

Exploration of the Identity Belonging Mechanism of Digital Nomads Based on the Fusion of Dual Theories

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ABSTRACT

With the advancement of digital technology, digital nomads, as an emerging mobile labor group, are increasingly gaining attention. While seemingly possessing freedom, they face the dual challenges of delocalization and a sense of homelessness. To this end, this study innovatively integrates Liquid Modernity theory and Network Society theory for the first time. It collects data related to digital nomads from platforms like Weibo and Rednote, employing online text analysis to systematically map the lived realities and internal dilemmas of digital nomads within social media, online communities, and individual narratives. The study finds that the experience of geographical migration and participation in temporary shared spaces at the spatial dimension, weak-tie social networks and online community interactions at the relational dimension, and self-meaning construction at the cognitive dimension collectively form the identity belonging mechanism of digital nomads.

1. Introduction

In the current era where digital technology is deeply embedded in daily life, the phenomenon of digital nomadism, as a typical form of highly mobile labor and lifestyle, is rapidly expanding worldwide. Statistics indicate that the global population of digital nomads reached 35 million in 2024, a 380% increase compared to 2019^[1]. Through continuous geographical migration and hybrid online-offline interactions, digital nomads have transcended the geographical boundaries of traditional communities, forming a highly mobile lifestyle. However, having broken free from fixed identity frameworks and gained enviable freedom, they simultaneously lose stable social attachments and a sense of identity belonging, facing the dual challenges of delocalization and a sense of homelessness^[2].

Although research on digital nomads has attracted

growing scholarly attention, Li Nao et al.^[3] point out that it remains in its early stage. Existing studies mainly concentrate on five aspects: conceptual definition, theoretical frameworks, lifestyle patterns, co-working and co-living spaces, and digital work practices, yet they are largely descriptive or conceptual, with limited empirical depth. A key gap lies in the exploration of identity belonging, where practice has advanced more rapidly than theoretical development^[4]. Traditional community studies, rooted in geographically bounded spaces^[5], fall short in explaining how digital nomads reconstruct belonging across fluid, multi-sited communities. Conversely, research on online communities often prioritizes virtual interaction while overlooking the significance of embodied spatial experience. To bridge these limitations, this paper investigates how digital nomads generate identity and belonging

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through spatial practices, community interactions, and self-discursive construction. By integrating Bauman's theory of Liquid Modernity with Castells' theory of the Network Society, and employing grounded theory analysis of digital nomad-related content on platforms such as Weibo and Rednote, it develops a tri-dimensional "Space-Relationship-Cognition" model, thereby contributing a novel theoretical framework for understanding digital nomad identity belonging.

2. Literature Review

2.1 Concept and Evolution of Digital Nomads

The concept of digital nomads was first proposed by Makimoto and Manners^[6] to describe a "new way of working and living, unrestricted by time and location, achieved through mobile communication and information technology." Their mobility represents not only a reconstruction of physical space but also a deconstruction of traditional occupational paradigms and social structures^[7], reflecting a shift in values among Millennials and Gen Z from material accumulation to prioritizing experiences^[8]. Xie Jia et al.^[9] vividly described the mobile logic of digital nomads as "liquid life": they switch between comfortable places, self-paced rhythms, and curated diverse experiences, practicing an ideal life.

International research primarily approaches digital nomads from a functionalist perspective, focusing on discussions about mobility freedom, geographical arbitrage, and the balance between work and leisure^[10]. In the West, digital nomads are seen as a new way of working and living, emphasizing their identity as global citizens, individual freedom, independence, and the breaking of traditional work models^[11]. American scholar Thompson B.Y.^[12] defines digital nomads as "groups who achieve global mobility through digital technology, pursuing a balance between work and travel," with core elements including the gig economy, geographical arbitrage, and autonomy; the British media BBC describes them as "professional groups who rely on remote work to realize their specific travel dreams." These definitions highlight digital nomads' transcendence of geographical constraints and pursuit of personalized lives.

In contrast, the domestic academic community has conducted a series of explorations focusing on the mobile practices and social significance of digital nomads. Some scholars focus on the community networks and lifestyles of digital nomads. Sun Yike and Zhou Chenglei^[13] note that digital nomads' geographical arbitrage practices contribute to rural revitalization to some extent but may also impact traditional village ecosystems; Zhang Pin and

Zhan Yuanyi^[14] found in their survey of rural areas in the Yangtze River Delta that young digital nomads attempt to reconstruct new emotional communities through co-living and sharing forms.

