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Theory of Multivariate Spatial Determinism: Multi-spatial Transformation can Shorten the Cognitive Gap Caused by Time

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Abstract

In this article, the developmental trajectories of students who have achieved intergenerational social mobility are documented through interviews, providing empirical evidence that diversification in spatial transitions within student cohorts facilitates self-directed field cultural adaptation, thereby enhancing their cognitive achievement and socio-economic functionality. It posits the potential of a pedagogical paradigm grounded in cognitive achievement to augment the educational efficacy within the social framework of China's educational system. The demographic under consideration—students situated in socio-economic strata—are characterized by their family income composition, disposable income, and social welfare patterns. Obstacles to spatial transformation diversification among certain Chinese student cohorts are attributed to economic scarcity, complex relational dynamics, and disparities in risk perception and preferences. In contrast, motivational forces for diversifying spatial transitions—love, desire, and fear—yield affective impacts, shaping cognitive disparities, behavioral decision-making, and socio-economic status. The report highlights that the implementation of a pluralistic spatial education model confronts challenges such as inequitable distribution of educational spatial resources, spatial categorization, pragmatization, and internationalization.

Keywords: *Spatial transitions, Educational effectiveness, Cognitive achievement, Social mobility, Educational achievement*

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1. Introduction

Scholars predominantly engage in the evaluation of educational efficacy within the pedagogical context; however, educational sociologists extend this evaluation to the effectiveness of education within the broader social system, beyond the confines of formal educational settings. This article advances a novel, straightforward, and efficacious pedagogical approach aimed at mitigating the cognitive achievement gap and inequities within the educational social system. It employs data from China to examine how diversification of educational spaces can bridge cognitive gaps engendered by temporal (historical) factors. For instance, inequalities in subsequent generations may become inherited

¹ Educational equality refers to the equitable distribution of educational resources; educational equity denotes the allocation of educational resources based on individual needs; educational justice embodies the concept of universal access to educational resources. These three constructs, within the paradigm of pragmatism, exhibit elements of opposition and conflict, necessitating a balanced approach to their integration. Achieving a harmonious equilibrium among various educational objectives represents one of the most significant challenges in the field of educational sociology.

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disparities, termed as inequalities due to historical reasons. The educational system, with its multifaceted objectives such as educational fairness, equality, and justice, faces certain challenges¹. From the perspective of the sociology of education, the educational system serves the social system by providing educational resources to those who can function within it and expects an efficient return in the form of individuals who are “cultivated to serve the social system effectively.” Evans and Rosenbaum (2008) assumed that individual income-achievement gaps are affected by children being invested and nurtured by their parents to learn to manage themselves.

In this sense, the primary goal of the educational system is to nurture individuals who can contribute to society, offering them educational opportunities that enable them to understand others within a common framework of ‘social knowledge,’ facilitating dialogue, competition, and cooperation, thus promoting the harmonious and coordinated development of the social system. Liben (2007) assumed that map education is a particularly useful focus for developing spatial thinking. In this sense, if knowledge is a huge map, it would be useful for filed *Bildung* in spatial education.

However, it seems that the necessity of establishing this ‘common knowledge framework’ has been overlooked, and the lack of education in this area leads to a tendency for individuals to speak, defend, and argue from their own positions, which is the root of social conflict, confrontation, and violence. The absence of this component in the educational system leads to extreme opposition, greed, and selfish social behavior. When everyone tends to think about what kind of education can effectively enhance students’ competitiveness and social achievement, or what constitutes a competitive talent for the future, the key question may become: Why haven’t all students achieved sufficient diversification of educational spaces, and what capabilities should we cultivate in children within these diverse spaces? Among the various abilities that students should acquire in basic education, this paper emphasizes the importance of the capacity for love and emotional intelligence (Zeidner and Kaluda, 2008). These abilities are not only crucial for every individual but also serve as prerequisites for acquiring a range of non-cognitive skills. For instance, without the capacity for love (Karen, 1998), a child cannot learn to give or enact love, and is unlikely to become a fully engaged citizen. Without emotional intelligence, children cannot learn to experience or empathize with the emotions of others (Ioannidou and Konstantikaki, 2008), inevitably creating barriers to participating in social relational activities, as they may not understand why others are angry or why they themselves have provoked conflict, and what emotions they should express in response. Indeed, a better understanding and tolerance of each other’s words and actions can be fostered based on the recognition of mutual love and emotional intelligence. Yang and his colleagues (Yang *et al.*, 2016) make a noteworthy suggestion for social governance that lower-class individuals’ internal attribution and system justification can be altered by an increased sense of mastery of themselves and a decreased sense of restriction from society.

The cognitive achievement inequality between individuals and groups is significant and warrants in-depth investigation. Benadusi (2001) pointed out that “when individual differences are too great, it threatens social cohesion, fosters a sense of inferiority among the least educated, and thus threatens social cohesion.” Similarly, large cognitive discrepancies among individuals threaten social cognitive cohesion, and those with less power in knowledge also foster a sense of inferiority. When faced with education, resistance to being educated may stem from the fear of being blamed, and when educational discourse is sensitively perceived as invasive, cognitive gaps widen, as the notion that “everyone has their own opinion (Burkard, 2017)” signifies a refusal to align, further exacerbating cognitive disparities and contributing to social behavior that widens these gaps.

There are many factors influencing individual cognitive achievement, and it is often difficult to clarify the specific impact of each factor. However, much of the past research has emphasized that inequality is not a product of individual factors but the result of unequal distribution of opportunities, which is determined by the social system. When the social system, as a ‘huge ship,’ cannot easily be steered or changed, pragmatic sociological research on education tends to analyze what kinds of unequal opportunities exist. Previous research has primarily focused on the inequality of educational opportunities and how to adjust these inequalities within the existing framework without major changes (Breen and Jonsson, 2005; Gamoran, 2001 and Corak, 2013). This paper posits that the inequality of educational opportunities is difficult to completely change. We pin our hopes on the pursuit of equality in educational space opportunities, such as through the establishment or simulation of various educational spaces, including online education, virtual space education, social space education, and global network education, to make educational opportunities in these spaces more equal and to nurture children with diverse educational resources in cultural, physical or virtual spaces, emotional, and other media spaces. This helps children and future social citizens coexist under a ‘social knowledge framework,’ strengthening rational competition and united cooperation.

Research on educational inequality, particularly regarding unequal educational opportunities, is abundant and still falls within the realm of institutional education (Jacob and Holsinger, 2008). This paper argues that the equalization of institutional educational opportunities requires substantial socio-economic capital investment, a process that is slow, long-term, and epochal. While not opposing this line of thought and approach, the paper proposes a new way of thinking by analyzing the inequality of educational space opportunities. From a pragmatic and educational efficiency-improvement perspective (Stake, 2013), the paper suggests integrating all existing media resources to create an attempt at equalizing educational space resource opportunities, efficiently targeting a ‘collective emotional consensus framework.’

