Study on the Changes of Infant's Parenting Style and Its Social Impact Under the Background of Digitalization

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ABSTRACT
This article focuses on the systematic reshaping of infant rearing patterns by the digital wave, aiming at revealing the changes of social structure and cultural mechanism caused by the deep embedding of technology into family parenting practice. The research adopts the theoretical analysis path, avoiding empirical data and case description, and discusses it from five dimensions: the reconstruction of parenting context, the transformation of parent-child relationship, the change of knowledge production logic, the adjustment of family gender role and the tension of intergenerational cultural transmission. Digital technology has not only changed the operation form of parenting behavior, but also reconstructed the cognitive framework and responsibility boundary of parenting subjects through algorithm recommendation, data monitoring and platform discourse. The traditional nurturing ecology based on experience inheritance and community support is being replaced by a highly individualized, standardized and commercialized digital logic. In this process, the mother's care burden is masked by the words of technology "empowerment", and the grandparents' experience is systematically marginalized, and the emotional texture of parent-child interaction tends to be thin due to mediation. Without critical reflection on technical design bias and institutional inertia, digital parenting may not only improve efficiency, but also aggravate inequality within families and weaken the continuity and diversity of social and cultural reproduction.

Keywords: *Digital parenting, Technical intermediary, Knowledge authority, Intergenerational cultural transmission.*

1. INTRODUCTION

Under the macro background of accelerating digitalization in contemporary society, infant rearing, a daily practice that was highly dependent on experience inheritance and intimate interaction, is undergoing unprecedented structural changes [1]. Digital technology is not only embedded in the parenting process as a tool, but also reshapes the cognitive framework, operation path and value judgment of parenting behavior as a cultural logic [2]. Intelligent monitoring equipment, parenting applications and social media platforms have jointly built a highly intermediary parenting environment, which gradually replaced the traditional parenting model with intergenerational oral instruction and community experience sharing as the core by algorithm recommendation, data feedback and online expert discourse [3]. This change is not simply a matter of technological adaptation, but involves the internal power structure of the family, the transfer of knowledge authority and the deep adjustment of the social and cultural reproduction mechanism.

Previous studies have focused on the improvement of parenting efficiency or the convenience of information acquisition by digital tools, but seldom systematically analyzed how digitalization reconstructs the identity of parenting subjects, the emotional texture of parent-child interaction and the organizational form of social support networks from the theoretical level [4]. Especially in the early development stage of infants, subtle changes in parenting styles may have a long-term impact on individual cognitive, emotional and

social abilities through social transmission paths. However, the current discussion on digital parenting often falls into the binary opposition of "empowerment" and "alienation", and lacks in-depth excavation of the institutional logic and cultural meaning behind it [5]. This article attempts to go beyond the perspective of instrumental rationality, regard digital technology as a structural force embedded in social relations, and investigate how it participates in shaping new parenting norms, family role expectation and intergenerational cultural transmission mechanism.

2. DIGITAL INFILTRATION AND THE RECONSTRUCTION OF INFANT REARING CONTEXT

In the past, parenting behavior mainly occurred within the family or in the network of acquaintances in the neighborhood, and the transmission of experience relied on word of mouth and daily observation, which was strongly embodied and situational [6]. Nowadays, smart cameras, sleep monitoring bracelets, feeding recording apps and other devices transform the circadian rhythm of infants into traceable and comparable data streams. This change has changed the source structure of parenting information and quietly reconstructed the standard of "qualified parents". Whether digital tools can be used effectively and whether the development indicators recommended by the platform are followed has gradually become a new measure to measure the quality of parenting.