2.2 Concept of Identity Belonging

Zhang Yingrui and Zuo Bin^[15], studying Tajfel's Social Identity Theory, propose that identity belonging is based on the subject's emotional attachment and identification with the group to which they belong. It encompasses how individuals construct a complete self-concept using multiple identity dimensions such as social, cultural, and professional identities, and how they balance and resolve conflicts between these identities. Accordingly, identity belonging in this paper refers to an individual's sense of "belonging here/belonging to this group" within a specific social group or field, constructed through the combined action of three elements: emotional attachment (emotional connection to the group), cognitive identification (identifying with the group's values and norms), and behavioral participation (sustained interactive engagement).

2.3 Shortcomings in Existing Research on Identity Belonging Mechanisms

Domestic interest in digital nomads is growing, but academic research on their identity belonging mechanism remains insufficient. Firstly, existing research predominantly focuses on the concepts, characteristics, and practical forms of digital nomads^[16], lacking in-depth analysis of the internal mechanisms forming their identity and sense of belonging. Secondly, existing academic research on digital nomads often approaches them from specific domains like geographical space or online networks, emphasizing their mobility characteristics, which makes it difficult to grasp their interactions in the process of digital nomad identity reconstruction. Finally, frequently used research methods in the literature also have limitations: most results rely on case interviews or questionnaire surveys, lacking systematic analysis of large-scale online texts.

These shortcomings result in fragmented research on digital nomad identity belonging: considering only a single dimension like geographical space, social relationships, or personal cognition fails to comprehensively reveal how digital nomad identity reconstruction is triggered; the coupling pathways between multiple dimensions are difficult to clarify, making it even harder to grasp the generative logic of identity belonging under the combined action of different dimensions. Therefore, there is an urgent need to establish a scientific model of the digital

nomad identity belonging mechanism to systematically and deeply analyze the process of identity and belonging formation for digital nomads within fluid spaces.

3. Research Approach

3.1 Theory Basis

The study theoretically innovatively integrates Bauman's Liquid Modernity theory^[17] and Castells' Network Society theory^[18] to reveal how digital nomads construct identity belonging through interactions across different spaces and network fields.

Bauman proposed Liquid Modernity theory in Liquid Modernity. The theory posits that with the deep penetration of consumerism and globalization, the institutional order and identity of contemporary society have become increasingly liquid. In this context, space is no longer a fixed container but a series of fluid nodes. Individuals consciously construct new emotional anchors within communities of different fields to alleviate the belonging anxiety arising from rootlessness^[19]. Furthermore, Bauman's theory not only emphasizes the uncertainty brought by geographical migration but also points to how individuals rebuild emotional attachment to places through conscious strategies of staying (e.g., recurring presence in shared apartments or co-working spaces)^[20]. As digital nomads constantly engage in geographical mobility while pursuing personalized lives, repeatedly sharing temporary living or working spaces with others, according to this theory, they can use conscious staying strategies to construct emotional anchors within fluid spaces, creating psychological belonging and security.

Castells proposed Network Society theory in *The Rise of the Network Society*, depicting a social structure "centered on information flows." In this social state, the traditional "space of places" model based on physical territory is broken; the technologically driven "space of flows" becomes the fundamental logic of social operation^[21]. The emergence of weak ties and modular organizations makes interactions between people more flexible and efficient, but also brings a new condition—mobility. Within this "network society" structure, individuals construct and maintain cross-geographical social networks by participating in online communities, using digital platforms, and accessing shared workspaces. According to this theory, digital nomads can escape the constraints of traditional geographical spaces and instead rely on various forms such as online communities, digital platforms, and co-working spaces to build cross-geographical, loose yet efficient social network relationships, enabling interaction between

the individual and others, and between the individual and the community^[22].

Bauman's liquidity theory guides digital nomads to consciously construct emotional anchors in fluid spaces through conscious staying strategies. Building upon this establishment of anchors, Castells' network society theory explains how digital nomads rely on cross-geographical, loose yet efficient social network relationships and achieve connection and recognition by actively expressing personal cognition within them. Integrating these two theoretical perspectives reveals that for digital nomads:

At the spatial level, the focus is on how individuals seek emotional anchoring within fragmented geographical practices; At the relational level, it examines how digital nomads leverage weak ties in social networks and modular communities to maintain social support; At the cognitive level, it focuses on how digital nomads, through digital discourse, self-narration, and group discourse practices, ultimately internalize the mobile experience into a sustained identity and sense of belonging.