It aims to understand the logic of emotional capital and capital logic through empathy and understanding, using the concepts of ‘social love, emotion, and responsibility’ to strengthen social solidarity and promote orderly social wealth circulation, thus truly driving major changes towards the equalization of institutional educational opportunities. The paper uses interview data on the diversification of educational spaces across class groups to more accurately reflect that social achievement disparities are mainly due to significant diversification differences in the educational spaces students occupy. These educational space disparities are influenced by emotional capital, economic capital, and cultural capital, with emotional capital playing a significant role.

The paper is divided into five parts, with this introduction being the first. In the second part, we describe a new perspective for explaining educational inequality, namely the analysis of this phenomenon from the perspective of educational spaces. In the third part, we introduce data from China, where institutional educational opportunity inequality exists among students from different social classes who have achieved similar social achievements and socio-economic statuses. Through analyzing their experiences of diversification in educational spaces, we describe the gaps and inequalities in educational opportunities that exist in the process of achieving educational social success among contemporary Chinese student groups. The fifth and final part discusses the results, analyzing that the phenomenon of inequality is mainly related to people’s emotional capital. The motivation for diversification in educational spaces is also the production of emotions such as love, desire, and fear, and comments on the possible choices of educational space policies to reduce inequality in educational space opportunities and improve self-field educational space cultivation.

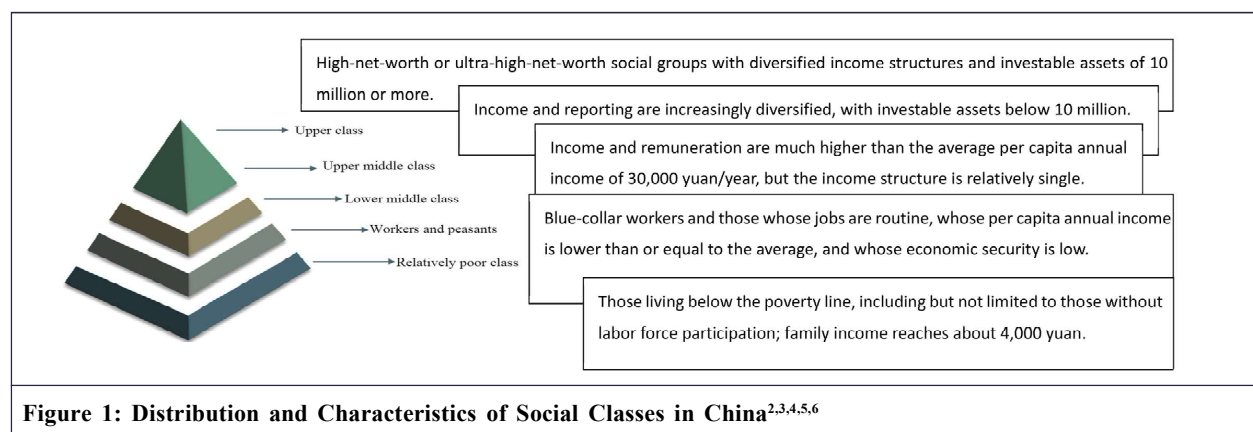
We begin our analysis of cognitive achievement inequality with the emotional space experiences and cognitive disparities of cross-class student groups. Following the year 1980, the stratification system within China transformed into a dynamic and open hierarchy. The analysis of social mobility within this context necessitates consideration of critical elements such as “occupational prestige, income distribution, residential and consumption patterns, as well as the social security system (Bian, 2002)”. The description of the socio-economic status class distribution in Chinese society serves as the criterion for selecting cross-class student groups, which is more in line with the reasons for sociological research on education, as it considers family finances, lifestyle, social welfare, and other sociological classification concepts.

2. Research Questions

1. From the perspective of educational sociology, how is the relationship between cognitive achievement and cognitive disparities conceptualized?
2. How do student cohorts navigate through the multidimensional spaces to mitigate cognitive gaps engendered by temporal constraints?
3. Within the process of multidimensional space transitions, how is affect operationalized to effectuate self-field pedagogization?

3. Materials and Methods

3.1. The Basis for Class Division Across Class Groups



² Upper class : We pursue rigorous and diversified asset allocation and leave it to professionals. Enjoy high-end homes, high-end medical care, prestigious school education and other services.
³ Upper middle class : Reasonable income distribution, enjoy relatively complete community services, medical insurance, diverse education options, etc.
⁴ Lower middle class : Social groups that pursue aristocratic asceticism or speculative utilitarianism, whose family income is not optimally allocated and lack financial literacy, may put their families at risk at all times. Higher demand for housing in school districts, institutional welfare foundation, pursuit of higher public education resources, etc.
⁵ Workers and peasants : A class group that pursues hard-working and frugality. The pursuit of affordable housing, affordable welfare, and basic public education resources.
⁶ Relatively poor class : “Two no worries, three guarantees” means no worries about food and clothing, and basic medical care, compulsory education and housing safety are guaranteed. Class groups dependent on social security.

The pyramid model discussed herein is predicated on the wealth scale and aggregate wealth pyramid published in the Credit Suisse Research Institute's "Global Wealth Report 2016"⁷, which delineates the proportion of the upper echelon, upper-middle class, lower-middle class, and the base tier as 0.7%, 7.5%, 18.5%, and 73.2%, respectively. This demographic wealth ratio serves as the basis for the construction of the wealth pyramid. Given the societal disparities between China and the United States, the American upper class or affluent stratum is primarily defined by individuals with assets exceeding 10 million USD. In contrast, the "2019 China Private Wealth Report"⁸ sets the threshold for "high net worth individuals" at investable assets of 10 million RMB or more. For the purposes of this analysis, the base tier of Chinese society is bifurcated into the working peasant class and the relatively impoverished class. This distinction is informed by the sociological framework proposed by scholars such as Dennis Gilbert in 2002, William Thompson and Joseph Hickey in 2005, and Leonard Beeghley in 2004, who, based on categories of income, education, and occupation, have identified the typical characteristics of social strata, including the segment of the population that does not participate in the labor force or has "limited labor force involvement and relies on government support—a distinct feature from the working class"⁹. Consequently, in alignment with the current Chinese context, it is appropriate to differentiate between the working peasant class and the poor population. Liu Yongfu, the Director of the State Council's Poverty Alleviation Office, articulated in the program "Dialogue" that "the United Nations' post-2020 development agenda calls for the eradication of absolute poverty by 2030, yet China aims to achieve this goal a decade earlier, by 2020."¹⁰ The Second Session of the Thirteenth National People's Congress of China posited that the standard for poverty alleviation by 2020 is an income of approximately 4000 RMB, coupled with the fulfillment of 'two no worries' and 'three guarantees,' which include basic medical care, compulsory education, and housing security¹¹.