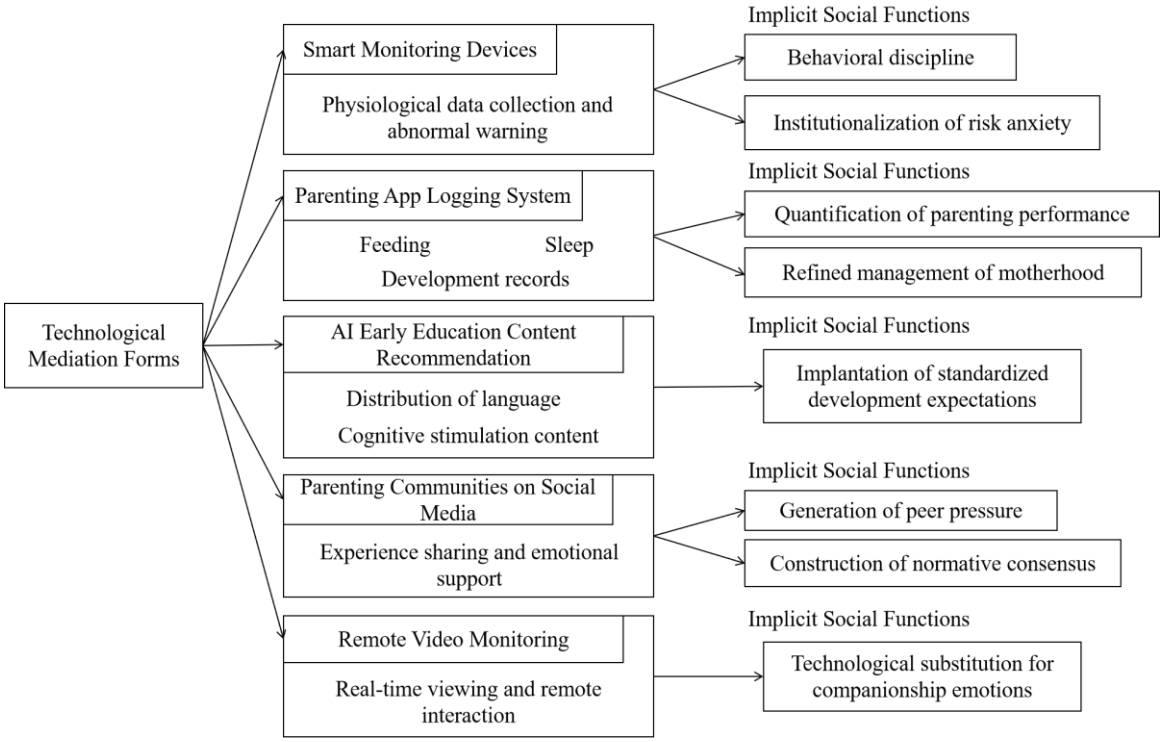


Figure 1 Mapping of Forms of Technological Mediation and Their Social Functions.

Digital platform has shaped a seemingly neutral but highly standardized parenting discourse system through the content distribution mechanism, and the technical logic and commercial motives behind it are often not fully perceived by users. "Figure 1" shows how different technology carriers are involved in monitoring, education, socialization and decision-making, and correspondingly assume social functions such as knowledge production, behavior discipline and emotional substitution. This kind of context reconstruction is not a simple technical superposition, but a deep cultural transformation about nurturing sovereignty, emotional expression and intergenerational trust.

3. STRUCTURAL TRANSFORMATION OF PARENT-CHILD RELATIONSHIP UNDER THE INTERMEDIARY OF TECHNOLOGY

Traditional parent-child interaction is based on physical practice such as physical coexistence, eye contact, voice appeasement and immediate response, and its core lies in the direct flow and mutual confirmation of emotions. With the increasing popularity of technical intermediary, the contact between parents and children often needs to be translated through screens, sensors or voice assistants, and the original continuous and integral companionship process is broken down into recordable, replayable and optimized data segments [7]. Parents' perception of infant status no longer depends entirely on intuition and experience, but more and more refers to sleep curves, crying analysis reports or development scores generated by equipment. What is more alarming is that the technical intermediary quietly reconstructs the subject position in parent-child interaction. When smart devices take on some care functions, such as calming sleep through white noise or replacing reading together before going to bed with AI story machine, the emotional attachment objects of infants may shift from specific people to abstract technical systems. At the same time, the role of parents has also shifted. They are no longer pure companions or guides, but gradually evolve into data managers, algorithm coordinators and platform content screeners. This role change not only improves efficiency, but also brings the risk of emotional alienation.

