Wang's account of furnishing her son Tony's home, the installation of central air conditioning was less about personal preference and more about upholding familial and societal honour. Despite Tony's practical suggestion of using wall-mounted units, Helen insisted on a centralized system, framing it as a symbol of family success and social standing. Her decision underscores how parents view their contributions as securing their family's place within the normative framework of modernity, even when it contradicts their own values of thrift. Similarly, Beverly Gao's eventual agreement to use the pre-installed central air conditioning in her home, driven by her daughter Emily's insistence, highlights how intergenerational adaptation operates. Initially resistant due to concerns about energy costs and maintenance, Beverly and her husband ultimately acquiesced when faced with the realities of Shenzhen's sweltering summers and their daughter's determination. This case reveals how young adults' preferences can shape and redefine parental practices, reflecting the evolving dynamics of normative accountability within the family.

Through these examples, it becomes evident that air conditioning serves as both a site of negotiation and a material marker of shifting family dynamics. For parents, providing advanced cooling systems represents a commitment to ensuring their children's homes meet societal standards of modernity and success. For young adults, these systems symbolize autonomy and alignment with urban lifestyles, even as they navigate the constraints of material and financial realities. This negotiation process not only reflects the blending of traditional and modern values but also highlights the evolving nature of normative accountability. The intergenerational dialogue around air conditioning practices illustrates how families balance respect for tradition with the demands of contemporary life, shaping practices that are both socially acceptable and personally meaningful. Ultimately, the act of negotiating these practices underscores the fluidity of cultural norms and their continual adaptation to new contexts in an ever-modernizing society.

## 7. 4 Reimagining Home Comfort

In this section, I turn to the journey of young adults in Shenzhen as they transition from living with their parents to establishing their own homes. This shift is not merely about a change of address; it reflects more subtle adjustments in values, expectations, and lifestyle choices. A central theme in this transition is air conditioning, a modern symbol of comfort that becomes a site of negotiation and adaptation between generations. Having previously explored how young adults navigate air conditioning usage within their parental homes, I now focus on their independent living practices. Equipped with newfound autonomy, these young adults are redefining standards of comfort, sometimes challenging the more conservative habits handed down by their parents. Through their stories, I observe instances of indulgence, small acts of rebellion, and, ultimately, the emergence of moderation. These narratives provide insight into how Shenzhen's younger generation is evolving its concept of home comfort. The section then shifts to consider the parents' perspectives. I examine how, as their children move toward greater independence, parental attitudes adjust—sometimes reluctantly—to the new norms brought by technological advances and shifting social expectations. Once firmly in control of household decisions, many parents find themselves gradually loosening their grip, recognizing and accepting their children's independent choices, particularly in their varied approaches to air conditioning use.

### 7.4.1 It Means Negotiating Freedom and Responsibilities

The independent lives of young adults in Shenzhen, particularly how they manage their newfound freedom in using air conditioning at home, reveal a nuanced negotiation of meaning within this practice. Rather than a simplistic narrative of unrestrained air conditioning use, my exploration uncovers a spectrum of diverse and evolving cooling practices. For many young adults transitioning into their own homes, air conditioning use shifts from a matter of parental negotiation to one of personal autonomy, laden with symbolic and practical significance. Before moving out, many had envisioned advanced, efficient air conditioning systems as a hallmark of independence, signalling the freedom to define their own standards of comfort. This aspiration often created the impression that they would indulge in extensive use for

constant comfort. However, in practice, such behaviour proves less prevalent than initially imagined, reflecting a more complex interaction between independence, resources, and daily routines.

Ryan Wang, a 26-year-old graduate who recently moved out of his parents' home, exemplifies this transition. Now residing in a modest 45-square-meter loft apartment—a practical choice supported by his parents—Ryan has begun shaping his personal environment. The apartment, equipped with a standard cabinet-style air conditioner typical of developer-furnished spaces, symbolizes his newfound autonomy. During my visit, the cool air set at 19°C starkly demonstrated the young couple's preference for a chilled environment, offering a tangible expression of their ability to establish a lifestyle distinct from their previous family constraints.

*“At my parents' house, air conditioner use was always a negotiation. We tried not to overdo it,”* Ryan recalled, explaining the shift upon moving into his own space. *“We started to explore what temperatures we preferred. At first, I hesitated to use the air conditioner so freely, but eventually, 19°C just felt right for us.”* His girlfriend, initially uncertain about such a low temperature, soon adapted. *“I wasn't sure at first, but sleeping under a quilt with the air conditioner on turned out to be quite pleasant,”* she added, reflecting the gradual alignment of preferences.

The story of Ryan is not an isolated phenomenon among young adults in Shenzhen. His inclination towards maintaining a cooler home environment at 19°C is reflective of a newfound freedom that many young people experience when they first move into their own spaces. This freedom often translates into a sense of rebellion against the more conservative approaches of their parents, allowing them to set their own rules and standards for comfort. However, as seen through my interviews, this phase of indulgence in the freedom of air conditioning may not be sustainable in the long run.

Yu Zhang's experience with air conditioning offers a distinct perspective. Previously a proponent of lower temperature settings, Yu, now 36 and a financial manager, reflects on his past attitudes with a more seasoned outlook. *“Back in my younger days, I'd set the AC to about 20-21°C. It was like my little rebellion, a way to declare my independence from my parents' rules,”* he shared, smiling at the memory. *“At that time, it seemed like a habit... almost a lavish indulgence that I could afford. During a trip to Malaysia, I noticed the air conditioning was also set quite low, which struck*

*me as an interesting cultural practice, perhaps reflecting local preferences or status symbols.”*

However, Yu's outlook changed over time, especially after several instances of falling ill, often termed as 'air conditioning sickness.' *“I used to work in an office where the AC was always on high. Living in the company's apartment, I continued that habit, always keeping it around 21°C. It didn't seem problematic initially, but repeated health issues made me reconsider,”* he explained. This realization brought about a shift in his approach to air conditioning. *“I've started to see that constant exposure to cold temperatures isn't healthy. Now, I prefer setting the AC to a more moderate temperature, around 24°C. It's funny how I find myself aligning more with my parents' views on this as I grow older.”*

Yu Zhang's story reflects a broader trend among young adults who initially embrace the freedom to define their own cooling preferences but gradually shift toward more balanced and health-conscious approaches. While younger adults often set temperatures that parents perceive as unhealthy, this evolution in practice highlights a maturing understanding of air conditioning's implications for both personal health and lifestyle. As individuals like Yu move through different life stages, their priorities and perceptions of comfort adapt, often aligning more closely with the values of the older generation.

In Shenzhen, as young adults transition into new life phases—particularly marriage and parenthood—their approach to air conditioning undergoes a marked transformation. The carefree, individualistic usage seen in individuals like Ryan gives way to a more deliberate and negotiated practice, shaped by the dynamics of shared living. This shift is especially apparent among young couples, where air conditioning use becomes a site of joint decision-making. Physiological differences between genders often lead to what is colloquially termed the "Thermostat Wars." Women generally prefer warmer temperatures (around 25°C), while men favour cooler settings (closer to 22°C), reflecting variations in body composition and metabolic rates.

In interviews with young couples, these conflicts frequently emerged as a recurring theme. Women often described feeling colder, particularly in their arms and hands, creating discomfort at the lower temperatures preferred by their male partners. Such

differences necessitate compromise, discussion, and occasionally technical solutions to bridge preferences. Notably, a more restrained pattern of air conditioning use was evident among these mature young adults. This moderation signals an emerging balance between personal comfort and collective responsibility, shaped by the realities of shared family life.

*“.....one summer evening, the debate over the air conditioner’s temperature came to a head..... he likes it really cool, around 20°C, but I just can't handle it that cold. I end up wearing sweaters and socks around the house!”*

(Fiona Chen, female, 28 years old)

Fiona Chen, a 28-year-old marketing executive, and her husband Benjamin Sun, a 30-year-old engineer, represent the typical young urban couple navigating the intricacies of married life. They shared their experiences with air conditioning, highlighting the subtle negotiations and compromises that have become part of their daily routine. Benjamin nodded in agreement, *“Yeah, I never really thought about it before. When I live alone, I'd always set the AC low. But with Fiona, I've had to adjust. We tried different settings and finally found a compromise at 25°C. It's a bit warm for me, but she's more comfortable, and that's important.”*

Their story highlights a familiar pattern among young couples, where decision-making about air conditioning continues to involve negotiation and shared input, much like in their family homes. “We even got a programmable thermostat,” Benjamin noted. “The temperature automatically adjusts to a warmer setting in the early hours of the morning when Fiona feels the coldest... it's really about finding a balance that works for both of us. Plus, we're more conscious about energy consumption now, especially since we're planning to start a family soon.” This process of negotiation reflects how shared living spaces necessitate practical adjustments and collective consideration, with technology serving as a tool to mediate differing preferences.

While Benjamin admitted that his preferences remain distinct from the older generation's, he acknowledged the impact of habitual air conditioning use on his comfort levels. “The biggest downside of using air conditioning a lot is that you can no longer tolerate heat. I used to be okay with 33 degrees, but now, I start feeling uncomfortably hot at 30.” This observation aligns with a broader realization among

young adults: habitual cooling practices gradually recalibrate their thresholds for comfort, underscoring the unintended consequences of sustained air conditioning use.

This evolving approach to air conditioning use among young families in Shenzhen reflects a broader shift toward a more balanced and intentional lifestyle. While comfort continues to be a priority, there is an increasing awareness of the need for moderation and energy efficiency. As young adults transition into their own homes, many find themselves adopting more restrained practices, influenced by lessons from their parents but adapted to align with their modern circumstances. Instead of embracing unrestrained air conditioning usage, they engage in negotiation and compromise—driven by the dynamics of shared living, concerns about energy costs, and personal health considerations. This trend underscores how leaving the family home does not inevitably lead to increased air conditioning use; rather, it signals a new phase where comfort is carefully weighed against practical responsibilities. For these young adults, air conditioning practices become a site where evolving meanings of independence, shared responsibility, and sustainable living converge.

#### 7.4.2 It Means ‘Letting Them Go’

In China, the process of young adults transitioning to independent living is deeply rooted in Confucian cultural traditions, which prioritize filial piety (孝道) and family hierarchy. Central to these teachings is the belief that parental responsibilities are not fulfilled until children achieve key milestones such as marriage, homeownership, and starting a family. Among these, marriage holds particular significance, reflecting the Confucian ideal that "不孝有三，无后为大" (of the three unfilial acts, the greatest is the failure to produce offspring). These milestones are not merely personal achievements but represent collective familial success, marking the culmination of a parent's duty and the successful societal integration of their offspring.

This cultural backdrop informs the evolving dynamics between parents and their children as the latter transition into independent living. Parental attitudes toward decisions about home technology, such as air conditioning, reveal this shift. The change is not merely a relinquishment of control but reflects a deeper negotiation of



trust, influenced both by the confidence in their children's upbringing and by societal norms that dictate parents step back once the milestones of adulthood are reached.

Take Jack's mother, Margaret Chen, a 64-year-old retired teacher in Shenzhen. Introduced to me through a community acquaintance, Mrs. Liang, Margaret was described as someone who had recently "accomplished the great task of life" by marrying off her son. In a conversation after one of Mrs. Liang's gatherings, Margaret expressed both pride and relief. *"Seeing my son settle into his new home with his wife marked the end of a chapter for me. It's the fulfilment of my responsibilities. Now, how he and his wife decide to use their air conditioner is their business. I've done my part,"* she explained with a tone of finality.

Similarly, Lucas Zhou, a 57-year-old factory manager, shared his reflections on this transitional stage after his son's recent marriage and move to a new apartment. *"Seeing our son move out was a proud moment, but it left a kind of emptiness too,"* he admitted. *"We've taught him to be independent, and now he's making his own decisions, like how to set his home's air conditioning. We know it's not our place to step in."* His wife echoed this sentiment: *"We do have our thoughts on their AC settings when we visit. Sometimes it feels a bit too chilly or a touch too warm for us. But we usually keep those opinions to ourselves. It's their home, their zone of comfort."* Mrs. Zhou succinctly captured the parental shift in roles, saying, *"Ever since they got married, I've consciously stopped fussing over the small things, like their AC settings. They're in charge of their own household now. Our focus as parents has naturally progressed to the next significant milestone in their lives... hopefully, we'll get to hold our grandson soon!"*

The emphasis on marriage and childbearing as ultimate markers of adulthood remains a defining feature of Chinese society. These milestones serve as cultural signifiers, not only of individual maturity but also of the fulfilment of parental and societal expectations. Decisions about home comforts, including air conditioning, are now firmly situated within the young adults' new family unit, symbolizing both their independence and their capacity to manage their own lives. This evolution highlights how meaning in air conditioning practices transcends personal preference, becoming a reflection of cultural traditions, social expectations, and the intricate process of letting go.

Our interviews revealed a nuanced dynamic of parental trust, shaped both by cultural expectations and the realities of relinquishing control. Parents, particularly those who adhered to strict or systematic approaches to child-rearing, often believe their children will carry forward the values instilled in them. This belief extends to seemingly mundane aspects like air conditioning use. “*We’ve always emphasized being sensible with things like AC usage. I believe he’ll continue those habits in his own home,*” remarked Andy Wu (62 yrs), a parent known for his disciplined approach to family life. This trust is rooted in the conviction that early teachings about responsibility and moderation have left a lasting imprint on their children.

Interestingly, even parents who frequently clashed with their children over air conditioning use expressed similar sentiments of trust, though tinged with resignation. For them, this trust appeared less a product of confidence in their upbringing and more a pragmatic acceptance of shifting parental roles. It is as though these parents, in recognizing their diminishing influence, adopt a ‘let them be’ approach, hoping that independence will naturally lead to self-regulation. Yvonne Lin (57 yrs), who often admonished her daughter Fiona for excessive AC use, noted, “*Now that she’s married and living on her own, I hope she’ll find the right balance.....maybe all those years of reminders will finally sink in.*”

This contrast in parental trust—anchored either in confidence or reluctant acceptance—highlights the layered psychology of letting go. It reflects a broader transition from direct control to an indirect influence shaped by hope and cultural expectations. This shift mirrors larger societal trends in China, where traditional parenting values intersect with the realities of modern, autonomous family units. Parents grapple with balancing a desire to maintain influence over their children’s choices with the need to respect their independence, creating a subtle negotiation of trust and control in domains as specific as domestic technology use.

The evolving role of parents in this context is significant. While they gradually step back from micromanaging, their influence lingers in quieter forms. For example, subtle reminders about air conditioning usage—framed as concerns for health or practicality—reflect their enduring investment in their children’s well-being. Helen, whose son moved out after marriage, encapsulated this sentiment: “*I was always pretty particular about how we used gadgets at home, AC included. But after he*

*moved out.....it's his turf now. They've got their own way of doing things. Sure, I might drop a hint about not cranking the AC too much.....for health's sake, but it's more like a nag than a rule."*

These narratives signal a departure from the hands-on approach of earlier generations. The transition of young adults to independent living redefines the parent-child relationship, with parents adapting to reduced influence over day-to-day decisions, including those concerning domestic comfort. This shift, however, does not equate to indifference. Many parents continue to care deeply about their children's choices, though their concerns are often expressed with more restraint.

This change is partly shaped by evolving societal norms around marriage and independence. Once young couples establish their households, they are expected to manage their own affairs, including decisions about home comfort. This expectation, reinforced by modern living standards, fosters a more autonomous approach to air conditioning use among young adults. Simultaneously, parental priorities subtly shift. With their children settled into independent lives, parents increasingly redirect their focus to other pursuits, such as future grandchildren or retirement plans. This reorientation of priorities further solidifies the perception of independence among young adults.

The evolving role of parents in decisions about air conditioning use in their children's homes reveals a shift in family dynamics in modern China. As parents step back from directly influencing their children's daily choices, they adapt to new expectations of autonomy while still maintaining a subtle presence through occasional advice or suggestions. This shift reflects a transition from tightly-knit, hierarchical family structures to more independent household arrangements, where young adults take on full responsibility for managing their domestic environments. The way air conditioning is used in these households highlights this change, as it embodies both the practical adjustments and the cultural negotiations involved in balancing tradition with modern living. Rather than imposing their views, parents now navigate their role as supportive advisors, mirroring the broader societal transition from collective habits to individual preferences in shaping home life.

#### 7.4.3 Negotiating Practices

Hybridity, as a concept, captures the blending and coexistence of seemingly opposing elements within a single practice. In the context of air conditioning use among young adults in Shenzhen, hybridity reflects the interplay between tradition and modernity, autonomy and inherited values, and routine and reflexivity. This concept is particularly relevant because it allows us to understand how young adults navigate the transition from shared family spaces to independent homes. Their practices do not represent a clean break from their parents' values, nor do they fully embrace modern ideals without question. Instead, they reflect a nuanced negotiation that integrates elements of both, resulting in practices that are both familiar and innovative. This hybridity is essential to understanding the evolving meanings of comfort in Shenzhen's rapidly modernizing urban environment. As air conditioning shifts from a luxury to a necessity, it becomes a focal point for intergenerational dialogue, where young adults and their parents simultaneously adapt and preserve their respective values. Through this lens, I can better appreciate how these practices are shaped by material constraints, cultural expectations, and generational negotiations.

For young adults, hybridity is most evident in how they redefine comfort while remaining influenced by their upbringing. Ryan Wang's preference for maintaining a cooler environment at 19°C represents his assertion of autonomy and rejection of his parents' more conservative air conditioning habits. This choice, however, is not entirely divorced from traditional influences; the practicality of using a standard cabinet-style air conditioner provided by his apartment's developer shows an awareness of material limitations. His partner's gradual adaptation to the cooler temperature also illustrates how individual preferences evolve into shared practices, balancing personal freedoms with relational considerations.

Similarly, Yu Zhang's story highlights how hybridity operates across life stages. As a younger adult, his preference for low air conditioning temperatures reflected rebellion against his parents' norms and a desire to assert independence. Over time, however, repeated health issues prompted him to adopt more moderate practices, aligning closer with the values his parents had long advocated. Yu's experience illustrates how hybridity is not static but evolves as individuals reconcile youthful aspirations with practical realities and inherited wisdom.

Parents, too, navigate hybridity as they adjust to their children's independence while maintaining their cultural values. Helen Wang's insistence on installing central air conditioning in her son Tony's home demonstrates how traditional notions of *Mianzi* (face) are reinterpreted in a modern context. For Helen, central air conditioning is more than a functional choice—it symbolizes family honour, societal status, and a commitment to ensuring her son's home aligns with contemporary standards of modernity. Despite Tony's initial preference for wall-mounted units, Helen's advocacy underscores how parents engage in hybrid practices by merging traditional values with the technological expectations of urban living.

In contrast, Beverly Gao's initial reluctance to use the pre-installed central air conditioning in her own home reflects her attachment to frugality, a traditional value. However, her eventual acceptance, driven by her daughter Emily's insistence and the realities of Shenzhen's climate, highlights how hybridity allows parents to adapt their practices without entirely abandoning their values. This shift demonstrates a willingness to integrate modern comforts while maintaining an awareness of resource constraints. Among young couples, hybridity is reflected in the negotiation of shared air conditioning practices. Fiona Chen and Benjamin Sun's compromise on setting the thermostat at 25°C illustrates how physiological differences and personal preferences are reconciled through discussion and technology. By incorporating a programmable thermostat, they blend inherited values of moderation with modern tools to mediate their differences. This hybrid approach ensures both partners feel respected and comfortable while aligning with broader concerns about energy efficiency and sustainability.

The narratives from earlier sections collectively underscore the role of hybridity in shaping air conditioning practices in Shenzhen. Young adults, while seeking autonomy, remain tethered to the values of their parents, which they reinterpret to fit their modern lifestyles. Similarly, parents, while advocating for traditional norms, adapt their practices to accommodate their children's evolving needs and preferences. This blending of old and new highlights the fluidity of air conditioning practices, where tradition and modernity coexist and influence each other.

Hybridity provides a framework for understanding how practices evolve within rapidly modernizing societies. In Shenzhen, air conditioning serves not only as a tool

for physical comfort but also as a symbol of cultural negotiation and generational adaptation. By balancing inherited values with modern aspirations, families create practices that are simultaneously rooted in tradition and responsive to contemporary realities. This process underscores the dynamic and iterative nature of hybridity, where individuals and families continuously negotiate the meanings of comfort, autonomy, and responsibility in their daily lives.

## 7.5 Chapter Summary

In this chapter, I delved into how young adults in Shenzhen navigate the transition from shared family homes to independent living, using air conditioning as a lens to explore their evolving relationships with comfort, autonomy, and intergenerational negotiation. My findings revealed a complex interplay between tradition and modernity, where air conditioning practices serve as both a symbol of personal independence and a site of familial and societal negotiation.

One of the most striking observations was how the meanings attached to air conditioning shift over time. For many young adults, cooling practices initially represent freedom—a tangible expression of their ability to shape their environment according to their preferences. This shift often begins within the family home, where individuals carve out personal spaces and assert control over air conditioning usage, sometimes subtly challenging their parents' more conservative practices. As they transition to independent living, these young adults continue to redefine comfort, blending their aspirations for modernity with lessons learned from family interactions.

I also found that these evolving practices are deeply shaped by intergenerational interactions. Parents, once the primary decision-makers, gradually adopt a more consultative role, supporting their children's preferences while maintaining ties to traditional values. This dynamic is particularly evident in cases where parents contribute to setting up their children's homes, often prioritizing status symbols like central air conditioning as markers of family success and *Mianzi*. However, these decisions are not unilateral; they emerge from a negotiation where young adults balance their parents' influence with their own desires for autonomy and practicality.

Another key insight is the role of hybridity in shaping these practices. Rather than a complete departure from their upbringing, young adults weave together elements of tradition and modernity, creating hybrid approaches to comfort and responsibility. For instance, I observed how younger individuals initially indulge in newfound freedoms, such as setting low air conditioning temperatures, only to later adopt more moderate practices influenced by health, energy costs, or shared living arrangements. Similarly, parents, while valuing frugality and moderation, adapt their practices to accommodate their children's modern lifestyles, often merging old values with new realities.

This chapter ultimately highlights the dynamic and iterative nature of cooling practices. Through air conditioning, young adults negotiate not only physical comfort but also deeper meanings of independence, family dynamics, and societal expectations. These findings offer a rich perspective on how urban living in Shenzhen reflects broader sociocultural transformations, where tradition and modernity coexist and continuously shape each other.

# **Chapter 8: Caring for Aging Parents: Negotiating Comfort and Expectations**

## **8.1 Introduction**

As families progress through various stages of life, the dynamics within their relationships and households evolve, often bringing about significant changes in decision-making and the division of responsibilities. This chapter focuses on the interactions between middle-aged children (approximately 40-55 years old) and their aging parents, with particular attention to the use of air conditioning in the home. In Chinese society, the responsibility for caring for elderly parents traditionally falls to adult children, who must navigate the complexities of balancing their own families and careers with the needs of their aging parents. This stage introduces challenges that are not only practical but also deeply embedded in the routines and meanings of family life. Air conditioning, as a household technology, intersects with these dynamics by influencing material practices, such as managing indoor temperatures, and social practices, such as negotiating its use. Aging parents, often rooted in a lifetime of traditional cooling methods, may resist the adoption of modern devices, reflecting their discomfort with the material aspects of new technologies. At the same time, middle-aged children, accustomed to viewing air conditioning as essential for health and comfort, imbue its use with new meanings tied to care and filial duty. The chapter examines how decision-making power around household practices, including air conditioning, gradually shifts from parents to their children. This transition reflects not only generational changes in skills—with younger generations more adept at handling technological devices—but also shifting notions of authority and caregiving. These differences frequently manifest in subtle negotiations and compromises over air conditioning use, illustrating how families navigate evolving intergenerational dynamics. Beyond practical concerns, such as health and thermal comfort, the chapter explores the emotional dimensions of caregiving. For adult children, the act of installing and advocating for air conditioning often carries symbolic significance, embodying their commitment to ensuring their parents' well-being. For the elderly, however, the imposition of such practices can be seen as a disruption to their sense of autonomy and a challenge to their long-held routines. These tensions highlight the



importance of social negotiation in aligning generational perspectives. At the core of this chapter is the balance families must strike between respecting the preferences of elderly parents and adapting household practices to modern standards of comfort and care. Air conditioning, as a seemingly mundane household technology, becomes a focal point for broader questions of tradition and modernity, autonomy and care, and respect and responsibility. By examining these family dynamics, this chapter contributes to a deeper understanding of intergenerational interactions within the rapidly modernizing context of contemporary Chinese society.

## 8.2 AC Installation and Generational Expectations

This section explores how deeply ingrained Confucian values, particularly filial piety (孝道), intersect with health considerations and the practicalities of air conditioning use in Chinese family life. For middle-aged children, air conditioning is often viewed as a material necessity, essential for safeguarding the health of their aging parents, symbolizing care and adherence to traditional values within a modern context. However, for the older generation, the meaning of air conditioning may differ significantly, often seen as a disruption to established routines or even as an unnecessary luxury. While younger family members emphasize the importance of air conditioning for maintaining thermal comfort and preventing health risks, older parents may resist its regular use, citing concerns about cost, unfamiliarity, or physical discomfort. These reservations highlight generational differences in skills and familiarity with modern technologies. Such divergences reflect broader tensions between tradition and modernity, with both sides negotiating how to incorporate new practices into established family routines. At the heart of these interactions lies a dynamic process of compromise, where families strive to align their perspectives and practices. This negotiation underscores the complexities of integrating air conditioning into traditional lifestyles, illustrating how material technologies, cultural values, and intergenerational relationships are interwoven in everyday life. By examining these dynamics, this section sheds light on how generational expectations are reshaped through both conflict and collaboration, reflecting broader shifts in Chinese family life.

## 8.2.1 Filial Piety, Health Considerations and AC Installation

### 8.2.1.1 *It means showing a 'filial child'*

*"Although we live in the downtown, ...in my [hometown] village, the expectation is clear: you must install an air conditioner for the elderly. It's more than just a matter of comfort.....it's a symbol of care and 'Xiaodao' (Chinese for filial piety). Failing to do so can attract criticism from neighbours, being seen as neglectful or even disrespectful. Even though I know that my parents would rarely use it, I couldn't ignore others' gossips.....Anyway, just like my peers, I installed it, as we are living here, in a 'neighbourhood society'."*

(Mary Wu, female, 43 years old)

In Confucian philosophy, filial piety is not only a moral obligation but also a societal foundation, considered essential for achieving harmony within the family and, by extension, the state. Confucius saw the family as the cornerstone of societal order, where each member had specific roles: parents as caretakers and providers, and children as obedient and respectful caretakers of their parents in old age. These values, deeply rooted in texts such as the *Xiao Jing* (Classic of Filial Piety), emphasize that caring for one's parents is not merely a private act but a public demonstration of virtue and responsibility.

Historically, filial piety manifested through actions suited to agrarian societies—such as manual labour to support aging parents or rituals that honoured their legacy. However, in contemporary urban China, these traditional expressions have been reinterpreted to fit modern lifestyles and technologies. In this context, air conditioning—a seemingly mundane household appliance—becomes a powerful symbol of filial care and duty. For Mary Wu, providing an air conditioner for her parents was an act of compliance with deeply ingrained cultural expectations, albeit one shaped by the realities of modern urban living.

For Mary, a 43-year-old who moved from rural Shandong to Shenzhen, installing an air conditioner for her parents was less about practicality and more about fulfilling societal and familial expectations. Having invited her parents to live with her in the city due to their declining health, Mary transformed a spare study into a living space for them, equipping it with what she saw as essential amenities, including an air conditioner.