Although there seems to be a consensus in academia regarding the definition of the upper-middle class, the social stratification of this group varies significantly. Many sociologists, for example, define the upper-middle class as the "professional class" and place it within the social structure, with scholars like Dennis Gilbert, William Thompson, and Joseph Hickey characterizing it by well-educated professionals. However, Leonard Beeghley diverges from this view, categorizing the upper echelon as "the super-rich," and what others refer to as the "upper-middle class," he considers the "affluent" stratum. This paper synthesizes these perspectives, categorizing the upper-middle class into two types: the well-educated professionals whose wealth and financial culture position them within the "affluent" category, and the wealthy, who, due to their capital, can employ professionals to manage their assets. Their wealth accumulation is contingent upon professional financial management, placing them between the super-rich and the lower-middle class, thus also classifying them within the upper-middle class. Beeghley does not simply refer to the non-upper-middle classes as lower-middle class, but rather directly as "middle class." To avoid confusion between "upper-middle class" and "middle class," this paper adopts the terminology "lower-middle class" as used by Dennis Gilbert, William Thompson, and Joseph Hickey. Since the term "class" was abolished during China's proletarian revolution, the term "strata" is used in its stead.

3.2. Selection and Classification of Interview Subjects

In the academic investigation, data collection was primarily conducted through participatory observation, in-depth interviews, verbatim transcription of oral autobiographies of the research subjects, and narratives provided by others. This yielded transcribed materials (G), complemented by the researcher's field notes (H), planning diaries (I), and observation logs (J). The study involved longitudinal tracking and extensive participation in "financial planning" activities. Throughout the "financial consulting" process, the researcher engaged with hundreds of individuals from diverse age groups, professions, and income brackets. In-depth interviews were conducted with 25 participants, and to elucidate the impact of "financial culture," a purposive sample of six individuals from different social strata was selected for participatory observation. These individuals, despite varied familial backgrounds and educational levels, all achieved upward social mobility. This paper seeks to identify common traits within this group that achieved "class ascension," gathering field data through a process that included data collection, substantive coding, theoretical coding, and theory construction. The researcher's participatory observations were supplemented by comprehensive in-depth interviews, oral narratives, and diary recordings from six study subjects, following their informed consent and the signing of an "Interviewee Informed Consent Form." The backgrounds of these six interviewees revealed disparities in institutional

⁷ "Credit Suisse Global Wealth Report: What era of wealth are we in?" [EB/OL] Retrieved on August 28, 2020. https://www.sohu.com/a/123784491_583130

⁸ BAIN. "2019 China Private Wealth Report" [EB/OL] Retrieval date: August 28, 2020. https://www.bain.cn/news_info.php?id=924

⁹ Gilbert, D. (2002) *The American Class Structure: In An Age of Growing Inequality*. Belmont, CA: Wadsworth, ISBN 0534541100. Thompson, W. & Hickey, J. (2005). *Society in Focus*. Boston, MA: Pearson, Allyn & Bacon; Beeghley, L. (2004). *The Structure of Social Stratification in the United States*. Boston, MA: Pearson, Allyn & Bacon.

¹⁰ "Dialogue" China's Poverty Alleviation Goal: Eliminate Absolute Poverty by 2020" Office of the State Council Leading Group for Poverty Alleviation and Development [EB/OL] Retrieved on August 28, 2020 http://www.cpad.gov.cn/art/2016/10/18/art_82_54533.html

¹¹ "The State Council Poverty Alleviation Office introduced the situation of poverty alleviation at the National People's Congress press conference—intensifying efforts and improving the quality of poverty alleviation" Central People's Government of the People's Republic of China. [EB/OL] Retrieved on August 28, 2020. http://www.gov.cn/zhengce/2019-03/08/content_5371851.htm.

Code	Age	Gender	Birth Place	Education Background	Family Background	Career Background	Financial Culture	Current Situation
a	45	Male	Anhui	University	Parents are farmers	Advertising boss	Mainly utilitarian	Annual income of over one million
b	35	Male	Zhejiang	Master	Both parents are college teacher	Company executives	Mainly principled	Annual salary over one million
c	36	Male	Guangdong	Undergraduate	Both parents are businessman	Certified accountant	Mainly rigorous	Annual salary over one million
d	27	Female	Shandong	Master	Civil servant businessman	Private business owner	laissez-faire	Annual income of over one million
e	24	Male	Zhejiang	Undergraduate	Both parents are businessman	Private business owner	Mainly utilitarian	Annual income of over 10 million
f	31	Male	Shandong	Junior high school	Both parents are farmers	Private business owner	Mainly utilitarian	Annual income of over one million

educational opportunities, yet they achieved similar socioeconomic statuses later in life. This indicates that their diverse spatial transformations have produced multifaceted educational spaces, effectively bridging their cognitive gaps. Despite the considerable disparity in educational backgrounds among the interviewees, such as an entrepreneur who discontinued formal education prematurely, it is evident that the cessation of formal schooling did not equate to the termination of their learning trajectory. Instead, these individuals perpetuated their educational endeavors within the societal realm,

(A) Causal condition	(1) Education (2) Social Wealth (3) Income distribution	(B) Impunity	(1) "Educational Equity" Issues (2) The "wealth gap" issue (3) "Serious financial" issues
(c) Fabric	Social stratification is influenced by education, social wealth and income distribution. Whether they have a good educational background, obtain a good degree or receive good financial literacy education, value education; the starting point of social wealth status; good income distribution and "financial culture". If not detected in time, it will not only affect the "social stratification and mobility", but also easily lead to various social problems.	(D) Conditions of intermediation	(1) No or wrong financial literacy education (2) A life of values education divorced from social practice (3) conservative passive learners (4) Neglect of cooperation
(E) Action or interaction strategies	(1) Education for good financial literacy (2) Value education in line with social practice (3) Lifelong learning (4) Cooperation	(F) Results	(1) Poor financial situation (2) "Upside down" phenomenon. (3) Dramatic changes in "wealth". (4) The "poverty trap". (5) Positive and stable "social mobility".

actively engaging with and assimilating knowledge from “diverse intellectual collectives (Napoleon Hill, 1937: 58) “within the community.

3.3. Coding and Decoding Using Grounded Theory Based on Interview Data

At the inception of the encoding process, the collected interview audio recordings were meticulously transcribed verbatim and systematically archived with codes corresponding to the temporal markers and the research subjects. Additionally, materials such as daily planners and schedule diaries were also subjected to the coding process. The methodology for coding and decoding involves a systematic distillation and categorization of semantic units, enabling the analysis and synthesis of the data according to relevant themes, concepts, or categorical explanations. Initially, through the generative conditions of social stratification matrices, a process is established that links categories with their respective concepts, thereby facilitating the enrichment of categories and the recombination of materials.