3.1 Research Methods

The hybrid online-offline interaction characteristics of digital nomads mean that research data often comes from unstructured textual or image data like posts, comments, and notes on online platforms. Therefore, guided by the integration of Liquid Modernity and Network Society theories, this paper adopts a qualitative research approach combining online text analysis and Grounded Theory to explore the generative mechanism of digital nomad identity belonging.

Online text analysis, as a method based on analyzing existing publicly available text data from online platforms, is suitable for capturing the everyday expressions and social constructions of contemporary mobile groups^[23]. This study utilized web crawler technology to collect a large amount of publicly available data published by digital nomads on social media platforms such as Rednote and Weibo, including text and images. It analyzed the information contained within and used tools like ROST CM6 for qualitative data analysis of high-frequency words and emotional polarity.

Glaser and Strauss's^[24] Grounded Theory provides a method for inducing theory from empirical materials. This theory emphasizes inducing theoretical categories and relational logic from raw data, making it suitable for exploratory research and mechanism construction for emerging social phenomena. This paper uses the procedural coding (Programmatic Grounded Theory) technique within Grounded Theory.

4. Research Design

4.1 Data Collection and Processing

Regarding data sources, this paper primarily focused on social platforms like Weibo and Rednote. Using keywords such as “digital nomad”, “remote work”, “identity”, “belonging”, “mobile work”, etc., it systematically crawled user-generated posts and comments from the past five years using Octoparse Collector and Python crawler tools. Initially, 492 blog posts (over 140,000 words) and 220 notes (over 20,000 words) were collected.

To ensure data validity, the ROST CM6 software was used to systematically clean the crawled data. Emojis, garbled text, duplicates, blanks, advertising/promotional content (e.g., posts with phrases like “DM me to get...”), and content unrelated to digital nomad life (e.g., notes promoting digital nomad visa services) were removed. Using ROST CM6 software, after cleaning, denoising, and word segmentation of the online texts, high-frequency words were extracted, resulting in a statistical list of the top 100 high-frequency words in the network texts (see Table 1); a co-occurrence matrix of high-frequency words was also generated (see Table 2).

Table 1: High-Frequency Word Statistics List for Network Texts (Partial)

Rank	Words	Frequency	Rank	Words	Frequency	Rank	Words	Frequency
1	Digital Nomad	386	16	Place	39	31	Spirit	29
2	Sojourn	181	17	Consumption	39	32	Feeling	29
3	Yunnan	124	18	Economy	37	33	Market	28
4	Friends	69	19	Tourist	35	34	Music	27
5	Community	68	20	Anxiety	35	35	Kunming	27
6	Culture	62	21	Start up business	34	36	Nomad	26
7	Freedom	54	22	Environment	31	37	Development	26
8	Dali	54	23	Coffee	31	38	Beijing	26
9	Travel	53	24	Youth	31	39	Company	26
10	Countryside	49	25	Earning	31	40	Creation	26
11	Digital	49	26	Tour	31	41	Value	25
12	China	48	27	Influencer	31	42	Exploration	25
13	Experience	47	28	Era	30	43	Every	24
14	Mode	43	29	Globalization	30	44	Nature	24
15	Happiness	39	30	Lay-down	30	45	Joy	24

Table 2: High-Frequency Word Co-occurrence Matrix for Network Texts (Partial)

	Digital Nomad	Sojourn	YunNan	Friends	Community	Culture	DaLi	Freedom	Travel	Countryside	Digital	China	Experience	Mode
Digital Nomad		57	33	38	33	37	29	36	27	16	29	31	39	19
Sojourn	57		17	15		19							14	
YunNan	33	17				15	16							
Friends	38	15												
Community	33													
Culture	37	19	15									15	20	13
DaLi	29		16											
Freedom	36													
Travel	27													
Countryside	16													
Digital	29													
China	31					15								
Experience	39	14				20								
Mode	19					13								

By conducting high-frequency word statistics and semantic network analysis on the large amount of digital nomad-related text collected from Weibo and Rednote platforms, the study systematically sorted out the core concepts and their potential interconnections within digital nomad discourse from three dimensions: space, relationship, and cognition.

Word frequency analysis revealed that the term “digital nomad” appeared most frequently (386 times) in the network texts of Weibo and Rednote, highlighting its importance as a core concept and indicating that digital nomads have become a new focus of social discourse.