*“Back in our coastal hometown, we weren’t too worried about my parents coping with the summer heat... They knew how to adapt, and when it got unbearable, they’d occasionally turn on the AC. But now, with their health declining, I thought it would be better for them to live with us so we could keep a closer eye on them,”* Mary explained.

While the decision to install an air conditioner could be interpreted as practical, Mary’s reflections reveal that it held a deeper meaning. As she observed, *“The air conditioner in my parents’ old home mostly gathered dust, but I couldn’t risk the judgment of others. It’s what’s expected.”* In her home village, the act of installing an air conditioner would be seen not as an optional convenience but as an essential gesture of respect and care. Without it, Mary risked being labelled as neglectful, failing to meet the expectations of filial piety upheld by her community.

The installation of the air conditioner was not merely about providing physical comfort to her parents but also about navigating the social dynamics of filial piety. In rural communities like Mary’s hometown, where Confucian values remain deeply embedded, the concept of filial piety extends beyond private family interactions to encompass public perceptions and judgments. As Mary explained, *“Since our study isn’t far from the living room AC, and its cooling effect could probably reach there... my wife said, ‘Even if your parents don’t mention it, we should still install one, just in case someone visits and judges us for not treating your parents well.’ It’s not just about us; it’s about showing others that we’re fulfilling our duty to care for our parents.”*

This statement highlights the dual role of the air conditioner as both a functional appliance and a symbolic artifact. Its presence in Mary’s home was less about addressing her parents’ needs and more about signalling to the broader community that she and her family were fulfilling their filial obligations. In this way, the air conditioner became a marker of compliance with cultural norms, reinforcing Mary’s role as a dutiful daughter.

The meaning of the air conditioner as a symbol of filial piety is further complicated by its modernity. For Mary’s parents, who had grown accustomed to traditional methods of cooling, the air conditioner represented an unfamiliar and, at times, unnecessary addition to their lives. Yet, its installation was not optional for Mary, who

felt compelled to demonstrate her care in a way that aligned with both cultural expectations and modern urban standards.

*“It’s not that my parents will use it often, but it’s there—just in case anyone asks,”* Mary remarked. This statement underscores the tension between tradition and modernity that defines many intergenerational practices in contemporary China. For the younger generation, providing air conditioning represents an effort to merge traditional values of care with modern conveniences. For the older generation, however, it often appears as an intrusion into their established ways of living, reflecting a deeper generational divide in how comfort and care are understood.

The pressure to conform to societal expectations is a recurring theme in Mary’s narrative. In her hometown, where social norms are tightly woven into the fabric of daily life, failing to meet the standards of filial piety can lead to public scrutiny and gossip. Mary’s decision to install the air conditioner, even though her parents rarely used it, was influenced as much by this external pressure as by her internal sense of responsibility.

*“Even though I know that my parents would rarely use it, I couldn’t ignore others’ gossip... Anyway, just like my peers, I installed it, as we are living here, in a ‘neighbourhood society’,”* Mary said.

In urban areas like Shenzhen, where traditional communities are less prevalent, the motivations behind such actions may shift, but the underlying cultural expectations remain. The air conditioner, in this context, serves as both a private gesture of care and a public display of familial duty, bridging the gap between rural traditions and urban realities.

While the act of installing an air conditioner reflects Mary’s adherence to the principles of filial piety, it also reveals the complexities of negotiating generational preferences within her household. For her parents, who grew up relying on natural cooling methods, the air conditioner represented both a departure from tradition and a reminder of their dependence on their children.

*“The air conditioner in my parents’ room is a compromise. They might turn it on during especially hot days, but they still prefer opening a window and feeling the*

*natural breeze. For them, comfort is about familiarity, not technology,”* Mary explained.

This negotiation highlights the evolving nature of filial practices in a rapidly modernizing society. While younger generations like Mary’s are increasingly adopting modern tools and technologies to express their care, older generations often remain rooted in traditional ways of living, creating a subtle but persistent tension in their interactions. Mary’s story exemplifies how filial piety continues to shape family practices in contemporary China, even as the material and social contexts of caregiving evolve. The air conditioner, in this narrative, becomes more than a household appliance. It transforms into a symbol of care, a marker of social compliance, and a site of intergenerational negotiation. Through the lens of Mary’s experience, I see how traditional values are reinterpreted in modern settings, creating new meanings and practices around familial care. The act of installing an air conditioner reflects not only the enduring influence of filial piety but also the ways in which younger generations navigate the complexities of tradition and modernity, balancing their parents’ preferences with societal expectations and their own understanding of care.

#### *8.2.1.2 But it Means a Hard Balance*

Dorothy Liu (46 yrs) offered a candid reflection on how generational preferences for cooling can sometimes clash with societal expectations: *"My parents are old school, they prefer the fan... But in our circles, it's like, 'Oh, you don't have an AC for your parents?' It's more for show, really... Sometimes, they'd rather go to a shopping mall to enjoy the air conditioning than use the one at home."* This sentiment was echoed by Patricia Yang, who explained, *"Mom and dad, they're tough folks, you know. Grew up in times when AC was a luxury. At home, they stick to their fan, saying it's enough. But then, I catch them taking these long trips to the mall, just sitting there, enjoying the AC. Kind of ironic, huh?"*

From a social practice theory perspective, these differences reflect not only material preferences but also a divergence in the meanings and competencies tied to cooling practices. The older generation’s preference for fans or communal air-conditioned spaces over private AC use is not merely about rejecting modern technology; it

reflects long-standing practices where cooling was communal and embedded within broader social interactions. Cooling practices, for them, have historically been tied to shared spaces—whether under a tree in the village or in a local teahouse—where the practice of cooling was as much about community as it was about comfort.

Interestingly, while adult children like Dorothy and Patricia interpret their parents' actions as preferring the mall's air conditioning over using their own at home, this behaviour can be understood through a different lens when analysed using social practice theory. The children see the air-conditioned environment as a primary motivator, emphasizing material comfort, but for the elderly, the competence and meanings associated with these outings include social engagement, routines, and opportunities to reconnect with communal life. The air conditioning, while appreciated, is secondary to the social practices it enables. Shirley Li, 41, similarly noted, *"Both my parents, they act like the AC is some alien tech. 'We survived without it before, we can now,' they say. Yet, every other day, they're off to the community centre. They say it's for the activities, but I know that cool air is the real draw."*

From the lens of practice, this divergence highlights how different elements interact within each generation's cooling practices. For the younger generation, air conditioning is a symbol of modern caregiving and a tool to ensure thermal comfort, embodying a meaning closely tied to health and care. In contrast, the older generation's relationship with cooling practices is shaped by their lifelong competences in enduring heat and finding alternative ways to cope, such as seeking shade or communal cooling spaces, and by meanings that emphasize resilience and social connection over material comfort.

Dorothy Liu's observation, *"Our house could be boiling, and still, my parents won't turn on the AC. They say they don't like the feel. Funny thing, though—they have no issue sitting in the air-conditioned waiting area at the train station for hours, just chatting,"* encapsulates this theme. For the parents, these spaces offer not just physical relief but also opportunities for socializing, while their children tend to emphasize the role of AC in ensuring comfort. Here, the communal aspect of cooling highlights the older generation's embedded meanings of cooling practices as opportunities for interaction, whereas the younger generation views cooling more as a private, family-centred duty.

These interviews reveal a generational divide not just in the use of air conditioning but also in how different generations construct and enact cooling practices. The younger generation integrates air conditioning into their routines as a way to demonstrate filial piety and modern caregiving competence, often tying its use to material and health-oriented goals. Meanwhile, the elderly frame cooling within their broader practices of social engagement and collective experiences. This generational misalignment underscores how the elements of practice—materials (AC technology), meanings (health, care, social connection), and competences (using AC effectively vs. seeking alternative cooling methods)—can clash, leading to differing interpretations of what constitutes comfort.

While the decision to install air conditioning is often framed as fulfilling a filial duty, the parents' actual preferences for cooling are often shaped by deeply ingrained habits and values that appear more conservative in comparison to their children's views. Karen Zhao, 43, explained the tension between her parents' traditional lifestyle and her desire to provide for their comfort:

*"Despite the sweltering summer heat, my parents would often opt for the natural breeze from an open window rather than the artificial coolness of the AC. Balancing respect for their preferences and ensuring their health and comfort has always been challenging. I often find myself in a dilemma: should I persuade them to use the AC for their health, or respect their desire to live as they always have?"*

Karen's experience exemplifies the challenges faced by many adult children who are negotiating their roles as caregivers in a modern, urban setting. Here, material elements such as air conditioning clash with the meanings and competences that the older generation brings to cooling practices. For Karen's parents, who had spent decades living in rural areas, cooling was traditionally achieved through natural methods, such as open windows or hand-held fans. These practices were not only pragmatic but also symbolic of their resilience and independence, values deeply tied to their identity. The transition to urban life, however, disrupted these established practices. Karen's decision to move her parents to Shenzhen was primarily motivated by health concerns, yet even with air conditioning installed, convincing her parents to use it regularly became a significant challenge. As she recounted:

*"Before my parents arrived, I rarely gave much thought to things like air conditioning or home maintenance. But their health issues, especially my father's hypoglycaemia, forced me to rethink our entire living arrangement."*

Karen's father's resistance to using air conditioning highlights a broader intergenerational conflict rooted in differing practices. For him, reliance on modern technology like AC was perceived as unnecessary and, perhaps more importantly, as undermining his sense of autonomy. He saw himself as capable of managing without such "luxuries," a perspective that was both practical and symbolic. This attitude created a significant barrier for Karen, who viewed air conditioning as an essential tool for ensuring her parents' comfort and health. Such experiences were echoed by many other participants. Shirley Lee, 41, shared a similar frustration:

*"I bought them an air conditioner, hoping it would ease their discomfort. But they see it as an unnecessary luxury. It's frustrating, knowing it could help, but not being able to convince them."*

This conflict underscores how the meanings attached to air conditioning differ significantly between generations. For the younger generation, air conditioning represents care, modernity, and health management, aligning with their roles as caregivers in a highly urbanized environment. In contrast, for the older generation, air conditioning is often seen as a superfluous or even intrusive element, disrupting the natural and communal cooling practices they are accustomed to.

Dorothy Liu's reflections further illustrate this dynamic:

*"My mother, who spent her entire life in the countryside, saw air conditioning as a frivolous luxury. It took constant effort to help her understand that it wasn't about luxury—it was about her health and comfort in these high temperatures."*

For the older generation, reluctance to embrace such technologies is more than a personal preference; it's deeply rooted in their identity and shaped by decades of living in environments where such conveniences were not part of daily life. This resistance also reflects the competences they have developed over time—skills and habits that enable them to cope with heat in ways that do not rely on modern appliances. On the other hand, adult children face the dual pressures of adhering to



societal expectations of filial piety while also navigating the demands of modern caregiving. Karen's narrative captures this tension:

*"He struggled to cope with the humidity but was stubborn about using the AC, even as temperatures rose. I realized it wasn't just about creating the right environment; it was about convincing them to accept it. Convincing them, however, was easier said than done."*

The role of adult children as mediators between two worlds—the traditional, rural life of their parents and the modern, urban environment—places them in a complex and often conflicting position. On one hand, they must respect their parents' established practices and values; on the other, they are tasked with ensuring their parents adapt to a new lifestyle that prioritizes health and comfort in a rapidly changing urban context.

These stories reveal how differing practices of cooling are not merely generational preferences but are deeply embedded in the broader systems of meaning and competence each generation holds. For the younger generation, caregiving through the provision of modern amenities like air conditioning is tied to their sense of responsibility and their understanding of what it means to care. For the older generation, their reluctance is rooted in their own competences and meanings, which emphasize independence, frugality, and resilience.

In reconciling these differences, adult children are not only providing physical care but are also engaging in a complex negotiation of meanings. They must balance their parents' desire to maintain autonomy and continuity in their practices with their own need to fulfil their caregiving roles in a modern urban context. This negotiation is emblematic of the broader challenges faced in integrating traditional practices with modern lifestyles, reflecting a microcosm of intergenerational adaptation in a rapidly urbanizing society. By viewing these conflicts through the lens of practice, it becomes clear that the challenges are not simply about material preferences but are deeply tied to the meanings and competences that each generation brings to their practices.

### 8.2.2 Appreciation, Reluctance, Partial Adaptation and Compromise

This section shifts the focus to the perspectives of the elderly parents themselves, examining how they interact with and adapt to modern amenities like air conditioning

in their later lives. These responses reveal a nuanced interplay between material elements—such as the air conditioner itself—and the meanings ascribed to it by different generations. For the younger generation, air conditioning symbolizes care, health, and modern living standards, whereas for the elderly, it often evokes resistance, frugality, and a preference for traditional methods of coping with heat. Their narratives reflect a complex negotiation of these meanings, characterized by a blend of appreciation for their children's intentions, reluctance to fully embrace unfamiliar technologies, and compromises made to navigate the shifting dynamics of intergenerational family life in urban settings.

*“When he insisted on installing that air conditioner, I was taken aback... we never felt the need for such comforts. Yes, summers were hot, but we had our ways of coping—a cool breeze in the shade, a slow-paced afternoon... I appreciate what he's trying to do for us... but it feels like too much, almost unnecessary. He worries about what others might say, but I'd rather not have him spend money on things we don't need. Sure, the air conditioner is there, and we use it on those really unbearable days. But most times, I'd rather open a window and feel the natural air. That's how we've always lived..”*

(Nancy Xu, female, 74 years old)

In my conversation with Nancy Xu, Mary Wu's mother, she expressed a range of emotions. Her story reflected a peaceful and content life in the Shandong countryside, a life she would have preferred to continue if given the choice. She jokingly mentioned being "summoned" to Shenzhen to "*cook, take care of the grandchildren, and make herself useful,*" while recognizing that Mary wanted to ensure better access to healthcare and other services as part of fulfilling her filial duties. However, Nancy and her friends didn't see this as the main reason for the move.

*“We didn't want to be a burden to our son. He's busy with his work, so we agreed to come, thinking we could help with household chores... They thought we'd come to the city to 'enjoy the good life,' but honestly, adapting to Shenzhen wasn't easy at first... It's the same for many in our village; when you reach this age and your children need you, you just have to come. What can you do?”*

(Janet Tan, female, 73 years old)

Janet, a friend of Nancy, described her relocation to Shenzhen with a tone that conveyed a deep sense of obligation and self-sacrifice—sentiments that were echoed by many elderly parents I interviewed. For most elderly Chinese, living with their children is not merely a practical arrangement but a culturally ingrained expectation, rooted in Confucian values of intergenerational support. This transition often requires relinquishing their established lifestyle, autonomy, and personal space, and it is framed by a sense of duty to contribute their remaining energy toward supporting the next generation. While adult children may view this move as a way to provide better living conditions and care, the elderly often perceive it less as an opportunity for 'enjoyment' and more as a necessary adjustment in fulfilling their familial roles.

Regarding the installation of an air conditioner in her small bedroom—originally a study—Janet expressed surprise at her son's insistence. For Janet and many of her peers, traditional methods of coping with summer heat, such as seeking shade, catching breezes, or enduring discomfort, are not just practical strategies but integral aspects of their identity, shaped by decades of frugal and resourceful living. Her preference for simplicity and frugality reflects deeply rooted values, contrasting with her son's perception of air conditioning as a basic necessity. While she appreciated her son's concern, Janet viewed the air conditioner as an indulgence, particularly given the financial cost of an appliance she deemed unnecessary. This ambivalence reveals a tension between her gratitude for her son's care and her discomfort with what she perceives as excessive modern comforts.

Janet's story illustrates a broader trend among elderly parents in urban China, who often find themselves navigating conflicting feelings about modern conveniences like air conditioning. These parents appreciate their children's care and intentions but struggle with the changes such gestures bring to their lives. For many, air conditioning embodies more than technological advancement—it symbolizes a shift away from the values of simplicity and resilience that have defined their lives. This subtle resistance to such changes reflects not outright defiance but a cautious negotiation of the meaning attached to these new technologies.

As seen in Janet's case, this negotiation often manifests as what can be termed "partial adaptation and compromise." While elderly parents may voice their opinions about air conditioners, they tend not to assert their authority as they might have in earlier stages

of life. Instead, they opt for quiet compliance, expressing their preferences without directly opposing their children's decisions. This dynamic highlights the evolving power balance in intergenerational households, where elderly parents—though physically present—take a more passive role in decisions about household technologies. Their acceptance of air conditioning, therefore, is not a wholehearted embrace of modernity but a measured concession to maintain family harmony while holding on to their sense of identity.

*“I told him, ‘You install it, and we won’t use it, isn’t that a waste? We can go back to our hometown after staying for a while. We’ve got an air conditioner there already. If we leave, won’t yours just gather dust?’ But my daughter-in-law said that at our age, we need to take care of our health and shouldn’t risk overheating in summer. It’s not much money anyway. We didn’t want to make a fuss. They think it’s best, let it be. I said something, but they don’t listen anyway.”*

(Barbara Li, female, 63 years old).

Barbara Li's reflections epitomize a recurring sentiment among the elderly interviewees—a feeling of being somewhat out of place in their children's homes, where the environment and decisions are increasingly shaped by younger generations. This sense of displacement often manifests as an obligation to comply with decisions, such as the installation of an air conditioner, despite perceiving it as unnecessary. For Barbara, this compliance is less about personal conviction and more about maintaining household harmony and avoiding tension. Her story illustrates a dynamic where the elderly relinquish decision-making power on modern conveniences, particularly home technologies like air conditioning, as they prioritize familial peace over asserting their own preferences.

Margaret Chen (64 years old) shared a similar experience, revealing how such compromises often stem from a desire to placate their children: *“Oh, that air conditioner... I said to my son, ‘Do we really need this fancy thing?’ But he was all worried about us getting too hot. So, we said okay, mainly to ease his mind. We do turn it on, but only when it gets really hot...”* Margaret's account underscores a recurring theme—while elderly parents do not view air conditioning as essential, they agree to its installation to affirm their children's care and alleviate their concerns. For Margaret, using the air conditioner is less about seeking comfort and more about

maintaining family harmony, reflecting the subtle compromises that underpin intergenerational dynamics in these households.

Carol Zhou (67 years old) provided a comparable perspective: “*When they brought that air conditioner in, I wasn’t sure what to make of it. We’re simple folks. But our daughter was clear – it was for our health, she said. We’ve kind of warmed up to it over time. We don’t use it much, but it’s there...*” Carol’s reflection captures the process of gradual adaptation that many elderly individuals undergo when introduced to modern technologies by their children. While they may accept these changes as part of their children’s efforts to demonstrate care, their use of such amenities often remains cautious and selective. For Carol, the air conditioner represents a concession rather than a lifestyle transformation, reflecting a broader pattern of ‘partial adaptation.’ This concept highlights how older adults navigate the tension between their long-standing habits and the newer practices introduced by their children.

When it comes to decision-making regarding the installation of air conditioning, older parents generally take on a more passive role, deferring to their children’s preferences and allowing them to take the lead. This hands-off approach, frequently observed in the interviews, reflects a deliberate choice by the elderly to avoid imposing their own preferences on their children. Even when they have strong opinions about their needs, they often prioritize minimizing conflict and maintaining harmony within the family. This deference is less about an absence of agency and more about their commitment to supporting their children’s filial intentions, even if it requires adjustments to their own established routines.

For example, Nancy Xu remarked: “*The kids, they’re always fussing over us, got us this air conditioner and everything. We prefer the open windows, but we’ve started to use it here and there. It’s their way of caring, you see. So, we’re going along with it, slowly getting the hang of this machine.*” Her comments reveal the duality of the elderly’s response—they acknowledge and appreciate their children’s care efforts, but they also retain a sense of distance from the technology itself. This nuanced balance is neither a wholesale rejection of modernity nor full integration into it. Instead, it reflects a careful negotiation between accepting care and maintaining their own comfort practices.

It becomes evident through these interviews that the acceptance of air conditioning is often partial. While the presence of an air conditioner in their rooms is a tangible representation of modern living standards and their children's concern, its actual usage seldom becomes a routine part of their lives. For many elderly individuals, long-standing habits and lived experiences shape their preferences, making them gravitate toward natural cooling methods such as open windows or shaded outdoor spaces. These preferences are tied not just to physical comfort but also to a psychological attachment to simplicity and self-sufficiency. This hesitation toward embracing air conditioning is both physical and emotional. As Linda Lin (78 years old) explained:

*"I understood his concern, but adapting to it has been challenging for us. We are grateful, yet living in an air-conditioned environment just isn't comfortable for us. See, every time we use the air conditioner too long, my joints start hurting. My husband feels the same - a little stiffness here, some discomfort there... These small discomforts add up, making it difficult for us. That's why we often choose not to use the air conditioner in our room. We're simply trying to find a space where we can feel comfortable in our own way. Sure, the summers here can get unbearably hot, and sometimes we do relent and use the air conditioning for a bit. But if given the choice, we'd rather have our room a little warm than constantly artificially chilled. Our son doesn't quite understand our hesitance. He's grown up in a different era, accustomed to different comforts."*

(Linda Lin, female, 78 years old)

Linda's testimony highlights the underlying collision between the younger and older generations' understandings of comfort, rooted in distinct material practices and divergent meanings. For the elderly, comfort transcends the mere regulation of temperature; it is deeply tied to their ability to maintain control over their environment in ways that feel natural, familiar, and congruent with long-held habits. This preference for natural airflows, such as breezes from open windows, and slower, less intrusive cooling methods often limits their engagement with the air conditioner, even when it is readily available. For some, physical discomfort—such as joint stiffness after prolonged use—serves as a tangible reminder of why this modern appliance does not align with their idea of comfort. However, this resistance is not

simply a rejection of new technology; rather, it reflects a lifetime of ingrained preferences and practices shaped by a different socio-material context.

For the younger generation, air conditioning carries a distinctly different set of meanings and practices. It symbolizes care, health, and the obligation to meet modern standards of comfort, particularly in urban settings characterized by rising temperatures and high humidity. To them, installing and encouraging the use of air conditioning is an expression of filial piety, aligning with their broader responsibilities to ensure their parents' well-being. However, this well-intentioned effort often clashes with the elderly's perception of air conditioning as an unnecessary and even extravagant indulgence, one that disrupts their established routines. Instead of viewing the air conditioner as essential, many older individuals see it as a concession made primarily to placate their children's concerns, rather than as an integral part of their daily lives.

This generational divide underscores a deeper tension in how comfort is both defined and achieved. The younger generation emphasizes the material benefits of air conditioning, associating it with modernity and health. Conversely, the older generation values the symbolic and experiential aspects of their traditional practices, where comfort is tied to a sense of harmony with their surroundings and the continuation of familiar habits. For example, while children might view air conditioning as a straightforward solution to the challenges of urban heat, their parents may find solace in the slower, more deliberate cooling strategies that have long been part of their lived experience.

For instance, Margaret Chen's reflections ("*We do turn it on, but only when it gets really hot*") and Nancy Xu's cautious approach ("*We prefer the open windows, but we've started to use it here and there*") highlight this partial adaptation. The elderly's selective use of air conditioning, whether for their health or during particularly hot days, shows a careful negotiation between preserving their long-standing habits and acknowledging their children's care. They are not resistant to change simply for the sake of resistance, but their sporadic use of air conditioning is rooted in a lifelong sense of what comfort means for them, shaped by their earlier rural or slower-paced lives.

This balance—between acknowledging their children’s efforts and maintaining their own sense of identity and autonomy—is central to understanding the elderly’s relationship with modern conveniences like air conditioning. For the older generation, the concept of ‘resilience’ is not framed as enduring discomfort or hardship but rather as adhering to long-standing patterns and values that define their sense of self. Their reluctance to fully embrace air conditioning reflects not a rejection of their children’s care, but a boundary within which their adaptability operates. It is an adaptation that prioritizes maintaining control over their environment in a way that aligns with their traditional practices and beliefs about comfort.

This measured acceptance reveals a complex negotiation of care, autonomy, and cultural identity. While the younger generation often views air conditioning as a symbol of health, care, and modernity, the older generation integrates it cautiously, treating it as a supplement rather than a replacement for their existing methods of cooling. This selective engagement with modern technology underscores their ability to adapt within limits that feel authentic to their values, without compromising their independence or deep-seated preferences.

The generational tension in these practices highlights broader societal dynamics. The elderly’s partial adaptation to air conditioning mirrors a broader negotiation with modernization itself—a willingness to adapt up to a point but a resistance to fully embrace changes that they perceive as unnecessary or misaligned with their established ways of life. Their sporadic use of air conditioning is not about rejecting comfort outright but about redefining it in a manner consistent with their own values and experiences. This negotiation reflects the collision of two systems of meaning: one that ties comfort to naturalness and simplicity, and another that links it to technological progress and convenience. Across the interviews, this pattern of partial adaptation emerges as a recurring theme. While the older generation appreciates their children’s efforts, their reluctance to fully integrate technologies like air conditioning into their daily lives underscores the enduring influence of their traditional views on comfort. This generational divide—shaped by contrasting life experiences and socio-material contexts—illuminates the delicate balance the elderly must strike between accommodating their children’s expectations and preserving their own sense of autonomy and identity.



In the context of family dynamics, this divide is not just a practical issue but a reflection of broader cultural shifts. For the younger generation, providing air conditioning symbolizes fulfilling filial duties in an urbanized, modern context. For the older generation, however, it often signifies a departure from familiar practices that are closely tied to their identity and their lived experiences. This section complements the analysis of the younger generation's perceptions by focusing on how the elderly navigate these tensions, revealing the misalignments that arise even in well-meaning acts of care. Ultimately, this generational divide sheds light on how families in modern urban environments like Shenzhen negotiate these evolving dynamics. It is a negotiation not only of comfort and care but also of meaning and identity, reflecting the challenges of balancing tradition and modernity within the intimate space of the home.

### 8.2.3 Negotiating Practices

The interactions between middle-aged children and their elderly parents in negotiating air conditioning (AC) use can be primarily understood through Coordination and Normative Accountability. These interaction types reveal both the practical adjustments made to reconcile differences and the deeper cultural shifts underlying intergenerational negotiations.

Coordination is the process through which family members adjust their behaviours and practices to accommodate different generational preferences and competences. It enables families to maintain functional harmony in daily routines. For example, children often encourage their parents to use AC during extreme heat for health reasons, while respecting their preference for natural cooling methods, such as open windows or using fans. In some cases, families allow alternative solutions, such as elderly parents spending time in air-conditioned communal spaces, which both satisfies comfort needs and aligns with their social habits. This practical negotiation often involves adjusting material arrangements to meet immediate needs without fundamentally challenging established routines. Parents may accept air conditioning as a backup for particularly hot days, while children ensure it is available as a visible sign of care. However, Coordination is ultimately limited to surface-level alignment, as it primarily addresses logistical challenges rather than the underlying cultural and symbolic meanings attached to cooling practices.

Beyond practical adjustments, the use and provision of air conditioning reflect shifts in the meanings of care, comfort, and filial responsibility. For middle-aged children, installing air conditioning is not just about comfort but also about fulfilling societal expectations of care and demonstrating filial piety. Parents, even if resistant to frequent AC use, often interpret the gesture as an acknowledgment of their value and respect within the family. For instance, children like Mary Wu often install AC units in their parents' rooms despite knowing they will be used infrequently. This decision is influenced by both social norms—where failing to provide such amenities might invite criticism—and personal values, where visible signs of care reinforce the image of being a dutiful child. These symbolic meanings strengthen Normative Accountability, as children navigate both internal family dynamics and external societal judgments about proper caregiving. On the parents' side, the reframed meaning of air conditioning as an expression of their children's love allows them to partially adapt without feeling that their traditional practices are being undermined. This adaptation often takes the form of selective usage, where AC is used sparingly and only in specific circumstances, maintaining a balance between modern amenities and their established routines.

