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Satoyama and Identity

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Abstract

This research develops a theoretical framework integrating place identity theory from environmental psychology with the Japanese concept of *Satoyama*, a traditional socio-ecological production landscape representing harmonious human-nature relationships. By synthesizing these two domains, this work proposes a "Satoyama Identity Framework" that illuminates the reciprocal relationships between landscape, identity, and stewardship behavior. The framework identifies four interconnected dimensions, physical-ecological, symbolic-cultural, social-community, and personal-experiential, through which place-based identity emerges and sustains both human well-being and ecological integrity. This integration offers novel theoretical contributions to environmental psychology, cultural geography, and conservation science while providing practical implications for addressing contemporary challenges of rural depopulation, landscape abandonment, and biodiversity loss. The thesis argues that strengthening Satoyama Identity is essential for motivating landscape stewardship and achieving sustainable futures in human-influenced ecosystems in Japan and worldwide.

Keywords: ecology, identity, Japan, landscape, satoyama, stewardship

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概要

本研究は、環境心理学における「プレイス・アイデンティティ」理論と、人間と自然の調和のとれた関係を体現する、伝統的な社会生態学的生産景観である日本の「里山」の概念を統合した、理論的フレームワーク（枠組み）を構築するものである。
これら二つのドメイン統合することにより、本研究は、景観、アイデンティティ、およびスチュワードシップ行動の相互関係を明らかにする「里山アイデンティティ・フレームワーク」を提案する。
このフレームワーク（枠組み）は、場所に基づくアイデンティティが形成され、人間のウェルビーイング（持続的幸福感）と生態系の健全性の両方を支える 4 つの相互に関連する次元、すなわち「物理的・生態的」、「象徴的・文化的」、「社会的・共同体的」、そして「個人的・体験的」を特定している。
この統合についての研究は、環境心理学、文化地理学、および保全科学に対して新たな理論的貢献をもたらすとともに、農村部の過疎化、景観の荒廃、生物多様性の喪失といった現代の課題に対処するための実践的な示唆を提供するものである。
本論文は、日本および世界の人為的影響を受けた生態系において、景観のスチュワードシップ（管理保全）への意欲を高め、持続可能な未来を実現するためには、「里山アイデンティティ」の強化が不可欠であると論じている。

キーワード：生態学、アイデンティティ、日本、景観、里山、スチュワードシップ（管理保全）

1. Introduction

The relationship between humans and their environments has become a critical concern in an era of unprecedented environmental change. While much scholarly attention has focused on the negative impacts of human activity on ecosystems, less attention has been paid to the positive, mutually beneficial relationships that have sustained both human communities and biodiversity for millennia. Two conceptual frameworks offer particularly valuable lenses for understanding these relationships: place identity theory from environmental psychology and the concept of *Satoyama* from Japanese ecological and cultural traditions.

Place identity theory, introduced by Proshansky, posits that physical environments play a fundamental role in shaping individual and collective identities (1978, 1983; 2014). The places we inhabit are not merely backdrops to human activity but integral components that shape who we are, how we see ourselves, and how we interact with the world. Place identity encompasses "those dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, feelings, values, goals, preferences, skills, and behavioral tendencies relevant to a specific environment" (ibid,, 1978, p. 155).

Concurrently, the concept of Satoyama has gained some international recognition as a model for sustainable human-nature relationships. Satoyama, derived from *sato* (village) and *yama* (mountain), describes the border zone between mountain foothills and arable flatland, characterized by a mosaic of secondary forests, rice paddies, grasslands, irrigation ponds, and human settlements. These landscapes have been shaped through centuries of traditional agricultural and forestry practices, creating habitats that support remarkable biodiversity while providing essential ecosystem services to human communities (Dublin & Tanaka, 2014; Dunbar & Ichikawa, 2020; Duraiappah & Nakamura, 2013; Fukamachi et al., 2001; Griffin, 2021; Imamori, 1995 in Yokohari & Bolthouse, 2011; Indrawan et al., 2014; Takeuchi, 2001, 2010).