At the spatial dimension, the high-frequency co-occurrence of word pairs like “digital nomad---sojourning---Yunnan” indicates the group’s strong tendency to choose specific geographical nodes like Yunnan and Dali as temporary anchors for their mobile lives. Within its semantic cluster, the frequent appearance of words like “nature” (24 times), “shared” (21 times), “café” (15 times) not only reflects the group’s demand for functional spaces for remote work, but also highlights these places as emotional carriers for natural landscapes and community interaction. This intertwining of functional needs and sensory experiences confirms the mechanism described in Bauman’s “Liquid Modernity” theory where individuals alleviate belonging anxiety through “emotional anchors.” Semantic paths characterized by “sojourning---nature---shared space” align with the mechanism settings of “geographical migration” and “emotional anchoring” within this paper’s “spatial embeddedness” dimension.

At the relational dimension, the co-occurrence network of “friend---community---conflict” also corroborates the duality of digital nomads’ relational embeddedness. On one hand, weak-tie social networks constructed by nodes like “friend” (69 times) and “community” (68 times) provide emotional support for digital nomads through high-frequency interaction; on the other hand, the association of “resources---conflict” exposes the potential impact of this fluid space-centric network structure on local community ecology.

At the cognitive level, the triangular word pair “freedom---value---self” became the core of the co-occurrence network, revealing how digital nomads construct identity meaning through symbolic narratives. Simultaneously, the high-frequency co-occurrence of the word pair “anxiety---entrepreneurship---growth” indicates that their professional practices are endowed with the meaning of alleviating anxiety and achieving self-growth. This logic of internalizing external contradictions into positive cognition reflects the dynamic adjustment function of cognitive embeddedness—individuals reconstruct discourse

to transform mobile dilemmas into drivers of identity belonging. Further analysis of the emotional tension in high-frequency words revealed that the coexistence of positive words like “freedom” (54 times), “happiness” (39 times), “exploration” (24 times) with negative words like “anxiety” (35 times), “loneliness” (16 times), “escape” (14 times) exposes the belonging deficiency and identity dilemma brought by mobility.

In summary, these high-frequency words and their semantic associations clearly outline the real-life circumstances and inherent core dilemmas of the digital nomad group: they pursue freedom and happiness, striving to realize ideals in mobility; but simultaneously, the unease of “drifting loneliness” and “lack of belonging” constantly surfaces, and the anxiety accompanying freedom is difficult to avoid. The coexistence of freedom and anxiety, the interweaving of sojourning and entrepreneurship, and the manifestation of resources and conflict within high-frequency words reveal the complexity of this group’s value orientations and emotional expressions.

4.2 Procedural Coding

4.2.1 Open Coding

Open coding primarily involves organizing the original textual material, attaching conceptualized labels, and then classifying these concepts according to their attributes to form different categories. Based on this, the researcher compared key statements and theoretical categories, merging, analyzing, and summarizing these nodes according to semantic associations and form 30 conceptual labels, which could be further grouped into 13 initial categories (see Table 3).

4.2.2 Axial Coding

Axial coding involves further identifying, analyzing, and determining the categories obtained from open coding to refine the main categories. Starting from the logic of researching the multiple embeddedness and identity belonging mechanism of digital nomads, this paper carefully analyzed and integrated the 13 initial categories based on their internal logic and connections, resulting in three main categories: “Space,” “Relationship,” and “Cognition” (see Table 4).

4.2.3 Selective Coding and Model Construction

Selective coding involves selecting and screening to determine the “core category” that can encompass all other categories, and further refining a clear generative pathway by analyzing the relationship between the core category and other categories. Based on this, this paper further analyzed the causal and logical relationships between the core

category and the main/initial categories, writing a generative pathway from “fluid space—community network—self-discourse” to “identity belonging” (see Table 5). Finally, the research concretized this logical framework

into the “Space-Relationship-Cognition” tri-dimensional embeddedness model (see Figure 1), presenting the entire process through which digital nomads achieve identity belonging via the synergistic action of the three dimensions.