The interplay of Coordination and Normative Accountability reveals how intergenerational households reconfigure their practices over time. Coordination ensures immediate functionality, while normative pressures lead to gradual shifts in meanings and roles. As air conditioning transitions from a material appliance to a cultural artifact, it reshapes how families conceptualize care and comfort. In this process, parents and children negotiate not just behaviours but also broader expectations about modern living and traditional values. While children focus on integrating air conditioning as a means of demonstrating care, parents accept it as part of a broader negotiation, selectively adapting to align with their children's efforts. These dynamics illustrate how material, social, and cultural elements intersect to redefine everyday practices. By focusing on these interactions, it becomes clear that the generational differences in cooling practices are not static but part of a dynamic process. The meaning of air conditioning evolves as families navigate practical challenges and cultural expectations, leading to new configurations of care and comfort within the household. This highlights the significant role of intergenerational negotiation in bridging traditional values and modern lifestyles.

## 8.3 Family Communication and Shared Decision-Making

This section delves into the daily negotiations surrounding air conditioning use in households with elderly parents, uncovering the layered complexities that arise after installation. While the act of purchasing and installing air conditioners might appear straightforward, the shared practices of use reflect deeper intergenerational tensions and adjustments. Middle-aged children, often motivated by concerns for their parents' health and modern standards of comfort, bring their own priorities to these decisions. In contrast, elderly parents may resist or reinterpret these practices through their long-held values of frugality and traditional notions of well-being. The ways in which these conflicting priorities are communicated—or silently navigated—highlight variations in familial dynamics, from explicit discussions to implicit adjustments. By examining these interactions, this section aims to reveal not only the differences and overlaps in cooling practices but also the cultural and power structures that shape how decisions are made and enacted in everyday life.

### 8.3.1 Consultative Communication Style, Non-verbal Cues, and Temperature Settings

*"In the living room, before we eat, I usually set the AC to 23°C... When my son is home, he prefers it even lower, like 17°C, to quickly cool the area. You know, the living room is quite spacious, and without setting it low, it takes forever to feel cool... I am also a fan person, but I've slowly adapted to AC... Sometimes, I forget to adjust it higher, and my parents, probably more sensitive, often end up raising the temperature themselves. At first, they didn't know how to change the settings, so I had to teach them a few times..."*

(Judy Huang, female, 51 years old)

In households where elderly parents cohabit with their middle-aged children, managing cooling practices becomes a site of intergenerational negotiation, shaped by contrasting meanings, material elements, and implicit power dynamics. The living room, often a shared family space for gatherings and meals, emerges as a key stage for these daily negotiations. In Judy Huang's family, the air conditioner symbolizes both comfort and responsibility: for her, setting the temperature reflects her role as a caregiver, while for her parents, it represents an adjustment to a less familiar practice.

The generational divide becomes apparent in the different approaches to temperature settings. Middle-aged children like Judy often prioritize rapid cooling or their own comfort, reflecting their habitual reliance on air conditioning from work environments or personal preference. In contrast, elderly parents may perceive such usage as excessive, responding by subtly adjusting the settings or turning off the air conditioner entirely. These small actions, though seemingly mundane, reflect their attempts to assert agency and maintain familiarity with their traditional cooling methods.

This dynamic interplay of actions—where younger family members initiate and older ones react—highlights a recurring negotiation of meanings attached to air conditioning. For Judy, cooling practices are intertwined with notions of duty and modern standards of comfort. For her parents, however, they align more with values of frugality and a cautious approach to new technologies. The resulting adjustments often occur through indirect feedback, as seen in Shirley Lee's family. Shirley noted, *"If my parents turn off the AC, it's probably because they find it either wasteful or uncomfortable. There's no need to probe too much. If they switch it off and I'm feeling hot, I'll just go to my own room and turn on the AC there."* These examples illustrate how intergenerational interactions around air conditioning rarely involve explicit discussions. Instead, they rely on subtle cues and unspoken compromises, reflecting both a respect for familial roles and a cultural inclination toward maintaining harmony. This quiet negotiation does not merely resolve immediate practical conflicts; it reveals the deeper layers of how families navigate the coexistence of differing practices, balancing generational autonomy with shared comfort.

Certain parents stand out as being more proactive in expressing their preferences regarding air conditioning use, an assertiveness shaped by multiple overlapping factors. These include their sense of care for their children, habits formed over decades, and long-established family dynamics. As Shirley noted, *"I think, on one hand, it's their way of caring for me. They've always been involved, often worried that I might catch a cold if I use the AC excessively... My parents have always had their opinions, and they're not overly concerned about making me uncomfortable."* While health concerns and personal comfort were commonly mentioned, children like Shirley also recognized that their parents' assertiveness often stemmed from deeply rooted family roles and personalities.

Despite the gradual shift in economic dependency, many parents retain a subtle but enduring form of authority—a "corrective right"—that allows them to influence decisions, albeit less forcefully than in the past. This influence plays out in nuanced ways, such as consultative communication styles. Rather than engaging in overt negotiations, middle-aged children frequently inquire about their parents' preferences before making adjustments. As Judy explained, *"Before turning on the AC, I usually ask what temperature they'd like. If they specify a number like 28°C, I go with it. If they say 'whatever makes you happy' or 'normal is fine,' I set it to a moderate value like 25°C."*

For both generations, air conditioning use is often framed as a minor issue that does not warrant in-depth discussion. Yet these small, seemingly mundane interactions reveal deeper cultural undercurrents. Middle-aged children frequently defer to their parents' wishes, driven by a sense of duty grounded in traditional norms of filial piety. Shirley emphasized this cultural expectation: *"Growing up, we were always taught to respect and take care of our elders. It's deeply rooted in our culture... I've noticed that younger people might not feel as obligated, maybe because of changing values over generations. But for us, ensuring our parents' comfort isn't just an act of care."*

This deference, however, does not necessarily indicate a generational decline in cultural values but rather a transformation in how those values are enacted. Middle-aged children continue to prioritize their parents' comfort, often responding promptly to any explicit requests. At the same time, elderly parents frequently avoid making direct demands, driven by a desire to maintain harmony and avoid being perceived as burdensome. This delicate balance shapes the way air conditioning practices are negotiated. As Mary observed, *"We usually avoid using the AC in the living room. If we have to turn it on, we're careful not to set it too low, mainly out of consideration for our parents. Sometimes, they just go to their room when it's on... Older people aren't fond of AC, so we try to avoid using it unnecessarily. We tend to use AC more in our individual rooms."*

This dynamic illustrates that direct negotiations about air conditioning use between elderly parents and their children are rare. Instead, families often rely on a subtle, consultative communication style that leans heavily on non-verbal cues. While there may be brief conversations about preferences, detailed discussions are uncommon.

These practices reflect not just unspoken agreements but a deeply ingrained cultural dynamic where harmony and mutual respect take precedence over explicit dialogue.

In traditional Chinese households, elderly parents often refrain from explicitly stating their preferences, particularly for everyday matters like air conditioning. This silence is not indicative of passivity; rather, it stems from cultural norms that prioritize familial harmony and the minimization of conflict. By refraining from vocalizing their discomfort, parents express a form of deference that preserves the generational hierarchy while signalling their desire to maintain balance within the household. In response, children develop a heightened sensitivity to non-verbal signals, adapting their actions to align with these cues. For instance, Patricia Yang, 48, explained: *“If my mom starts covering herself with a blanket on the sofa, or if Dad, who usually roams shirtless, puts on a short-sleeve shirt, I know it’s time to adjust the temperature.”* She added, *“My parents quietly moved their seats away from [the AC]. That was my cue they were feeling cold. I’ve learned to observe their positioning.”*

This form of tacit communication extends to shared family activities, such as meals. Elderly parents often open windows or turn on fans pre-emptively, subtly indicating their preference for natural air circulation rather than directly requesting that the air conditioner be turned off. These non-verbal acts not only convey their personal comfort preferences but also demonstrate a degree of respect for the younger generation’s lifestyle choices. Younger family members typically interpret these signals and adjust their practices accordingly, such as using the AC less frequently during meals or opting for alternative ventilation methods. Judy Huang, 51, illustrated this dynamic: *“I know my parents so well—they think eating is just a quick thing. They can endure not using the AC while cooking for us. They’ll open the windows and set up the portable fan early, then call us out of our rooms to eat. We’ve mentioned it, but if they don’t feel hot, they stick to their way. So, as a family, we just go with what our elders prefer.”*

These forms of non-verbal communication underscore the intricate ways in which family members navigate air conditioning preferences in Chinese households. Rather than overt negotiations, these interactions reveal a shared understanding that prioritizes familial harmony and mutual accommodation. However, this process is not without its complexities. The reliance on subtle cues and unspoken agreements often

reflects broader cultural values, such as filial piety and respect for elder authority, while also highlighting the tacit negotiation of power within the family.

By examining these everyday scenarios, it becomes evident that thermal comfort practices in Chinese households are deeply embedded in shared meanings that prioritize familial harmony and mutual accommodation. The reliance on subtle cues and unspoken agreements reflects broader cultural values, such as filial piety and respect for elder authority, which shape the meanings attached to air conditioning use. For the elderly, air conditioning symbolizes both care from their children and an unnecessary extravagance that disrupts their established lifestyle. For their children, it embodies a modern standard of care and an obligation to ensure their parents' health.

These shared yet conflicting meanings guide the negotiation of cooling practices within the family. The parents' silence and reliance on non-verbal cues are not merely practical responses but deliberate actions steeped in cultural norms that prioritize respect and harmony. By refraining from explicitly voicing their preferences, the elderly maintain a sense of dignity while respecting their children's authority over household decisions. Simultaneously, the children interpret these unspoken signals as part of their filial duty, ensuring that their parents' comfort is met without direct confrontation.

Such dynamics illustrate how the meanings associated with air conditioning are not static but are constantly negotiated through intergenerational interactions. For instance, parents might view the act of tolerating air conditioning as a way to show deference to their children's decisions, thereby reinforcing a cultural norm of yielding to the younger generation's modern practices. On the other hand, children may perceive their actions of adjusting the temperature or observing their parents' non-verbal cues as an extension of their role as caregivers, aligning with traditional expectations of filial piety. Ultimately, these negotiations underscore the evolving interplay between traditional and modern meanings within family life. The emphasis on non-verbal communication and implicit understanding highlights how air conditioning becomes more than a practical tool—it serves as a medium through which cultural values and intergenerational relationships are expressed and renegotiated. This alignment of meanings enables families to maintain harmony even

amidst conflicting preferences, demonstrating the adaptive capacity of traditional practices in modern urban settings.

### 8.3.2 Elders' Voices: Hints, Harmony, and Household Dynamics

Intergenerational dynamics within families often reveal more nuanced negotiations around air conditioning use than what might initially appear. While younger family members are often attuned to the unspoken signals their elderly parents send, they may misinterpret the parents' compliance as passive agreement. However, a closer examination reveals that the elder generation's 'silence' regarding air conditioning settings is not an indication of indifference or lack of preference but instead reflects deeper concerns about maintaining harmony within the family. This silence is shaped by a combination of cultural norms, the relational dynamics of the household, and the material aspects of the practice itself.

Intergenerational dynamics within families often reveal more intricate negotiations around air conditioning use than what might initially appear. While younger family members often interpret their elderly parents' silence regarding air conditioning settings as passive agreement, this study reveals that such silence stems from a deeply rooted desire to maintain family harmony rather than a lack of preference. This inclination to avoid explicit disagreement aligns with the Confucian principle of “家丑不可外扬” (family disgrace should not be aired), a cultural norm that discourages open discussions about household conflicts with outsiders.

In my interviews, elderly individuals like Janet Tan and Arthur Qiu, both in their seventies and retired medical professionals, initially conveyed a narrative of acceptance and adaptation regarding their children's decisions on air conditioning use. Responses like "*We don't interfere with them,*" "*We can't control them,*" and "*We usually just go along with what they (the children) decide,*" gave the impression of complete detachment, with their primary concern being to ensure familial harmony. This initial portrayal likely reflects a cultural tendency to shield family dynamics from external scrutiny, presenting an idealized image of a conflict-free household to outsiders.



However, by intentionally steering the conversation toward seemingly mundane topics such as eating habits, daily routines, and financial prudence, I was able to create a more comfortable environment for candid discussions. These indirect entry points allowed the interviewees to gradually transition to discussing more sensitive issues, such as disagreements over air conditioning use. This shift underscores the importance of understanding how cultural values influence not only the dynamics of family interactions but also the ways in which these dynamics are presented to outsiders.

*“We can't really make demands; (the family) being happy each day is what matters... When they come home, the AC in the living room is inevitably turned on. Sometimes, the cold air drifts into our bedroom, waking us up from our nap. My husband is more outspoken. He sometimes goes and turns off the AC or adjusts it higher when it's just our son using it. He mumbles under his breath, 'Why do you need it so low? Can't you just open a window for some natural breeze?' But if our daughter-in-law is around, we usually don't say anything...”*

(Janet Tan, female, 73 years old)

Janet's account highlights the delicate balance between material realities—such as the shared thermal environment created by air conditioning—and the cultural emphasis on relational harmony. The air conditioner, far from being a neutral object, becomes a site of negotiation where generational values and power dynamics intersect. For Janet and her husband, the discomfort caused by cold air is less significant than the potential disruption of family harmony, particularly in the presence of their daughter-in-law. This dynamic reveals how the air conditioner, as a material element, acts as both a physical presence and a symbolic mediator of familial relationships.

My strategy of using everyday topics to build rapport before addressing more contentious issues proved effective in uncovering these nuanced dynamics. Discussions about seemingly innocuous subjects like meal preparation provided a non-threatening entry point, allowing interviewees to gradually open up about their true feelings regarding air conditioning use. This process not only facilitated deeper insights but also demonstrated how the elders' reluctance to explicitly address conflicts reflects broader cultural values of discretion and deference.

Margaret Chen, a 64-year-old retiree, illustrated how respect and mutual understanding within her family gradually shifted her role from a silent observer to an active participant in household decisions about air conditioning. Initially apprehensive about disrupting her son and daughter-in-law's relationship, Margaret hesitated to voice her preferences. Over time, however, the consistent kindness and attentiveness of her daughter-in-law encouraged her to feel more at ease expressing her needs.

*"Living suddenly with the young couple, I was concerned about causing them inconvenience and didn't want to be a source of trouble in their relationship... We usually leave the AC settings to them, just going along with whatever they decide. In the beginning, I'd ask my daughter-in-law softly if she was too warm, almost timidly, but she's always been kind to us. Now, she often asks us our preferred temperature when turning on the AC, making us feel more at ease over time."*

(Margaret Chen, female, 64 years old)

Margaret's experience illustrates the delicate balance elderly parents navigate while living in their children's homes. Initially, the sense of being a guest often compels them to tread lightly, especially when it comes to household decisions like air conditioning settings. However, over time, as they perceive respect and attentiveness from younger family members—particularly in-laws—they gradually feel more comfortable expressing their preferences. This transition underscores how materials, such as the air conditioner and the physical spaces of the home, interact with meanings tied to respect, deference, and familial harmony.

In Margaret's case, her family's relatively affluent status played a crucial role in fostering harmonious cohabitation. She noted that in more financially secure households like hers, separate rooms and personal spaces are not a luxury but an expectation. These arrangements provide each family member with greater autonomy, allowing them to manage their environments independently, including adjusting air conditioning settings. This spatial independence helps to minimize conflicts in shared spaces and contributes to a more congenial family dynamic. Here, the material element—private spaces—acts as a facilitator for smoother family interactions, allowing individual preferences to be accommodated without disrupting shared meanings of harmony and respect.

Margaret contrasted her situation with that of her friends who live in smaller, shared spaces:

*"Comparing to our situation, some friends have it harder... They live in smaller places with shared spaces... One friend, in particular, is always cautious about speaking up. He's in a cramped apartment with his son's family, just one AC for everyone. He's told me about how hard it is... He often finds the AC too cold, but hesitates to say anything... Doesn't want to cause trouble in their already tight living space. So, he endures, sometimes wears extra layers in summer... He tries to be outside more, avoiding conflict over the AC... It's a tough situation for them, especially for the elders."*

(Margaret Chen, female, 64 years old)

This account highlights how spatial and economic constraints exacerbate tensions in less affluent households. In these settings, shared living spaces often necessitate shared decisions about air conditioning use, creating additional friction. Expressing personal discomfort, such as dissatisfaction with excessively cold AC settings, becomes more challenging for elderly family members, as they fear disrupting the delicate equilibrium of the household. The material limitation—a single air conditioning unit in a cramped space—amplifies the need to prioritize household harmony, a meaning deeply rooted in Confucian ideals of familial respect and self-sacrifice. For instance, some elders hesitate to ask for adjustments, worrying that doing so might strain relationships, particularly with in-laws. This hesitance often results in quiet endurance—layering up in summer or avoiding shared spaces—rather than voicing their needs.

These observations reveal that a family's economic status and living arrangements significantly influence the negotiation and resolution of air conditioning practices. Wealthier families, with access to more spacious homes and individualized living areas, experience fewer conflicts because family members can independently regulate their thermal environments. In contrast, economically constrained households, where space and resources are limited, face more frequent challenges. In such contexts, the material conditions of tight living arrangements amplify generational tensions, while meanings of familial duty and respect often lead to unspoken discomfort and suppressed preferences, particularly among the older generation.

Through these interviews, I began to understand that while elderly parents often perceive their role and authority within the family as being respected, the actual exercise and expression of this power are shaped and constrained by a combination of factors, including familial relationships, communication styles, and economic conditions. These dynamics highlight how air conditioning, as a shared household object, mediates interactions and reflects deeper cultural meanings.

Older parents frequently rely on non-verbal hints and subtle gestures to communicate their preferences or discomfort regarding air conditioning use. This approach stems from a combination of necessity and a cultural inclination to prioritize family harmony over personal comfort. The Confucian ethic of maintaining peace within the family aligns with their avoidance of direct confrontation, even in situations where their preferences might differ significantly from their children's choices. This reluctance to voice explicit demands demonstrates a negotiation of meanings: for the elderly, silence and subtlety signify deference and respect, while for the younger generation, these same actions might be interpreted as agreement or satisfaction.

While younger family members often interpret these non-verbal cues as dignified expressions of needs, deeper analysis reveals that such subtlety is frequently rooted in a sense of compromise. For many elderly parents, gestures such as adjusting clothing, opening a window, or quietly moving away from an air-conditioned area signify a desire to minimize disruptions in the household. These actions embody a balance between self-care and the commitment to maintaining familial harmony, reflecting an intricate interplay of meanings: personal sacrifice as a form of care, and adaptation as a demonstration of respect for the household's modern dynamics.

During one discussion, Max Yang, a 76-year-old father, shared his perspective on using hints and indirect communication regarding air conditioning settings:

*“Researcher: Do you think your children truly understand your hints? Is this subtlety a forced adaptation or a preferred mode of expression for you?”*

*Max Yang: For us, it's about not being a burden, not causing any disruption... We might drop a hint here and there, adjust our clothing, open a window... But it's not just about comfort; it's about showing respect to our children's way of living. We adapt, even if it means not saying things directly. It's a balance... of our needs and the peace of the household.”*

Max's response highlights how generational roles within the family shape not only the actions taken but also the meanings attributed to them. His deliberate choice to rely on non-verbal communication reflects both a recognition of the children's authority over the household and a continued adherence to traditional norms of deference. Here, meaning is co-constructed: Max's subtle gestures reflect both an acknowledgment of his children's autonomy and a quiet assertion of his own preferences, showcasing how air conditioning becomes a symbolic site of negotiation.

The elders' quiet adjustments—whether layering clothing, tolerating discomfort, or repositioning themselves within shared spaces—reveal a calculated effort to manage their surroundings without disrupting household dynamics. While these actions might seem minor, they carry significant meanings: for the younger generation, such adjustments are often interpreted as acquiescence, but for the elders, they represent a nuanced negotiation of their place within the family. This interplay between actions and interpretations underscores how shared objects like air conditioners facilitate both practical and symbolic exchanges within households.

In this context, air conditioning serves as more than a technological convenience; it becomes a focal point for intergenerational negotiation, symbolizing both care and tension. For the younger generation, it represents modernity, health, and concern for well-being, while for the older generation, it can signify physical discomfort and a disruption of familiar practices. These contrasting meanings often remain unspoken, relying on implicit understanding to maintain equilibrium. As the older generation navigates these realities, their approach to shared living spaces reflects a blend of adaptation and unspoken negotiation. These dynamics illustrate how traditional values of respect and familial harmony persist in shaping daily interactions, even in the face of evolving lifestyles and material conditions. Maintaining this harmony often requires careful adjustments and compromises, where silence and subtlety play a central role. In the next section, I will examine the moments when this equilibrium breaks down, shedding light on the more contentious aspects of intergenerational differences, particularly as they relate to shifting definitions of comfort and environmental preferences.

### 8.3.3 Negotiating Practices

From the findings above, while coordination plays a role in managing air conditioning practices in multigenerational households—such as middle-aged children adjusting temperatures based on non-verbal cues or teaching elders to use the air conditioner—its significance remains practical and surface-level. Coordination focuses on the “how” of shared practices but offers limited insight into the deeper cultural underpinnings and relational dynamics shaping these interactions. More profound insights emerge through intersection, hybridity, and normative accountability, which together illustrate how air conditioning becomes a medium for negotiating intergenerational values, power, and cultural adaptation.

Intersection is the most overt and impactful type of interaction, as it highlights the generational conflicts embedded in air conditioning practices. For middle-aged children, air conditioning aligns with modern notions of comfort, efficiency, and health, reflecting their habituation to contemporary work environments and urban lifestyles. In contrast, elderly parents often view air conditioning through the lens of traditional values, associating it with unnecessary extravagance or a disruption of established routines. This conflict is not merely about differing preferences but reveals deeper generational divergences in how technologies are integrated into daily life. For example, Janet Tan’s husband turning off the air conditioner or increasing its temperature after their son leaves the room exemplifies a subtle assertion of generational agency. His quiet resistance—coupled with muttered remarks about the merits of natural ventilation—signals not only discomfort but also a desire to maintain control over the home’s shared environment. These moments of intersection are fraught with implicit negotiations, as younger family members often interpret such actions as acquiescence rather than subtle expressions of dissent. This underscores how shared practices like air conditioning become arenas where power and autonomy are contested and redefined.

Hybridity, on the other hand, reveals the potential for cultural values and modern practices to merge, producing new forms of intergenerational interaction. Middle-aged children like Judy Huang embody this hybridity by combining traditional filial piety with modern caregiving practices. By consulting her parents about their preferred temperature before adjusting the air conditioner, Judy balances respect for elder

authority with her own role as a caregiver, reflecting the evolving dynamics of filial responsibility in a technologically mediated household. Similarly, Margaret Chen's experience illustrates how hybridity emerges over time. Initially hesitant to express her preferences for fear of disrupting her son and daughter-in-law's household dynamics, Margaret gradually found a voice within the family, encouraged by their consistent attentiveness to her comfort. This transition from passive adaptation to active participation reflects a hybrid negotiation of traditional deference and modern expectations for mutual respect. Hybridity, therefore, does not merely represent compromise but demonstrates the capacity of families to adapt cultural norms to changing material and technological realities while preserving relational harmony.

Normative accountability anchors these interactions in deeply rooted cultural expectations, particularly those influenced by Confucian ideals of filial piety and family harmony. For elderly parents, silence and subtlety in expressing preferences about air conditioning settings are not signs of passivity but deliberate strategies to uphold family equilibrium. Non-verbal cues—such as opening windows, covering themselves with blankets, or moving away from air-conditioned areas—serve as quiet assertions of personal agency while avoiding direct confrontation. These actions reflect an internalized cultural ethos where maintaining harmony takes precedence over individual comfort. However, this silence carries layered meanings. On one hand, it signals respect for the younger generation's authority over household decisions, acknowledging the shifting power dynamics in modern family structures. On the other hand, it subtly reinforces the elder generation's influence, as middle-aged children are often quick to interpret and respond to these cues as part of their filial duties. Patricia Yang's observations of her parents' adjustments, such as layering clothing or repositioning themselves, highlight how normative accountability operates through implicit agreements, ensuring that respect and care are mutually maintained without disrupting the household balance.

These interaction types—intersection, hybridity, and normative accountability—are not isolated but intricately intertwined, creating a dynamic interplay that defines intergenerational practices around air conditioning. For instance, the act of adjusting the air conditioner may begin as a moment of intersection, where conflicting preferences arise, but it often transitions into hybridity, as families develop new routines that incorporate both traditional values and modern conveniences.

Simultaneously, these actions remain embedded in a framework of normative accountability, where cultural expectations of care and harmony guide behaviour. This layering of interactions reveals how air conditioning, far from being a neutral technology, serves as a powerful mediator of cultural negotiation and relational adaptation.

Through these nuanced interactions, families navigate the tension between maintaining continuity with traditional values and adapting to the demands of modern living. Air conditioning becomes a site where generational roles, cultural meanings, and material practices converge, illustrating how deeply embedded cultural norms persist even as they evolve. The reliance on subtle, often unspoken negotiations underscores the resilience of Confucian values like filial piety and harmony, while also highlighting their capacity to adapt to new social and material conditions. Ultimately, these interactions reflect a delicate balancing act—families continuously redefine what it means to live together, ensuring that both individual needs and collective well-being are accommodated within the shifting dynamics of modern family life.

## 8.4 Intergenerational Conflicts and Tensions

This section delves into the evolving complexities and strains in relationships between elderly parents and their middle-aged children, particularly as familial roles shift with the aging process. The metaphor of the "old child" poignantly illustrates the reversal of care dynamics: aging parents, who were once independent and authoritative, now require increased attention and emotional support. This role reversal often manifests in behaviours akin to child-like dependence and emotional volatility, challenging both generations to navigate new dynamics. For middle-aged children, this shift brings a heavy emotional and practical burden, as they juggle caregiving responsibilities with the need to respect their parents' autonomy. At the core of these tensions lie everyday interactions, such as managing the use of an air conditioner, which can escalate into symbolic flashpoints for deeper issues of control, independence, and family dynamics. The elderly often interpret these interactions through a lens of diminishing agency and a growing sense of neglect, while their children struggle to balance respect for their parents' desires with their own caregiving judgments. From the perspective of the



elderly, their growing reliance on others introduces a profound tension: while they recognize the necessity of support, they also feel a loss of self-determination. This shift often leads to feelings of isolation and frustration, even in physically close multigenerational living arrangements. For many, this emotional disconnection stems not from overt neglect but from the inability of their children to fully grasp the changing significance of autonomy and respect in old age. This section focuses on the challenges that emerge in caregiving within multigenerational households, emphasizing the need for families to reconcile the tensions between providing necessary care and respecting the elderly's desire for autonomy. These conflicts are not just about managing specific tasks, such as air conditioning settings, but are deeply rooted in shifting meanings of familial roles and the competences required to adapt to these changes. As the elderly struggle to retain a sense of dignity and control, and as middle-aged children endeavour to care for their parents effectively, these tensions underscore the profound renegotiation of intergenerational relationships.