Historical educational inequalities are a manifestation of the uneven distribution of wealth, which predominantly influences social mobility through the causal conditions of education, societal wealth, and income distribution. Such disparities in social wealth create systemic issues of educational equity, wealth gaps, and severe financial challenges for individuals. Individuals’ perceptual gaps regarding income distribution are acquired through the diverse spaces within their society, and although people may not be consciously aware of the cognitive understandings of income distribution accumulated through learning in these pluralistic spaces, emotions such as love, desire, and fear naturally drive upward social mobility. This propels individuals through various spatial transformations, actualizing a process of self-education within the field, which enhances cognitive achievements and leads to a common, extensive, and enriched ‘commonsense picture,’ thus forming their cultural circles. By ascending into the middle class and through the cultural spaces of middle-class circles, individuals engage in cultural self-education that strengthens communication and mutual benefit, improving the structure of income distribution, rapidly increasing capital accumulation, and facilitating a leap from the middle class to the upper-middle class, thereby achieving social class ascension.

Table 3: Example of Initial Coding of Space and Spatial Education Main Axis

Data	OpenCode Labeling	Open Coding Initial Conceptualization	Open Coding Core Conceptual Discourse
<p>Intended Group I: Gb1"...My parents are college teachers. As long as I am not good in a subject since I was a child, I can find a famous teacher in a certain subject to make up lessons anytime and anywhere. So as long as I am not too stupid, it is probably quite difficult for me to get bad grades..."Gb2"...The most important thing for students is to study well..."Gc1 "...My parents are businessmen. They gave me a gold piggy bank since I was a child. I have been saving money since I was 3 years old. They also taught me that making money is not easy and that I must respect money..."Gc2"...He also taught me how to make a budget, how to make money, and how to buy things..."Gb3"...I had always done very well in my studies at my original school, but when I got to my undergraduate..."</p>	<p>Cultural capital (G70 Educational qualification; G71 achievement value education; G72 money value education; G73 financial literacy; G74, family upbringing concept; G75education model;) (Field culture; G76 wealth concept; G77 lifestyle; G78 family wealth; G266 income structure; G267 consumption concept; G268 Circle culture, G269 family parenting model; G270 Field migration; G271 self-adaptation;...)</p>	<p>Factors affecting social class? 1. education and enlightenment: cultural capital; Field culture, etc....?</p>	<p>Family/School/ Circle: Value Education Life; Values, value cognition, value ranking, value judgment, value experience, value method, ...;</p>

Table 3 (Cont.)			
Data	OpenCode Labeling	Open Coding Initial Conceptualization	Open Coding Core Conceptual Discourse
<p>Intended Group II:</p> <p>Gf2 "...After I came out, I had no money or anything, but my boss appreciated me and I learned a lot. The money I later started my own business was all saved bit by bit by myself. No one helped me, and no one even thought I was successful..."</p> <p>Gd2 "...When I started my business after graduation, it was money given to me by my family. When I lost money, no one said anything, but I felt that I was despising myself. Later I thought about it, and I should have lost money, because I had a good understanding of the world from the very beginning. Deviation..."</p> <p>Ge1 "...My clients after graduation were all friends of my relatives or parents, which allowed me to earn my first pot of gold..."</p> <p>Gh1 "...I worked for a big company doing nail materials for a year. This job was because my father was a big customer of their company, so he gave me a one-year contract. After the work was completed, I went back to inherit the family business, which is now a company. Deputy director, and my dad opened a company for me alone worked for a big company doing nail materials for a year. This job was because my father was a big customer of their company, so he gave me a one-year contract. After the work was completed, I went back to inherit the family business, which is now a company. Deputy director, and my dad opened a company for me alone..."</p> <p>Gi1 "...My family background was not very good before, but later I was admitted to a good school and received a scholarship to study abroad. Now my monthly income is around 20,000, which is not much, but I also spend less and can still save a lot..."</p> <p>Gj1 "...My family was very poor, my parents passed away, and I grew up with my grandparents. They used to say that my task was to study hard and not worry about anything else. In fact, I feel sorry for them. Although I got into a good school, I took a loan and still have debts. And I know that I am not right. I spend too much money. My job is not very good now and my salary is not very good. It's too low and I don't really want to go. Such financial problems make me feel uncomfortable..."</p> <p>Gb4 "...Although my parents who studied abroad before were college teachers, it was very difficult, and my parents spent a lot of money. They like to travel abroad, so supporting me to study abroad should be their biggest expense. The university I went to was pretty good, and my favorite workplace only accepted people who graduated from Ivy League schools or prestigious schools, or whose families were from big bosses, so I got in pretty smoothly..."</p>	<p>Social wealth (G16 Underlying quality: Perseverance?G17 Capital support; social relationship support; G18 Comprehensive support; G19 Underlying quality: frugal; G20 Born at the bottom; Protected by the middle; G21 Starting point of development...)</p>	<p>2.Social wealth: economic capital, etc....</p>	<p>Social stratification and income distribution: financial distribution, income structure, expenditure strategy, etc...</p>

Table 3 (Cont.)			
Data	OpenCode Labeling	Open Coding Initial Conceptualization	Open Coding Core Conceptual Discourse
<p>Intended Group III:</p> <p>Gb5 "...I have always been a relatively self-disciplined person, and my parents also asked me to exercise, study well, and have good habits. So I did the same..."</p> <p>Gc4 "...There will probably be a clear plan, such as goals for this year and things to do. I still read and make reports every day, keep accounts, and make plans..."</p> <p>Gd3 "...Now I have the habit of keeping accounts and planning every day because it can improve efficiency. After all, practice is money..."</p> <p>Gf3 "...I just want to make a lot of money. It hasn't changed since I graduated from junior high school..."</p> <p>Gd4 "...I spend money lavishly and never look at the price when buying things. There was a time when I was depressed due to financial problems and thought about committing suicide..."</p> <p>Gj2 "...I don't want to spend a lot of money, but the people around me are like this, and I don't want to look too different. So although I still have a lot of debt, including student loans, I don't know when I will be able to pay it off..."</p> <p>Gk1 "...I can save a lot of money, because my mother remarried, and my father died in an accident. She couldn't support me, so she remarried, but I can't get close to my stepfather, and I don't spend much money. , I think I can make more money in the future..."</p>	<p>Income Distribution self planning?G22</p> <p>self-management?G23</p> <p>Emotional management?G24</p> <p>financial plan?G25</p> <p>investment arrangement G26</p> <p>financial goals?G27</p> <p>Financial issues...etc.</p>	<p>3. Income Distribution:</p> <p>Self-management; financial planning etc....</p>	<p>Education and self-management: learning, self-management, financial planning, etc...</p>

4. Results

In the field of educational research, interview transcriptions are transformed into discourse data through the process of coding meaning units. The initial stage of data analysis is characterized by open coding, which involves categorizing the data into labels. These labels serve as preliminary steps towards data conceptualization and facilitate the emergence of core concepts.