Table 3: Open Coding and Initial Categories

Original Statement (Node)	Conceptual Label (A)	Initial Category (B)
“Bali... freedom accompanied by sea breeze, sunshine, white clouds”...	Natural Scenery (A1)	Natural Environment (B1)
“In the homestay by Erhai Lake, the lake is faintly visible from the room... “... ”	Ecological Living Space (A2)	
“ It gathers a large number of startups and tech companies, it’s one of Brazil’s core cities for tech innovation”...	Urban Scene (A3)	Urban Environment (B2)
“Cafés, libraries, shared offices... satisfy remote work needs...”...	Multi-functional Public Space (A4)	Modern Infrastructure (B3)
“At Huangshan Heiduo Island Digital Nomad Community... digital elements are everywhere”...	Digital Community (A5)	Digital Environment (B4)
“Writing code remotely in a café by Erhai Lake”...	Remote Work Freedom (A6)	
“Logging into Feishu on time to start working, directly entering work mode with two meetings”...	Modern Tech Support (A7)	
“Digital nomads group up for hiking, gaming, board games, even community canteens”...	Common Interest Driven (A8)	Interpersonal Interaction (B5)
“Friends met in hostels... might fly to another country next week. “... ”	Difficulty Maintaining Relationships (A9)	
“There’s a long-haired Amish brother... here teaching farmers to grow coffee... “... ”	Interaction with Locals (A10)	
“At Dali market, Bai ethnic grandma’s herb stall intertwined with digital nomads’ guitar sounds”...	Intergenerational Cultural Clash (A11)	Cultural Integration (B6)
“...Sharing their city experiences via social media... endows the city with more vitality and inclusivity, enhancing its globalization level...”...	Digital Nomad Global Flow (A12)	
“This is not a utopia, it’s a future community under growth, with greenery, warmth, infinite possibilities... customize your islander life...”...	Shared Community Support (A13)	Community Relationship (B7)
“We encountered many old and new friends online, igniting passion in experiences of opening hearts, missing each other after conversations ended”	Online Community Interaction (A14)	
“Now fully integrated into local life, ‘like home,’ having a sense of belonging is his and many new Dali residents’ real feeling when describing Dali”...	Possessing Belonging (A15)	
“The bright agility of the teaching assistant when freelance writing becomes an enviable vivid life for others”...	Role Modeling (A16)	Role Model Effect (B8)
“I asked her, what good and bad changes happened to your life after this? An aunt angrily said, they forbid us to hunt birds... “... ”	Locals vs. Outsiders Conflict (A17)	Resource Allocation Conflict (B9)
“I’ve understood from cost of living, exploration level, degree of freedom in life why digital nomads choose Bali”...	Longing for Freedom (A18)	Multiple Emotional Experiences (B10)
“Cold oden from a late-night convenience store, in a moment we suddenly wanted to escape”...	Feeling Lonely (A19)	
“... I like the community environment and atmosphere, but I don’t want to stay long, ran away after the car was modified. Because I think the essence of being a digital nomad is avoiding complex interpersonal relationships... “... ”	Contradiction of Freedom & Loneliness (A20)	
“... happiness almost made me forget the overwhelming green and stunning sunset experienced two days ago.”...	Sense of Happiness (A21)	
“...Although inevitably anxious, I’m not rushing to apply for new projects, choosing to be a professional dog walker for a few days”	Feeling Anxious (A22)	

Table 3 continued

Original Statement (Node)	Conceptual Label (A)	Initial Category (B)
“True workplace freedom isn’t escaping the system, but finding an ecological niche within it”;...	Value Orientation (A23)	Self-Knowledge (B11)
“A former 996 worker, now a digital nomad. I transformed from a ‘corporate drone’ life of 9-9-6 into a ‘free person’ earning while traveling”...	Identity Reconstruction (A24)	
“Work doesn’t have to be in an office...”...	Rethinking Work Style (A25)	Active Work Cognition (B12)
“Entrepreneurship cured my internal struggles, fragility, and affectation”...	Work Change & Self-Growth (A26)	
“Reading is a good way to broaden horizons, traveling thousands of miles is too”...	Integration of Knowledge & Practice (A27)	Lifestyle Cognition (B13)
“Sojourning in Yunnan isn’t exclusive to the silver-haired generation, young people can also find dream habitats”...	New Lifestyle (A28)	
“Are digital nomads a cure or an illusion?...”	Weighing Freedom & Risk (A29)	
“Now I feel, after true spiritual freedom, material consumption is basically minimal, no material desires...”...	Change in Consumption Concept (A30)	