#### 8.4.1 “Old Children”, AC Conflicts, and Contradictory emotions

*"I'm at a loss about how to handle her. She's completely unresponsive to advice. We installed an air conditioner in response to her relentless complaints about the unbearable heat, but it's like she's entrenched in her ways. There was this one evening when I turned it on for her before leaving, filled with concern that she might get cold later on. I contemplated fine-tuning the temperature but was held back by the fear of her reproach. And indeed, the next morning she vented her frustration, criticizing us for our lack of consideration, bitterly remarking how she had no idea how to adjust it and almost spent the night freezing."*

(Min Dai, male, 60 years old)

In the families I've spoken to, a sense of harmony and mutual adjustment is often a prevailing theme, but there are exceptions. A distinct pattern emerges in households with very elderly parents and middle-aged children, where recurring conflicts over day-to-day issues overshadow any semblance of balance. The experience of Min Dai, a 60-year-old son caring for his 87-year-old mother, encapsulates the complexities of these dynamics. Returning to China after years of working overseas, Min assumed the role of primary caregiver for his aging mother following his father's passing.

Min's upbringing in Shanghai's longtang (弄堂)—the intricate alleyways that once defined urban life in the city—shaped his resilience and adaptability. These longtang were more than just residential spaces; they were bustling microcosms of social and cultural interactions. In the 1960s and 70s, longtang life represented a tightly knit community where families shared kitchens, bathrooms, and outdoor spaces. For children like Min, this environment necessitated an early mastery of social negotiation and practical skills. Min often found himself juggling responsibilities, such as protecting his younger siblings and mediating disputes among neighbours, which honed his toughness and social acumen.

Despite these formative experiences, Min's relationship with his parents carried lingering emotional complexities. While his parents held stable positions in state-owned enterprises, their demanding work schedules left little time for nurturing familial bonds. Min perceived a clear favouritism towards his brother, who stayed closer to home, leaving Min to feel overlooked despite his eventual successes abroad. This sense of marginalization, combined with his admiration for his mother's once unwavering independence, added layers of tension when their roles reversed in her later years.

Min recalled an incident over a decade ago when he brought back an expensive electric fan from Norway, a symbol of his thoughtfulness and success. However, after his father's passing, Min discovered the fan unopened and hidden behind a wardrobe. To him, this act wasn't merely a reflection of thriftiness but an ingrained resistance to indulgence and a commitment to enduring discomfort—a trait his mother often espoused as virtuous.

This perception of strength and self-reliance defined his mother for much of her life. Yet, with age, Min began to observe a profound transformation. Once resolute and composed, his mother had become increasingly irritable and unpredictable.

*"I never envisioned that my mother, who always epitomized strength and self-reliance, would become so easily irritable,"* Min reflected, his voice tinged with sadness and bewilderment. *"She seems perpetually on edge, quick to take offense at the slightest provocation."*

This transformation, however, cannot be solely attributed to her aging body. It reflects the changing balance of competence and meaning in her daily practices. Her diminished physical abilities—her declining competence—altered how she perceived material objects like the air conditioner. Once tools of autonomy, these objects now became reminders of her dependence, triggering frustrations that extended beyond their immediate use.

The air conditioner, for instance, became a focal point of intergenerational conflict. Min's mother criticized him for his "lack of consideration," citing her inability to adjust the settings and the discomfort she endured as a result. This incident exemplifies the broader struggle between her desire for autonomy and the realities of her growing reliance on others. For Min, this clash presented an emotional paradox. The resilience he admired in his mother had now morphed into stubbornness, complicating his efforts to provide care. While he viewed his actions—like setting the air conditioner's temperature—as expressions of filial responsibility (孝), his mother saw them as encroachments on her autonomy. This divergence highlights how the erosion of practical competence reshapes the meaning attached to routine interactions, creating fertile ground for misunderstandings and conflict. The shifts in competence also magnified existing tensions in meaning. For Min's mother, the air conditioner symbolized more than temperature control; it embodied the control she once exercised over her environment. Her inability to operate it independently transformed the air conditioner into a source of frustration and loss. Meanwhile, for Min, it remained a tool for care, underscoring his role as a dutiful son. This misalignment of meanings, coupled with her diminished competence, intensified their conflicts.

As Min recounted these experiences, the nuances of their relationship became clearer. The air conditioner was not merely a trigger for arguments but a material object that revealed deeper emotional struggles. For his mother, it symbolized the erosion of her independence. For Min, it represented his efforts to bridge the gap between care and control. The resulting tensions illuminate the broader dynamics at play in intergenerational households, where changes in competence reshape meanings, creating conflicts that reflect the shifting roles and expectations of aging parents and their adult children.

A similar case is that of Youjun Zhang's family. Youjun, the third son in his family and now 52 years old, observes a marked change in his 93-year-old mother, who was once fiercely independent but now confronts the reality of her waning autonomy. *"It's not merely the physical aspect of aging,"* Youjun reflects, *"but the sense of losing control over her life and surroundings. The daily conflict around AC is emblematic of this loss."* For Youjun, and many in his social circle, these conflicts are part of a broader struggle between fulfilling filial duties and navigating the delicate realities of caring for aging parents who still cling to their independence.

The behavioural changes in elderly parents, like Youjun's mother, are not isolated. These shifts force their children to reevaluate family dynamics, as the parents' diminishing self-care abilities (competence) alter their engagement with everyday practices. While most middle-aged children grew up resilient and self-reliant, they now face the dual challenge of providing care while respecting their elders' need for autonomy. Seemingly minor conflicts, such as air conditioner settings, highlight these struggles, exposing how shifting roles create tension between the meaning of care and the practical realities of aging.

*"She was always so determined, so resolute... But now, there's this underlying fragility, a fear of becoming insignificant or neglected. This often manifests as anger or defiance, particularly over seemingly inconsequential matters like an air conditioner's settings,"* notes Min Dai, whose reflections mirror those of Youjun.

*"It's a delicate balance... we now just treat her as a child, an 'old child.' On one hand, you want to respect their wishes and independence. On the other, there's a constant concern for their well-being, for making decisions that ensure their comfort and health,"* Youjun explains.

In these accounts, the phrase "old child" recurs, capturing the contradictory emotions children feel as their aging parents display child-like volatility. This shift in competence reshapes the meaning of caregiving, as children must balance their parents' increasing dependence with their own emotional limits. Explaining or reasoning often feels futile, as parents' frustrations over their diminished autonomy find outlets in conflicts over daily practices like air conditioning use.

*"My mother now wakes up early, around five or six in the morning, leaning on her walking cane as she wanders the streets. At her age, it's hard for her to find*

*companionship, especially in a big city like Shenzhen, unlike in a village where she could chat with neighbours. She likes to walk repeatedly down the same streets, unable to find someone to confide in. Given her advanced age, she isn't well-received by others. When she's home, we also dare not speak much with her. Issues like using the air conditioner—if she says something, we don't really have much choice,”* Youjun recounts.

In this context, air conditioning disputes symbolize deeper struggles for control and connection. For elderly parents, the ability to influence even minor decisions about household temperature becomes a proxy for asserting agency in a world where their physical and social competence has significantly diminished. For their children, these conflicts underscore the emotional toll of caregiving, especially in urban environments like Shenzhen, where weaker community ties amplify the isolation of multigenerational living.

Over time, initially stable relationships evolve under the strain of prolonged care. As parents' volatility increases, children must often adopt a passive acceptance of criticism to maintain peace. Ou Chen, 60, succinctly captures this reality: *“No child can be filial for long in the face of a prolonged illness.”* This Chinese saying resonates with many interviewees, reflecting the growing emotional burden they bear.

*"We don't want to argue with her about these issues, but her unreasonable behaviour is difficult to bear. We can't help but have our own emotions too. In China, there's a saying, 'No child can be filial for long in the face of a prolonged illness.' This saying rings true in our situation,"* Ou explains.

The conflict over air conditioner settings often becomes a focal point for these deeper tensions. For elderly parents, diminished competence leads to a heightened sense of dependency, which clashes with their desire for autonomy. Meanwhile, children, though well-intentioned, struggle to reconcile their caregiving responsibilities with their need for emotional and practical boundaries.

The air conditioner itself transforms into a material symbol of these conflicts. For parents, it embodies the loss of control over their environment—a daily reminder of their reliance on others. For children, it represents the complexities of caregiving, where acts of care are often perceived as intrusions. This divergence in meaning amplifies the conflict, revealing how shifts in competence fundamentally reshape

intergenerational relationships. Thus, while the air conditioner may be the immediate cause of disputes, the true tension lies in the broader struggle to balance independence and caregiving. These conflicts reflect the intricate ways in which meaning, competence, and familial expectations intersect, redefining roles and relationships in the process.

#### 8.4.2 Feelings of Neglect, Helplessness, and Tensions

*"I just feel so belittled at home, and they don't even give me money to use. They are always telling me not to do this or that. I can't help but argue with them; they give me no freedom. Just this morning, they wouldn't let me go out for a walk, claiming it was too hot and they were afraid I'd get heatstroke. I don't see them showing concern for my feelings otherwise..."*

(Cuiying Ju, female, 93 years old)

Interviews with elderly family members revealed that everyday communication is fraught with subtle tensions. These interactions often go beyond words, requiring close attention to gestures and tone. For Cuiying Ju, who was once known for her resourcefulness and stamina—managing a shop while working long hours in the fields—her identity was deeply tied to her ability to contribute and remain self-sufficient. However, the erosion of her physical strength and the onset of chronic illnesses have gradually stripped away her capacity to manage even small aspects of her daily life, such as controlling the air conditioning.

This loss of self-reliance is not merely practical but deeply emotional, transforming how Cuiying perceives her role in the family. From her perspective, being told to “stay in bed” or not to turn on the air conditioner for a guest is more than a momentary inconvenience—it is a stark reminder of her diminishing agency. During my visit, when Cuiying attempted to rise and adjust the air conditioner, her daughter-in-law intervened firmly, telling her to remain in bed. Cuiying’s sharp retort, *“I just wanted to turn on the air conditioner for our guest, what’s the harm in that?”* encapsulated her frustration with being excluded from decisions that once fell naturally within her domain.

For the younger generation, such interventions are often seen as acts of care and protection, particularly given the health risks associated with advanced age. Yet these well-meaning actions can unintentionally erode the sense of control that elderly individuals like Cuiying attach to even the simplest tasks. This divergence in perspective is a recurring theme across families. The children, focused on ensuring physical comfort and safety, fail to recognize the symbolic weight these actions carry for their parents.

One poignant illustration of this tension came from another respondent, Meilan Gao, who shared:

*“He doesn’t really care about me. Whatever I say, he just ignores..... Last week, he had guests over for Mahjong, and they set the AC really low for their comfort. I sat there, shivering, asking them to turn it up a bit. But his response was, ‘It’s not that cold; you can move to the guest room, which is far from the AC.’ I was wrapped in a sweater and a blanket, still freezing, while they were happily playing Mahjong, completely oblivious to my discomfort.”*

(Meilan Gao, female, 87 years old)

For elderly parents like Cuiying and Meilan, these moments reflect more than physical discomfort; they signify a growing sense of invisibility within their own households. Their ability to influence or even participate in everyday decisions diminishes, leading to feelings of exclusion and neglect. This shift often sparks resentment, as the elderly struggle to reconcile their current dependent state with the independence they once enjoyed.

The divergence in priorities between the generations is further illustrated by Cuiying’s reflections on urban life:

*“I’ve told them more than once that I want to go back to the countryside. In the city, especially during summer, I just can’t get accustomed to it. It’s too hot, and everything’s just closed rooms with air conditioning. It feels suffocating. And the AC, set so cold, always makes me feel unwell. I miss the natural breeze in the countryside, the shade of the trees, the gentle wind. But they keep saying life is better in the city, with better medical facilities. They think I’ll be safer and more comfortable here. I*

*know they mean well, but I long for the freedom and natural environment of the countryside. Every time I bring this up, it's like they don't even hear me..."*

(Cuiying Ju, female, 93 years old)

This narrative highlights the clash between two distinct interpretations of comfort and well-being. For Cuiying's children, air-conditioned urban living represents progress and security, aligning with their view of a "better life." For Cuiying, however, this lifestyle erases the meaningful connections she associates with the countryside—natural breezes, open spaces, and a sense of belonging rooted in familiarity. Her desire to return to the countryside reflects not just nostalgia but a deep-seated yearning to reclaim autonomy and reconnect with a space where she feels her identity remains intact.

These conflicts reveal how the physical and social environments shape differing generational values. While the children prioritize efficiency and safety, the elderly attach greater importance to preserving their sense of self and control. Actions like managing the air conditioner, though seemingly mundane, become arenas where these broader tensions play out. For the children, ensuring that their parents avoid discomfort or risk is an expression of care; for the elderly, these same actions symbolize a loss of their role as decision-makers within the household. This misalignment creates a cycle of misunderstanding. The younger generation perceives their parents' dissatisfaction as irrational or overly emotional, while the elderly view their children's interventions as dismissive of their needs and desires.

Additionally, as they age, the elderly's physical conditions and health needs change, possibly making them more sensitive to the environment (such as temperature, noise). They have more specific and explicit needs for their bodies and comfort, but these needs may not receive enough attention and satisfaction in the family. During my visits to these households, I observed several instances where the comfort needs of the elderly were overlooked, particularly in the summer months.

In one visit to Lau Qian's home, an 82-year-old man living with his son's family, I noticed his discomfort during a hot summer day. The air conditioning in the house was set to a very low temperature. Lau, sitting in his armchair, kept adjusting his blanket and rubbing his hands together, suggesting he felt chilled. He asked his grandson, who was nearby, if the temperature could be turned up a little as he was



feeling cold. The grandson, barely glancing up from his phone, replied that it was better to keep it cool because of the heat outside. Lau, after a moment of silence and a brief sigh, tucked the blanket around him more tightly, indicating his resigned acceptance of the situation.

In another family, Jie Xu, aged 76, expressed a desire for natural ventilation instead of constant air conditioning in the living room. She reminisced about how she used to enjoy the summer breeze during her younger days, a sentiment she shared as she glanced toward the closed windows. However, when she suggested opening the windows to let in some fresh air, her daughter-in-law quickly dismissed the idea, citing concerns about pollen and dust for the grandson. Jie sat quietly for a moment, her expression betraying a sense of longing as she looked at the windows. Later, she quietly returned to her bedroom, where she opened the window to let in the fresh air.

The third visit brought me to the Rui Cui family, where they had recently installed a new, high-tech air conditioning system. Rui, 79 years old, who had always been keen on handling household appliances, found himself unable to operate the new central AC. The remote, cluttered with buttons and digital displays, left him struggling to figure out how to adjust the settings. I observed him attempting to use the remote, but eventually, he set it down with a sigh, seemingly expressing frustration and a sense of loss of independence. His family, meanwhile, appeared unaware of his struggle, praising the efficiency of the new system.

While my presence as a guest limited my ability to directly observe conflicts and tensions as they unfolded, these visits revealed deeper dynamics rooted in everyday practices. Although family members often had good intentions, the younger generations appeared to lack a nuanced understanding of the elderly's need for autonomy and comfort or the significance these held in shaping their well-being. Across many households, it became evident that changes in the elderly's competence—such as diminished physical and cognitive abilities—were not adequately acknowledged or integrated into household routines. This neglect disrupted the balance of practices, leaving the elderly unable to assert their preferences or adapt their surroundings to their needs. Consequently, their lack of control over their living conditions often translated into feelings of helplessness and emotional disconnection, further straining intergenerational relationships.

When discussing their confrontations with their children, particularly about issues like air conditioning, these elderly parents did not view themselves as being overly demanding. Most felt justified in expecting care and support from their children, deeply rooted in the cultural value of filial piety, which emphasizes the moral obligation of children to respect and care for their aging parents. As Cuiying poignantly remarked during our interview, *"I've cooked for this family for decades, and now that I'm old and asking them to take care of me, it's too much? Now that I'm old and no longer useful, they just ignore me?"*

Cuiying's voice quivered with emotion, conveying a profound sense of injustice. Her words reflected a conflict of meaning: for her, filial piety signifies more than physical care—it embodies recognition, respect, and reciprocity for her lifelong contributions to the family. Yet, in her view, these expectations remain unmet. Despite her decades of providing for the household, she now feels that her needs are minimized, particularly as her declining health and diabetes complications require more personalized attention. This disconnect underscores the tension between traditional meanings of caregiving embedded in filial piety and the more pragmatic approaches adopted by her children.

Her children, meanwhile, shared a contrasting perspective. They emphasized their efforts to provide for her well-being, including seeking medical advice and adhering to recommendations, but noted the difficulty of balancing her care with their work and other responsibilities. For them, caregiving is often interpreted as ensuring basic comfort and safety rather than fully embodying the symbolic and emotional dimensions that their mother associates with filial piety. This meaning-based conflict highlights the evolving interpretation of caregiving in modern families.

These interactions reveal how generational shifts in the understanding of filial piety contribute to broader tensions in intergenerational relationships. For the elderly, the symbolic meaning of caregiving encompasses not just meeting physical needs but also maintaining their dignity, autonomy, and status within the family. Bridging this gap requires recognizing the importance of these meanings while finding practical ways to address them. Everyday interactions, such as negotiating air conditioning preferences, serve as microcosms of these deeper tensions, underscoring the need for families to navigate both practical caregiving and the emotional weight of filial piety.

### 8.4.3 Negotiating Practices

From the findings above, the intergenerational conflicts surrounding caregiving, particularly involving air conditioning use, provide a rich illustration of intersection and normative accountability. These dynamics reveal the ways generational values and expectations collide, not merely in the practical management of household tasks but in the deeper symbolic negotiation of autonomy, care, and respect. The generational tension around air conditioning use is fundamentally rooted in the conflicting meanings each generation assigns to the practice. For elderly parents, air conditioning is not just a functional device but a symbol of autonomy and control. Min Dai's mother's inability to adjust the air conditioner independently reflects a deeper sense of frustration tied to her diminishing agency. Her critique of her son for setting the temperature "incorrectly" is not merely a practical complaint but a reaction to the loss of authority over her immediate environment. For her, this small act symbolizes a broader erosion of control in a life increasingly shaped by others' decisions.

For middle-aged children like Min, the air conditioner represents care and responsibility—a tool for ensuring the comfort and health of their aging parents. Min's decision to pre-set the air conditioner temperature before leaving the room was a well-meaning act of caregiving. However, his mother's reaction reframes his intention as a perceived disregard for her needs. This misalignment in meanings exposes the crux of generational intersection: what one generation views as care, the other interprets as an encroachment on autonomy. Such moments are emblematic of a broader shift in family dynamics, where adult children must assume caregiving roles while navigating the residual authority and independence of their parents. These intersections, far from being isolated incidents, repeatedly surface in the mundane decisions of daily life, turning air conditioning use into a microcosm of generational negotiation. The tension lies not in the act itself but in the meanings each generation projects onto it, with these conflicting interpretations creating fertile ground for misunderstanding and emotional strain.

Underlying these conflicts is the powerful influence of normative accountability, particularly the Confucian ideal of filial piety, which shapes both generations'

expectations of caregiving. For the elderly, filial piety is not just about receiving care; it embodies recognition and respect for their lifelong contributions. Cuiying Ju's remark—*"I've cooked for this family for decades, and now that I'm old and asking them to take care of me, it's too much?"*—captures the dissonance she feels. Her sense of neglect stems from the gap between her expectations of reciprocity and her children's more utilitarian approach to caregiving. This gap is further widened by the cultural weight attached to autonomy. Elderly parents, particularly those who were once self-reliant, struggle to reconcile their growing dependence with their desire for dignity. For Cuiying, being told to stay in bed or being prevented from turning on the air conditioner for a guest is more than a matter of practicality—it is a stark reminder of her diminishing role in the family. These small acts, though seemingly benign, carry immense symbolic weight, as they challenge her sense of self-worth and identity.

For middle-aged children, normative accountability also exerts significant pressure. Their caregiving actions are shaped by a dual expectation: to ensure their parents' well-being while respecting their autonomy. However, in practice, these expectations often conflict. Efforts to protect their parents—such as keeping the air conditioning at a medically advisable temperature—can be perceived as dismissive of their parents' preferences. This tension illustrates how normative accountability is not a static cultural mandate but an evolving standard, where modern caregiving practices must navigate the complexities of traditional expectations.

The findings reveal that these two interaction types—intersection and normative accountability—are deeply intertwined. The generational collisions over air conditioning settings are not just practical disagreements but symbolic struggles over control, respect, and the redefinition of familial roles. The elderly's diminished competence in managing technological devices like air conditioners amplifies the emotional stakes of these interactions. What might appear as a minor conflict over temperature settings becomes, for the elderly, a site of existential negotiation—a fight to maintain relevance and agency within their family. For children, these same interactions embody their struggle to fulfil filial responsibilities under the constraints of modern life. Min Dai's reflection on his mother's growing volatility—her irritability and quickness to criticize—reveals the emotional toll of caregiving. While Min interprets his actions as a fulfilment of his duty, his mother perceives them as

insufficient or even dismissive. This divergence illustrates how normative accountability, far from fostering harmony, can exacerbate tensions when cultural expectations collide with practical realities.

## 8.5 Chapter Summary

This chapter examines intergenerational dynamics within Chinese households, focusing on the use of air conditioning (AC) as a lens to understand caregiving practices between elderly parents and their middle-aged children. By analysing everyday interactions around AC, the chapter uncovers how traditional cultural values, particularly filial piety, intersect with modern technologies, revealing the complexities of balancing caregiving, autonomy, and family harmony. A significant finding is that air conditioning, beyond being a household appliance, becomes a material mediator of cultural values and familial roles. For middle-aged children, providing and advocating for AC represents care and adherence to modern caregiving norms, rooted in cultural expectations of filial piety. Conversely, elderly parents often perceive AC with scepticism, associating its use with discomfort, unfamiliarity, and a loss of control over their daily lives. These differing perspectives often lead to subtle negotiations or overt conflicts, as families attempt to reconcile generational preferences and practices. Using interaction perspectives—coordination, intersection, hybridity, and normative accountability—the chapter explores how these dynamics unfold. Coordination highlights practical adjustments, such as teaching elderly parents to use AC or interpreting non-verbal cues like adjusting temperature settings. Intersection underscores generational tensions, where children's health-oriented use of AC clashes with parents' attachment to natural cooling methods and self-reliance. Hybridity captures how families adapt traditional caregiving norms to integrate modern practices, blending respect for elder authority with new caregiving roles. Finally, normative accountability emphasizes how cultural ideals of filial piety frame these interactions, imposing dual pressures on children to care for their parents while respecting their autonomy. The chapter's findings contribute to understanding intergenerational caregiving as a process of continuous negotiation. It demonstrates that conflicts over seemingly mundane practices, such as AC settings, reflect deeper struggles over independence, emotional well-being, and shifting family roles. By

applying interaction perspectives, this research provides a nuanced methodological approach to analysing intergenerational dynamics, showing how material practices mediate cultural transitions. Ultimately, this chapter underscores the evolving nature of caregiving in modern Chinese households. It highlights how traditional values remain embedded in daily life while adapting to modern realities, offering a robust framework for understanding how families navigate the intersection of tradition, modernity, and materiality. These insights lay the groundwork for the concluding arguments of the dissertation, emphasizing the dynamic and relational aspects of caregiving in contemporary Chinese society.

# Chapter 9: Discussion

## 9.1 Introduction

This chapter synthesizes the findings from the empirical chapters to respond to the research questions outlined in Chapter 1. These questions explore generational differences in cooling practices, the processes of intergenerational negotiations, the factors shaping these negotiations, their reflections on broader family dynamics, and the implications for sustainable household energy consumption. By summarizing and reflecting on the empirical findings, this chapter underscores the role of cooling practices in navigating generational and cultural dynamics within Chinese families. As Welch et al. (2020) emphasized, cultural norms are not static but are enacted and negotiated in everyday practices. In the previous empirical chapters, this study illustrates how Confucian values, are embedded within daily family interactions, shaping intergenerational negotiations and influencing the dynamics of energy use. This chapter builds on these findings by examining how these values, as enacted in practice, intersect with material, social, and technological elements, ultimately shaping cooling practices in the context of Shenzhen's rapid urbanization and modernization. This chapter is structured as follows: (1) The section on Generational Differences in Cooling Practices addresses Research Question 1 by summarizing how material preferences, competences, and meanings vary across generations, highlighting the evolving nature of comfort and resource use. (2) The section on Intergenerational Negotiations Around AC Use responds to Research Questions 2 and 3 by exploring how negotiations occur within families, examining the cultural factors shaping these interactions.

## 9.2 Generational Differences in Cooling Practices

### 9.2.1 Materiality in Cooling Practices

This section addresses Research Question 1 by exploring how material conditions have shaped cooling practices across generations, highlighting the normalization of air conditioning and the historical underpinnings of material differences. The cooling practices of older generations were deeply shaped by the historical realities of mid-

20th century China, a period characterized by resource scarcity and collective living. During the planned economy era, goods were rationed, and even basic items like electric fans were rare luxuries. Participants such as Janet Tan (73 years old) recalled a childhood where cooling relied on palm-leaf fans, bamboo mats, and cooling chairs, reflecting a time when material simplicity was not just a choice but a necessity. These tools, crafted from readily available materials, were emblematic of a resource-constrained era when conservation and collective sharing were integral to daily life. This period also coincided with the collectivization policies of the 1950s and 1960s, which prioritized collective survival over individual comfort. Cooling practices during this time often centred around communal activities, such as gathering under banyan trees for shade or using shared fans in public spaces. These practices not only addressed functional needs but also reinforced social bonds. Janet's memories of sleeping under the open sky with a cooling chair encapsulate this collective ethos, where cooling was as much a social experience as a physical necessity.

In stark contrast, the younger generation grew up in a China transformed by the economic reforms of the late 1970s and 1980s. These reforms, initiated under Deng Xiaoping, ushered in an era of rapid economic growth, urbanization, and consumerism. For middle-aged participants, this period marked the transition from scarcity to abundance. Many participants described the significance of their family's first air conditioner, purchased in the early 2000s, as a symbol of their upward mobility. This generational shift in material conditions reflects the broader socio-economic changes that redefined comfort and consumption patterns in urban China. For the youngest generation, born into a fully modernized Shenzhen, air conditioning is not just an appliance but an assumed part of everyday life. Participants like Jerry Liu (23 years old) described environments where air conditioning was ever-present, from homes to workplaces and shopping malls. This material normalization is tied to Shenzhen's rapid urban development, where high-rise apartments, enclosed shopping centres, and sealed office buildings necessitated mechanical cooling. Unlike older generations, for whom cooling materials reflected a harmony with natural rhythms, the younger generation has grown up in spaces designed for artificial climate control, embedding air conditioning into their routines.

The normalization of air conditioning reflects both the material transformation of Chinese households and broader cultural aspirations for modernity. In the post-reform



era, air conditioning shifted from a luxury reserved for the elite to an affordable commodity for middle-class families. This transition was driven by several key factors. Firstly, as China's GDP soared during the 1990s and 2000s, household incomes increased, making appliances like air conditioners accessible to a wider population. Participants like Jerry Liu highlighted how owning an air conditioner became a marker of socio-economic progress, aligning with the growing consumer culture in urban China. Besides, Shenzhen's urban landscape, characterized by high-rise apartments with limited natural ventilation, created a material dependency on air conditioning. As noted in 7.3.1, Jack Li apartment's sealed windows and lack of cross-ventilation left no alternative but to rely on mechanical cooling. This architectural shift, common in rapidly urbanizing cities, reflects how material design locks residents into energy-intensive practices. Finally, the proliferation of affordable, energy-efficient air conditioners further facilitated their adoption. By the 2010s, government policies promoting energy-efficient appliances also contributed to the widespread use of air conditioning, making it a standard feature in urban households. This normalization has fundamentally altered perceptions of comfort. For older participants, air conditioning remains a tool to be used sparingly, reflecting their ingrained habits of frugality. However, for younger participants like Jerry Liu, air conditioning is an indispensable part of modern living, tied to productivity and well-being in Shenzhen's subtropical climate. This generational divergence underscores how material practices are shaped not only by availability but also by historical and cultural context.