Despite their distinct origins, both concepts address fundamental questions about how humans relate to, identify with, and nurture stewardship roles throughout their environments. However, no systematic theoretical integration of these frameworks exists. This gap is increasingly

problematic as Satoyama landscapes face severe threats from rural depopulation, urbanization, and changing land-use patterns. “In Japan, about 40% of municipalities are considered at risk of disappearing due to demographic decline, while recent research indicates that human depopulation in Satoyama landscapes does not automatically lead to ecological recovery but can instead contribute to biodiversity loss.” (NACS-J, 2025)

1.2 Research Objectives and Questions

This thesis aims to develop an integrated theoretical framework that synthesizes place identity theory with the concept of Satoyama. The primary research questions guiding this investigation are:

1. What are the theoretical relations between place identity theory and the Satoyama concept?
2. How can these frameworks be integrated to produce a comprehensive understanding of human-landscape relationships?
3. How does the integrated framework illuminate contemporary challenges facing rural communities and their landscapes?

1.3 Significance of the Study

This theoretical integration holds significance across multiple domains. Academically, it bridges environmental psychology, cultural geography, landscape ecology, and conservation science, offering new conceptual tools for understanding human-environment relationships. Practically, the framework provides guidance for policy interventions aimed at sustaining both biodiversity and community well-being in human-influenced landscapes. Culturally, it validates and systematizes traditional ecological knowledge while connecting it to contemporary scientific understanding.

The urgency of this work is underscored by global trends. The United Nations projects that 85 countries will experience continuous depopulation by 2050 (Uchida et al., 2025), while the Kunming-Montreal Global Biodiversity Framework (KMGBF) calls for halting biodiversity loss

and putting nature on a path to recovery by 2030 (2022). Understanding how place identity motivates environmental stewardship, and how landscape change affects identity, is essential for achieving these goals.

2. Place Identity

Place identity emerged as a formal concept within environmental psychology in the late 1970s, primarily through the work of Proshansky and his colleagues at the Graduate Center of the City University of New York. Proshansky argued that mainstream psychology had largely neglected the role of physical environments in identity development, focusing instead on social relationships as the primary determinants of selfhood. In his seminal article "The City and Self-Identity," Proshansky introduced place identity as a specific substructure of self-identity, comparable to gender identity or ethnic identity (1978). The theoretical foundation of place identity rests on the recognition that human development occurs not in abstract social space but in concrete physical settings that shape experience, memory, and meaning. As individuals interact with their environments through daily routines, significant life events, and ongoing sensory engagement, they incorporate those environments into their sense of self. This incorporation is not merely cognitive but involves emotional, aesthetic, and behavioral dimensions.

Place identity is conceptualized as a multidimensional construct comprising four interconnected dimensions that operate across physical, symbolic, social, and personal levels. Together, these dimensions explain how places become embedded in both individual self-concepts and broader cultural frameworks. Place identity is first grounded in a **physical** dimension, encompassing the material features of place—such as geographic boundaries, landforms, built structures, vegetation, climate, and other sensory qualities—that provide a relatively stable substrate for identity, memory, and meaning. Beyond these tangible attributes, a **symbolic** dimension captures the meanings, narratives, and cultural associations attached to places, including the images, discourses, and representations through which places are interpreted and communicated, thereby differentiating them from one another and linking individuals to wider cultural identities. A **social** dimension emphasizes that place identity emerges through interactions

with others in shared settings, encompassing observable behaviors, customs, dialects, and practices associated with particular places, as well as the social networks and community bonds they sustain. At the individual level, a **personal** dimension comprises subjective feelings of attachment, belonging, and emotional connection, drawing on personal memories, aesthetic preferences, and the incorporation of place into one's life narrative and self-concept. Place identity exists within a constellation of related concepts that describe human-place relationships. Place attachment refers to the emotional bond between individuals and specific locations, encompassing affective connections that may precede or accompany cognitive identification. Sense of place describes a broader experiential quality that integrates perception, emotion, and meaning, often characterized by feelings of authenticity, rootedness, and significance (Proshansky, 1978, 1983; 2014).