4. NURTURING KNOWLEDGE PRODUCTION AND THE RECONFIGURATION OF AUTHORITY SYSTEM

The wave of digitalization has changed the practice of infant rearing and fundamentally shaken the production mechanism and authoritative structure of traditional parenting knowledge. In the pre-digital era, parenting knowledge was mainly formed through intergenerational experience transmission, community mutual assistance networks and official guides issued by medical or educational institutions. Its authority is based on long-term practice accumulation, professional qualification certification or cultural consensus. With the rise of social media, mother-infant community and intelligent parenting applications, the producers of parenting knowledge are diversified, and common user content, algorithm recommendation and business "expert opinions" jointly form a decentralized and mobile knowledge ecology. Thus, knowledge breaks through the professional closed system, showing the characteristics of fragmentation, immediacy and contextualization, but it also causes deep-seated problems such as vague authority, difficulty in distinguishing authenticity and scientific dilution.

Algorithmic logic is quietly replacing traditional professional judgment as the core mechanism of knowledge distribution. The platform pushes content according to users' click preferences, staying time and interactive behavior, which makes "widely read" gradually equal to "trustworthy", while scientific rigor takes a back seat. In this context, simplified conclusions with communication power are often more influential than professional explanations with complex conditions. This change of knowledge form reshapes parents' cognitive framework and reconstructs their judgment standard of "what is a reliable information source". The authoritative triangle, which used to be composed of pediatricians, educators or senior nurses, has been infiltrated or even partially replaced by online celebrity parenting bloggers, AI health assistants and community opinion leaders.

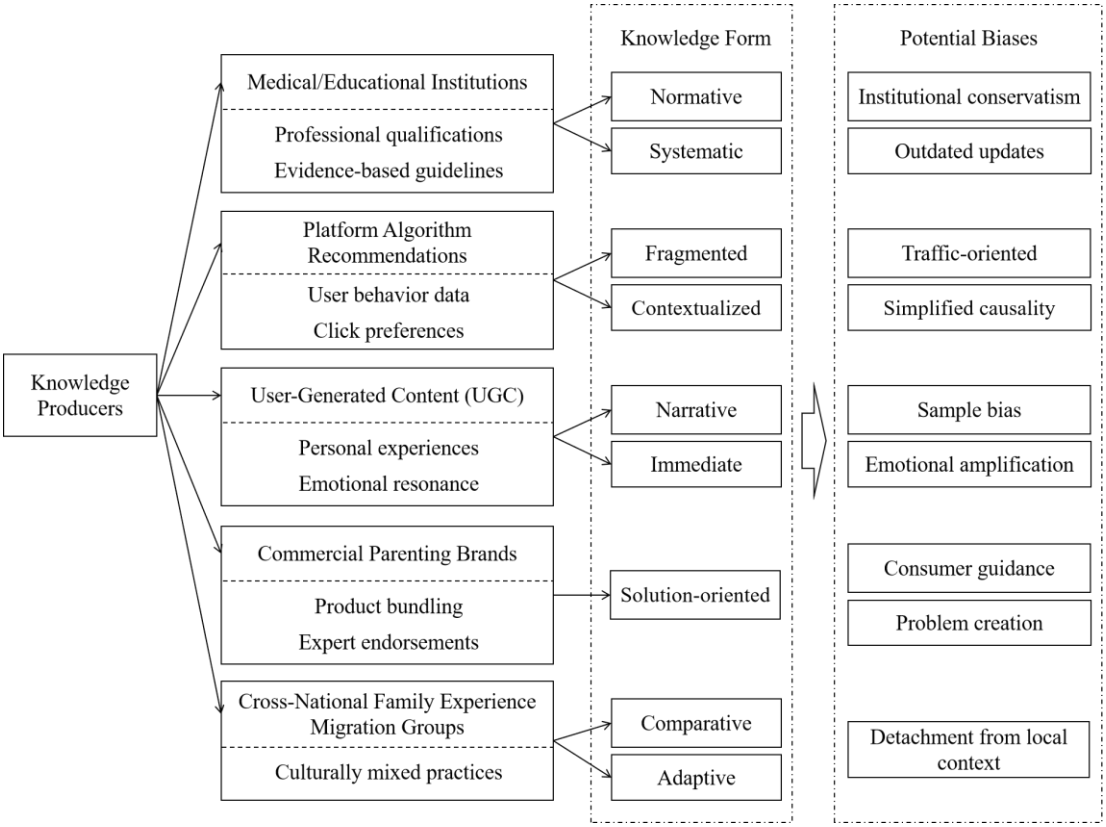


Figure 2 Comparison of Knowledge Producers and Authority Sources in Parenting.