The rise of air conditioning has led to the gradual disappearance of traditional cooling materials and methods. For older generations, items like palm-leaf fans, bamboo cooling chairs, and natural ventilation were integral to their cooling practices. These materials embodied a resourcefulness born out of necessity, as well as a cultural harmony with nature. Participants expressed nostalgia for these simpler methods, which they viewed as sufficient for achieving comfort while fostering social connections. However, these materials have been largely replaced by energy-intensive technologies. The disappearance of traditional cooling practices reflects not only technological progress but also a cultural shift towards individualism and efficiency. Younger participants often perceived traditional methods as outdated and inconvenient, favouring the immediacy and control offered by air conditioning. This

material transition highlights how technological adoption reshapes cultural values, prioritizing convenience over conservation. The loss of traditional practices also reveals the lock-in effects of modern material environments. As high-rise apartments and urban infrastructure became dominant, they necessitated reliance on air conditioning, marginalizing methods that once thrived in more open, communal spaces. This shift underscores how material environments both reflect and reinforce changing societal norms.

Material lock-in extends beyond physical infrastructure to the habits and expectations it fosters. For older generations, traditional cooling methods were tied to a frugal, communal ethos that persists even as new technologies become available. As Judy Huang noted, she continues to prefer fans over air conditioning, not only for economic reasons but also because it aligns with her ingrained values. For younger generations, the widespread availability of air conditioning has established a different kind of material dependency. Participants like Jack Li described a near-total reliance on mechanical cooling, driven by both necessity and cultural expectations. This reliance is further entrenched by socio-economic factors, such as rising income levels and the growing demand for enclosed, climate-controlled environments. The generational divergence in material practices highlights the enduring influence of early material experiences in shaping long-term behaviours.

These findings resonate with and extend existing literature on the socio-material dimensions of everyday practices, offering a distinct lens through the Chinese urban context. As Shove (2003) argues, materials are not passive backdrops but active agents in defining practices, shaping how comfort, convenience, and consumption are experienced and normalized. This study corroborates her findings by demonstrating how air conditioning has shifted from being a luxury to a near-universal feature in urban households in Shenzhen. The rapid normalization of air conditioning, driven by urbanization, rising incomes, and architectural trends, exemplifies how technological advancements restructure everyday life, aligning with Shove et al.'s (2014) notion of 'locked in' and Sahakian's (2017) 'material lock-in', where physical infrastructures and devices constrain alternative practices. Additionally, Welch (2016) and Welch & Warde (2016) emphasize that the integration of materials, meanings, and competences determines the trajectory of practices. This study advances his argument by illustrating how material conditions in Shenzhen—sealed windows, lack of natural

ventilation, and high-density housing—interact with shifting cultural meanings and competences to institutionalize air conditioning as the dominant cooling method. The material environment not only supports but actively reproduces these practices, reinforcing the generational divergence in cooling behaviours.

The findings echo Ingold's (2007, 2011, 2012) analysis of the disappearance of traditional material cultures, as industrialization and modernization displace materials tied to resourcefulness and community. Palm-leaf fans, bamboo cooling chairs, and natural ventilation, which were once central to older generations' cooling practices, have been supplanted by energy-intensive technologies. This displacement reflects broader shifts in cultural values from collective resourcefulness to individualized efficiency. However, this study also nuances Ingold's perspective by emphasizing the emotional and cultural significance of these traditional materials. Unlike Ingold's more general observations, the nostalgia expressed by older participants in Shenzhen for these materials illustrates their dual role: they were not only functional but also symbolic of collective experiences and social bonds. This adds depth to existing discussions on materiality, showing how transitions in material culture are intertwined with transformations in social dynamics.

The concept of material lock-in, as articulated by Sahakian (2017), emphasizes how physical possessions, infrastructures, and technologies embed specific consumption practices into daily life, shaping what people perceive as normal. In the context of Shenzhen, the materiality of cooling practices aligns with this notion, as the architectural design of high-rise apartments with sealed windows and limited natural ventilation necessitates reliance on air conditioning. These material arrangements not only constrain alternative practices, such as natural ventilation, but also reflect broader socio-economic transformations and aspirations for modernity. This interpretation extends Shove et al.'s (2012) insights into the coercive power of material environments in shaping practices. In Shenzhen, as in Geneva, material lock-in manifests through the physical design of living spaces, which compels residents to adopt energy-intensive cooling technologies. However, while Sahakian (2018) emphasizes material lock-in in affluent households, where large homes and appliances reinforce consumption norms, the Shenzhen case highlights how rapid urbanization and economic reform have institutionalized air conditioning as an indispensable part of urban living. This contrast underscores the role of socio-economic contexts in

shaping the dynamics of material lock-in. Material lock-in in Shenzhen also resonates with Gram-Hanssen's (2010) exploration of how materials and competences interact to sustain practices. For older generations, traditional materials such as bamboo cooling chairs and palm-leaf fans were not only functional but required specific skills to use effectively, embedding resource-conscious behaviours shaped by historical scarcity. These materials, deeply intertwined with collective living and frugality, have largely disappeared as air conditioning became normalized. This loss of traditional cooling methods illustrates Ingold's (2012) argument that industrialized production often marginalizes traditional material cultures, erasing practices that once reflected sustainability and community.

The role of social lock-in, as described by Sahakian (2017), further enriches our understanding of generational cooling practices in Shenzhen. Social norms around comfort and modernity, reinforced by peer networks and cultural aspirations, sustain the widespread adoption of air conditioning. For younger generations, air conditioning is not just a functional necessity but a marker of socio-economic status, aligning with the cultural values of progress and individualism. This observation aligns with Stephenson et al.'s (2010) "energy cultures" framework, which links material conditions with cultural norms and aspirations. However, the Shenzhen case extends this framework by emphasizing how rapid urbanization and economic reform amplify these dynamics, making air conditioning a symbol of modernity as much as a practical tool. The intergenerational divergence in cooling practices also complements Hargreaves' (2010) analysis of contested household practices, revealing how generational negotiations are influenced by material conditions and cultural expectations. While older generations may resist the widespread adoption of air conditioning, favouring resource-efficient methods rooted in historical scarcity, younger generations embrace air conditioning as a norm embedded in the materiality of urban life. This dynamic underscores the interplay between material and social dimensions in shaping energy consumption.

### 9.2.2 Meanings and Cultural Norms

The meanings attributed to air conditioning (AC) practices reveal a significant divergence between generations, shaped by both practical considerations and cultural

values. Drawing from the findings in the empirical chapters, this section explores these meanings along two dimensions: the practical significance of AC across generations and the cultural meanings embedded in these practices, particularly through the Confucian values of frugality and filial piety.

#### *9.2.2.1 Practical Significance of AC Across Generations*

The dual connotation of extravagance and impracticality associated with air conditioning (AC) for older generations in China reflects their formative experiences during periods of economic scarcity. These experiences fostered a reliance on natural and collective cooling practices, such as using bamboo mats, gathering under trees, and employing manual fans. Such practices were not only pragmatic but also culturally significant, symbolizing resourcefulness, simplicity, and harmony with the environment. Evidence from this study reveals that many elderly participants reminisced about the communal aspect of these methods, particularly the social bonding facilitated by evenings spent under trees in shared spaces. These activities underscored not just practical solutions to heat but also the reinforcement of community cohesion—a theme echoed in global studies, such as Khosla's (2022) exploration of traditional cooling practices and their cultural framing as healthier and more environmentally attuned.

The empirical findings resonate with Zobeidi et al.'s (2024) work, which emphasizes the adaptability of climate mitigation practices to align with local norms. For older Chinese generations, natural cooling methods like opening windows to harness cross-ventilation were deeply ingrained habits, as participants described these approaches as an integral part of their daily routines during childhood. Such methods were not merely practical but also reflected an ethos of moderation and resilience cultivated during economically constrained times. These values contrast sharply with the more individualized, technology-reliant practices of younger generations, who grew up amidst China's rapid economic growth and urbanization.

Older participants' perception of air conditioning as a necessary yet infrequently used resource reflects a broader trend identified by Davis et al. (2021), who highlighted the significant role of economic conditions and cultural attitudes in shaping the adoption and utilization of cooling technologies. In this study, elderly respondents repeatedly

emphasized health concerns, particularly the fear of "cold air sickness," and expressed discomfort with prolonged AC usage, which they associated with excessive deviation from natural living. This evidence highlights their alignment with traditional practices that prioritize harmony with the body and the environment, reflecting broader cultural tendencies to resist over-reliance on technology.

In stark contrast, younger generations in China perceive AC as indispensable in navigating the subtropical climate of urban areas like Shenzhen. Participants in their 30s and 40s described AC as a necessity rather than a luxury, framing it as integral to their productivity, work-life balance, and overall comfort. For this cohort, AC transcends its basic function to embody the modern urban lifestyle, where fast-paced living and enclosed architectural designs necessitate reliable cooling solutions. As highlighted in Khosla et al. 's (2022) analysis of sustainable cooling, the cultural significance of AC use among urbanized populations is deeply tied to lifestyle demands. This study complements McElroy's findings by emphasizing how participants in Shenzhen contextualize AC use as a response to the pressures of urban density and sealed environments.

Middle-aged participants in this study further illustrated how AC use intersects with social roles and familial responsibilities. They often framed their provision of AC as a symbol of caregiving and filial piety, particularly for aging parents and young children. For instance, several respondents expressed that ensuring a comfortable temperature at home was a way to demonstrate care and fulfil their duties as providers. This finding aligns with Yang et al. 's (2022) research on cooling practices in Chinese offices, where AC use often reflects broader social expectations and professional identities. By bringing this dynamic into the domestic sphere, this study expands the understanding of how technological adoption is intertwined with social identity and familial obligations.

The generational shift in cooling practices also highlights the evolution of comfort as a socio-technical construct. For older generations, comfort was defined by adaptability, harmony with natural conditions, and minimal material inputs. Younger generations, however, perceive comfort as technologically mediated, aligning with the demands of energy-intensive urban lifestyles. These shifts reflect broader socio-technical transitions, as discussed by Shove et al. (2014) and Miller et al. (2021), who

emphasize that cooling practices evolve in response to changing technological, economic, and cultural landscapes. Evidence from this study reinforces this perspective, with participants attributing their reliance on AC to its ability to enhance convenience, productivity, and perceived quality of life. This study complements their findings by showing how younger generations in China, having grown up during a period of rapid economic development and technological proliferation, have normalized AC as a daily necessity. This normalization, tied to increasing material abundance and urbanization, underscores the broader societal shifts toward energy-intensive living.

## (2) Cultural Meanings of AC Practices

The cultural meanings embedded in air conditioning (AC) practices within Chinese families reflect deep connections to Confucian values, particularly frugality (节俭) and filial piety (孝道). These values manifest in distinct yet interrelated ways across generations, shaped by historical experiences, technological developments, and evolving familial roles.

### *Frugality as a Moral Virtue*

For older generations, frugality is a deeply embedded cultural value, shaped by collective memories of economic scarcity and resource constraints. This study finds that many elderly participants deliberately limit their use of air conditioning (AC), framing this practice as a reflection of self-discipline and respect for nature. These choices are not merely practical but imbued with cultural significance, aligning with a worldview that emphasizes moderation, resourcefulness, and living in harmony with the environment. For instance, one participant recounted her reliance on natural ventilation and manual fans during the summer, describing these practices as a meaningful continuation of values instilled during her formative years. Such practices signify more than economic prudence; they represent a moral ethos that prioritizes sustainability and conscious living.

The study situates these behaviours within a broader cultural framework, echoing Sigurðsson's (2014) exploration of Confucian consumer ethics, where frugality emerges as a virtue that reflects discipline and moral uprightness. While Sigurðsson's

work focuses on the broader societal implications of frugality in contrast to rising consumerism, this study adds a nuanced layer by examining how these values manifest in specific practices like cooling. Elderly participants' deliberate and restrained AC usage is positioned as a continuation of these Confucian ideals, where the rejection of perceived excess embodies a moral commitment to preserving resources and respecting the natural world. This perspective also aligns with Brown et al. (2012), Rishi et al. (2022), and Assan et al. (2018) that cultural ideals of moderation shape climate mitigation practices globally, particularly in contexts where resourcefulness is historically valued. However, the findings from this study extend their observations by providing a localized understanding of how these ideals evolve within the unique socio-cultural environment of urbanizing China. Older generations' interpretation of frugality as a guiding principle in AC use reflects an enduring connection to a lifestyle shaped by necessity, now transformed into a deliberate and meaningful cultural practice.

The formation and evolution of these meanings can be traced to the socio-economic conditions experienced by older generations during periods of scarcity and collective living. The narratives of participants consistently highlight how limited access to modern technologies in their youth cultivated habits of resource conservation and self-reliance, which continue to influence their cooling practices today. This generational continuity of values illustrates how cultural meanings attached to practices like AC use are not static but are deeply informed by historical and material conditions. While much of the existing literature highlights the dichotomy between traditional values and modern consumption patterns, this study focuses on the continuity and adaptation of cultural values within the context of evolving material practices. It enriches the discourse by emphasizing how frugality, as an enduring value, shapes the ways in which older generations engage with modern cooling technologies.

#### *Filial Piety and the Provision of Comfort*

In contrast to the older generation's emphasis on frugality, younger participants reinterpret filial piety—a cornerstone of Confucian ethics—as the provision of comfort through technological means. This study finds that middle-aged participants often frame their use of air conditioning (AC) as an act of caregiving and



responsibility, emphasizing the material provision of comfort for their elderly parents. For example, one participant recounted installing an AC unit in their parents' rural home, despite initial resistance. This act was described not only as fulfilling a moral obligation but also as introducing their parents to the conveniences of modern living, ensuring their physical comfort during sweltering summers. This reinterpretation of filial piety reflects an evolution in its application, shifting from obedience and respect toward practices that align with contemporary standards of well-being and caregiving. Such findings align with Meng et al.'s (2024) discussion of how Confucian values adapt to modern decision-making, illustrating the transformation of traditional principles in response to societal and technological changes. While traditional filial piety emphasized deference and support within a hierarchical family structure, modern expressions prioritize enhancing the quality of life through tangible acts of care, such as the use of technological solutions like AC.

This study builds on Welch et al.'s (2020) exploration of "teleoaffective formations," where shared goals and emotions shape interconnected practices. The provision of AC as a caregiving act illustrates how younger generations integrate normative expectations of care with affective commitments to parental comfort. By situating the act of AC installation within broader cultural and material arrangements, this study highlights how practices are simultaneously shaped by traditional moral frameworks and modern technological affordances. Unlike previous studies focusing solely on material outcomes, this research underscores the cultural meanings that imbue these practices, providing a deeper understanding of how caregiving practices evolve through intergenerational engagement with technology. The empirical findings also reveal how these caregiving practices are shaped by economic and technological conditions. Younger participants, having grown up in an era of increased material abundance and technological advancement, view the provision of AC as a necessary and natural extension of their filial duties. This contrasts with older generations' more restrained engagement with technology, reflecting broader societal transitions in the meaning of caregiving. As Warde et al. (2017) note, practices are often linked by "general understandings" that transcend individual performances, such as the shared notion of caregiving as a moral obligation. In this context, AC usage becomes a medium through which filial piety is enacted and modernized, demonstrating the interplay between cultural ideals and material practices.

Furthermore, this study extends the discourse on cultural meanings in consumption by illustrating the nuanced ways in which younger generations reinterpret traditional values. Rather than viewing technological adoption as a divergence from traditional values, the findings suggest that it represents a continuity of moral obligations expressed through new means. This perspective challenges the binary view of tradition versus modernity, offering a more integrated understanding of how cultural values adapt within specific socio-material contexts. By combining insights from Welch et al.'s (2020) work on cultural formations and Sigurðsson's (2014) analysis of value adaptation, this study contributes to a more holistic understanding of filial piety in contemporary Chinese families. It demonstrates how practices like AC usage are imbued with evolving cultural meanings, reflecting the dynamic interplay between enduring moral principles and the demands of modern caregiving. This enriched perspective offers a valuable contribution to the broader literature on cultural sociology, social practice theory, and intergenerational dynamics.

### 9.2.3 Competences and Skills

The study highlights how competences—understood as the skills, knowledge, and dispositions enabling individuals to engage in specific practices—differ across generations within Chinese households, revealing broader cultural and socio-economic transitions. These generational distinctions reflect how competences, deeply embedded in historical contexts and cultural norms, shape the way cooling practices are understood and enacted in everyday life. Older generations demonstrate extensive competence in traditional cooling methods, such as optimizing natural ventilation, using bamboo mats, and employing manual fans. These competences were shaped by collective memories of economic scarcity and resource constraints, where resourcefulness was not only a necessity but also a moral imperative. Participants described practices like strategically positioning windows to harness natural airflow or choosing shaded areas of the home during peak heat. These methods reflect a lived understanding of how to interact with the environment to achieve comfort without relying on external energy sources. Such competences are deeply tied to Confucian ideals, particularly frugality (节俭), which prioritize moderation and harmony with nature. These findings resonate with Shove et al.'s (2012) emphasis on competences

as central to sustaining social practices, but they add a uniquely Chinese dimension by framing these competences as morally and culturally significant.

In contrast, younger generations possess advanced technical competences related to modern air conditioning (AC) systems. These include skills like setting timers, adjusting energy-efficient modes, and maintaining equipment to ensure optimal performance. For younger participants, these competences reflect not only technological proficiency but also an alignment with the fast-paced, energy-intensive demands of urban life in modern China. For instance, one participant highlighted how smartphone apps are used to remotely control AC settings, demonstrating a seamless integration of digital tools into daily routines. This reflects broader societal changes, where technological literacy has become a key marker of modern living. Compared to older generations, whose competences are rooted in simplicity and sustainability, younger generations' competences signify a shift toward convenience and precision. However, this shift is not merely technical; it is also culturally meaningful. Many younger participants framed their mastery of AC systems as an extension of filial piety (孝道), where ensuring the physical comfort of aging parents through technological means was described as a tangible expression of care and responsibility. This interpretation aligns with Sahakian and Wilhite's (2014) observations of energy practices in urban contexts, where technology adoption is shaped by cultural expectations and social obligations.

Middle-aged participants exhibit a hybrid set of competences, combining traditional knowledge with modern technological skills. This group often acts as mediators within the family, balancing the needs of older and younger generations. Their competences include energy management strategies, such as scheduling AC usage during peak hours and employing energy-saving modes to minimize costs while maintaining comfort. These practices reflect a pragmatic approach that integrates cultural values of resourcefulness with modern technological affordances. While Gram-Hanssen's (2010) work on household energy practices in Europe emphasizes the role of infrastructure in shaping competences, this study underscores the cultural context within which these competences are developed. For middle-aged participants, their energy management skills are not just practical but also represent a fulfilment of their roles as providers and caregivers within the family.

The evolution of competences across generations illustrates how practices adapt to changing material and cultural conditions. Older generations' competences are rooted in necessity, reflecting a historical context of limited resources and a reliance on ingenuity. These competences, while practical, also symbolize a continuity of cultural identity that values simplicity and ecological harmony. Younger generations, on the other hand, acquire competences aligned with a technologically advanced and energy-intensive lifestyle. Their ability to navigate and optimize modern cooling systems represents a departure from traditional methods but simultaneously reflects an adaptation of cultural values, such as caregiving and responsibility, to fit contemporary realities.

The study contributes to the broader literature on competences and energy practices by situating them within the specific cultural and generational context of Chinese families. Unlike Western-centric studies that often focus on individual behaviours or technological systems, this research emphasizes the collective and intergenerational dimensions of competences, rooted in Confucian values and familial dynamics. While Sahakian and Wilhite (2014) highlight the role of cultural norms in shaping energy-intensive practices, this study adds depth by exploring how competences are transmitted, reinterpreted, and adapted within families over time. It also extends Shove et al.'s (2012) framework by demonstrating how competences evolve not just in response to material arrangements but also through the intergenerational negotiation of cultural values.

In conclusion, competences play a central role in defining generational differences in cooling practices within Chinese households. These skills and dispositions, shaped by historical experiences and cultural norms, reflect both the continuity and adaptation of traditional values in response to modern technological and societal changes. By examining competences within this context, the study provides valuable insights into the cultural specificity of energy practices, highlighting the dynamic interplay between tradition, modernity, and technology in shaping everyday life.

## 9.3 Intergenerational Negotiations around AC Use

### 9.3.1 How Negotiations Occur

From the empirical observations outlined in the chapter, negotiations around air conditioning (AC) usage in urban families emerge as a dynamic and evolving process shaped by generational roles, life stages, and the socio-cultural transformations of modern Chinese cities like Shenzhen. These negotiations unfold through distinct phases, reflecting shifts in authority, preferences, and practical needs. By examining the stages of negotiation, I identified several forms and mechanisms through which these interactions occur, highlighting their contextual specificity and evolution over time. In the early stages of family life, as described in the childhood-related sections of the analysis, explicit negotiations are largely absent. Parents maintain full control over AC decisions, guided by concerns about health, financial constraints, and cultural values of frugality. Decisions about when and how to use AC are made unilaterally, often justified by the perceived risks of "cold air sickness" and the importance of teaching resilience. Children, having little agency, passively accept these norms as part of household routines. This stage highlights the authoritative role of parents and the cultural embedding of values such as moderation and discipline in cooling practices.

As children enter adolescence, the chapter on intergenerational practices illustrates how initial forms of negotiation begin to take shape. Adolescents assert their independence by advocating for AC use tied to specific needs, particularly academic productivity. One key example from the analysis is parents allowing extended AC use during study sessions or exams, despite their general preference for limiting usage. This shift marks a significant adjustment in household dynamics, where parents make concessions to prioritize their children's educational success, a highly valued goal in Chinese urban households. The flexibility demonstrated here reflects a cultural prioritization of education as a legitimate reason to modify established practices, making this a notable departure from earlier rigidity. In young adulthood, as highlighted in the sections on household decision-making, negotiations become more explicit and balanced. Young adults, particularly those contributing financially or living independently, begin to advocate for more consistent and comfort-oriented cooling practices, such as maintaining stable indoor temperatures throughout the day.

These discussions often take the form of practical exchanges, where young adults justify their preferences by emphasizing the benefits of comfort and energy efficiency. The analysis highlights that this stage is characterized by mutual adjustment, where parents acknowledge their children's increasing agency and adapt their expectations to accommodate new standards of living. This transition signifies a shift toward collaborative decision-making, with both parties actively participating in discussions to find workable compromises.

The caregiving phase, as outlined in the chapter on filial practices, introduces a reversal in negotiation dynamics. Adult children, now assuming the primary caregiving role, make decisions to ensure their aging parents' comfort and well-being, often overriding initial resistance. Instances were noted where adult children installed AC units in their parents' homes despite objections rooted in concerns about cost or traditional preferences for natural cooling methods. These actions are framed as acts of care and responsibility, reflecting both modern sensibilities and traditional filial obligations. In this phase, negotiations often move from collaborative to authoritative, as adult children assert their decisions based on a perception of their parents' needs and vulnerabilities.

Across these phases, the analysis reveals four primary forms of negotiation: unilateral decisions, implicit negotiations, explicit discussions, and gradual compromises. During childhood and caregiving stages, unilateral decisions dominate, reflecting the authority of the primary decision-maker—parents in the earlier phase and adult children in the later. Implicit negotiations, which are common during adolescence, involve subtle adjustments where parents accommodate children's emerging preferences without direct confrontation. Explicit discussions, most evident in young adulthood, involve open exchanges of preferences and practical considerations, allowing for more equitable decision-making. Gradual compromises appear across multiple stages, reflecting incremental adjustments that reconcile generational priorities and evolving household dynamics over time.

The educational concessions described in the adolescent stage stand out as particularly significant. These represent a major cultural shift, where parents prioritize academic success over long-held values of frugality and moderation. This flexibility underscores the importance of education in Chinese family life and demonstrates how

cultural priorities shape the negotiation process. By tracing these forms of negotiation across life stages, the chapter provides a nuanced understanding of how urban families navigate generational differences in cooling practices, balancing tradition, modernity, and the diverse needs of their members.

### 9.3.2 Factors Influencing Negotiations: Culture in Practice

In analysing the factors that shape negotiations around air conditioning (AC) use in urban Chinese families, it becomes evident that cultural traditions, deeply embedded "in practice," play a foundational role in influencing both the methods and outcomes of these interactions. As Welch et al. (2020) points out, culture is not external to practice but is enacted through it, and this study demonstrates how Confucian thought, a cornerstone of Chinese cultural heritage, permeates the way family members navigate generational differences and decision-making processes. The findings reveal that negotiations are not only practical resolutions but also deeply infused with cultural meaning, reflecting values that have been cultivated over thousands of years of Confucian influence. Specifically, four key Confucian principles emerge as central to understanding how these negotiations unfold: Hierarchical Respect (尊卑有序), Benevolent Parents, Filial Children (父慈子孝), Leaping the Dragon Gate (鱼跃龙门), and Rites of Passage: Coming of Age (成人之礼). These principles guide family dynamics, shaping how authority is distributed, responsibilities are assumed, and aspirations are negotiated across generations.

#### 9.3.2.1 Hierarchical Respect (尊卑有序)

##### 9.3.2.1.1 Addressing Research Questions

The concept of 尊卑有序 (hierarchical respect) emerges as a critical framework within Chinese families, serving as a foundational principle that precedes and underpins other cultural values, including 孝道 (filial piety). The research in Chapter 5 demonstrates how this concept operates not just as a form of respect towards parents but as a comprehensive system that governs the entire familial structure, especially in early childhood and adolescence. This section addresses how these deep-seated cultural norms shape intergenerational negotiations around air conditioning use, influencing family dynamics and decisions at various life stages.

From an early age, children in Chinese families are inculcated with the idea that they must adhere to a strict hierarchy, with parents—and by extension, all elders—occupying the highest ranks within the family structure. This hierarchy is not just about respect; it is about recognizing and accepting one's place within a clearly defined social order. As observed in Chapter 6, the strong parental authority over children is evident in how decisions about air conditioning use are made and enforced. Parents often impose strict rules regarding when and how air conditioning can be used, and these rules are presented not as suggestions but as high-level commands that must be obeyed. The study shows that this authoritative approach persists until children formally enter adulthood, often marked by entering university, at which point there is a noticeable shift in the family dynamics.

#### 9.3.2.1.2 Unexpected Findings

One of the surprising findings in the study is the extent to which parents enforce hierarchical respect in everyday practices, particularly in their interactions with their children. The research uncovered that parents are deeply committed to ensuring that their children not only understand but internalize this hierarchical framework as part of their upbringing. This enforcement goes beyond simple obedience; it is a systematic and deliberate process where parents use their authority to mold their children's understanding of social order. For example, the decision-making process around air conditioning usage is not just about managing resources but about instilling in children the importance of adhering to a hierarchical structure, both within the family and in broader societal interactions.

The study also presents that parents' control extends into the socialization process, where children are taught that this hierarchical respect applies not only at home but in society at large. This socialization is reflected in the way children are expected to behave towards teachers, elders in the community, and even government authorities. The finding that parents maintain high levels of control over their children's lives until they enter university underscores the depth of commitment to this cultural value. The implications are profound: children learn from a young age that challenging this hierarchy is not just a family matter but a violation of a broader societal expectation.



#### 9.3.2.1.3 Comparing to Past Literature

When comparing these findings to existing literature, key distinctions become evident. While respect for authority and elders is valued in many cultures, the way hierarchical respect shapes behaviour in Chinese families is particularly pronounced. In Western societies, respect for parents is often balanced with an emphasis on mutual respect and individual autonomy. For example, Fuligni (1998) found that, in the U.S., as children grow older and assert their independence, parental authority, though still significant, becomes more negotiable. His research showed that despite cultural differences, adolescents from various backgrounds—including Chinese, Mexican, Filipino, and European—experienced similar levels of conflict and cohesion with their parents, suggesting that in a multicultural context like the U.S., the negotiation of parental authority as children mature is a common pattern.