Subsequently, all pedagogical spaces are systematically categorized into three distinct realms: spaces for values education and life, spaces related to the distribution of income within educational contexts, and spaces for moral education and self-regulation. Moreover, these pedagogical spaces possess a physical dimension, exemplified by four types of self-education contexts: the domestic domain, the scholastic domain, social circles, and the domain of the self.

4.1. Multiple Space Transformation and Environmental Adaptation

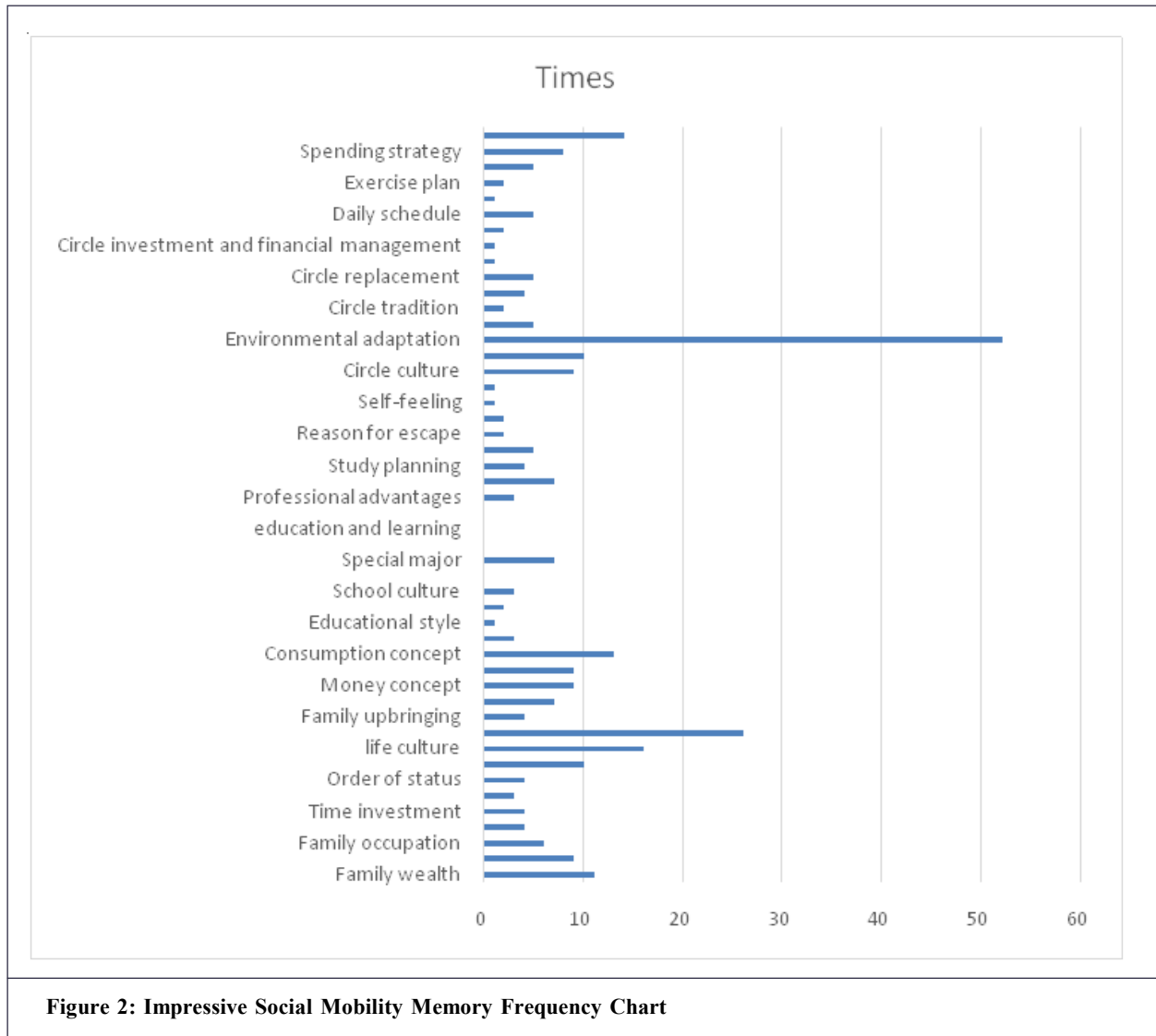
In the findings of the study, it was observed that the frequency of environmental adaptation situations following the diversification of spatial transitions among student cohorts was the most prevalent in comparison to all recorded frequencies. The student body, through continuous interaction and collision with novel environments during these spatial transitions, engenders a new field of acculturation. This process of field-specific acculturation facilitates the self-directed renewal and self-education of the student collective.

Additional factors influencing the self-field pedagogy primarily concentrate on economic reasons, such as familial wealth, capital support, educational expenditures, and temporal investments. Cultural rationales also play a significant role, encompassing variables such as familial professional roles, personal lifestyles, family status hierarchies, cultural life practices, parenting approaches, financial literacy, curricular content, school culture, monetary and ethical values, fiscal culture, specialized disciplines, cultural disparities, and stratified cultural norms.

Table 4: Examples of Six-level Coding of Self-education Field						
Open Coding-Tagging (Level 1)	Source	Open Coding-Conceptualization (Level 2)	Open Core Concepts (Level3)	Spindle Coding-Categorization (Level 4)	Selective Coding-Core Categorization (Level 5)	Selective Coding-Core Categorization (Level 6)
G78;G197;G164;G56;G26 ...	11	Family wealth	Family economic background	Family economic capital	Family field	Objective factors
G88;G141;G147;G148;G98 ...	9	Capital support				
G1;G99;G100;G142;G2...	6	Family occupation	Family education background	Family cultural capital		
G159;H1;H2;H3;I1;I2...	3/7	Education expenditure	Education investment			
I4;I5;I6;I9	4	Time investment				
G84;G230;G66	3	Self-life	Person-centered family	Family relationship structure		
G260;G263;G272;G187	4	Order of status	Status family			
G37;G38;G158;G167;G171 ...	10	Family opinion				
G77;G63;G64;G46; G59...	16	life culture	Family culture type	Family upbringing adaptation		
G6;G17;G18;G72;G48...	26	Values				
G74;G108;G246;G221	4	Family upbringing	Family upbringing concept			
G83;I7;I8;I10;I11;I12...	2/7	Family expectations	Family expectations and planning			
G23;G31;G36;G35;G22...	9	Money concept	Money attitude	Family financial culture		
G132;G57;G47;G72;G49...	9	Financial learning	Financial education			
G45;G94;G95;G102;G61...	13	Consumption concept	Consumer culture			
G75;G3;G245	3	Educational courses	Curriculum	School education capital	School field	
G71	1	Educational style	Education model			
G2;G248	2	Academic competition	Degree recognition			
G18;G68;G71	3	School culture	Mainstream values	School value education		
not applicable	none	Money and morals	Money attitude			
G49	7	Special major financial culture education and learning	Accounting: Financial education	School special major		
G273			Economics: Financial education			
G274			Finance: Financial education			
G275			Insurance: Protecting education			
G276,I13;I14	2/3	Professional advantages	Professional selection	School education		