The relationships among these concepts remain debated. Some scholars treat place identity as a dimension of place attachment, while others view attachment as a precursor to identification. The emerging consensus recognizes these as overlapping but distinct constructs, with place identity emphasizing cognitive and self-referential aspects while attachment emphasizes emotional bonds (Devine-Wright & Clayton, 2010; Dixon & Durrheim, 2000; Hauge, 2007). Recognizing the fluidity of psycho-physical-cultural interdependency, place-identity will heretofore be defined as broadly encompassing place attachment.

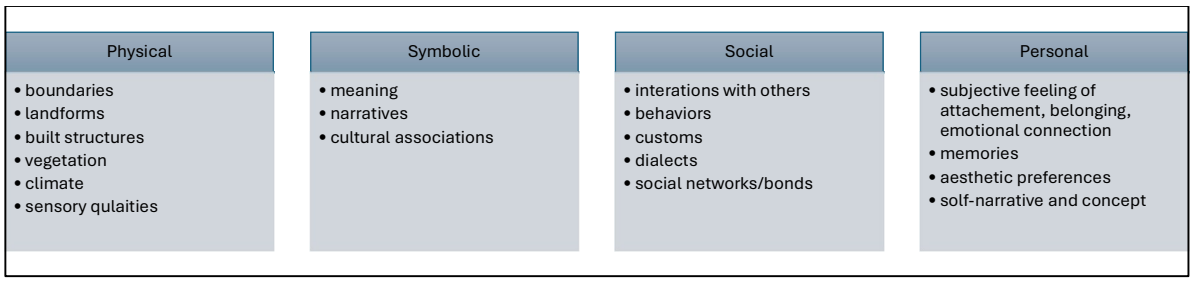

Figure 1. Four dimensions of Place Identity.

2.1. The Concept of Satoyama

Satoyama combines two Japanese characters: *sato* meaning village or home, and *yama*, meaning mountain or hill. The term describes the transitional zone between human settlements and more remote mountain wilderness, historically managed by rural communities for subsistence and livelihood. The concept has evolved through multiple definitions. The original emphasis was on community management of forests through coppicing and resource harvesting during the Edo period (1603-1868), when villagers gathered fallen leaves for fertilizer and wood for construction, cooking, and heating. More recently, Satoyama has been defined more broadly to encompass entire landscape mosaics including secondary forests, rice paddies, dry fields, grasslands, streams, ponds, and irrigation infrastructure. Satoyama landscapes are characterized by their mosaic structure, patchworks of different land-use types that together create diverse habitats and support multiple ecosystem functions. Key components include: Secondary Forests: Unlike old-growth forests, Satoyama woodlands have been repeatedly cut and allowed to regenerate, creating distinctive vegetation communities adapted to periodic disturbance. These forests provided firewood, charcoal, timber, and non-timber forest products. Rice Paddies: Wet rice cultivation is central to Satoyama landscapes. Flooded paddies create wetland habitats supporting diverse aquatic communities, including fish, amphibians, and insects like dragonflies and fireflies. Grasslands: Periodically mowed or burned grasslands provided fodder for livestock and thatch for roofing. These semi-natural grasslands support distinctive plant and butterfly communities. Irrigation Infrastructure: Networks of ponds, canals, and reservoirs regulate water for agriculture while providing aquatic and wetland habitats. Human Settlements: Villages and farmsteads are integrated into the landscape mosaic, their residents serving as both managers and beneficiaries of surrounding ecosystems (Duraiappah & Nakamura, 2013; Fukamachi et al., 2001; Imamori, 1995; Indrawan et al., 2014; Ishizawa, 2018; Iwata et al., 2011; Kobori & Primack, 2003; Suzuki et al.; Takeuchi, 2010). Satoyama landscapes reportedly cover approximately 40% of Japan's national land area, representing a major category of land use and biodiversity habitat (Takeuchi, 2010).