This reconfiguration process is not value neutral. Medical institutions emphasize evidence-based and risk control, commercial platforms seek user stickiness and conversion efficiency, while individual users prefer emotional resonance and immediate solutions. Under the interweaving of multiple logics, nurturing knowledge has changed from a public product to an information commodity that can be customized, packaged and consumed. “Figure 2” compares the differences of traditional professional organizations, platform algorithms, user content, commercial brands and transnational family groups in knowledge form, legitimacy, communication mode and potential bias, showing that authority is shifting from institutional trust to algorithmic and emotional trust.

5. DIGITAL PARENTING PRACTICE RESHAPES FAMILY ROLES AND GENDER DIVISION OF LABOR

The practice of digital parenting not only improves the efficiency of parenting, but also quietly reconstructs the logic of role distribution and gender division of labor within the family. On the surface, smart devices and applications seem to reduce the burden of care through automatic recording, remote monitoring and task reminding, and create technical conditions for fathers to participate in parenting. However, through in-depth observation of its usage patterns, it can be found that most digital tools still default to the mother as the main operator: from keeping feeding logs, setting vaccine reminders to tracking development, the system constantly strengthens her role as “parenting project manager”. Technical intermediary has not broken the traditional gender division of labor, but institutionalized its concealment. Fathers are often assigned auxiliary tasks, while overall responsibility, emotional maintenance and risk warning are still on the shoulders of mothers.

Table 1. Distribution Characteristics of Parental Digital Parenting Operational Behaviours

Scenario	Mother's Operational Frequency (%)	Father's Operational Frequency (%)	Mother's Average Response Time	Father's Average Response Time	Depth of Functional Use (1–5 points)
Sleep Management	82.1	36.7	5.8 minutes	24.3 minutes	Mother: 4.6 / Father: 2.9
Health Records	79.4	28.5	4.2 minutes	31.1 minutes	Mother: 4.3 / Father: 2.4
Early Education Content Selection	68.9	52.3	7.1 minutes	18.6 minutes	Mother: 3.8 / Father: 3.5
Abnormal Alert Response	91.2	44.0	3.9 minutes	26.7 minutes	Mother: 4.7 / Father: 3.0

"Table 1" shows the differences in operating frequency, response time and functional depth between parents and users in four high-frequency scenarios: sleep management, health record, early education content selection and abnormal alarm response. The data shows that in all kinds of digital parenting scenes, the mother's operation frequency, response speed and function use depth are significantly higher than that of her father, which shows that technology has not reconstructed the pattern of parenting participation in the family in a balanced way. In the highly routine and continuous follow-up links such as sleep management and health records, the operating frequency of mothers is close to 80%, while that of fathers is less than 30%. The average response time of mothers is generally controlled within 5 minutes, while that of fathers is more than 24 minutes, with a delay of nearly 5 times.

6. TENSION BETWEEN SOCIAL INTEGRATION AND INTERGENERATIONAL CULTURAL TRANSMISSION MECHANISM

The expansion of digital parenting not only improves the efficiency of individual family parenting, but also has a hidden and profound impact on the foundation of social integration and the transmission mechanism of intergenerational culture. Traditional infant rearing is never just technical care, but also a social practice embedded in community relations and cultural context. Through daily interactions such as lullabies, local diets, festivals and customs, ancestors quietly passed on their emotional patterns, values and identity to the new generation. When parenting decisions increasingly rely on standardized guidelines pushed by the platform, families gradually pull away from the local knowledge network and switch to a global parenting discourse system that is de-regionalized and de-historical. Although this shift gives young parents more "scientific" basis, it also makes the experience of their ancestors systematically marginalized, and the cultural symbols and emotional logic they carry are regarded as irrational residues.