Table 4 (Cont.)						
Open Coding-Tagging (Level 1)	Source	Open Coding-Conceptualization (Level 2)	Open Core Concepts (Level3)	Spindle Coding-Categorization (Level 4)	Selective Coding-Core Categorization (Level 5)	Selective Coding-Core Categorization (Level 6)
G278;H4;H5;H6;I15...	3/7	Self interest	Learning interest	adaptation		
G277; I16; I17; I18	2/4	Study planning	Study plan			
G225;G156;G189;G190;G272	5	School adaptation	Teaching adaptation	Escape from school education		
I19;I20	2	Reason for escape	Reasons for dropping out/ changing schools			
G273;I21	2	Public opinion evaluation	Social and family evaluation			
G5	1	Self-feeling	Self-evaluation			
G133	1	Self-identity				
G6;G122;G161;G233;G161...	9	Circle culture	Cultural configuration	Integrate into the circle	Circle field	
G146;G214;G80;G14;G10...	10	Cultural difference	Cultural separation			
G227;G228;G229;G222;G224...	52	Environmental adaptation	Field adaptation			
G173;G162;G163;G183;G139...	5	Social relationship	Field relations	Circle culture		
G11;G25	2	Circle tradition	Habit			
G116;G150;G41;G21...	4	Circle development	Changes in field capital			
G81;G261;G19;G270;G262	5	Circle replacement	Field replacement	Circle migration		
G239	1	Public opinion turns	Field expectations and evaluation			
G49	1	Circle investment and financial management	Field financial learning	Circle financial education		
G123;G29	2	Self-study	Learning management	Self-management	Education and self-planning	Subjective factors
G52;G53;G32 ;G92;G149	5	Daily schedule	Time management			
G253	1	Solution plan	Emotional management			
G28;H7	2/2	Exercise plan	Health management			
G54; G79;G130;G152;G266	5	Income structure	Financial management	Financial plan		
G54;G33;G43;G136;G137...	8	Spending strategy				
G223;G7;G30;G85;G174...	14	Value life	Values			

It is imperative to underscore the emotional determinants, including familial public opinion conflicts, divergences in values, discrepancies in familial expectations, differences in monetary perspectives, consumption viewpoint variations, parenting style diversity, educational approach diversity, academic credential competition, professional field advantages and disadvantages, personal interests, learning strategies, school acclimatization, risk preferences, self-perception,



public opinion assessments, and self-identity. These affective elements, revolving around love, desire, and fear, exert a profound impact on the cognitive behaviors and achievements of the student cohort, with their influence permeating the entire spatial and pedagogical cultivation process.

The investigation has revealed that although an individual’s social mobility is invariably influenced by familial and cultural determinants, it remains possible for individuals to enhance their adaptability to environmental contexts and competitive edge through a process of multidimensional spatial transformation, thereby facilitating positive social mobility trajectories. In essence, the empirical evidence presented within this article serves to refute the presuppositions of social determinism¹² by demonstrating that individuals can, indeed, elevate their socio-economic standing and alter their destinies through the strategic employment of multidimensional spatial transformations, as well as the accrual of diverse social experiences and competitive capabilities.

4.2. Affect Capital Cognition

All of the nineteenth-century founders of sociology touched on the topic of emotion. For example “Emile Durkheim explores the social scaffolding for feelings of ‘solidarity’. Karl Marx explores alienation and, in his analysis of class conflict, he implies much about resentment and anger. Max Scheler explores empathy and sympathy, and Georg Simmel has a rich variety of sentiments. Sigmund Freud calls attention to the primacy of conscious and unconscious emotion. The American sociologist Randall Collins has pointed out, Max Weber elucidates the anxious ‘spirit of capitalism’, the magnetic draw of charisma, and he questions what passes for ‘rationality’ (Hochschild, 2002)”. However, they ignore the discussion of love as an emotion, or a rational emotion, and the discussion of the relationship between its capitality.

¹² Social determinism is a concept in sociology that suggests that the behavior of individuals and the direction of societal development are largely determined by social factors, rather than individual free will or biological determinants.

This manuscript advances the notion of affective production relations as a cognitive attainment, hierarchically stratified and examined through eight distinct financial cultural archetypes. These archetypes are delineated as follows: “Security-Dependence Normativism,” “Industrious Frugality,” “Hedonistic Immediatism,” “Aristocratic Asceticism,” “Speculative Utilitarianism,” “Rigorous Financialism,” “Investment Value-ism,” and “Global Asset Allocation.” Each archetype encapsulates the ideologies, value systems, and lifestyle characteristics emblematic of diverse societal strata.

Tomkins (2014) views “affect as the primary innate biological motivating mechanism and what is illusory is the biological and psychological source of the apparent urgency of the desperate quality of the hunger, thirst, breathing, and sex drives”. In this sense, the emotions of people at the bottom of society will often be triggered by biological and psychological urgency, which will bring about more fearful imaginations of survival and despair.

Accordingly, the financial culture of “Welfare Dependency” is observed among the relatively impoverished classes in the context of socioeconomic stratification. These individuals exhibit a profound sense of national pride, drawing emotional gratification from the developmental achievements of their homeland. They express contentment with the social welfare provisions afforded to them, which offer a sense of security, especially when their labor capacity is diminished or entirely eroded.

For instance, a student recounts, “After my parents passed away, my grandparents, who are on minimal subsistence allowance, lacked the capability to work, which left me reliant on student loans for university education. I have not even started working yet, and I am already burdened with significant debt. (J-4)”

Conversely, the “Industrious Frugality” financial culture is predominantly practiced within the working and farming classes. These individuals are characterized by their diligence and commitment to laborious efforts. They have a predilection for frugality and saving, driven by the aspiration to elevate their living standards through relentless perseverance.

A representative sentiment from this group reflects on parental values: “My parents were very frugal when they were younger. They worked hard and were very thrifty. My mother was particularly careful with spending because of the pressure to pay off the mortgage and the desire to settle it as quickly as possible (G-d:14).”