Table 4: Axial Coding

Category Connotation	Initial Category (B)	Main Category (C)
Emphasizes the feelings and experiences of digital nomads when immersed in natural landscapes (e.g., seashore, mountains, forests)	Natural Environment (B1)	Space (C1)
The living scenes and socio-economic environment of digital nomads in urban spaces, such as city streetscapes, entrepreneurial clusters, etc.	Urban Environment (B2)	
Various public spaces and technical facilities satisfying the remote work needs of digital nomads	Modern Infrastructure (B3)	
Describes the atmosphere and elements of digital technology and information environments in digital nomad communities and cyberspaces	Digital Environment (B4)	
Emphasizes the process and challenges of digital nomads establishing and maintaining social connections amidst constant mobility	Interpersonal Interaction (B5)	Relationship (C2)
The exchange and integration situations arising from the interaction between digital nomads and local cultures and other groups	Cultural Integration (B6)	
Reflects the mutual aid, support, and belonging structures within the online or offline community networks that digital nomads participate in	Community Relationship (B7)	
Involves the influence and motivation exerted by individuals or cases with exemplary significance within the digital nomad group on others	Role Model Effect (B8)	
Focuses on potential conflicts and contradictions over resource use and allocation between digital nomads and local residents or other groups	Resource Allocation Conflict (B9)	Cognition (C3)
Various emotions and feelings experienced by digital nomads in pursuing a mobile lifestyle	Multiple Emotional Experiences (B10)	
Emphasizes the process through which digital nomads reflect on and reconstruct their own identity, values, and sense of belonging via continuous movement and practice	Self-Knowledge (B11)	
Reflects the awareness and cognitive adjustment of digital nomads regarding the autonomous choice of work styles	Active Work Cognition (B12)	
The understanding digital nomads form of this new mobile lifestyle after integrating acquired knowledge and practical experience with their personal life	Lifestyle Cognition (B13)	

Table 5: Typical Relational Structure and Connotation of the Core Category

Core Category	Main Category	Generative Pathway
Generative Mechanism of Digital Nomad Identity Belonging	Spatial Embeddedness	Spatial Practice → Emotional Anchoring → Belonging
	Relational Embeddedness	Community Interaction → Support Network → Belonging
	Cognitive Embeddedness	Self-Narration → Identity Construction → Belonging