In contrast, studies focusing on Chinese family dynamics, such as those by Chao (1994) and Ho (1986), have demonstrated that parental authority in Chinese families tends to remain stronger and less negotiable, particularly due to the deeply ingrained values of Confucianism, which emphasize filial piety and hierarchical family structures. Chao's research highlights that even as children enter young adulthood, there is a continued expectation of deference to parental authority, particularly in decision-making processes that affect the family unit. This is reinforced by studies like Chen et al. (2016) and Yeh et al. (2013), which show that in China, children often feel a strong sense of obligation to respect and obey their parents well into adulthood. While entering university or starting a career may mark a formal transition into adulthood, the cultural expectation of deference to parents often persists, differing sharply from the more individualistic approaches seen in Western societies.

Additionally, the influence of hierarchical respect extends beyond the immediate family to the broader social structure. Unlike in Western societies, where individualism and egalitarianism often mitigate the influence of hierarchical respect, Chinese society maintains a strong emphasis on social hierarchy that permeates all levels of interaction (Bell, 2020; Qu, 2024). The respect for authority is not limited to parents but includes all figures of authority, reflecting a cultural expectation that authority should be respected universally, not selectively.

Moreover, this study adds to the existing literature by highlighting the active role that parents play in reinforcing hierarchical respect through everyday practices like air conditioning use. This is consistent with the work of Yeh & Bedford (2003), who discuss the hierarchical nature of Chinese families, but the current findings offer a more nuanced view by showing how these values are systematically instilled and maintained through specific, everyday decisions. Although this study anticipates that Western families may prioritize individual autonomy in day-to-day decisions, particularly regarding resource use and comfort, such as air conditioning, with less emphasis on family hierarchy, these assumptions should be approached with caution. These differences are speculative and based on cultural background rather than empirical evidence directly comparing child-rearing practices in China and other countries, like Norway. Therefore, more systematic comparative research is needed in the future to determine the substantive impact of these cultural differences, particularly in family decision-making processes and intergenerational interactions.

In conclusion, the concept of hierarchical respect serves as a critical foundation for understanding intergenerational negotiations and family dynamics in Chinese culture. Its influence is evident not only in how families make decisions about everyday practices, like air conditioning use, but also in how these practices reinforce a broader societal structure that values hierarchy and authority. The study's findings suggest that hierarchical respect is not just a cultural relic but an active, dynamic force that continues to shape behaviour and expectations in contemporary Chinese society.

#### *9.3.2.2 Benevolent Parents, Filial Children (父慈子孝)*

##### *9.3.2.2.1 Addressing Research Questions*

While the concept of hierarchical respect (尊卑有序) establishes a strict social order within Chinese society, it is deeply rooted in broader Confucian values. Confucianism emphasizes social harmony, and hierarchical relationships between individuals are central to this philosophy. Hierarchical respect is an expression of Confucian values like loyalty, duty, and respect for authority, especially within the family. *Filial piety*, another key Confucian value, directly supports hierarchical respect by placing parents at the top of the family structure, where they are honoured and cared for by their children. This expectation extends beyond the family and shapes social interactions

across various spheres of life. In the context of air conditioning use, as observed in the empirical chapters, children are expected not only to accept this hierarchical framework but also to recognize the societal obligations of filial piety within the family. These Confucian principles frame the dynamics of intergenerational negotiation, where younger family members are inclined to defer to the comfort preferences of their elders, even if this means sacrificing their own.

In contrast, cultural contexts outside of China, such as those found in many Western societies, place far less emphasis on filial piety as a societal imperative. For example, research by Harper (2004) on family dynamics in Western societies highlights the prioritization of individual autonomy and egalitarian relationships between parents and children, especially as children reach adulthood. These studies reflect the broader societal focus on individual rights and personal freedom, which often overrides collective familial obligations like filial piety. As a result, decision-making around resources such as air conditioning is more likely to reflect individual comfort preferences rather than being influenced by deference to elder family members.

During childhood and adolescence, as highlighted in Chapter 6, children are often subject to strict regulations imposed by their parents regarding AC use. These restrictions are not just about controlling energy costs or managing health concerns; they are also about instilling a sense of responsibility and respect for the family's collective well-being. The parents' authority in this domain is largely unquestioned, with children adhering to these rules as a manifestation of their respect and obedience, which are core aspects of *filial piety*.

As children transition into adulthood, particularly when they enter college or begin their careers, the nature of these negotiation changes. While the obligation to respect and care for one's elders remains, younger family members begin to assert their preferences and needs more strongly, reflecting a shift in family dynamics. However, even in this phase, decisions around AC use continue to be influenced by *filial piety*. For example, younger adults might negotiate for more liberal use of AC by framing it as necessary for productivity or health, while still considering the comfort and financial concerns of their parents. This negotiation process illustrates the balance between asserting individual needs and maintaining familial harmony, a balance deeply rooted in the Confucian principle of *filial piety*.

*Filial piety* shapes these negotiations by creating a framework where the needs and well-being of elders are prioritized. The respect for authority within the family, as discussed in earlier sections, means that even when younger generations seek to assert their preferences, they do so within the boundaries set by their elders. This deference is not merely out of habit but is ingrained through cultural and social expectations that view *filial piety* as a non-negotiable aspect of family life.

The influence of Confucian values also extends beyond shaping how younger generations view their elders; it also significantly impacts how elders themselves are constrained by Confucian norms. As Rozman (2014) explained, Confucianism is not just about obedience and respect from the younger generation; it also imposes a moral framework on elders, requiring them to care for and guide the younger generation in a way that ensures the family's continuity and well-being. From Chapter 8, this responsibility often results in older generations, who might initially resist modern technologies such as air conditioning, eventually adopting these innovations out of a sense of duty toward younger family members. Moreover, they are willing to compromise on their comfort to meet the needs of the younger generation, as long as it is within their physical limits. In the Chinese context, this adaptation and compromise are not merely about accepting new technology for convenience; they are tied to a deep-seated responsibility to ensure the well-being and success of the younger generation, a concept strongly rooted in Confucian filial piety.

#### 9.3.2.2 Unexpected Findings

While filial piety remains a deeply ingrained and powerful traditional value, the findings reveal unexpected challenges and critiques regarding its application in contemporary society. Following several decades of strict population control policies in China, the demographic structure has significantly aged, while family sizes have drastically shrunk. The nuclear family, typically consisting of two generations with fewer members, has become the norm (Wu et al., 2018). This demographic shift has placed considerable economic and social pressure on the younger generation. Even when children sincerely wish to provide their parents with comprehensive care—both materially and emotionally—they often find themselves overwhelmed, unable to fully meet these expectations.

As a result, the capacity for family-based elder care is increasingly weakening and becoming more challenging. For instance, in Chapter 8, despite children's efforts to enhance their parents' comfort, feelings of neglect, helplessness, and tension appear to be increasingly present. Given that cooling is primarily a matter of subjective comfort, children often struggle to balance their filial duties with the demands of their own lives. This struggle highlights a growing disconnect between traditional expectations and modern capabilities. The expectation to care for one's parents, including providing them with a comfortable living environment through air conditioning, is increasingly difficult to fulfil as economic and social pressures mount. Moreover, the derivative effects of filial piety, such as unnecessary air conditioning consumption and performative gestures of care, are accelerating the spread of unsustainable lifestyles. These actions, though rooted in traditional values, may inadvertently contribute to environmental and societal challenges, indicating a need to reassess how such values are interpreted and practiced in modern times.

Ultimately, these findings highlight the profound influence of Confucian values, particularly filial piety, on the adoption and use of air conditioning in Chinese families. Unlike in Western societies, where technology adoption tends to be driven by individual preferences, in China, the decision to incorporate air conditioning is deeply embedded within a cultural framework that emphasizes familial duties and collective well-being. This framework creates a unique dynamic where both younger and older generations navigate their roles and responsibilities within the household, often leading to compromises that reflect the broader societal expectations of care and respect. However, the increasing demographic pressures and the evolving nature of family structures in China raise critical questions about the sustainability of these traditional values in modern contexts. The tension between upholding filial piety and adapting to contemporary realities underscores the need for a revaluation of how these values are applied today, particularly as they intersect with technological adoption and environmental sustainability.

#### 9.3.2.2.3 Comparing to Past Literature

When comparing the findings of this study with existing literature, it becomes clear that the intersection of *filial piety* and energy use has been underexplored. Most prior

research on *filial piety* has focused on its influence on family dynamics, elder care, and intergenerational relationships in broader cultural or social contexts, rather than its specific impact on household practices like energy consumption. This study thus contributes a novel perspective by linking *filial piety* to patterns of AC use within Chinese families, filling a notable gap in the literature.

Hamilton (1990) provides a comparative analysis of these cultural differences, highlighting that in Western societies, the obligations of children to their parents are often viewed as personal choices rather than societal duties. Hamilton's study delves into the concepts of patriarchy, patrimonialism, and filial piety, drawing a stark contrast between their manifestations in China and in Western Europe. He describes how, in China, legitimate authority is deeply embedded within specific social roles, making it impersonal and focused on harmony rather than individual discretion. Filial piety in China is not merely an expression of respect but is deeply integrated into the social fabric, dictating the behaviour and responsibilities of individuals within the family and society at large. Hamilton emphasizes that this doctrine of sincere submission, particularly within the father-son and ruler-subject relationships, was central to the moral order of late imperial China. These relationships were seen as part of the immutable natural order, to which everyone was expected to conform.

Following Hamilton, scholars such as Bedford & Yeh (2019), Eklund (2021) and Xie (2023) also underscore that, while terms like "patriarchy" and "filial piety" are used in both Western and Chinese contexts, they refer to phenomena with distinct organizational features and developmental potentials. In the West, patriarchal authority was often tied to the personal will and discretion of the patriarch, whereas in China, it was more about fulfilling predefined social roles, with filial piety serving as a key element in maintaining societal harmony. This distinction helps explain why filial piety in China operates as a societal obligation with far-reaching implications, including in areas such as air conditioning use, where the expectations of care and respect for elders extend beyond personal choice and are deeply rooted in cultural norms.

In Chinese culture, the phrase "父慈子孝" (*fù cí, zǐ xiào* - "Benevolent Parents, Filial Children") is often used to express the reciprocal relationship between parents and children. Even those unfamiliar with Confucian teachings are influenced by these

commonly repeated phrases. Legal scholar Su (2016) has analysed the functional role of "父慈子孝" in maintaining social order in traditional Chinese agricultural communities, arguing that filial piety and parental benevolence were crucial for unified family action and social stability. Su's analysis highlights several points: first, Confucianism promotes "filial piety" and "parental benevolence" as complementary, not standalone values; second, these values were rooted in the social and economic realities of agrarian society and may not fully apply to modern contexts; and third, "filial piety" often involved both caring for parents and obedience, reflecting a belief that a father's love should be reciprocated with filial obedience.

As discussed earlier, the influence of Confucian values extends beyond shaping how younger generations view their elders; it also significantly impacts how elders themselves are guided by these norms. As scholars like Lin (2022) have explained, Confucianism is not solely about obedience and respect from the younger generation; it also imposes a moral framework on elders, requiring them to care for and guide the younger generation in a way that ensures the family's continuity and well-being. This approach contrasts sharply with Western contexts, where the adoption of new technologies among older adults is often framed around personal utility and individual convenience, rather than familial obligation. For example, studies by Venkatesh et al. (2003) and Czaja et al. (2006) suggest that in Western societies, the primary factors influencing older adults' adoption of technology are often related to personal needs, ease of use, and perceived usefulness, rather than considerations of familial roles or obligations. In contrast, the decision to adopt technology in Chinese families is more collectively oriented, with a focus on maintaining family harmony and fulfilling intergenerational responsibilities. When compared to previous research, such as Madsen (2017), which discusses resistance to new technologies among older adults primarily in terms of personal preferences or technological literacy, the findings emphasize the unique role of Confucian duties in the Chinese context. In China, the elder generation's acceptance of new technologies, such as air conditioning, is deeply intertwined with their role as caretakers, often leading them to prioritize the younger generation's needs over their own initial discomfort with new devices. Nonetheless, surprising contrasts within this dynamic emerge. For instance, while Western studies by Chard and Walker (2016) often highlight generational divides in technology adoption as a source of tension, in Chinese families, this divide is frequently bridged

by the shared understanding of familial roles dictated by Confucian values. This is exemplified by older family members learning to use AC timers or smart technologies, not out of personal desire, but as a way to manage family resources more efficiently while ensuring comfort for all.

Some scholars also noticed that the demographic shift has placed considerable economic and social pressure on the younger generation. Even when children sincerely wish to provide their parents with comprehensive care—both materially and emotionally—they often find themselves overwhelmed, unable to fully meet these expectations. Historically, Confucian filial piety may have been well-suited to traditional Chinese society, where close-knit family structures and agrarian lifestyles were prevalent. However, in modern China, while filial piety remains a valued virtue, it requires careful and rational reconsideration (Zhang, 2021). The shift from an agrarian society, characterized by "familiar society" structures, to an industrial and commercial civilization, marked by "stranger society" dynamics, as noted by Gong and Zheng (2011), has fundamentally altered the social fabric. As family sizes diminish and their functions become increasingly simplified, familial authority is either being returned to individual family members or monopolized by political organizations and the state. Consequently, individuals are increasingly becoming "social persons" rather than "family persons," as observed by Gong and Zheng (2011).

### 9.3.2.3 *Leaping the Dragon Gate* (鱼跃龙门)

#### 9.3.2.3.1 Addressing Research Questions

In the Chinese context, the emphasis on education as the most reliable means of altering a family's destiny significantly influences the way families negotiate AC usage, particularly during critical educational periods like preparation for the *Gaokao*. This priority is deeply rooted in Confucian values, where academic success is not just a personal achievement but a means of bringing honour and economic security to the entire family. The historical significance of the *keju* (科举) system, which has shaped the cultural narrative around education for centuries, continues to manifest in contemporary practices, where the *Gaokao* plays a pivotal role in determining a student's future.



The study reveals that as children enter adolescence and begin preparing for the *Gaokao*, a significant shift occurs in family dynamics regarding AC use. Parents, who traditionally enforce strict limitations on AC due to concerns about frugality and health, become more willing to relax these restrictions to support their children's educational endeavours. This shift is not merely about providing physical comfort; it reflects a deeper cultural belief in the transformative power of education, epitomized by the idiom "鲤鱼跃龙门" (a humble carp leaps over the dragon gate and transforms into a sacred dragon). Education, as a practice strongly dominated by Confucian values, intersects with the weaker energy practice of AC use, creating a context where educational imperatives temporarily override traditional norms around resource conservation.

Drawing on Halkier (2020)'s concept of intersections, this negotiation demonstrates how two practices with differing cultural weight converge, with one practice subsuming the other. The dominant cultural framing of education as the ultimate pathway to upward mobility exerts pressure on families to create optimal study environments. This often leads to a suspension of traditional values of frugality, as energy use becomes a secondary concern in the pursuit of academic success. In this context, AC transitions from being merely a comfort tool to a resource enabling the realization of life-changing opportunities.

This process also illustrates the evolving nature of family dynamics. As children assert their needs for comfort and autonomy during academic preparation, power dynamics within the family begin to shift. While parents retain authority, they increasingly accommodate the demands of modern educational pressures, fostering a more collaborative approach to decision-making around resource use. Halkier's notion of intersections is particularly relevant here, as the negotiation process reflects not just a balancing act but an integration of two practices—education and energy use—where the priorities of one reshape the expectations and limits of the other.

The unique emphasis on education in Chinese culture further magnifies this intersection. Unlike in many Western contexts, where education is one of many potential pathways to success, the *Gaokao* is imbued with a singular, life-defining importance. The correlation between academic success and household comforts like AC becomes far more pronounced in this context, where educational achievement is

tightly intertwined with family honour and societal expectations. Parents view the provision of an ideal study environment, even at the expense of traditional norms, as an investment in the family's future, aligning with the broader Confucian ethos of collective progress and filial responsibility.

#### 9.3.2.3.2 Unexpected Findings

While the findings on the role of education in shaping AC use within Chinese families largely align with expectations, several unexpected aspects emerged.

One surprising finding is the degree to which younger generations have become acclimatized to a higher standard of living, particularly regarding their reliance on air conditioning. While the prioritization of academic success and the subsequent relaxation of AC use during critical study periods is anticipated, it was unexpected to observe how this shift in household norms has led to a broader change in comfort thresholds among the younger generation. The study found that children who grew up in environments where AC use was encouraged during their educational pursuits have developed a stronger dependency on air conditioning, even outside the context of studying. This suggests that the cultural drive to support educational success has inadvertently contributed to raising the baseline expectations for comfort in daily life among younger Chinese people.

Another unexpected finding is the way in which AC use during educational periods has begun to influence broader family practices and expectations. For example, it was observed that as children progress through their academic careers and increasingly demand more comfort, their preferences start to shape the family's approach to household technology and resource allocation. In some cases, parents who initially viewed air conditioning as a luxury began to see it as a necessary investment not only for their children's success but also as a marker of the family's socio-economic advancement. This shift in perception challenges the traditional view of air conditioning as an indulgence and positions it as a symbol of modernity and progress, aligning with the family's broader aspirations for upward mobility.

Furthermore, the study revealed that this shift is not merely temporary. The normalization of air conditioning use during educational periods often leads to its continued prevalence in the household, even after the child's academic pressures have subsided. This sustained change in behaviour indicates that the cultural prioritization

of education can have long-lasting effects on domestic practices, far beyond the initial period of study. It suggests a more permanent shift in household norms, where the temporary relaxation of energy conservation measures evolves into a new standard of living.

Moreover, the generational negotiation around AC use, which initially appears as a practical response to educational needs, reveals deeper cultural implications. As families adapt to the demands of modern education, they also navigate a redefinition of traditional values. The willingness of parents to accommodate their children's needs by adjusting long-held practices indicates a dynamic interplay between tradition and modernity, where cultural values are not static but evolve in response to changing social and economic conditions. This adaptation process was more fluid than expected, showing that traditional Chinese values, such as frugality, can coexist with and even support the adoption of modern conveniences when framed within the context of education and familial success.

Finally, an unexpected outcome of this study is the recognition of the tension between environmental sustainability and the increasing reliance on air conditioning driven by educational pressures. While parents and children alike understand the importance of energy conservation, the immediate priority of academic success often overshadows these concerns. This finding suggests a potential area of conflict between the cultural value placed on education and the emerging global emphasis on sustainable living. The continued prioritization of AC for educational purposes may contribute to long-term challenges in promoting energy-efficient practices, raising questions about how these competing values will be reconciled in the future.

These unexpected findings highlight the complex and sometimes contradictory nature of how deeply ingrained cultural values, such as the emphasis on education, interact with modern technological practices within the household. They suggest that while cultural priorities like education can drive significant changes in domestic practices, they also introduce new challenges and tensions that need to be understood and addressed in the context of evolving family dynamics and broader societal shifts.

#### 9.3.2.3.3 Comparing to Past Literature

The findings on the influence of education, particularly through the lens of the "鱼跃龙门" (leaping the dragon gate) cultural metaphor, in shaping air conditioning use within Chinese families offer a unique contribution to the existing literature on energy consumption, intergenerational dynamics, and cultural practices. While the significance of education in Chinese society is well-documented, the specific link between educational pressures and domestic energy use, especially in the context of air conditioning, has received limited attention. This section seeks to compare the study's findings with past literature, highlighting both alignments and divergences, and underscoring the novelty of this research.

Existing literature, such as the work by Bray and Koo (2006), extensively discusses the pivotal role of education in Chinese society, particularly the *Gaokao*, as a crucial determinant of social mobility and family honour. This aligns with the study's findings that the emphasis on educational success strongly influences household practices, including the relaxation of traditionally strict norms surrounding air conditioning use. However, while Bray and Koo (2006) focus primarily on the social and psychological impacts of educational pressure, this study extends the discussion to include the material and behavioural consequences, specifically how these pressures translate into tangible changes in energy consumption patterns within the home.

The study also finds parallels with the research of Yu et al. (2020) and Qian and Yin (2017), who explore how deeply rooted Confucian values influence the adoption of modern technologies in Chinese households. Yu et al. (2020) demonstrate that Confucian values, particularly those emphasizing trust and social harmony, play a significant role in influencing farmers' adoption of green control techniques (GCTs). Their research shows that Confucian values positively impact the level of trust within farming communities, which in turn facilitates the adoption of environmentally sustainable practices. This trust, built on shared cultural values, acts as a mediating factor, encouraging family farms to adopt GCTs by fostering greater confidence in these techniques and the institutions promoting them. Similarly, Qian and Yin (2017) highlight how Chinese cultural values, including the human-nature relationship and long-term orientation, play a crucial role in shaping consumers' attitudes towards adopting electric vehicles. This study supports their conclusions by showing how the

cultural importance of education drives the adoption and increased use of air conditioning, illustrating how traditional values directly impact technological practices. However, the study also diverges from their conclusions by suggesting that this influence is not merely a temporary adaptation but leads to a more permanent shift in household norms, where the comfort provided by air conditioning becomes an entrenched expectation rather than a conditional luxury.

Moreover, the study's findings challenge some aspects of the literature on environmental sustainability and energy consumption. For instance, research by Zhang (2022) and Kang (2011) emphasizes the growing environmental consciousness among younger Chinese generations, suggesting a shift towards more sustainable consumption practices. However, this study reveals a tension between the drive for academic success and environmental concerns, where the former often takes precedence, leading to increased energy use that may conflict with sustainability goals. This finding complicates the narrative presented in the literature, indicating that while environmental awareness is rising, it may be overridden by other cultural imperatives, such as education, particularly in the high-stakes context of the *Gaokao*.

Comparatively, in Western literature, the relationship between education and household energy use is less pronounced. Studies like those by Grønhøj and Thøgersen (2017) and Warde et al. (2022) typically emphasize individual preferences, economic factors, and environmental awareness as primary drivers of energy consumption in households. The strong link between educational pressures and energy use, as observed in this study, is less evident in Western contexts, where educational success is often one of many factors influencing family dynamics, rather than the singular, defining priority. This distinction underscores the cultural specificity of the study's findings and highlights the unique role that education plays in shaping domestic practices in China.

Additionally, the study contributes to the discourse on intergenerational negotiations and resource allocation within families. While previous research by Henwood et al. (2016), Phoenix et al. (2017) and Diprose et al. (2019) explores how intergenerational narratives influence household energy use, this study extends that discussion by showing how these narratives are specifically tied to educational achievement in the Chinese context. The findings suggest that in China, the intergenerational

transmission of values around education not only influences who controls resources like air conditioning but also reshapes the norms around its use, leading to a more liberal approach as children reach critical educational milestones.

One of the most significant contributions of this study to the literature is its exploration of how traditional cultural metaphors, like "鱼跃龙门 (a humble carp leaps over the dragon gate and transforms into a sacred dragon)," continue to influence modern household practices. While the metaphor itself has been widely discussed in sociocultural studies, its direct impact on contemporary behaviours, such as energy use, has not been extensively analysed. This study fills that gap by demonstrating how this metaphor, and the cultural values it embodies, can have real-world implications for how families manage and prioritize resources.

#### *9.3.2.4 Rites of Passage: Coming of Age (成人之礼)*

##### *9.3.2.4.1 Addressing Research Questions*

The concept of "成人之礼" (Chéng rén zhī lǐ), or the "coming of age" ceremony, deeply ingrained in Chinese culture, offers a significant lens through which to examine the transition of individuals from adolescence to adulthood. Historically, this rite of passage signified a young person's readiness to assume adult responsibilities within the family and society, with its roots tracing back to the Zhou Dynasty (1046–256 BCE). Although the formal rituals like the "冠礼" (capping ceremony for males) and "笄礼" (hairpin ceremony for females) have largely faded from contemporary practice, the underlying principles of "Coming of Age" persist. This transition is marked by significant shifts in family dynamics, where young adults begin to take on greater autonomy, especially in decision-making around household practices such as air conditioning use.

This cultural milestone addresses the research questions by illuminating how intergenerational negotiations around air conditioning (AC) use occur within Chinese families and what influences shape these negotiations. As young adults transition into new life stages—such as entering university, starting a career, or getting married—the traditional power dynamics within the family begin to shift. Parents, who previously maintained strict control over household resources and comfort levels, gradually relax

these controls in recognition of their children's new adult status. This transition is not merely symbolic but reflects deeper cultural expectations, where young adults are now seen as capable of managing their own comfort and contributing to the family's well-being.

The findings from Chapter 7 provide concrete examples of how this transition influences air conditioning use. As young adults assert their independence, they gain more autonomy over their living environments, often leading to increased use of air conditioning. This shift is driven by both the cultural imperative to support the well-being of the younger generation and the recognition of their new role within the family. Parents, acknowledging the importance of supporting their children's transition into adulthood, often adjust their own practices and expectations, thereby renegotiating household norms around energy use.

Moreover, the concept of "Coming of Age" highlights the broader cultural influences that shape these negotiations. The transition into adulthood is accompanied by a rising expectation that young adults will take responsibility for their own comfort and lifestyle choices. This expectation influences the way air conditioning use is negotiated within the family, as young adults seek to establish their own space and comfort while still adhering to the overarching family values of resource conservation and respect for elder authority.

This process of negotiation reflects broader shifts in family dynamics, where traditional values are continuously renegotiated to fit the realities of modern life. As young adults gain more control over their living conditions, their comfort thresholds often rise, leading to greater and more frequent use of air conditioning. This change is not simply a matter of increased resource consumption but a reflection of the cultural significance of "Coming of Age" in Chinese society, where the transition to adulthood is closely tied to the ability to manage one's environment and take on greater family responsibilities.

#### 9.3.2.4.2 Unexpected Findings

The exploration of "Coming of Age" in the context of air conditioning use within Chinese households revealed several unexpected findings that challenge conventional understandings of intergenerational dynamics and energy consumption.

One surprising discovery was the extent to which the transition to adulthood—symbolized by "Coming of Age"—directly influences not only the autonomy of young adults in household decision-making but also the level of indulgence parents are willing to provide. While it was anticipated that young adults would assume more control over their living environments as they reached adulthood, the degree to which parents actively facilitated this shift was unexpected. Parents, who previously adhered strictly to frugal practices, were found to relax their stringent energy-saving norms more significantly than anticipated, often investing in advanced air conditioning systems as a way to support their children's comfort and success. This suggests that the cultural imperative to support one's child during their transition to adulthood may override previously held values of frugality and resource conservation.

Another unexpected finding was the role of air conditioning as a symbolic marker of adulthood. While it was anticipated that young adults would use air conditioning more freely, the extent to which this usage became a rite of passage itself was striking. In many cases, the acquisition of personal control over air conditioning was seen as a tangible indicator of one's new status within the family—a marker of independence and maturity. This shift was not merely about comfort but about asserting one's role as an adult capable of managing personal and family resources. The symbolic value of air conditioning in this context adds a new dimension to our understanding of how modern technology intersects with traditional cultural practices.