The financial culture of “Hedonistic Consumerism” is typically associated with the middle class, where there is a pursuit of immediate gratification and a zest for life. This ethos prioritizes the enjoyment of the present over saving, with a tendency to expend financial resources on pursuits that satisfy a longing for spiritual freedom. Bourdieu described this trait as characteristic of the bourgeoisie; however, this study did not find evidence of such behavior among the upper echelons of society. Instead, it was noted among certain middle-class families and their descendants. The practice of “Hedonistic Consumerism” within the upper classes, as observed in this research, is more aligned with “Value Investing” or “Global Asset Allocation” rather than pure indulgence, given that their investments are strategically aimed at value appreciation. Nonetheless, the Chinese context diverges from that of the United States, particularly in the post-modern “Risk Society” (Ulrich Beck, 2004). The discourse on “consumption downgrading” that rapidly spread across online platforms in 2017 indicates a shift in behavior even among those middle-class individuals who previously embraced hedonism.

“My parents exemplified a hedonistic approach during their early years. They prioritized immediate gratification and leisure activities, which included frequent travel, despite a lack of substantial savings and a tendency toward depleting their monthly income on such pursuits. Fortunately, an eventual increase in my father’s salary provided the financial means necessary for my international education, which might have otherwise been unattainable. (G-b:8).

In the domain of sociocultural economics, the concept of “Noblesse Asceticism” is one manifestation of the financial culture adopted by the middle class. This ethos, primarily characterized by the “intellectual gaze,” has its roots in Pierre Bourdieu’s delineation of the intellectual’s perspective. It embodies an austere yet artistic lifestyle that eschews frivolity and excess, in favor of a more measured and intellectually enriching existence (Bourdieu, 1984:287).

As articulated by members of this group, “Our family is not without means, but it is well known that many great figures in history have adhered to a lifestyle of minimal desires. It is through spiritual abundance that one elevates their state of being and expands their worldview... (G-d:15)”

Conversely, “Speculative Utilitarianism” represents another strand of the middle class’s financial culture, predominantly among entrepreneurs of medium and small-scale enterprises, who often operate at or below the middle-class threshold. These individuals, emblematic of China’s SME sector, navigate the precarious waters of market competition, where a utilitarian approach is sometimes indispensable for the survival and profitability of their businesses. Their approach can

be characterized as opportunistic, occasionally misjudging risks due to a lack of legal and financial acumen. This can lead to the conflation of personal and business finances, engendering potential risks and a life metaphorically described as “licking blood off the edge of a knife.”

As they express, “I’m in a bind at the moment with numerous private loans tied up in the business. Even with tight cash flow, I must seek fortune amidst danger... The interest on the money I borrow, if I work all year just to pay that interest, it’s as if I’ve labored for nothing. Taking risks is unavoidable when there’s a multitude of obligations that must be met. (G-f:9)”

“Fiscal Conservatism in the Upper Middle Class”: This financial culture is predominantly adopted by professionals such as university professors, lawyers, accountants, and senior managers. They possess specialized knowledge and are part of a sophisticated financial community, complete with mature management mechanisms.

“Our household accounting is optimized by an accountant who also assists in strategic tax planning, as we have tax obligations in both Hong Kong and mainland China. The complexity of our tax affairs, coupled with the potential for tax reduction through self-filing, necessitates the engagement of a professional. Our family business has procured premium medical insurance, and we have supplemented this with commercial insurance policies that provide coverage for critical illnesses, accidents, life, and property, all calibrated annually to our varying needs. We maintain a reserve fund of approximately six months’ expenses, contribute to a retirement fund, and have established an education fund for our children. Additionally, our assets are diversified across real estate, equity, stocks, bonds, gold, and ETFs, all assessed to align with our risk tolerance, and importantly, I have prepared a will for unforeseen circumstances. (G-b:9)”

“Investment Value Orientation among the Upper Middle Class”: This financial culture is championed by professionals and entrepreneurs from large or multinational corporations, who seek value investments aligned with their personal values and possessing potential for growth. They may employ professionals to provide services and, through collaboration, explore opportunities for wealth accumulation, brand value enhancement, and social responsibility.

“Adhere to value investing and long-term holdings. While working in the United States, I consistently practiced value investing. Currently, in China, I am still observing because I perceive the stock market investors here to be somewhat irrational. Even good companies can be risky in such an environment. I am optimistic about future improvements. (J-8)”

“Global Asset Allocation for the Elite”: This principle is followed by the upper echelons of society, including the ultra-wealthy who value the creation of ‘business empires’ for their role in driving employment, living standards, and development. They seek wealth growth opportunities on a global scale and fulfill their social responsibilities to varying degrees, autonomously deciding which vulnerable groups to support.

“Having previously employed a professional team for financial management and asset allocation, I am now preparing to establish a family office to conduct professional investments globally, while also ensuring a healthy cash flow from my own business ventures. (G-e:4)”

Affective production relations, which encompass love, desire, and fear, intricately navigate the perception of joy, value, and economic objectives, correlating with the financial cultural strata of class. Desire is characterized by the agony of unfulfilled aspirations, fear by the trepidation of loss, and love represents a rational emotion devoid of desire and fear. These sentiments are covertly embedded within the economic values of societal strata, exerting influence over cultural lifestyles, capital configurations, and social interconnections. The socio-economic values upheld by individuals shape the evaluative criteria for ‘cognitive achievements,’ giving rise to eight distinct financial cultures. The disparities, and at times oppositional economic values imbued with emotion, precipitate social discord. The economic behaviors, societal conflicts, and alterations in production relations prompted by these emotions, in turn, affect the generation and redistribution of capital.

5 Discussion

5.1. *The Conception of Cognitive Achievement in the Sociology of Education*

Cognitive achievement typically refers to an individual’s capacity or level of knowledge in areas such as language, mathematics, and logical reasoning. These achievements are often assessed through standardized test scores or academic performance. From the perspective of educational sociology, understanding the relationship between cognitive achievement and cognitive disparities involves examining the impact of social factors within the educational process, including social structures, culture, and individual behaviors on educational outcomes. Educational sociology emphasizes

that cognitive solidarity promotes the cohesion of the social system, which is inextricably linked to the development of individual cognitive solidarity and socio-economic status. For instance, in China, a student's cognitive achievement may not directly equate to social achievement in cognition. From the vantage point of educational sociology, the relationship between cognitive achievement and cognitive disparities is multi-layered and complex. Cognitive disparities might be understood as cognitive misalignments, which could encompass economic, socio-cultural, emotional, and self-identity dimensions, thereby affecting the internal cohesion of the social system through their impact on social cognitive solidarity. In this sense, narrowing cognitive disparities is conducive to strengthening the internal cohesion of the social system, thereby facilitating the benign operation and coordinated development of society. Educational sociologists seek to understand how these factors interact and explain the relationship between cognitive achievement and cognitive disparities through their interplay. They also investigate how educational policies and practices can be employed to reduce cognitive disparities, thereby promoting social equity and individual social mobility.