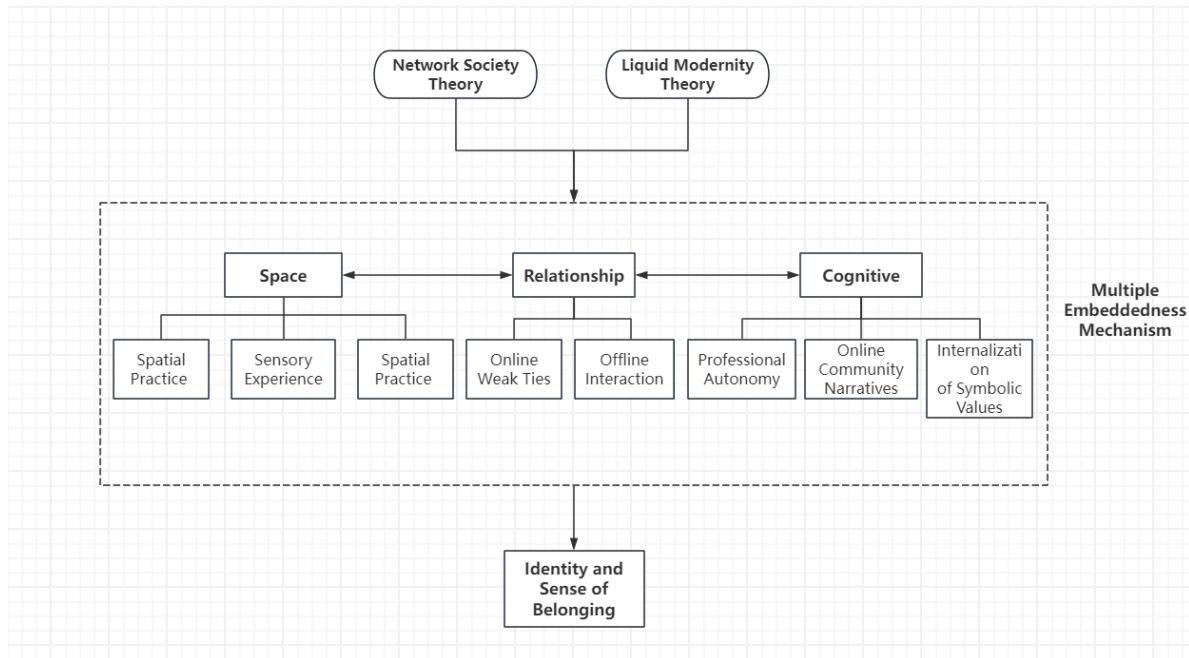


Figure 1: Digital Nomad Identity Belonging Mechanism Model

4.3 Theoretical Saturation Verification

After the preliminary construction of the model, the author utilized reserved online text data (approximately 1/5 of the total text volume) to verify theoretical saturation. This preliminarily indicated theoretical saturation. Furthermore, the coding results and theoretical model were submitted to two other scholars researching the field of digital nomads. After careful discussion, positive feedback was received, and the logical relationship between the core category and the main categories remained unchanged. At this point, the multiple embeddedness and identity belonging theoretical model for digital nomads achieved saturation.

5. Model Interpretation

5.1 Theoretical Integration: Integrated Theories Supporting the Tri-Dimensional Embeddedness Logic

At the level of spatial embeddedness, Huan Jianli^[25], interpreting Zygmunt Bauman’s Liquid Modernity, proposes that liquid modernity dissolves the geographical attachments and stable structures of traditional society, forcing individuals to constantly reconstruct a sense of belonging amidst mobility, forming the paradox that “the price of freedom is the loss of security.” For digital nomads, this “uncertainty in mobility” manifests in repeated geographical migrations and temporary field choices. Consequently, when choosing short-term or long-term stopping places,

digital nomads consider not only local physical resources and living costs but also subconsciously seek emotional anchors capable of carrying spiritual belonging—such as memories and a sense of ritual associated with places they can return to. Simultaneously, Liu Kewen’s^[26] interpretation of Castells’ Network Society theory points out that the nodes of information flow networks shape the organization of social interaction. This infers that the spatial embeddedness of digital nomads relies not only on the physical environment but also requires consideration of the accessibility of network infrastructure and community nodes, both jointly constructing their psychological map of “places to return to.” Such spaces are not only carriers of their physical stays but also, through the blending of sensory experiences like natural landscapes and café atmospheres with functional needs like remote work facilities, become concrete nodes of their emotional attachment.

At the level of relational embeddedness, Bauman’s theory of liquid modernity suggests that temporary communities and short-term interactions become crucial for digital nomads to address individualized dilemmas and mitigate mobile anxiety^[27]. Through co-working spaces or online groups, they form loose yet meaningful ties that buffer the isolating “sense of homelessness.” Wang Liqiu^[28], drawing on Castells’ analysis of the digital society, argues that weak-tie networks and modular organization shape modern community operations: information flows reconstruct social interactions, weak ties replace traditional strong ties, and resources diffuse rapidly through

de-territorialized networks. For digital nomads, relational embeddedness thus operates through online weak ties and offline interactions. Online, platforms such as Weibo or Rednote enable cross-geographical loose networks where experience-sharing facilitates resource acquisition, despite limited emotional depth. Offline, short but intensive engagements in community canteens or group activities foster emotional support, though often fragile as “a friend might fly away next week.” Within this context, digital nomads combine co-living nodes for face-to-face support with virtual communities for sustained emotional ties, reflecting a hybrid “online–offline” practice and a decentralized strategy that balances broad network fluidity with temporary attachments at specific nodes.

Finally, under the interaction of space and relationships, cognitive embeddedness becomes the key mechanism for generating belonging. It is precisely within the highly fluid background that digital nomads transform the mobile experience into a stable identity through self-narration and online expression. In this process, digital nomads engage in three discursive practice paths: The first is narrative of professional autonomy, such as expressions like “entrepreneuring while traveling” or “transforming into a free person,” turning mobility into an anti-system professional ideal. The second is online community narrative, using social media to share identity labels like “member of an international community” or “digital nomad pioneer,” integrating fragmented experiences into a coherent group identity. The third is the internalization of symbolic values. High-frequency words like “freedom” and “exploration” are not merely descriptions of life states but become symbolic representations of group values, internalized as part of the core of the digital nomad identity through repeated use and dissemination. From this point on, whenever digital nomads post personal experiences, share work routines, or write reflections on social platforms, they are not only declaring their identity externally but also endowing their own experiences with continuity and meaning through speech.

Thus, it can be summarized:

1. Spatial embeddedness responds to the need for emotional anchors in liquid modernity, focusing on how physical fields provide support for a sense of belonging in mobility.