Satoyama can be understood as a lived model of human–nature relations that embodies what has been described as “harmonious coexistence” or a “society in harmony with nature,” in which communities and ecosystems mutually sustain one another over time. This relationship rests on four interrelated principles (see Figure 1): **reciprocity**, whereby human labor, knowledge, and

intervention are exchanged for food, fuel, materials, and aesthetic or spiritual benefits as ecosystem services; **sustainability**, in which traditional management practices align with natural cycles and local carrying capacities to maintain long-term productivity and biodiversity; **moderation**, through which resource use remains deliberately limited so that ecological processes can continue to function while human needs are met; and **co-evolution**, whereby human and ecological communities adapt together over centuries to produce distinctive biocultural landscapes that would not emerge in either untouched wilderness or fully industrialized settings (Duraiappah & Nakamura, 2013; Fukamachi et al., 2001; Imamori, 1995; Indrawan et al., 2014; Ishizawa, 2018; Iwata et al., 2011).

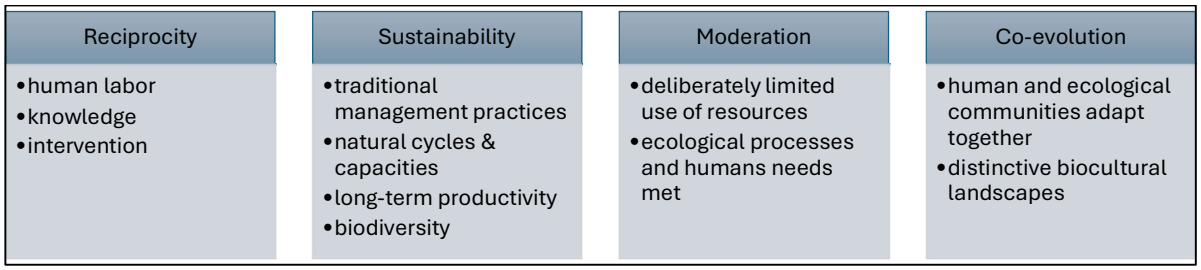

Figure 2. Four principles of Satoyama.

2.2. Satoyama and Place Identity

Within this psycho-socio-ecological context, Satoyama also operates as a meaningful place that engages multiple dimensions of place identity articulated in the literature. At the physical level, its geographic boundaries, landforms, built structures, vegetation, climate, and sensory qualities provide the material grounding upon which identities are constructed and to which memories and meanings become anchored. At the symbolic level, Satoyama carries narratives, images, and cultural representations—such as ideals of rural harmony or traditional stewardship—that differentiate it from other landscapes and connect individuals to broader cultural identities. At the social level, everyday interactions, customs, dialects, and practices embedded in Satoyama settings, together with the networks and community bonds they foster, shape a shared sense of who "belongs" to these places. At the personal level, Satoyama informs subjective feelings of attachment,

belonging, and emotional connection, incorporating personal memories, aesthetic preferences, and life narratives into an individual's self-concept.

From this perspective, Satoyama exemplifies the psychological functions that Proshansky and colleagues attribute to place identity. Satoyama landscapes offer familiar environments that provide coherence and predictability in everyday life. They provide meaning by enabling individuals to interpret spatial experiences and relationships in ways that render their surroundings significant. It also functions on a personal level by allowing people to express tastes, values, and preferences while meeting practical needs for shelter, resources, and activity spaces.

Four convergence points between place identity theory and the Satoyama concept can be garnered from the above discussion: 1) Landscape as Identity Shaper: Both frameworks recognize that physical environments actively shape human identity rather than serving as passive backdrops. Place identity theory emphasizes how the environments we live in are not simply settings but vital components that shape who we are. Similarly, Satoyama embodies landscapes that have shaped Japanese rural identity for centuries, creating distinctive lifeways, knowledge systems, and cultural expressions. 2) Reciprocal Human-Environment Relationships: Both frameworks emphasize bidirectional relationships. Place identity involves ongoing transactions between people and environments, with each shaping the other. Satoyama is defined precisely by harmonious human-nature interaction, the landscape is a product of human management, and human communities are adapted to landscape conditions. 3) Memory, Continuity, and Change: Both frameworks address temporal dimensions of human-place relationships. Place identity develops through accumulating experiences and memories, creating a sense of continuity that can be threatened by environmental change. Satoyama carries centuries of accumulated knowledge, practices, and meanings, transmitted across generations through active participation in landscape management. 4) Traditional Knowledge as Identity Anchor: Both frameworks recognize that knowledge embedded in practice constitutes identity. Place identity encompasses skills and behavioral tendencies relevant to specific environments. Satoyama is maintained through traditional ecological knowledge, practical wisdom about when to cut, what to plant, how to manage water, that simultaneously defines community identity and sustains landscape function.