5.2. Multiple Space Transformation Shortens the Cognitive Gap

A significant research finding presented in this text is that student groups can reduce cognitive disparities caused by temporal constraints through multidimensional spatial transformations. The failure to achieve such transformations among students may be attributed to economic deprivation, complex emotional relationships, and differences in risk perception and preferences. In *The Strategy of Desire*, Ernest Dichter (2017) counters the argument that “motivational research amounts to manipulation and shows how the understanding and modification of human behavior is necessary for progress¹³”. Within multidimensional spatial transformations, the emotional motivations for self-field socialization include love, desire, and fear, which influence their cognitive disparities, behavioral decisions, and socio-economic status.

In the multidimensional landscape of educational pedagogy, the cultivation of individuals who share a common “schematic of sensibility” is instrumental in the creation of society. In the domain of value science governance, the epicenter lies in discerning the nature of the spirit and integrity that resonate with individuals. The construction of an “idealized heroic self-image” within the individual's psyche serves as the foundational bedrock for the genesis of all profound emotional responses. In the process of multiple spatial transformations, people construct their heroic consciousness (Allison, 2019), that is, how their ideal self perceives, experiences, and thinks about the world. Education and curriculum create society by making kinds of people as future citizens (Popkewitz and Lindblad, 2004). Bai (2022a) delves into how heroic value science fosters societal pedagogy through the interplay of reason and spirit. This form of social education engenders an educational milieu via cinematic media, offering a sphere for self-directed edification and experiential learning. Concurrently, the familial domain, as an educational space, affords parents a pathway for professional self-cultivation in parenting practices (Bai, 2023). The prerequisite for communicable individuals is their educability, as exemplified in discussions on the teachability of psychological resilience. The science of heroism facilitates the cultivation of self-techniques for environmental adaptation amidst the transition across diverse spaces (Bai, 2022b). This manuscript posits the conceptualization of polymorphic spatial transitions as a constituent of self-technologies. Within the ambit of individual autodidactic endeavors, these polymorphic spatial transitions are instrumental in diminishing cognitive dissonance and augmenting cognitive attainment.

The establishment of this shared schematic is foundational to the development of “communicable” individuals. The term “communicable” denotes the capacity of the student body to empathize with and comprehend the emotional, situational, and cognitive differentials among diverse populations. Cognitive achievement is inextricably linked to discussions concerning the interrelation between individual cognition and one's socio-economic status. The “fundamental aspects” of the student body's cognitive achievements are primarily the awareness of education, societal wealth, and income distribution scenarios. This awareness significantly influences the student body's conception of financial culture, future livelihood, and the definitions, expectations, and confidence in happiness.

5.3. Supplement to Cognitive Achievement and Affect Theory: Affect Capital

The impetus for individuals' multifaceted spatial transitions is predominantly rooted in affective responses, which are underpinned by love, desire, and fear. Individuals experience affection towards those around them, harbor desires for acquisition, and possess fears associated with loss. These elements of love, desire, and fear are intricately woven into the fabric of human emotional conduct, economic behavior, and cultural practices. Affect and emotion play pivotal roles in both personal and collective existence, exerting influence over individual self-cultivation, socio-political relationships, and socio-economic behaviors. In this sense, affect transcends mere personal introspection; it is a dynamic entity that

¹³ Dichter, E. (2017). *The strategy of desire*. Routledge.

flows, exchanges, and accumulates among individuals through physicality, language, and social interaction. The transactional nature of affect underscores its function as a form of emotional capital.

The exchange of affective responses achieves a capitalistic function within the realm of emotions. Expressions of emotion in areas such as the arts, literature, cinema, music, and everyday social interactions create pervasive educational spaces within society. The articulation of these emotions within educational spaces can serve as a repository for societal emotional symmetry. By influencing individuals' affective reactions, shaping the logic of social relationships, and facilitating empathetic engagement with social roles, these expressions can diminish cognitive disparities among individuals. To a certain extent, we concur with the notion that within the context of educational social governance, individuals possess the capacity to act as facilitators of processes, embodying a skill set that can be described as 'critical facilitation (Gregory and Romm, 2001)' capabilities, coupled with the cultivation of an open discourse orientation. For instance, while our practices may not necessarily align, we are capable of comprehending, empathizing with, and caring about divergent approaches. Accordingly, this process fosters the construction of a common sense of understanding, cultivates communicatively competent individuals, and enhances socio-economic collaboration, thereby yielding authentic cognitive accomplishments. This theoretical framework elucidates the significance of affect within human behavior and social structures as realized through the mechanism of emotional capital.

Emotion serves as the direct impetus for transformation within these pluralistic educational spaces. For students from lower socio-economic backgrounds, the predominant emotional drive to ameliorate their current living conditions stems from fear—a survival fear—which in turn generates fear-driven economic behaviors as a primal force to urgently improve their socio-economic standing. In contrast, for certain segments of the middle-class student population, their emotions are driven by desires unmet by their economic situation, given their increasing cultural needs. Such emotions propel the middle-class student body to engage in desire-driven economic behaviors in pursuit of an enhanced quality of life. For upper-middle-class students, their economic conditions may already satisfy basic needs, yet economic actions may constitute a significant aspect of daily life, with such behaviors being more rational in nature.

5.4. True Love¹⁴ as a Highest Affect Capital Emotion

The inequity of educational opportunities is attributed to an insufficiency in the emotional drive within student populations. It is posited that the generation of sufficient emotional impetus occurs when students experience “authentic love,” leading to a passionate engagement. Under such circumstances, love—as the most potent form of life-affirming emotion—exerts its influence within the market of production relations. In this discourse, we refer to love as a form of emotional capital, whereby love injects vitality into social productivity, capital creativity, and cultural prosperity.

China ought to concurrently endeavor to augment the potential for students' multidimensional spatial transitions while mitigating the observed cognitive disparities among distinct student cohorts. Presently, the landscape of pluralistic spatial education is grappling with the challenges of inequitable distribution of educational spatial resources, the complexities of spatial categorization, pragmatization, and internationalization. Various environmental or background spaces—be it physical, cultural, or educational—stimulate “affect moments” that engender cognitive memories and cultivate the expansion of an individual's intellectual sphere, thereby narrowing the gap in cognitive achievement.

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None

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¹⁴ To delineate the conceptual distinctions among “True Love,” “Sacred Love,” “True Love,” and “Pure Love,” it is posited herein that “True love” represents a refined amalgamation of both True Love, Pure Love and Sacred Love, thereby constituting a novel manifestation of affection.

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