An intriguing and somewhat unexpected finding in the context of "Coming of Age" is how air conditioning has become intertwined with other significant life milestones, particularly marriage. In traditional Chinese culture, marriage has always been a major life event, often involving elaborate customs and expectations. In recent years, the role of air conditioning in this context has evolved, with air conditioners sometimes being included as part of the bride's dowry or as a necessary purchase when setting up a new household. This trend reflects the growing importance of comfort and modern amenities in the perception of a successful marriage and household (Lin and Lin, 2020). Parents, motivated by a desire to ensure their children's happiness and stability in marriage, often play a significant role in facilitating these purchases, sometimes even exceeding their original budget constraints. This practice not only highlights the deep cultural significance of "Coming of Age" but also underscores the material expectations that now accompany



these rites of passage. As young adults prepare for marriage, the inclusion of air conditioning in their plans reflects both a practical need for comfort and a symbolic gesture of entering a new, independent phase of life.

#### 9.3.2.4.3 Comparing to Past Literature

The findings related to "成人之礼" (Coming of Age) and its influence on air conditioning use within Chinese households offer a unique perspective that has not been extensively explored in previous literature. While much research has been conducted on the cultural and social significance of coming-of-age ceremonies in various contexts (Yu and Fan, 2011), the specific impact of such rites on household energy practices, particularly in relation to air conditioning use, remains an underexplored area. This section compares the study's findings with existing literature to highlight both alignments and deviations from past research.

Past studies of 'coming-of-age', such as those by Fong (2002), Anagnost (1997) and Zhou (2017), have focused primarily on the symbolic and social significance of these rites, often emphasizing their role in reinforcing social hierarchies and familial duties. These studies, however, tend to overlook the material consequences of these transitions, particularly in terms of household technology adoption. Our findings extend this discussion by demonstrating that "Coming of Age" not only marks a social transition but also triggers shifts in household consumption patterns, notably the increased use of air conditioning. As young adults in China transition into roles of greater autonomy, they begin to influence household decisions more directly, resulting in a tangible shift towards greater comfort and technological convenience within the home.

Liu's (2019) analysis of modernization's impact on Chinese family life highlights how consumerism increasingly shapes individual and familial behaviours. While Liu's work provides a broad overview, this study delves into the specifics of how "Coming of Age" influences the adoption of air conditioning within households. The transition to adulthood in China is not merely a symbolic change; it is accompanied by real shifts in material expectations and consumption habits. This perspective aligns with Liu's observations on consumerism but adds depth by illustrating how deeply embedded cultural practices like "Coming of Age" drive specific consumption

behaviours, such as the adoption of air conditioning, as part of the broader modernization process.

A comparison between Chinese and Western coming-of-age practices reveals significant cultural differences in how these transitions influence household consumption. Western research, such as that by Nelson and Shavitt (2002) and Arnett (2000), often describes the transition to adulthood as a period characterized by increased personal spending on lifestyle goods, including entertainment and fashion. In these contexts, household technology use, including air conditioning, is typically driven by personal preferences and financial capability rather than by cultural rites of passage. In contrast, the Chinese emphasis on "Coming of Age" as a collective family milestone means that decisions around air conditioning usage are closely tied to the individual's new status as an adult within the family. This difference highlights the collectivist orientation in Chinese culture, where personal milestones are celebrated with investments that benefit the entire household, reflecting broader family-oriented values.

My study also uncovers the role of air conditioning in the context of marriage, another significant life milestone closely tied to "Coming of Age." Traditional studies of Chinese marriage customs, such as those by Davis and Harrell (1993), have focused on the symbolic and social aspects of these rituals. However, recent research, including that of Scharff (2020) and Lin and Lin (2020), points to the growing importance of modern technologies like air conditioning in contemporary marriage practices. Our findings expand on this by showing how air conditioning has become a critical element in the material preparations for marriage, often included as part of the dowry or as an essential component of the marital home. This trend underscores the evolving nature of Chinese household consumption, where comfort and modern amenities are increasingly prioritized as symbols of a successful marriage and a stable household.

The findings also challenge traditional narratives of frugality and resource conservation that have been long associated with Chinese culture, as noted by Min et al. (2022). While these values remain influential, our research indicates that the practice of "Coming of Age" can lead to increased consumption, particularly among young adults who are establishing their own households. As they gain independence,

these young adults often push the boundaries of traditional frugality, embracing higher comfort standards exemplified by the more frequent use of air conditioning. This shift might not simply suggest a broader cultural transformation but could also reflect a re-prioritization within traditional values. Education, familial responsibility, and personal achievement may now be valued more highly than frugality, with these elements driving decisions that embrace modern conveniences like air conditioning. As young adults establish their own households, their choices represent a nuanced negotiation of these long-held values, where adherence to educational and familial obligations justifies a shift towards higher consumption and comfort standards.

In summary, this study's examination of "Coming of Age" offers a nuanced understanding of how this cultural rite intersects with modern consumption practices, particularly in relation to household technologies like air conditioning. By linking the transition to adulthood with shifts in cooling practices, the research illuminates how these rites of passage are not just symbolic but actively shape domestic life and family dynamics. The findings show that the growing independence and responsibility associated with adulthood can lead to a re-negotiation of traditional values, where modern conveniences are embraced as a means of fulfilling familial and personal obligations. These insights extend existing literature by showing that, while coming-of-age rituals are universally significant, their impact on household consumption patterns varies across cultural contexts, particularly in societies undergoing rapid modernization like China.

# Chapter 10: Conclusion

## 10.1 Introduction

This concluding chapter synthesizes the key insights of this research, focusing on its theoretical contributions, practical implications, and future research directions. The study examines intergenerational dynamics in air conditioning (AC) use within urban Chinese households, exploring how cultural values, material dependencies, and generational negotiations shape energy practices. By extending social practice theory, it emphasizes the critical role of interactions in mediating these dynamics. The chapter begins by summarizing key findings, highlighting generational differences in cooling practices and the cultural norms shaping them. It then discusses sustainability implications and policy suggestions, addressing Research Question 4 by examining the tension between modern convenience and environmental responsibility.

Theoretical contributions follow, emphasizing the integration of interactions into social practice theory to better understand multi-generational households. The chapter concludes by identifying research limitations and proposing directions for future exploration, particularly in non-domestic settings and the intersection of mobility and cooling.

## 10.2 Summary of Key Findings

The synthesis of this study's findings highlights the profound role of cultural values, particularly those rooted in Confucianism, in shaping energy consumption practices within Chinese families. Unlike many Western contexts, where individualism and personal autonomy often dominate, Confucian principles serve as a guiding framework for social behaviour and family dynamics in China. While not explicitly practiced as a religion, Confucianism deeply influences intergenerational relationships and decision-making processes, including resource management and everyday practices such as air conditioning use. These values manifest through both material and symbolic dimensions of practice, as well as through the dynamic interactions that mediate intergenerational negotiations.

One key finding of the research is the pronounced cultural differences and tensions between generations in their approach to energy use, particularly air conditioning

practices. These differences are closely tied to the socio-economic contexts in which each generation was raised, reflecting China's dramatic transitions over the past century. Older generations, shaped by periods of economic scarcity and collective survival, approach air conditioning with frugality and restraint. For this cohort, particularly those who lived through the planned economy era of the 1950s to 1970s, air conditioning remains a luxury to be sparingly used, reflecting a deeply ingrained sufficiency mindset. Their practices are embedded in material conditions of the past and resonate with Confucian ideals of thrift and moderation, which were essential for survival during times of hardship.

In contrast, younger generations, who have grown up during China's era of economic reform and technological advancement, perceive air conditioning as a necessary tool for comfort, productivity, and modern living. For them, air conditioning signifies efficiency, individual well-being, and the ability to thrive in fast-paced urban environments. These practices are shaped by the material availability of modern cooling technologies and a reconfigured cultural narrative that prioritizes convenience and personal success. As explored in Chapter 5, this generational divide reflects a broader tension between traditional values of collective well-being and sufficiency and contemporary norms emphasizing individual comfort and efficiency.

The dynamics of negotiation within these families are deeply influenced by Confucianism's emphasis on hierarchy and collective responsibility. Family interactions are not only structured by material and symbolic elements of practice but also mediated by relational expectations that are distinctly Confucian. Younger family members often defer to their elders out of respect and duty, embodying the principle of filial piety. This dynamic reinforces a hierarchical structure where elder preferences, often aligned with traditional sufficiency-oriented practices, carry significant weight in household decisions. However, Confucian values also impose reciprocal obligations on elders to guide and support younger family members, fostering a bidirectional flow of influence. For instance, younger generations advocating for increased air conditioning use for comfort or productivity often do so within the bounds of respectful dialogue, aiming to align their modern preferences with familial harmony.

These interactions illustrate the profound influence of Confucian norms on intergenerational negotiations, demonstrating how cultural values permeate and shape the dynamics of practice adaptation within Chinese families. Drawing from Halkier's interactional dimensions, these findings reveal how Confucian ideals such as hierarchy (尊卑有序), filial piety (父慈子孝), the pursuit of excellence (鱼跃龙门), and rites of passage (成人之礼) influence the processes of coordination, intersection, hybridity, and normative accountability within household cooling practices. Coordination is deeply embedded in the Confucian emphasis on maintaining familial harmony and respect for elders. For instance, younger family members often accommodate elder preferences for more frugal cooling practices, aligning their behaviours with the broader family expectation of deference and restraint. Conversely, elder family members, guided by their responsibility to care for younger generations, may adapt to younger preferences for comfort, particularly when framed in terms of productivity or academic success—a value linked to the cultural aspiration of achieving excellence (鱼跃龙门).

Intersection highlights how these cooling practices are integrated into broader family routines, with cooling adjustments often aligned to support significant family milestones or activities. For example, during periods of intense study or preparation for exams—a key marker of family success—the family may collectively prioritize the use of air conditioning, reflecting the Confucian commitment to enabling individual achievement for the collective good. Similarly, moments of familial gathering or rites of passage (成人之礼) may serve as occasions where cooling practices are adjusted to reinforce collective well-being, blending modern technology with traditional values of hospitality and respect. Hybridity emerges as younger generations reflexively negotiate traditional values with their own needs for convenience and comfort. While elders might emphasize thrift as a virtue, younger members frame their preferences as a means to fulfil their duties and responsibilities, such as maintaining academic performance or professional productivity. This negotiation reflects a blending of sufficiency-oriented values with efficiency-driven practices, creating a dynamic synthesis that is uniquely contextualized within the family's cultural and material environment. Normative accountability, a key dimension of Confucian ethics, underpins these negotiations by anchoring individual

and collective actions within a shared moral framework. Younger generations justify their use of air conditioning by appealing to ideals such as family success or academic achievement, which resonate with the elder generation's values. Similarly, elders use their lived experiences and authority to remind younger members of the importance of restraint and resourcefulness, ensuring that practices remain culturally anchored. This reciprocity, while rooted in Confucian values, allows for flexibility and adaptation as generational differences are reconciled through continuous interaction.

These findings enrich the application of social practice theory by emphasizing how Confucian norms actively mediate intergenerational negotiations, shaping the evolution of practices in relational and cultural terms. By illustrating how values like hierarchy, filial piety, and collective responsibility influence the dynamics of coordination, intersection, hybridity, and normative accountability, this study expands the theoretical understanding of how cultural narratives are not merely constraints but dynamic forces that guide the ongoing reconfiguration of practices. This nuanced perspective demonstrates that cooling practices within Chinese families are not static or merely functional but are deeply embedded in social interactions that reflect and adapt to broader cultural, material, and relational contexts.

## 10.3 Sustainability Implications and Policy Suggestions

### 10.3.1 Implications of AC Normalization for Sustainability

The normalization of air conditioning (AC) within urban Chinese households represents a profound socio-material transformation with significant implications for sustainability. Drawing on the findings of this study, it is clear that AC has transitioned from a symbol of luxury to an essential component of daily life, particularly among younger generations in urban contexts like Shenzhen. This shift reflects broader changes in cultural aspirations, material infrastructures, and socio-economic contexts, where modernity, comfort, and socio-economic status are deeply intertwined. However, the normalization of AC, while enhancing comfort and well-being, raises pressing concerns about energy consumption, environmental sustainability, and social equity, challenging the trajectory of sustainable urban living in contemporary China.

At the heart of this normalization lies the dual phenomenon of material and social lock-in, as articulated by Sahakian (2018) and Shove et al. (2012). Material lock-in is evident in Shenzhen's architectural trends, characterized by high-rise, sealed buildings that necessitate mechanical cooling. These material environments constrain alternative practices such as natural ventilation, embedding reliance on AC into the daily routines of urban residents. Social lock-in reinforces this dependency, as AC becomes a symbol of modernity and a marker of upward mobility, particularly for younger generations. Participants in this study consistently equated AC with productivity, health, and familial well-being, further embedding it into their cultural expectations. This confluence of material and social factors creates a feedback loop where AC usage is normalized, entrenched, and increasingly perceived as indispensable, even as its environmental and social costs escalate.

The implications of this trend are profound. The continued normalization of AC contributes to a self-reinforcing cycle of energy-intensive living, exacerbating climate change. Rising global temperatures drive increased demand for cooling, which in turn escalates energy consumption and greenhouse gas emissions. This cycle risks locking urban societies into high-carbon lifestyles, undermining global efforts toward carbon neutrality. For China, which has committed to peak carbon emissions by 2030 and achieving carbon neutrality by 2060, the rapid growth of cooling demand presents a direct challenge to these goals. As Shove et al. (2012) argue, such lock-ins constrain alternative pathways and institutionalize unsustainable practices, making transitions to low-energy lifestyles increasingly difficult.

Moreover, the cultural normalization of AC reveals a deeper tension between traditional values and modern aspirations. Younger generations, influenced by evolving notions of filial piety, now frame AC use as an essential component of caregiving, prioritizing the comfort and well-being of family members. This reinterpretation aligns with past scholars' findings on the adaptation of Confucian values in contemporary contexts. However, this shift risks marginalizing traditional practices rooted in frugality and ecological harmony, as older generations' resource-conscious cooling methods are supplanted by energy-intensive alternatives. The findings of this study suggest that the cultural and material framing of AC as essential for modern living has marginalized sustainable practices, reinforcing patterns of consumption that are challenging to disrupt.



Looking to the future, the unchecked normalization of AC may exacerbate socio-economic inequities, creating a "thermal divide" where access to cooling becomes a marker of privilege. As Sovacool and Dworkin (2015) highlight, energy access disparities often mirror broader inequalities, with marginalized populations disproportionately affected by rising costs and limited access. In Shenzhen, this dynamic risks deepening urban inequities, as affluent households enjoy uninterrupted comfort while economically disadvantaged groups face affordability challenges. This divide is particularly concerning in the context of climate change, where extreme heat events are projected to become more frequent and severe, disproportionately affecting vulnerable populations.

These challenges also highlight clear opportunities for targeted interventions, grounded in the evidence from this study. Urban planning should prioritize passive cooling designs and urban greening, which were shown in this study to play an integral role in shaping cooling practices. Older participants recalled the effectiveness of open layouts, shaded courtyards, and natural ventilation in reducing the need for mechanical cooling. Modern architectural designs could incorporate these features alongside green roofs and tree-lined streets to reduce urban heat, offering viable alternatives to reliance on air conditioning (AC). These strategies not only reduce energy demand but also draw on culturally resonant practices, as participants expressed a strong appreciation for the harmony between natural elements and living environments.

Policies that promote energy-efficient technologies should address more than the proliferation of AC units; they must also incentivize hybrid approaches that combine mechanical cooling with passive methods. For instance, subsidies for retrofitting older buildings with energy-efficient materials, coupled with incentives for hybrid systems that integrate natural ventilation, could reduce dependence on energy-intensive solutions. The study provides examples of participants balancing comfort with conservation, demonstrating that such policies could be effective when framed as both practical and culturally meaningful.

Educational campaigns should focus on reframing cooling as a collective responsibility tied to resourcefulness and environmental stewardship. The study reveals that traditional cooling practices were often framed in terms of community

well-being and shared responsibility, values still embedded in the cultural fabric of older generations. Campaigns could emphasize these themes while promoting sustainable practices, such as using fans or improving natural ventilation, as contemporary and innovative solutions. Highlighting the cultural and economic benefits of reducing energy-intensive practices could help shift norms, particularly among younger generations who currently view AC as indispensable.

Community-based solutions also offer practical pathways to reducing individual reliance on AC. The study underscores the historical importance of shared cooling spaces, such as banyan trees and communal courtyards, in providing relief from heat while fostering social connections. Modern adaptations of these spaces—such as shaded urban parks equipped with cooling infrastructure or community cooling centres—could revive the communal ethos while addressing contemporary cooling needs. These spaces could be particularly valuable for vulnerable populations, providing equitable access to thermal comfort and reducing disparities exacerbated by energy costs.

In conclusion, effective interventions must address both the material and cultural dimensions of cooling practices, drawing from the empirical evidence presented in this study. By integrating passive cooling designs, incentivizing hybrid approaches, promoting cultural shifts, and reinvigorating communal practices, these strategies can reshape the trajectory of AC normalization. Practical, targeted measures grounded in existing practices and cultural values provide a viable pathway toward a sustainable cooling future while preserving aspirations for comfort and modernity.

### 10.3.2 Efficiency vs. Sufficiency

The intergenerational dynamics of cooling practices in urban Chinese households illuminate the broader sustainability debate between efficiency and sufficiency. Efficiency, celebrated for its technological ingenuity, emphasizes achieving more with less, while sufficiency focuses on moderation and limiting consumption to what is necessary. In this study, these concepts find embodiment in the generational contrasts: younger individuals' reliance on technological solutions aligns with efficiency, whereas older generations' restrained and resource-conscious practices reflect sufficiency. The divergence arises not only from socio-economic changes but also

from the cultural underpinnings of Confucian values, which champion moderation (中庸), frugality (节俭), and harmony with nature (天人合一).

Older generations, shaped by historical scarcity and cultural ideals, exhibit sufficiency-oriented behaviours that prioritize minimal consumption. Their preference for traditional cooling methods—like natural ventilation, bamboo mats, and handheld fans—is rooted in their lived experiences and moral imperatives of avoiding wastefulness. These practices were not merely practical but symbolic of resilience and respect for natural rhythms, reflecting a harmony that aligns with Confucian teachings. For instance, one elderly participant’s description of enduring summer heat without air conditioning highlighted not deprivation but moral discipline. In contrast, younger generations prioritize efficiency, leveraging advanced air conditioning technologies to optimize comfort, productivity, and energy use. However, this reliance often normalizes higher levels of consumption, as cooling becomes a baseline expectation rather than an occasional necessity.

The implications of these divergent practices are profound, particularly for sustainability. Sufficiency, as embodied by older generations, offers a low-carbon model of living that directly addresses overconsumption. However, the marginalization of these practices in urban environments—dominated by high-rise, sealed architectural designs—raises concerns about the disappearance of resource-conscious values. Efficiency, while technologically promising, risks locking societies into energy-intensive patterns, as higher comfort thresholds fuel increasing energy demands. This dynamic underscores the limitations of efficiency as a standalone strategy and highlights the importance of integrating sufficiency principles into modern practices.

To address these challenges, interventions must strategically harness the deeply rooted Confucian cultural values observed in this study, adapting them to the practical realities of modern China to align cooling practices with sustainability goals.

Hierarchical respect (尊卑有序) offers a natural entry point for promoting sufficiency-oriented behaviours. In the Chinese context, deference to elders and authority figures is not only a family tradition but also a broader societal norm. Campaigns led by respected local leaders, policymakers, or even popular cultural figures advocating for moderation in energy use could find widespread acceptance.

For instance, municipal governments could partner with influential community leaders to create narratives around frugality as a modern virtue, connecting these messages with historical and cultural legacies of resilience during hardship.

Benevolence and care (父慈子孝) further provides a powerful framework for interventions, especially given the observed emphasis on younger generations' desire to care for their aging parents through technology. Reframing sufficiency as an act of intergenerational care—preserving resources not only for their parents' comfort but also for the future well-being of their children—could resonate strongly. Practical examples include urban policies that promote community cooling centres equipped with energy-efficient systems and shaded communal spaces, allowing families to share resources while fostering a sense of collective responsibility. Such initiatives could align with the existing cultural emphasis on familial care and societal harmony, blending modern solutions with traditional values.

The principle of balance and harmony (中庸), which underpins older generations' restrained cooling practices, can inspire systemic interventions emphasizing equilibrium between technological progress and environmental sustainability. Hybrid cooling approaches—integrating passive cooling designs such as natural ventilation with efficient AC systems—could be incentivized through policies that reward developers for incorporating sustainable features into high-rise apartment projects. In densely urbanized regions like Shenzhen, where architectural designs often lock residents into mechanical cooling, such hybrid systems could reduce dependence on energy-intensive practices while maintaining thermal comfort. Cities could pioneer “Balanced Cooling Neighbourhoods,” offering tax breaks or subsidies to projects that prioritize these features, making them economically viable for developers and appealing to residents.

Confucian respect for rituals and collective norms (禘祫) also holds untapped potential for reshaping societal behaviours. This study highlights how family rituals around cooling reflect broader cultural practices. Extending this idea, local governments could introduce community-level initiatives such as seasonal “Cooling Moderation Days,” where neighbourhoods engage in collective cooling efforts through reduced energy use, public education on traditional cooling methods, and the celebration of sustainable practices. For instance, communities might showcase traditional bamboo

fans or communal shaded spaces, reframing them as culturally rich and environmentally forward. These activities, tied to cultural pride, could normalize sufficiency-oriented behaviours while fostering social cohesion.

Finally, the Confucian ideal of education and moral cultivation presents a powerful tool for long-term shifts in societal attitudes. Schools and universities could incorporate modules on sustainable living, framing sufficiency not as an outdated constraint but as a forward-thinking approach rooted in cultural wisdom. Practical applications could include programs encouraging students to engage with older family members to document traditional cooling methods, fostering intergenerational understanding and respect. Additionally, urban community centres could serve as hubs for workshops on hybrid cooling solutions, led by a combination of traditional practitioners and modern sustainability experts, thus blending cultural values with practical applications.

These interventions, deeply informed by China's cultural and socio-economic realities, offer a roadmap for integrating sufficiency into contemporary cooling practices. By leveraging Confucian principles alongside practical, community-focused policies, China can address the growing environmental challenges of air conditioning normalization. This culturally resonant approach not only aligns with the aspirations of a modernizing society but also preserves and adapts its rich heritage, ensuring a sustainable and harmonious future.

## 10.4 Theoretical Contributions

This study advances the theoretical framework of social practice theory by exploring intergenerational dynamics in air conditioning (AC) use within Chinese households, emphasizing the interplay of cultural values, material conditions, and social interactions. By integrating insights from Halkier (2020) and Welch et al. (2020), the research extends traditional applications of social practice theory, which primarily focus on the three elements of materials, meanings, and competencies, to include the critical role of interactions as a dynamic and relational component. This focus on interactions highlights how generational negotiations around cooling practices are not merely individual behaviours but are deeply embedded in cultural narratives and

familial structures. Drawing on Halkier's dimensions of coordination, intersection, hybridity, and normative accountability, the study demonstrates how shared routines, cultural contestations, and material dependencies are actively negotiated within families. For instance, coordination explains how generational differences in cooling preferences are managed to maintain household harmony, while hybridity illustrates how traditional values of thrift are blended with younger generations' pursuit of comfort. These relational processes show that cultural values are not static but are actively reinterpreted and adapted in response to material and social changes.

Welch et al. (2020)'s concept of "culture in practice" further enriches this perspective by framing cultural values as embedded within and expressed through everyday actions rather than external influences. In the context of Chinese households, Confucian principles such as filial piety, thrift, and the prioritization of family cohesion serve as guiding forces that shape intergenerational cooling practices. These cultural imperatives manifest in diverse ways, such as parents prioritizing their children's comfort during study sessions, even at the expense of their own preferences, reflecting the moral obligation to support the younger generation's success. At the same time, younger family members, while embracing modern conveniences, continue to navigate these practices within the framework of respect for elders and familial obligations. This dynamic interplay of tradition and modernity demonstrates how cultural values evolve through practice, creating a nuanced understanding of how intergenerational dynamics influence energy behaviours.

Methodologically, this study contributes to the application of social practice theory by employing a phased research design that categorizes participants into generational cohorts and combines semi-structured interviews with field observations. This approach enables a comprehensive exploration of how material, cultural, and relational elements intersect to shape AC practices. Observational data, such as the spatial arrangement of cooling devices and family interactions around their use, provide concrete insights into the lived realities of cooling practices, complementing the narrative richness of interview data. By capturing both the explicit and implicit aspects of family dynamics, this methodological approach addresses the limitations of purely quantitative or interview-based studies, offering a multi-dimensional understanding of energy practices.

Furthermore, this research situates its findings within the broader context of urbanization and sustainability transitions, highlighting the theoretical and practical implications of intergenerational negotiations for energy consumption. In rapidly urbanizing cities like Shenzhen, where traditional cultural values coexist with modern technological advancements, cooling practices serve as a microcosm of broader societal transformations. By showing how cultural norms, material conditions, and generational interactions influence energy behaviours, the study underscores the importance of incorporating relational and cultural dimensions into sustainability research. This enriched framework provides valuable insights for policymakers seeking to design culturally resonant interventions that promote sustainable energy practices. For example, leveraging Confucian principles to encourage intergenerational dialogue on resource conservation offers a pathway to align cultural values with environmental goals.

In summary, this study contributes to the theoretical advancement of social practice theory by emphasizing the relational and cultural dimensions of intergenerational dynamics in energy practices. By integrating Halkier's interactional framework (Halkier, 2020) and Welch's cultural lens (Welch et al. 2020), it offers a comprehensive understanding of how cultural values, material conditions, and social interactions converge to shape and sustain everyday practices. These contributions not only deepen the theoretical scope of social practice theory but also provide practical insights for addressing the challenges of sustainability transitions in culturally diverse and rapidly changing contexts.

## 10.5 Limitations

During the research process, I encountered several unforeseen challenges that have implications for both the findings and future research in this area.

First limitation is the challenge of building trust with participants, particularly when discussing culturally sensitive topics like family dynamics. In the Chinese context, the norm of "家丑不外扬" (family shame should not be spread outside) often discourages open discussion of conflicts, leading some participants to downplay generational tensions. To address this, I refined my approach by using open-ended questions and

creating a relaxed, neutral interview environment. Gradually transitioning from general to specific questions helped participants feel more comfortable and to build trust. Despite these efforts, some reluctance persisted, underscoring the need for culturally sensitive methods in qualitative research and the importance of adapting approaches to local norms.

Besides, there were communication challenges with the elderly. I found that using dialects, particularly with older respondents, was more effective in obtaining information and building rapport. However, my proficiency in the dialects commonly spoken by the elderly, such as Cantonese and Chaozhou dialects, was limited, leading to communication barriers that affected the depth and accuracy of data collection. Future research teams should enhance their cultural and language capabilities by training in local dialects or hiring experienced local researchers to overcome these barriers. Additionally, designing interview questions using clear, everyday language rather than academic jargon can make it easier for elderly participants to understand and respond, thereby improving the quality of the data.

In terms of sample representativeness, the study's focus on urban areas may have limited its ability to capture the full spectrum of cooling and air conditioning practices and family dynamics across different socioeconomic backgrounds, particularly in rural areas. While the urban focus provided a deep and nuanced understanding of these practices in a rapidly urbanizing context, it may not fully represent the actual situation of families in more diverse settings. There are significant differences in resource usage, family structure, and cultural habits between urban and rural areas, which were not fully reflected in my study. However, considering that China continues to urbanize rapidly, this urban focus remains relevant to understanding the practices in a significant portion of the population. For future researchers, I recommend conducting complementary studies that focus on rural locations and lower-income families. Such research could provide a valuable comparative perspective, highlighting how air conditioning use and family dynamics differ across socioeconomic and geographic divides. By enabling direct comparisons with urban studies like mine, future research could offer a more comprehensive understanding of these practices across the broader population, ultimately contributing to more tailored and effective policy recommendations.