3. Satoyama Identity Framework

The Satoyama Identity Framework's (SIF) four-dimensions provides a holistic model for understanding Satoyama (a.k.a. socio-ecological production landscapes (SEPLS)) as integrated human-nature systems (Dunbar & Ichikawa, 2020; Suzuki et al.). It categorizes elements into Physical-Ecological, Symbolic-Cultural, Social-Community, and Personal-Experiential dimensions, emphasizing the dynamic interdependencies of that support landscape stewardship.

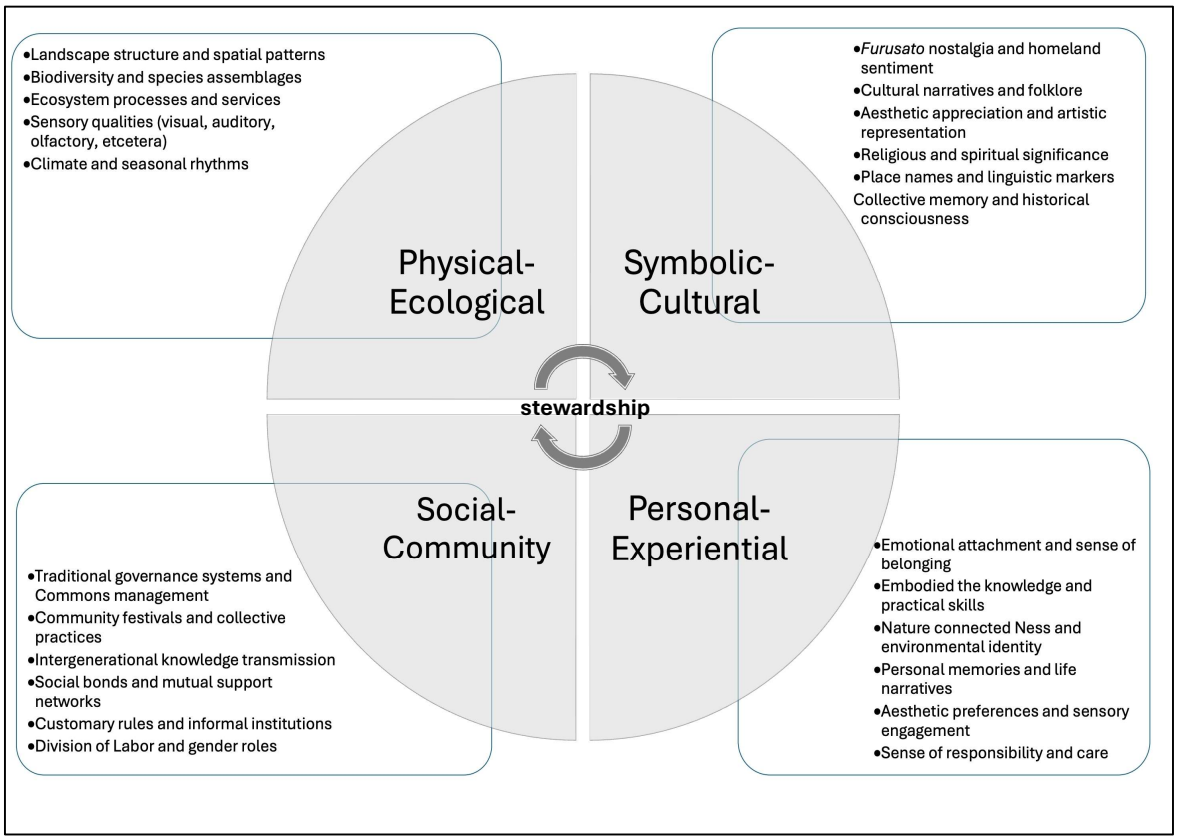

Figure 3. The Satoyama Identity Framework

The Physical-Ecological dimension in the Satoyama Identity Framework (SIF) focuses on the tangible environmental structures and processes shaped by human activity. It pairs ecological features such as a mosaic of forests, rice paddies, grasslands, ponds, streams, and settlements, creating diverse "edge" habitats that boost biodiversity. This patchwork, maintained through farming and forestry, prevents homogenization and supports species movement across patches. Processes include nutrient cycling, pollination, and habitat provision; services encompass provisioning (timber, fish, mushrooms), regulating (water filtration, erosion control), and cultural (leisure, inspiration). Ponds and ditches host aquatic life like dragonflies and fireflies, while grasslands sustain insects and birds via mowing. Seasonal rhythms drive management—e.g., autumn silver grass harvests create scenic views and scents—while climate influences phenology, visuals (e.g., ripening fields), sounds (birdsong, streams), and smells (earth, blooms). These sensory elements enhance ecosystem resilience and human-nature bonds.

The Symbolic-Cultural dimension articulates the relationship between physical landscape features and intangible cultural meanings, thereby deepening human–nature relations. *Furusato* signifies a profound emotional attachment to rural hometowns, emblematic of idealized past landscapes of fields and woodlands that figure prominently in constructions of Japanese identity and nostalgia for simpler times. It generates a shared cultural imaginary, frequently expressed in school songs, visual arts, and folk narratives, which connects individual origins to broader communal heritage. Religious, spiritual, and aesthetic dimensions are manifested through Shinto-Buddhist conceptions of nature, in which shrines, sacred sites, and seasonal beauty engender rituals, poetry (such as haiku), and aesthetic sensibilities like *mono no aware*, or the appreciation of transience. These cultural representations sacralize the landscape, fusing visual and seasonal splendor with norms of ethical stewardship. Place memory and historical markers encompass collective remembrances associated with historic sites, festivals, and ancestral practices, thereby sustaining cultural continuity in the context of modernization. Features such as ancient villages and rice terraces function as living archives that reaffirm identity and orient sustainable practices. Through these processes, symbolic elements become interlaced with material structures, endowing biodiversity and landscape mosaics with emotional and spiritual significance that encourages social practices and personal engagement in satoyama stewardship. In doing so, they convert