2. Relational embeddedness, based on the logic of information flows and weak ties in network society, analyzes how digital nomads leverage platforms and communities to build cross-geographical social networks, consolidating group identity.

3. Cognitive embeddedness, under the interaction of space and relationships, internalizes external experiences

into stable identity and value belonging through self-narration and discursive practices.

The synergistic action of “Space-Relationship-Cognition” constitutes the internal logic for digital nomads to generate a sense of belonging within the context of liquid modernity, namely: individuals find emotional anchors in physical space → gain social support through network relationships → internalize this into identity belonging through discourse construction.

5.2 Dynamic Mechanism: Interaction of Tri-Dimensional Embeddedness and Belonging Generation

The embeddedness in spatial, relational, and cognitive dimensions does not exist in isolation but forms a dynamic generative mechanism for identity belonging through their interaction. Firstly, spatial embeddedness constitutes the material and perceptual foundation for belonging generation. Geographical migration and participation in shared spaces provide digital nomads with «temporary anchors.» This spatial practice not only satisfies functional needs but also triggers emotional resonance through sensory experiences, forming an initial intention of belonging.

Secondly, relational embeddedness strengthens the perception of belonging through social interaction. Sustained interaction within online communities (B7) and the establishment of offline weak ties (B5) constitute the dual relational network of the nomadic group. For instance, experience sharing on Rednote and co-living activities in digital nomad communities (e.g., community canteens) enhance group identity through information exchange and emotional support. However, high-frequency words like «loneliness» and «anxiety» indicate that the looseness of weak ties may lead to the fragility of belonging.

Finally, cognitive embeddedness is the core source for the continuous generation of belonging. Through active work cognition (B12) and lifestyle reflection (B13), digital nomads transform mobility into a resource for identity construction. This cognitive reconstruction enables the nomadic group to continuously generate a dynamically balanced sense of belonging amidst the contradictions of «freedom and loneliness» and «exploration and anxiety.»

The interaction of the three-dimensional embeddedness presents a progressive generative logic of “spatial trigger → relational reinforcement → cognitive internalization,” meaning physical space stimulates the initial belonging intention, social interaction consolidates group identity, and cognitive narration ultimately realizes the symbolization and reproduction of belonging. This mechanism reveals how digital nomads achieve “rootedness without roots” in mobility: through the dynamic balance of multiple em-

beddedness, transforming liquidity into the perception of identity belonging.

6. Conclusion and Discussion

This paper innovatively integrates Bauman's Liquid Modernity theory and Castells' Network Society theory, proposing and constructing for the first time the "Space-Relationship-Cognition" tri-dimensional embeddedness model for digital nomads. It integrates the synergistic effects of geographical migration, community networks, and self-discourse within a systematic framework, breaking through previous limitations of focusing on single fields or methods. Also, It expands the theoretical horizon of digital nomad identity belonging research and provides a new theoretical perspective for in-depth analysis of the digital nomad identity belonging mechanism.

In terms of practical significance, based on the model, this paper provides the following three suggestions for digital nomad community support and platform construction: ① Optimizing Spatial Design: Balance functionality and emotionality, adding shared working and cultural exchange facilities in digital nomad gathering places to strengthen their function as emotional anchors. ② Optimizing Relational Networks: Develop online community matching algorithms to promote the transformation of weak ties into more cohesive interactive relationships, while organizing periodic offline activities to enhance community cohesion. ③ Cognitive Guidance and Support: Assist the nomadic group in adjusting anxious mindsets and reshaping the positive meaning of mobile life through the dissemination of typical cases like successful entrepreneurial narratives and mental health support.

This paper provides a new theoretical perspective and practical guidance for research on digital nomad identity belonging. However, there remains room for further research in terms of research methods and subjects. The paper focuses on digital nomad groups active on Chinese social media, relying on publicly available platforms like Weibo and Rednote for data collection. Future research could integrate existing market research data, industry reports, or multi-source data from large-scale questionnaires and interviews to form a more comprehensive and richer dataset. Combining big data analysis and other technologies, quantitative analysis of the digital nomad identity belonging mechanism could be conducted from the three dimensions of "Space-Relationship-Cognition" to quantify the logical relationships between concepts, forming a more precise theoretical model, deeply mining the potential value of the data, and thereby constructing a quantifiable identity belonging index system. Simultaneously, this paper primarily takes Chinese digital nomads as the

research subjects. Future research could adapt the model for digital nomads in cross-cultural, multilingual environments, expanding its application scenarios.

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