Finally, consider conducting multiple interviews at different times during the summer to observe how family dynamics and energy use behaviours change with the seasons. This approach can provide deeper insights and help understand short-term family changes. For instance, it could be valuable to interview families shortly after they have moved back in together, followed by additional interviews months later, as they settle into new routines. Additionally, conducting interviews at the beginning of summer, mid-summer, and the end of summer would allow researchers to capture families' evolving experiences and adjustments with air conditioner use during different phases of the season. This method can reveal short-term trends and usage patterns, offering more detailed and specific data. By following these approaches, researchers could gain a better understanding of how families' coping strategies and behaviours shift over time, providing practical insights for policy development and application.

## 10.6 Future Research Directions

Building on my research, future researchers can further explore the relationship between air conditioner use and family dynamics from the following perspectives:

- **Expanding the Scope of Cultural Norms and Energy Use:** While this study has focused on familial settings, future research could investigate how cultural norms around energy use manifest in workplaces, schools, and other communal environments. For example, in offices, the interplay between hierarchical respect (e.g., deference to managers' preferences) and cooling practices could reveal insights into how organizational culture shapes energy consumption. Similarly, in schools, cooling practices might reflect institutional norms and resource constraints, potentially shaping students' perceptions and habits regarding energy use. Exploring these settings could uncover parallels and contrasts with familial dynamics, offering a more comprehensive understanding of how cultural norms influence energy practices across different spheres of life.
- **Cooling and Mobility:** Another avenue for exploration lies in the relationship between cooling practices and mobility. In urban settings like Shenzhen,

mobility and cooling intersect in various forms, such as air-conditioned public transport, private vehicles, and shared mobility services. Research could examine how individuals make decisions about cooling while in transit, the cultural and environmental implications of these practices, and how they align or conflict with stationary cooling habits. For example, understanding how commuters prioritize comfort versus sustainability while using air-conditioned trains or buses could provide valuable insights for urban transport planning. This line of inquiry could also explore cooling solutions designed for mobility, such as personal cooling devices or energy-efficient transportation systems, linking individual choices to broader urban energy transitions.

- **Intergenerational Transmission of Energy Practices:** Future studies could explore how generational shifts in cooling practices influence intergenerational learning in non-domestic settings. For instance, workplaces or schools where younger generations interact with older colleagues or educators could serve as sites for negotiating cooling norms and energy-saving behaviours. Observing how millennials or Gen Z professionals and students adapt, challenge, or align with institutional cooling practices could reveal new dynamics in the intergenerational transfer of energy norms. This approach would extend the current study's focus on familial negotiations to other intergenerational interactions, highlighting the broader social mechanisms that sustain or disrupt energy practices.
- **Millennials as Change Agents:** As millennials increasingly take on leadership roles in families, organizations, and communities, their influence on cooling practices warrants closer examination. Future research could investigate how millennial parents, educators, and managers promote or reshape norms of energy efficiency and sufficiency in their respective spheres. For example, millennial parents might instil energy-saving habits in their children, while millennial managers could implement workplace policies that emphasize sustainability. Understanding how this generational cohort uses their environmental awareness and technological skills to influence cooling practices across different domains could provide actionable insights for promoting sustainable energy transitions.

- **Outdoor Cooling and Urban Design:** Cooling practices outside the home represent another important area for future exploration. This includes examining how people navigate outdoor heat in public spaces and how urban design influences these practices. Research could explore interventions such as shaded walkways, cooling stations, and urban greening initiatives that provide relief in outdoor environments. Additionally, studies could analyse cultural differences in outdoor cooling practices, such as the use of traditional cooling methods (e.g., parasols or hand fans) alongside modern technologies. Linking these findings to mobility patterns and urban infrastructure could offer holistic solutions for sustainable cooling in public and semi-public spaces.

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# Appendix

## Appendix 1. Interview Schedule

### Interview Schedule

#### **Biographical data**

- How much time do you live with your family?
- Can you introduce me your family?
- Who is paying the bills? How the family cost shared?
- Have you always lived in Shenzhen?
  - If so, where?
  - If not, when did you move?
- Have you always lived in the same apartment?
  - If so, why never move?
  - If no, could you tell me more about the story your move.....  
*Prompt: previous home (house/flat, old/new, type of cooling), why move here, who moved here first, who joined then, whose flat is it (effectively)?*

#### **Past Summer Cooling**

##### Old Social Practices

- How did residents deal with heat in everyday life when you were a child?  
*Prompt: Drinking, Clothing, Fans, folding fan, enjoy the cool (air) under the tree, enjoy the cool (air) in the alley*
- Did different people have different approaches? What were they? Why? Did your parents let you do like these?
- How did this vary between different spaces? (home, work, socialising, shopping)

##### Old Self-Family Practices at home in Summer

- Have you always been living in your current apartment?
    - If not, what was your previous home like?
    - If yes, what was your home like in your childhood?
  - Did you have different ways of dealing with heat then?
    - If didn't, why no change happen?
    - If yes, what were they?
- Prompt: move around the home, use anything, wear anything, do anything at certain times*

- What was the design of the dwelling and did that help? Did you have outside space?
- How did you manage your home for the heat? Did you do specific things?

*Prompt: specific actions on flooring, window, external/internal shading, ground, roof, courtyard*

- Are you still doing like these? Why/Why not?
- Did your family need to negotiate for how to cool? Who, if anyone, would you say is most in charge of things? Did you discuss it much?
- How do you feel, looking back, about these ways of doing things? Do you ever think about them? When do you?

### First experiences of A/C

***As it is possible that interviewees between 18–23 have been using AC since they can remember, we therefore consider two different sorts of questions:***

- ☐ Age between 18-23, and has been using AC since they can remember:  
Did you think about air conditioning when you are child? Tell me the first time you thought about air conditioning

*Prompt: When you think about it? In which situation? Anything happened at that time?*

- ☐ Age between 24-30:
  - Now can you tell me of your first encounters with A/C?
  - In what environments did you first encounter it (School? Homes?)
  - Can you remember when that was?
  - What kind of air-conditioner was it, do you know?
  - How did A/C end up there? Who decided to put it in?
  - To what extent was it welcomed? Talked about? In what ways?
  - Did particular groups particularly like it? Any express dislikes at the time?
  - How did people use it at first (at specific times only, for example)?
  - Were there ever any conflicts around its use? What were they?

## **Changes Made for Current home**

### Current home

- If always live there, can you think back to what your home's summer was like in your childhood?  
If not, tell me about the first summers for you in this flat. Could you tell me about each room?

*Prompts: difficulties to cool the room, can't totally open window, corner room, no opposite windows, orientation (morning/afternoon sunshine)*

- How does your home feel when it's naturally ventilated? Why do you think this is?

*Prompt: Temperature (hot, uncomfortable, humid), Air (fresh, comfortable, stuffy, damp, stale, cooking smells lingering, unpleasant smells from outside or inside);  
Why: weather, building, apartment design, surrounding environment*

**WE'VE BEEN TALKING FOR 35 MINUTES. I THINK IT'S TIME TO TAKE A BREAK...**

**[REST FOR MINUTES]**

### Changes

- Any changes/adjustments were made for your home to deal with heat? Who decided? How did your family implement them?

*Prompt: design, A/C and other appliances, ventilation, plants, shading*

- Why to install AC in your home? Have there been times when some people seemed unhappy/happy about this?
- For other changes/modifications in your home, have there been times when some people seemed unhappy/happy about this?

*Prompt: fans, shadings, ventilations (windows, etc.), plants, flooring*

### New Practices

- What alternative ways do you keep cool in your current home? How do you feel about them? How about your family members? Tell me more.....

*Prompt: fan, clothing, mat (fabric), shading, ventilation, drinking*

- Do you think you know how to use AC in an energy-efficient way and why?
- Can you remember receiving any advice or instructions about using AC, and about how to save AC energy use in your home?

*Prompt: when, what advice or instructions, whether able to follow*

- How does your home environment feel when it is cooled by AC?  
How about your family members/guests? Do you think the idea of a welcoming environment comes into how you cool the place? Why do you think so?

*Prompt: Temperature ((un) comfortable, cold/hot), Air (smells, unhealthy)*

- (Optional) If using Fans, how does your home generally feel when using fans? Why do you think this is? How about your family members?

## Everyday Cooling and Living together

### Preferences between different cooling practices?

- Between the different methods of keeping yourself and your home cool, Do you always prefer to use AC? Does that vary with situations (weather, day/night...)? How about your other family members? Why different?

Do you prefer to open windows? How about your other family members? Why different?

Do you prefer to use summer clothing? How about your other family members? Why different?

Do you prefer to use fans? How about your other family members? Why different?

Do you ever talk about this with your family members? In what ways? Tell me more....

Do you ever talk with your generational peers about how older people like it compared to you? Do you think they have different preferences? How do you know?

### Your bedroom

- How much of your time is spent in air-conditioned spaces? Where?
- When are you usually in your bedroom? How do you cool and ventilate your bedroom?
- Can you tell me about how the AC are used by you (and your wife/husband) in the bedroom? Please tell me more.....

*Prompt: seasons, times (daytime, sleep time), temperature setting, ventilation, turn on AC and open window*

- Why you use AC in this way to keep cool? How your wife/husband and parents respond to that? Will they intervene or judge you? What might they say? Do they notice?

*Prompt: Comfort, Convenience, Cost, Control*

- How do you think about that? Ever discussed that?
- How did those discussions go? Ever tried different ways of doing it? Do you think he/she is happy with that arrangement? Who is more or less happy about it? Why?
- Do your parents do different things in their bedrooms?

### Parents' bedroom

- How much of their time is spent in air-conditioned spaces? Where?
- When are your parents usually in their bedroom? How did they cool and ventilate their bedroom(s)?
- Can you tell me about how the AC are used in their bedroom? Please tell me more.....



- Who, if anyone, would you say is most in charge of the temperature in the room?
- Was there any debate about his/her decisions? How did the other one adapt to that situation?

*Prompt: debate on cooling approaches, AC settings, somebody use AC and others feel cold*

- Do cooling decisions ever cause family arguments/tension?
- How did those discussions go? Ever tried different ways of doing it? Do you think he/she is happy with that arrangement? Who is more or less happy about it? Why?
- Why do you think they do differently to you (if they do)? Do you think they are typical of older people / people of that generation in that regard?

### Reception Room

- Who is usually in the reception room? When will others be there?
- How did he/she cool and ventilate when study/stay there?
- about you and others?
- Can you tell me about how the AC are used in the reception room? Please tell me more.....
- Have you ever done differently in the past? How do that go? How did you come to use it in this way? How has reception room cooling changed over your life?
- Are there situations you and others need to stay with he/she there? Who, if anyone, would you say is most in charge of the temperature in the room?
- Was there any debate about his/her decisions? How did you adapt to that situation? How about others?
- Do cooling decisions ever cause family arguments/tension?
- How did those discussions go? Ever tried different ways of doing it? Do you think he/she is happy with that arrangement? Who is more or less happy about it? Why?

[If talked about other areas occur negotiations, refer to the end]

### **Reasons Behind the Negotiations**

- When did you realize you and your parents had different views on cooling? How did you handle it then?
- Do you still feel the need to argue about cooling decisions with your parents? If not, when did that change?
- Was there ever a moment when you noticed family members starting to agree more on cooling practices? What do you think led to that shift?
- Have you ever changed how you cool your home because of a family discussion? What led to that?
- When you face situations now where your parents used to remind you or argue with you, how do they react these days? What do you think has changed in their approach? Why do you think this happened?
- Do you think disagreements about cooling are about more than just staying

- comfortable? What else might be involved?
- Have your parents' views on cooling become more modern or flexible over time? Why do you think that is?
- Do you think the negotiations in Chinese families is different from other countries? Why?

**Thank you!**

### **[Other Areas Possibly Occur Negotiations]**

#### *Study Room*

- *Who is usually using the study room? When will others be there?*
- *How did he/she cool and ventilate when study/stay there? How about you and others?*
- *If have, can you tell me about how the AC are used in the study room? Please tell me more.....*
- *Are there situations you and others need to stay with he/she there? Who, if anyone, would you say is most in charge of the temperature in the room?*
- *Was there any debate about his/her decisions? How did you adapt to that situation? How about others?*
- *Do cooling decisions ever cause family arguments/tension?*
- *How did those discussions go? Ever tried different ways of doing it? Do you think he/she is happy with that arrangement? Who is more or less happy about it? Why?*

#### *Kitchen*

- *Who is usually using the kitchen? When will others be there?*
- *How did he/she cool and ventilate when cook/stay there? How about you and others?*
- *Did anyone have a complaint for the cooling or ventilation there? Why?*
- *Are there situations you and others need to stay with he/she there? Who, if anyone, would you say is most in charge of the temperature in the room?*
- *Was there any debate about his/her decisions? How did you adapt to that situation? How about others?*
- *Do cooling decisions ever cause family arguments/tension?*
- *How did those discussions go? Ever tried different ways of doing it? Do you think he/she is happy with that arrangement? Who is more or less happy about it? Why?*

#### *Balcony*

- *Who is usually using the kitchen? When will others be there?*
- *How did he/she cool and ventilate when stay there? How about you and others?*

- *Are there situations you and others need to stay with he/she there? Who, if anyone, would you say is most in charge of the temperature in the room?*
- *Was there any debate about his/her decisions? How did you adapt to that situation? How about others?*
- *Do cooling decisions ever cause family arguments/tension?*
- *How did those discussions go? Ever tried different ways of doing it? Do you think he/she is happy with that arrangement? Who is more or less happy about it? Why?*

### **[If talk about the future]**

*We've talked a lot about generations, as different generations grow older,*

- *Do you think the ways you/your family keep themselves cool in the summer will change?*
- *How will it? Do you think you will adopt any new living arrangements in the future and how will that go in terms of summer cooling?*
- *Do you think you are typical of how different generations deal with these matters?*
- *Do you think that different generations have different needs / approaches / ideas here? Or not?*
- *Do you think your home has to be modified/retrofitted to fulfil the need for different generation?*
- *How do you feel about these changes? Are they are good thing? Bad thing? Inevitability?*

*Prompt: bedrooms, reception room, shading, ventilation, greenery, insulation*

- *Do you think the ways which people in your neighbourhood will keep themselves cool in the summer will change? How do you imagine that playing out? Why?*
- *Do you want to replace/supplement your current AC in the near future? Why? What kinds of AC?*
- *Do you think different generations have different relationships with air conditioning? Where you got these ideas? What should be done about that?*
- *I wonder how you think the residents of Shenzhen will live in the heat in the future years? Is this something you have ever thought about before?*

*Prompt: (1) No AC+all other cooling; (2) AC+Other Cooling; (3) All AC*

## Appendix 2. Poster



# Recruitment

*If you are curious about.....*



*What's shaping our cooling?*



*Why people cool them differently*

*How can we be more low-carbon?*

## JOIN US

*Come on, Join our Survey!*



**Activity Purpose**

Understand the cooling changes in the past years  
Understand the cooling practices in households

**Reward for Interviewee**

**£30**

**Registration Way**

(1) Scan the QR code to register



(2) Get registration form by contact  
phone number: [+86 13328130217](tel:+8613328130217)

**Recruitment Requirements**

- (1) Local residents aged 18 and above
- (2) Live in self-family apartments
- (3) Family has 2-3 generations

(3) Willing and able to interview about 70 mins

**Research Sponsor**



University College London

**Research Team**

Mr. Zhang Wanhao, UCL  
Email: [wanhao.zhang.20@ucl.ac.uk](mailto:wanhao.zhang.20@ucl.ac.uk)  
Ms. Michelle Shipworth, UCL  
Email: [m.shipworth@ucl.ac.uk](mailto:m.shipworth@ucl.ac.uk)

## Appendix 3. Participant Information Sheet

LONDON'S GLOBAL UNIVERSITY



### Participant Information Sheet For Community Residents in Shenzhen

UCL Research Ethics Committee Approval ID Number: \_20599/002\_

#### YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

**Title of Study:** Understanding Household Cooling Practices in China

**Department:** UCL STEaPP

**Name and Contact Details of the Researcher(s):** Wanhao Zhang; wanhao.zhang.20@ucl.ac.uk

**Name and Contact Details of the Principal Researcher:** Ms. Michelle Shipworth;  
m.shipworth@ucl.ac.uk

**UCL Data Protection Officer Name and Contact Details:** Alex Potts; data-protection@ucl.ac.uk

#### 1. Invitation Paragraph

For my PhD project, I am investigating the local cooling practices by knowing your cooling experiences in the summer. For this research, we ask your cooperation. Before you decided it is important for you to understand why the research is being done and what participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

#### 2. What is the project's purpose?

Cooling our homes is contributing to a surge in energy demand and to climate change. Cooling demand is particularly high in areas such as Shenzhen. Understanding residents' cooling practices, and how they have changed over time, will help to make more effective policy decisions. To achieve this aim, we seek to understand the cooling practices of different generations of Shenzhen residents.

#### 3. Why have I been chosen?

Our target group is Shenzhen urban residents living in self-family apartments.

The objectives of our interview are as follows:

- Understand the different household summer cooling practices
- Understand the differences in cooling practices for different generations
- Understand how cooling practices are negotiated in households with different generations

We are looking for families with two generations of adults – parents living with their adult children. We will interview 30 parents and their adult children separately. Both the parents and the adult children need to be comfortable using internet.

We are looking for participants who have lived in their current flat for at least 2 years. Their flat should have a reception room, a kitchen, and installed air conditioners. The parents and their adult children must have separate bedrooms.

**4. Do I have to take part?**

It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. For the questionnaire, you **can withdraw** at any time without giving a reason **during the filling process**. If you decide to withdraw you will be asked what you wish to happen to the data you have provided up to that point. However, please be noted that you **cannot request for your data to be withdrawn after submission**. For the interview, you can stop and **withdraw** without giving any reason **during the interview**. However, you will **not be allowed to withdraw** your data after the **interview has finished**. If you decide to withdraw, you will be asked what you wish to happen to the data you have provided up to that point.

**5. What will happen to me if I take part?**

*There are two components to the study: a questionnaire and an interview.*

*(1) In the 5 minute questionnaire we ask demographic questions to see if your family and flat are suitable for our project. If so, we ask for your **contact details** so that we can reserve the interview time with you. If you want to be interviewed online, we also need to ask for the **characteristics of the apartment** (e.g., 2 Bedroom, 100 m2) and if possible, provide your **home's floor plan** if possible to help us understand the indoor life you describe.*

*(2) The 70-90 minute interview can be conducted in person or online via Microsoft Teams, depending on your preference. Once we confirm an appointment, we will either visit your home or send you a secure link to join the virtual meeting at the scheduled time. With your consent, the **interview will be recorded** using a recorder or the built-in recording feature of Microsoft Teams.*

**6. What are the possible disadvantages and risks of taking part?**

This study involves collecting personal information about you that has privacy risks, including your **age, sex, marital status, occupation, family income, family composition, and housing layout**. This information will be used as the basis for our participant selection and interpretation of your personal behaviour. None of the personal information collected from you will directly identify you. But if someone has enough information about the residents in your community, that information could potentially identify you. To reduce your privacy risk, we will anonymously collect your personal information, and you can withdraw during the survey and interview processes when you feel uncomfortable with the relevant questions.

In order to arrange our in-person/online interviews, we will need your contact information, which should be your Email Address/Phone Number/WeChat Number. This information will only be accessible to the data collector. As this research is a social study, one possible risk is data leakage, which could result in the identity of residents being indirectly identified. However, we have developed rigorous data management techniques to minimise the chances of this happening – see #9.

The interview is expected to last 70-90 minutes, but we expect to pause for necessary rests. You can also pause the interview and rest at any stage and stop the interview entirely if you need to.

**7. What are the possible benefits of taking part?**

When we confirm that you are the interviewee this study needs, we will contact you for the formal interview. We will pay you £30 for your interview. If you refuse to answer questions or want to withdraw from the study during the interview, you will not lose your payment. We also hope you will find the interview interesting. Finally, your participation will help researchers better advise policy-makers about energy saving interventions.

**8. What if something goes wrong?**

If you have any questions about the study, do not hesitate to contact me by email or phone (wanhao.zhang.20@ucl.ac.uk; +86 13328130217).  
If you have any complaints, you can contact Ms. Michelle Shipworth from the University College London, e-mail: m.shipworth@ucl.ac.uk. Please, write emails to Ms. Shipworth in English.  
If you have any questions about the data protection, you can contact the UCL Data Protection Officer – Alex Potts; data-protection@ucl.ac.uk  
If you feel your complaint has not been handled to your satisfaction by Ms. Michelle Shipworth, you can contact the Chair of the UCL Research Ethics Committee – ethics@ucl.ac.uk.

**9. Will my taking part in this project be kept confidential?**

*All collected files will be uploaded for processing to the same folder on a password protected, encrypted hard-drive accessible only to the data collector. After the data collection period has finished, files will be anonymised, and anonymous files will be shared with other team members via MS OneDrive, a secure online file storage system.*  
*All the information that we collect about you during the course of the research will be kept strictly confidential. You will not be able to be identified in any ensuing reports or publications.*

**10. Limits to confidentiality**

Please note that assurances on confidentiality will be strictly adhered to unless evidence of wrongdoing or potential harm is uncovered. In such cases the University may be obliged to contact relevant statutory bodies/agencies.

**11. What will happen to the results of the research project?**

Questionnaire data of participants that are not selected to interviews will be deleted immediately after the recruitment stage. Only the interviewees' information will be kept. All interview records will be transcribed into text files and the raw data will be deleted after the transcriptions are completed. After the data collection period has finished, files will be anonymised, and anonymous files will be shared with other team members via OneDrive. Only the 4 members of this student project (Data collector Wanhao Zhang, the investigators Michelle Shipworth, Arthur Petersen, and Russell Hitchings) have access. The results will be included in peer-reviewed journals and a PhD thesis. Your personal information will not be identified in any report or publication. Besides, if you are interested to receive a summary of the results, you can tick "Yes" in the corresponding item of the Consent Form.

According to the 3.1.10 of UCL records retention schedule, the research data will be kept for 10 years after the project completed.

## 12. Local Data Protection Privacy Notice

### Notice:

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk)

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice:

For participants in research studies, click [here](#)

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The categories of personal data used will be as follows:

The contact details you give us to contact you for the interview and it should be your **Email Address/Phone Number/WeChat Number**.

The categories of demographic data which is only used for research will be as follows:

- **Year of birth**
- **Sex**
- **Marital status**
- **Family Composition**

Even if someone gained access to this data, it would be very difficult for them to identify you from it. We are taking many steps to minimise the chances that someone else will gain access to your data.

The lawful basis that would be used to process your *personal data* will be a public task.

According to the 3.1.10 of UCL records retention schedule, your personal data will be kept for **10 years** after the research project completed. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this, and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at [data-protection@ucl.ac.uk](mailto:data-protection@ucl.ac.uk).

*The data this survey collected will be transmitted via OneDrive between the Wanhao Zhang (the Data Collector) and Ms. Michelle Shipworth (the Principal Investigator). No data will be shared outside the research team, or with another organisation or researcher based in another country within, or outside European Economic Area.*

## 13. Contact for further information

If you need to know further information, do not hesitate to contact the following people:

Mr. Wanhao Zhang  
Telephone: +86 13328130217  
Email Address: [wanhao.zhang.20@ucl.ac.uk](mailto:wanhao.zhang.20@ucl.ac.uk)

Ms. Michelle Shipworth  
Telephone: +44 (0) 2031085991  
Email Address: [m.shipworth@ucl.ac.uk](mailto:m.shipworth@ucl.ac.uk)

This information form is in duplicate, please keep the copy carefully.

**Thank you for reading this information sheet and for considering to take part in this research study.**



## Appendix 4. Consent Form

DEPARTMENT OF SCIENCE, TECHNOLOGY, ENGINEERING  
AND PUBLIC POLICY (UCL STEaPP)



### CONSENT FORM FOR COMMUNITY RESIDENTS IN SHENZHEN

*Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.*

**Title of Study:** Understanding Household Cooling Practices in China  
**Department:** UCL STEaPP  
**Name and Contact Details of the Researcher(s):** Wanhao Zhang;  
 wanhao.zhang.20@ucl.ac.uk  
**Name and Contact Details of the Principal Researcher:** Ms. Michelle Shipworth;  
 m.shipworth@ucl.ac.uk  
**Name and Contact Details of the UCL Data Protection Officer:** Alexandra Potts  
 a.potts@ucl.ac.uk

This study has been approved by the UCL Research Ethics Committee: Project ID number:

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

**I confirm that I understand that by ticking/initialling each box below I am consenting to this element of the study. I understand that it will be assumed that unticked/initialled boxes means that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element that I may be deemed ineligible for the study.**

	Tick Box
*I confirm that I have read and <b>understood the Information Sheet</b> for the above study. I have had an opportunity to consider the information and what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction and <b>I would like to take part</b> in the questionnaire survey and interview.	
*I consent to participate in the study. I understand that my personal information ( <i>year of birth, gender, family composition and marital status</i> ) will be used for the purposes explained to me. I understand that according to data protection legislation, "public task" will be the lawful basis for processing.	
*I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified.	
*I consent to provide researchers the <b>floor plan</b> of my home if I choose to be interviewed online to promote the discussion around my home cooling. If it can't be found, I agree to draw a plain floor plan by myself or let the researchers to draw according to my description.	
*I understand that my data gathered in this study will be <b>stored anonymously and securely</b> . It will not be possible to identify me in any publications.	
*I understand that my information may be subject to review by responsible individuals from the University for monitoring and audit purposes.	
*I consent to an audio recorded interview and understand that the recordings will be destroyed immediately following transcription.	
*I hereby confirm that I understand the inclusion criteria as detailed in the Information Sheet and explained to me by the researcher.	
*I understand that my participation in the questionnaire survey is voluntary and that I am free to withdraw at any time without giving a reason during the filling process. I understand that my participation in the interview will receive an incentive of <b>£30</b> . However, if you refuse to answer questions or want to withdraw from the study during the interview, I will not lose my payment.	
*I agree that my data, after it has been fully anonymised, can be shared with other researchers.	
*I understand that the information I have submitted will be published as a report. Would you like to receive the research results: <input type="checkbox"/> Yes <input type="checkbox"/> No	
*I understand that the data will not be made available to any commercial organisations but is solely the responsibility of the researcher(s) undertaking this study.	
*I am aware of who I should contact if I wish to lodge a complaint.	

If you agree to take part in this study, please provide your email address or phone number or WeChat number so that we can contact you to organise an interview: \_\_\_\_\_

## Appendix 5. Ethics Approval

STeAPP Local Research Ethics Committee  
UCL STeAPP  
Shropshire House (4th Floor)  
11-20 Capper Street, London WC1E 6JA

**Date:** 25.01.2022

**RE: SLREC Approval Number – 0027 – Michelle Shipworth**

Dear Michelle Shipworth,

**Project ID:** 20599/002

**Title of project:** Understanding Household Cooling Practices in China

Thank you for submitting your project application to the SLREC. I can confirm that your application has been approved from the date of this letter. This approval is valid until **August 2023**. If you need an extension or if you need to change anything material in the approved application during the course of your project, please let me know in case you need to submit a formal Amendment Form which can be found on the STeAPP Hub [here \(for staff & PhD students\)](#) or [here \(for MPA students\)](#).

Please use the following approval number '**0027**' in all correspondence.

At the end of the project, we would be grateful if you could submit a short summary of your results and confirm that you have taken any and all the required steps to delete any personal data collected as part of the project.

Wishing you very best wishes with your work.

Yours sincerely,



Sarah JL Edwards BSc MA PhD MBPsS  
Professor of Bioethics and Chair, SLREC  
STeAPP