ostensibly utilitarian land into cultural heritage and underwrite resilience grounded in both nostalgic and sacred motivations.

The Social-Community dimension of the SIF highlights how collective human organization sustains socio-ecological systems through shared practices and structures. Traditional festivals and collective practices, like communal harvesting or rituals, coordinate group activities to maintain landscapes, fostering unity and knowledge transmission. Social rules and support networks are supported by informal norms and mutual aid systems that prevent overuse, as seen in historical Satoyama where communities regulated resource access collaboratively. Division of labor and gender roles are allocated by age, skill, or gender—e.g., men handling forestry, women managing fields—optimizing efficiency while embedding cultural equity. This dimension drives stewardship by embedding sustainability in social fabric: rules enforce cyclic resource use, networks build resilience against disruptions like depopulation, and labor divisions ensure adaptive management. In modern contexts, reviving these via multi-stakeholder participation counters abandonment, linking to other dimensions like personal skills gained through festivals .

The Personal-Experiential dimension reflects the personal human-nature connection in Satoyama identity, centered on embedded knowledge, sense of self, and drive. It promotes individual initiative to support socio-ecological systems via hands-on involvement. Embodied knowledge includes practical skills from everyday activities—such as foraging, farming, or tool-making—transmitted across generations. In Satoyama settings, these skills support flexible resource management by combining customs with natural cues to build resilience. In the realm of nature connection and environmental self-identity, people develop strong emotional links, seeing themselves within the landscape through "being-in-the-world" sensed bodily and felt deeply. This builds place-based self-understanding, with Satoyama informing values and perspectives. From such bonds arises a sense of duty and care that spurs voluntary stewardship, like habitat upkeep, fueled by fondness over finance. This care appears in adaptive actions that curb excess use and sustain resource cycles. These aspects tie personal experience to wider elements: skills aid community work roles and biodiversity care, while care bolsters cultural symbols and social norms.