The parenting paradigm advocated by the digital platform often takes cognitive development, behavioral norms and development standards as the core indicators, ignoring the cultural values of non-quantitative dimensions such as ritual sense, dialect use and physical contact in the process of parenting. Infants and young children are brought into a highly homogeneous stimulus-feedback cycle at the early stage of growth, and the space for infiltration of local culture is constantly compressed. In the long run, parenting may change from a cultural reproduction practice to a purely technical management project, and the diversity foundation of society will be diluted in silence.

7. CONCLUSION

Based on the theoretical analysis of the changes of infant rearing patterns under the digital background, this article reveals that technical intervention is not a neutral process, but a profound social and cultural reconstruction. On the surface, digital tools give parents more sense of control and scientific basis, but in fact, they bring parenting behavior into a performance-based framework dominated by platform logic. This makes the nursing practice based on emotion, intuition and local experience transformed into a monitorable, optimizable and comparable data task. Although this change has improved the immediacy of information acquisition, it has also led to the parenting subject, especially the mother, falling into a higher intensity of emotional labor and self-discipline. Father's participation is often limited to

auxiliary and technical links, which fails to really break the structural barrier of traditional gender division of labor, but continues the inequality of responsibility distribution under the appearance of "common parenting".

At the same time, the production mechanism of nurturing knowledge has fundamentally shifted, professional authority has been diluted by algorithm recommendation and user traffic, and science has given way to communication and publicity to personalized customization. This change not only weakens parents' critical judgment on complex parenting issues, but also accelerates the digestion of local parenting wisdom. The far-reaching impact is that when parenting is increasingly becoming a highly private and individualized technical management project, the connection between family and community, neighborhood and even wider social network will be weakened. Social integration is no longer maintained through the practice of co-care, but depends on the virtual community provided by the platform. Although the latter has a connecting function, it is difficult to carry true emotional reciprocity and cultural influence. In the future, it is urgent for policy and technology design to go beyond instrumental rational thinking and bring emotion, difference and cultural diversity into the core consideration again, so as to find a balance between technological convenience and humanistic continuation.

REFERENCES

[1] Zhou Jiaxian, Xu Yilan, Zhang Mengrun. The Impact of Sensitive Parenting Behaviors on Children's Brain Development: Neural Mechanisms and Influencing Factors[J]. Studies in Early Childhood Education, 2023, (01): 9-18. DOI: 10.13861/j.cnki.sece.2023.01.010.

[2] Zhao Jin, Zhang Yiwen. Screen Exposure and Early Childhood Development[J]. Journal of Bio-Education, 2019, 7(01): 1-5.

[3] Liang Yali, Ma Jie, Zhang Yuxiao, et al. Study on Infant Sleep Patterns and Their Relationship with Breastfeeding Based on K-means Cluster Analysis[J]. Chinese Journal of Contemporary Pediatrics, 2022, 24(10): 1154-1160.

[4] Zhang Cui, Tian Meina, Niu Bei, et al. Study on Feeding Status of Infants Aged 6–24 Months in Urban and Rural Areas of Hebei Province[J]. Practical Preventive Medicine, 2022, 29(09): 1072-1076.

[5] Shao Jie, Tong Meiling, Zhang Yue, et al. Expert Consensus on Infant and Young Child Nurturing Care[J]. Chinese Journal of Child Health Care, 2020, 28(09): 1063-1068.

[6] Chen Jiayang, Zhang Dan, Wang Dan. Research on Marketing Strategies of Children's Complementary Food Products in China under New Parenting Concepts[J]. Modern Business, 2020, (35): 6-8. DOI: 10.14097/j.cnki.5392/2020.35.002.

[7] Tang Hanwei. Inheritance and Transformation of Yao Ethnic Infant Rearing Customs in Central Guangxi: A Case Study of Chashan Yao in Jinxiu Yao Autonomous County[J]. Comparative Study of Cultural Innovation, 2021, 5(23): 134-137+159.