Restoring this dimension can fight population loss by renewing human-nature ties for lasting sustainability.

The four dimensions interconnect in a sustainable feedback loop of stewardship: physical landscapes provide biodiversity services that support community practices and personal skills, while social rules shape landscape management, embedding symbolic and experiential values. For instance, collective festivals (social) reinforce historical place memory (symbolic) and embodied skills (personal), which in turn maintain biodiversity processes (physical) through labor divisions. Disruptions like depopulation weaken these links, leading to underutilization, but restoration revives mutual reinforcement (Hasan, 2010). Satoyama embodies stewardship through symbiotic human-nature management, where communities proactively sustain SEPLS for ecosystem services and well-being via co-management and traditional knowledge. This framework illustrates stewardship as multidirectional: physical care (e.g., mosaic maintenance) stems from social governance and personal responsibility, yielding cultural/spiritual rewards and biodiversity resilience. Globally, it models harmonious societies, aligning with biodiversity goals like the Kunming-Montreal Global Biodiversity Framework (Hughes & Grumbine, 2023; Li et al., 2023). Landscape stewardship can be defined as, "efforts to create, nurture, and enable responsibility in landowners and resource users to manage and protect land" (Brown & Mitchell, 2000, p. 71). Landscape stewardship behavior is influenced by sense of place, attachment, and identity; in essence, people are more likely to care for environments they identify with. This concept connects place identity's functions with Satoyama's reliance on ongoing human management. The stewardship perspective reveals how identity motivates behavior, and how that behavior in turn sustains the landscape conditions that support identity (Kollmuss & Agyeman, 2002; Stern, 2000; West et al., 2018).

Synthesizing these, the four dimensions are interconnected through dynamic processes that sustain and transform Satoyama identity. Identification emerges through active engagement with the landscape. This practical engagement creates embodied knowledge and emotional bonds while simultaneously maintaining landscape function. Each generation receives Satoyama landscapes as heritage and transmits them to successors through socialization, apprenticeship, and shared

practice. This transfer carries not only technical knowledge but identity narratives and value commitments. Satoyama identity must adapt to changing conditions, climatic, economic, and demographic. The framework's resilience depends on maintaining core identity elements while allowing peripheral adjustments. Strong place identity motivates stewardship behavior. Stewardship maintains landscape conditions. Maintained landscapes reinforce identity. This cyclical relationship creates a self-reinforcing dynamic, but one vulnerable to disruption if any component fails.

4. Contemporary Challenges

Japan's rural areas face severe demographic decline. The most extreme case is Akita Prefecture, with 39% of residents over age 65, the lowest birth rate, and the fastest population decline in Japan (Kuhn, 2025). A 2024 government study found that 744 municipalities (43% of total) risk disappearing by mid-century due to declining numbers of women of childbearing age ("Number of Young Women to Halve in 40% of localities by 2050", 2024). This depopulation directly threatens Satoyama place identity. As young people leave for cities, the intergenerational transfer of knowledge and practice breaks down. Without successors, traditional management practices cease. Communities lose the critical mass needed for collective action. The social-community dimension of place identity dissolves. Importantly, and perhaps counterintuitively, research demonstrates that those who remain in rural areas often report satisfaction with their communities even while expressing dissatisfaction with economic opportunities (Sasaki, 2018). This suggests that place identity remains strong even as economic viability declines.

When Satoyama management ceases, landscapes undergo succession toward forest, eliminating the mosaic structure that supports biodiversity. Recent research analyzed 158 Satoyama sites across Japan and found that human depopulation is contributing to biodiversity loss rather than ecological recovery (Uchida et al., 2025). The study found that "human depopulation does not immediately restore human-altered lands into ecosystems suitable for wildlife." Species richness and abundance of birds, butterflies, fireflies, and plants declined in both depopulating and growing areas. The abandonment of traditional land-use practices, a direct consequence of identity dissolution, leads to habitat loss for species adapted to managed landscapes. This finding

challenges assumptions that reduced human presence automatically benefits nature. In socio-ecological systems like Satoyama, human absence can be a destructive force. The stewardship-identity cycle breaks down, with cascading effects on biodiversity.

As Japanese society has urbanized, connections to Satoyama landscapes have weakened even for those who remain. The fuel and fertilizer revolutions of the 1960s eliminated traditional dependencies on forest products, making Satoyama resources economically marginal. Mechanization reduced labor requirements in agriculture. Consumer goods replaced self-provisioning. These changes severed the practical engagement that historically grounded place identity (Kada, 2012). Without daily interaction with forests and fields, residents experience their landscapes differently, as scenery rather than livelihood, as heritage rather than present practice. The personal-experiential dimension of place identity shifts from embodied knowledge to nostalgic observation.

Climate change introduces novel stressors to Satoyama systems. Changing precipitation patterns affect irrigation and flood dynamics. Temperature shifts alter species distributions and phenology. Extreme events damage infrastructure and crops. These changes challenge the adaptive function of place identity. When landscapes transform beyond recognition, when familiar species disappear and new ones arrive, the physical-ecological substrate of identity becomes unstable. Traditional knowledge may become obsolete. The symbolic-cultural dimension, premised on continuity with the past, confronts radical discontinuity.

5. Discussion and Conclusions

This research makes several theoretical contributions: First, it synthesizes previously separate literatures from environmental psychology, Japanese studies, landscape ecology, and conservation science, demonstrating their complementarity and mutual enrichment. Second, it proposes the four-dimensional Satoyama Identity Framework as an analytical tool applicable to human-influenced landscapes globally. Third, it articulates the stewardship-identity cycle, revealing how place identity motivates environmental behavior that in turn sustains the landscape conditions supporting identity. Fourth, it demonstrates how contemporary challenges, depopulation,

abandonment, disconnection, and climate change disrupt different dimensions of place identity with cascading effects.

The framework also offers practical guidance for practitioners working in conservation, rural development, and community organizing. By identifying the multiple dimensions through which Satoyama Identity operates, it suggests multiple intervention points and the need for integrated approaches. Active intervention to maintain stewardship practices, which requires maintaining communities and their place identities, is essential.

While developed through the case of Japanese Satoyama, the integrated framework has broader applicability. The finding that depopulation does not automatically benefit biodiversity has immediate policy implications: passive withdrawal of management is not a viable conservation strategy for socio-ecological landscapes. The core insight that place identity and environmental stewardship are mutually constitutive applies across cultural contexts, though specific manifestations will vary. The four-dimensional framework provides analytical categories that can be adapted to different cultural and ecological settings.

This research has developed an integrated theoretical framework synthesizing place identity theory with the Japanese concept of Satoyama. The resulting Satoyama Identity Framework identifies four interconnected dimensions, physical-ecological, symbolic-cultural, social-community, and personal-experiential, through which humans develop identification with and commitment to managed landscapes.

The integration reveals place identity and environmental stewardship as mutually constitutive: identity motivates care for landscapes, while the practice of care reinforces identity. This stewardship-identity cycle has sustained Satoyama landscapes for centuries but now faces severe disruption from demographic, economic, and environmental changes.

Contemporary challenges, rural depopulation, landscape abandonment, cultural disconnection, and climate change threaten different dimensions of Satoyama identity with cascading effects on both human communities and biodiversity. The recent finding that depopulation is contributing to biodiversity loss in Japanese Satoyama underscores the urgency of understanding and supporting the human dimensions of these socio-ecological systems.

Ultimately, this thesis argues that achieving sustainable futures in human-influenced landscapes requires understanding and nurturing the place identities that motivate stewardship. In an era when 85 countries face continuous depopulation by 2050 (Canning, 2011), and when global targets call for halting biodiversity loss by 2030 (2022; Weiland et al., 2021), the lessons from Satoyama, where humans and nature have coexisted for centuries, have never been more relevant. The challenge is not to exclude humans from nature or to industrialize natural systems, but to cultivate the forms of identification and practice that sustain harmonious coexistence.

Disclaimer: Partial revisions to this paper utilized PerplexityPro artificial intelligence tool.

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